KEP SERIES SELF-PRIMING PUMPS

KEP series self-priming pumps are centrifugal pumps with open impeller mounted directly to the motor shaft and used for pumping liquids including high air occlusion and chips in machine tools industry.

Application Fields;

- Fluids with high air occlusion,
- Contaminated liquids,
- Liquids containing solid particles,
- Alkaline, solvents, coolants and lubricants etc.
- Surface washing, cleaning, degreasing,
- Recycling and filtration in Machine-tool industry,
- Circulation of coolant,

Fluids;

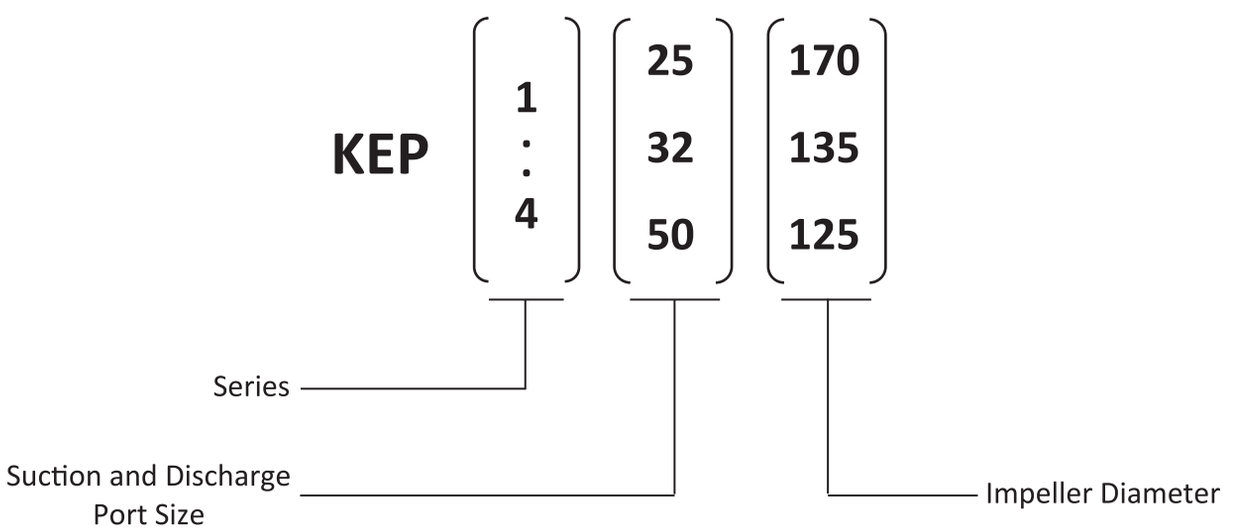
- Water,
- Emulsions,
- Cutting oils,

Specifications;

- Self-priming after the pump casing has been filled with the fluid.
- No back flow valve required.
- Insensitive to the penetration of gas and air.
- Chip size max. 9 mm,
- Easy to clean out via drain plug.
- Small space requirements due to the compact design.
- All pumps include single mechanical seal.

Materials;

Pump Body	***- GG 25***
Motor Flange	***- GG 25***
Impeller	***- GG 25***
Pump Shaft	***- AISI 420***
Mechanical Seal	***- C-SiC-Viton***
	- TC-TC-Viton (optional)



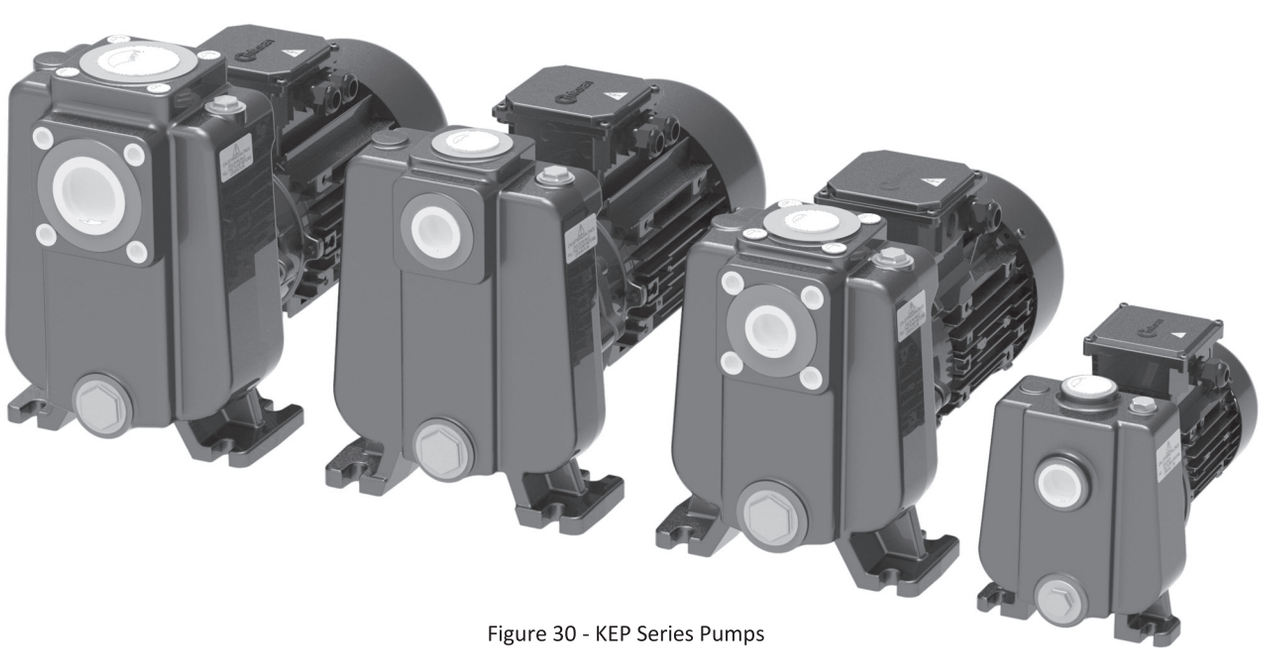


Figure 30 - KEP Series Pumps

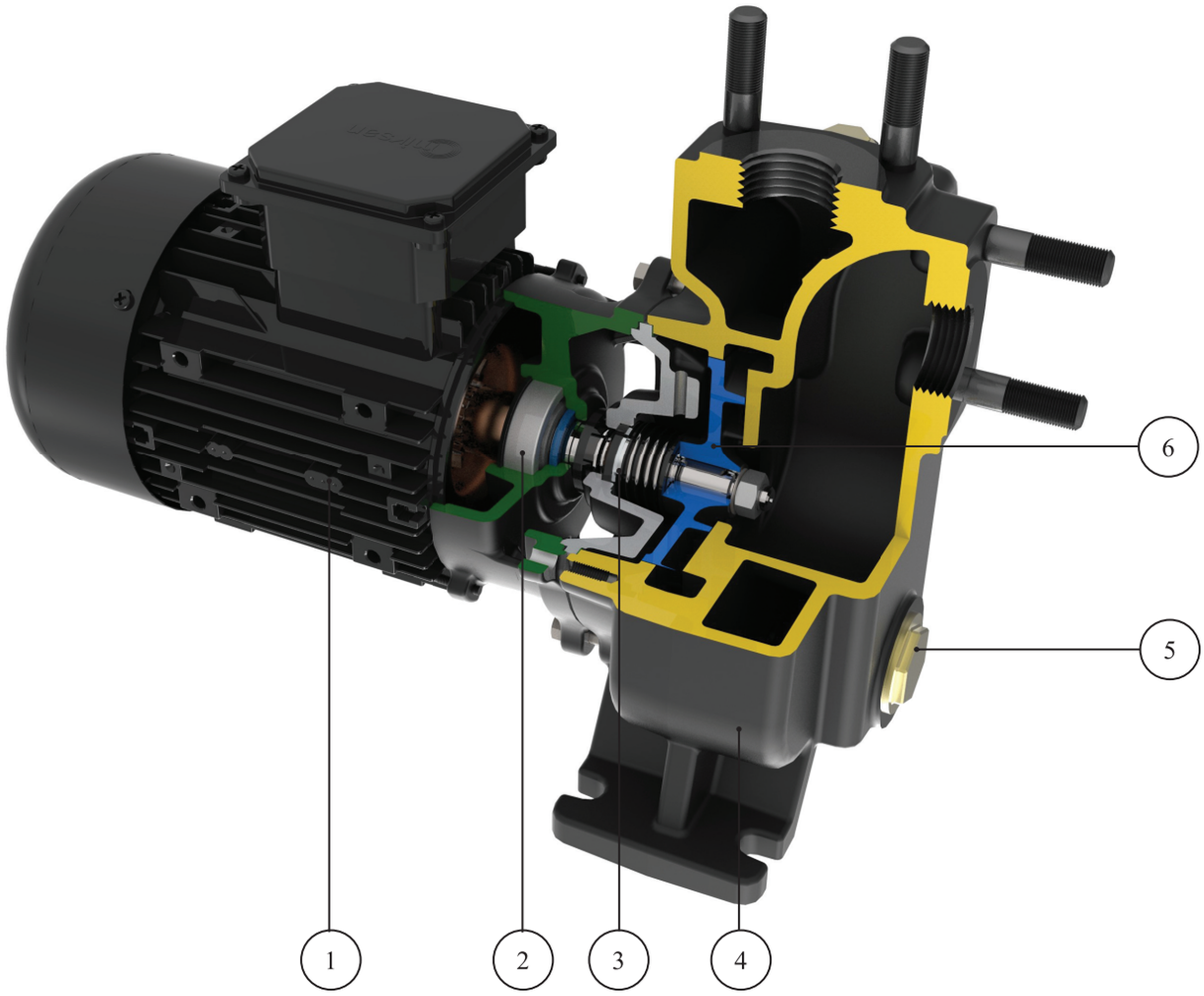


Figure 31 - KEP Series Pumps Section View

1. Electric Motor

Special shaft and flange mounted electric motors are used on KEP series. Motor shaft is directly mounted to impeller.

Power of 3 phase electric motors are 4,0 kW and 3,0 kW in frame size of 100; 2,2 kW and 1,5 kW in frame size of 90; 1,1 kW in the frame size of 80; 0,37 kW and 0,25 kW in frame size of 63.

2. Bearings

Motor flange is made of cast iron and the front bearing is bigger than standard electric motors so it offers increased strength against to axial forces.

3. Mechanical Seal

Standard mechanical seal material is C-SiC-Viton. TC-TC-Viton mechanical seal is available upon request.

4. Pump Body

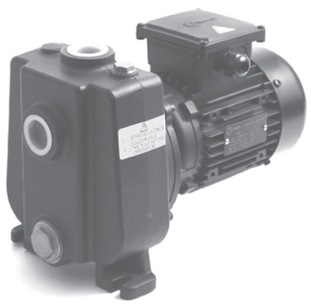
Self-priming after the pump body is filled with the fluid once.

5. Drain Plug

KEP pumps can be easily clean out via drain plug without dismantling the pump from the system.

6. Impeller

Special impeller design that allows self-priming without foot valve requirement.



KEP 125 PUMP

Applications:

- Cutting, turning, milling, boring, grinding and similar applications of the machine tools,
- Filtration systems,
- Circulation systems.
- KEP Pumps are used for pumping of cutting / cooling fluids.

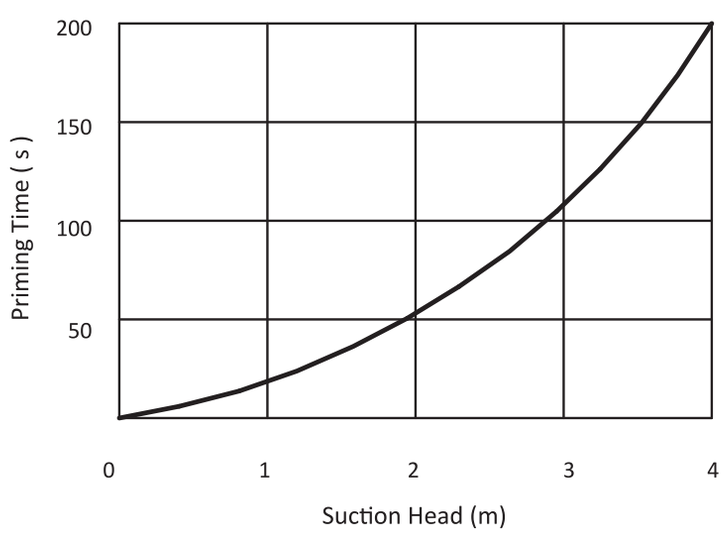
Fluid Specifications:

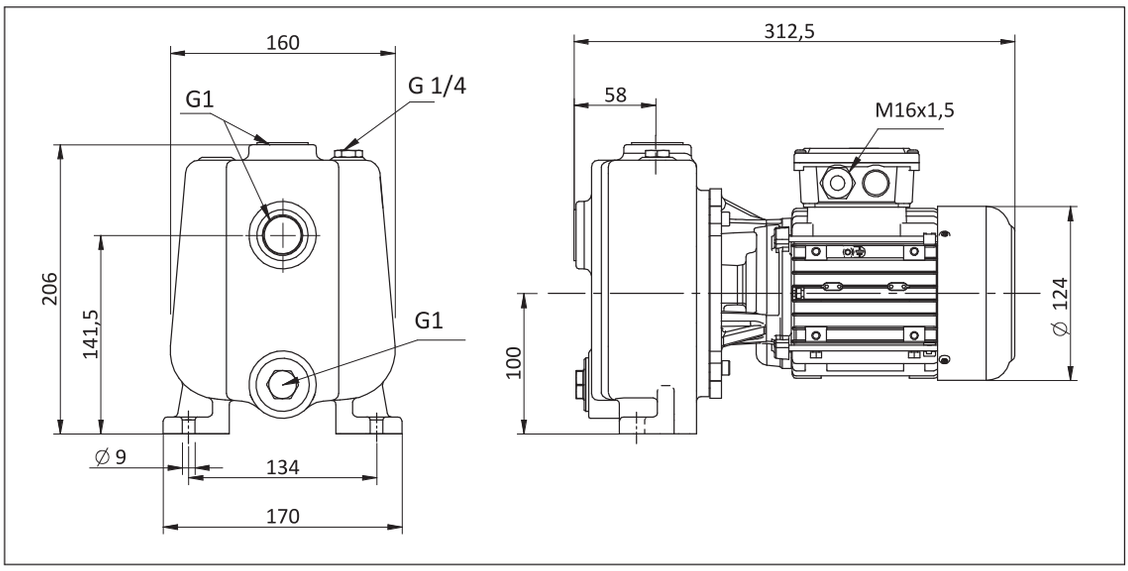
- Coolants,
- Cutting oils,
- Grinding oils,
- Water
- Chip containing liquids (max. 6 mm)
- Fluid temperature 0...60 °C
- Kinematic viscosity 1...30 mm^2/s

Materials:

Pump body	: Cast iron - DIN GG25
Motor Flange	: Cast iron - DIN GG25
Impeller	: Cast iron - DIN GG25
Shaft	: Stainless steel - AISI 420 (DIN 1.4021)
O-ring	: Viton
Mechanical Seal	: C-SiC-Viton
Electric motor	: 3 phase induction motor - 2 pole, 1 phase induction motor (Optional) Protection degree IP 54

Suction Head and Priming Time





DIMENSIONS & NOMINAL VALUES

TYPE	Weight kg	Power kW	Voltage V(Δ⁄Y)	Frequency Hz	Rated current A	Speed rpm
KEP 125/100	12.0	0.25	230/400	50	1.26/0.73	2760
KEP 125/150	12.5	0.37			2.16/1.25	2820

* The performance curves are based on 1 mm^2/s (cSt) kinematic viscosity values and 997 kg/m^3 density
** Curve tolerance according to ISO 9906:2012 Grade 3B.

Performance Curve

KEP 232 PUMP

Applications:

- Cutting, turning, milling, boring, grinding and similar applications of the machine tools,
- Filtration systems,
- Circulation systems.
- KEP Pumps are used for pumping of cutting / cooling fluids.

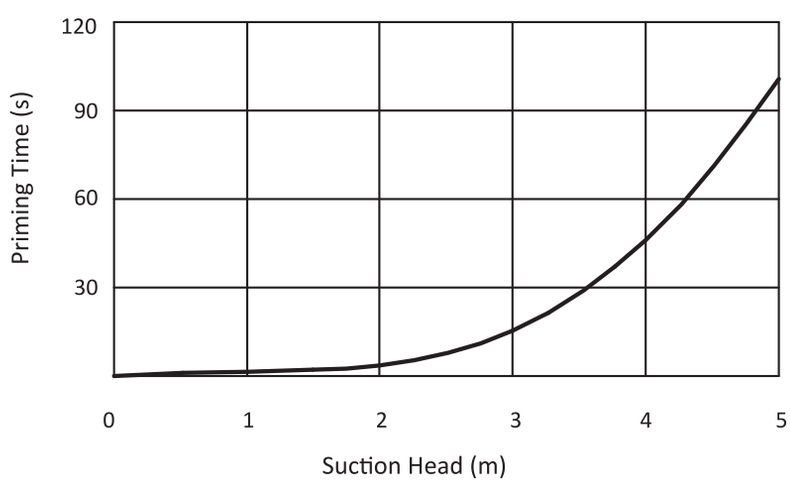
Fluid Specifications:

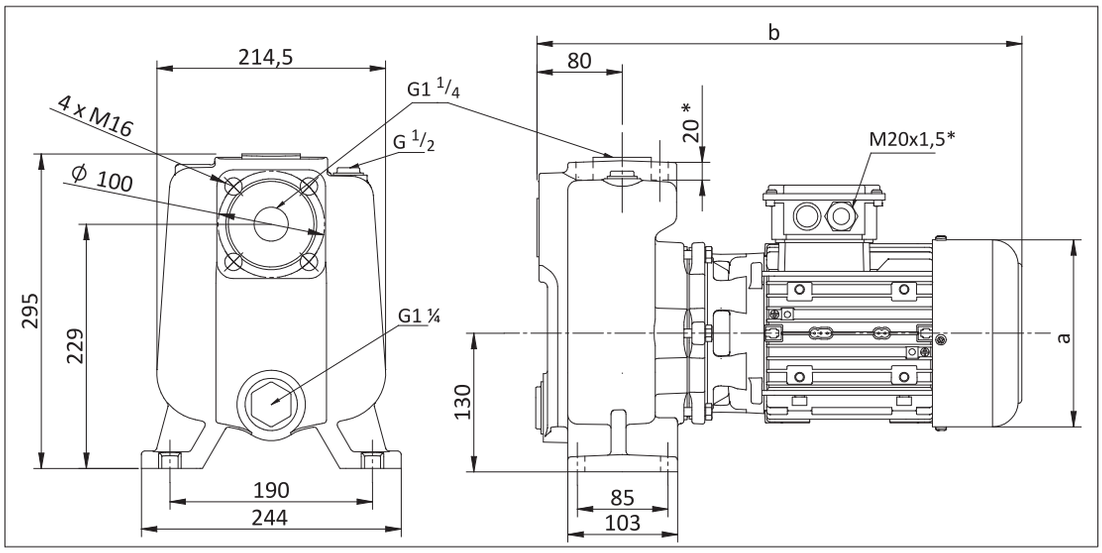
- Coolants,
- Cutting oils,
- Grinding oils,
- Water
- Chip containing liquids (max. 9 mm)
- Fluid temperature 0...60 °C
- Kinematic viscosity 1...30 mm^2/s

Materials:

Pump body	: Cast iron - DIN GG25
Motor Flange	: Cast iron - DIN GG25
Impeller	: Cast iron - DIN GG25
Shaft	: Stainless steel - AISI 420 (DIN 1.4021)
Mechanical Seal	: C-SiC-Viton
Electric motor	: 3 phase induction motor - 2 pole, Optionally 4-pole, Protection degree IP 54

Suction Head and Priming Time





DIMENSIONS & NOMINAL VALUES

TYPE	a (mm)	b (mm)	Weight kg	Power kW	Voltage V(Δ/Y)	Frequency Hz	Rated current A	Speed rpm
KEP 232/135-4	157	411	30.5	0.55	230/400	50	2.96/1.71	1410
KEP 232/110			31.5	1.1			4.16/2.4	2890
KEP 232/120	176	430	35.5	1.5			5.72/3.3	2910
KEP 232/128		455	38.0	2.2			7.79/4.5	2905
KEP 232/135	194	485	45.0	3.0			10.39/6.0	2905

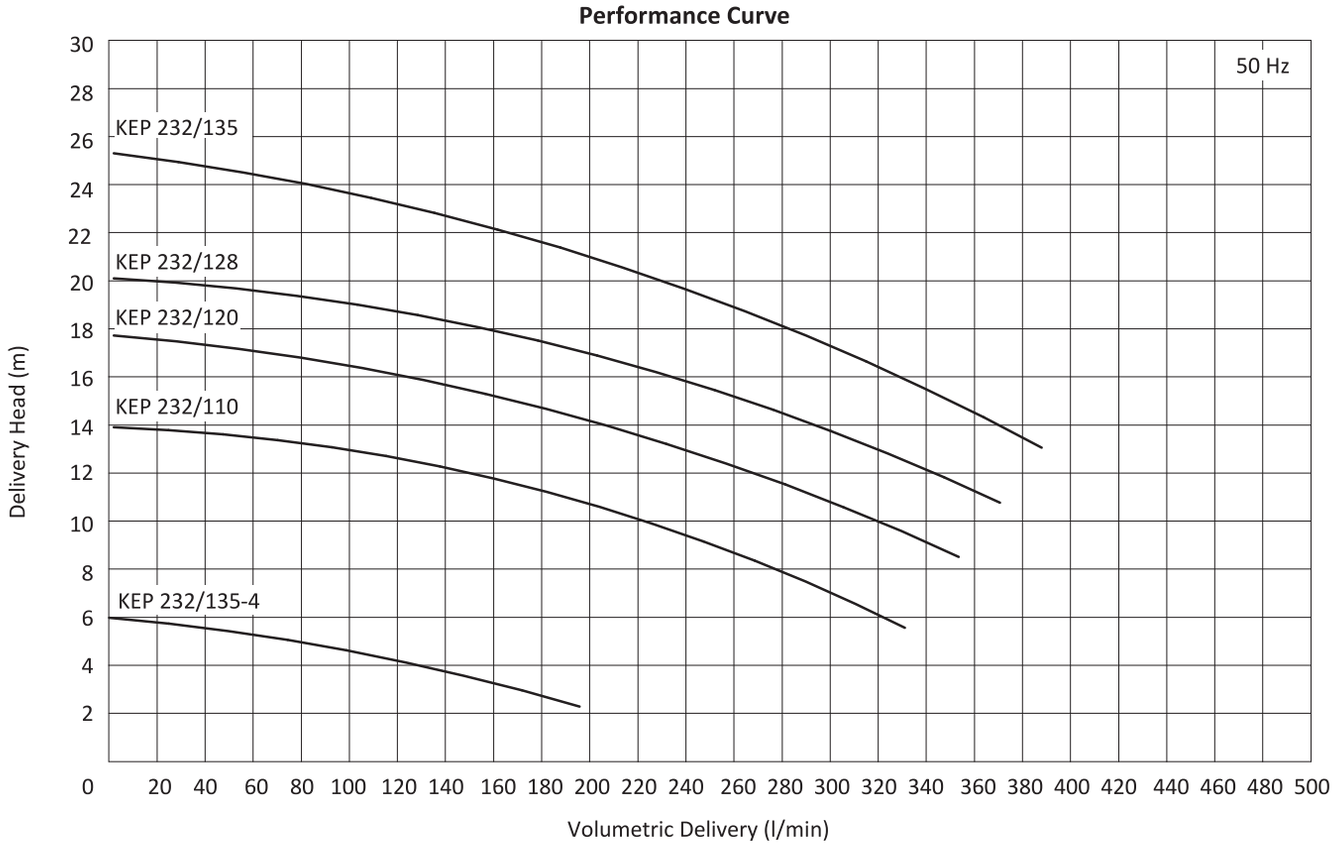
* Flange connection (DIN EN 1092-2 PN 16)

** The performance curves are based on 1 mm^2/s (cSt) kinematic viscosity values and 997 kg/m^3 density

*** Curve tolerance according to ISO 9906:2012 Grade 3B.

**** M16x1,5 cable gland is used on KEP 232/135-4 AND KEP 232/110 pumps.

Performance Curve



KEP 332 PUMP

Applications:

- Cutting, turning, milling, boring, grinding and similar applications of the machine tools,
- Filtration systems,
- Circulation systems.
- KEP Pumps are used for pumping of cutting / cooling fluids.

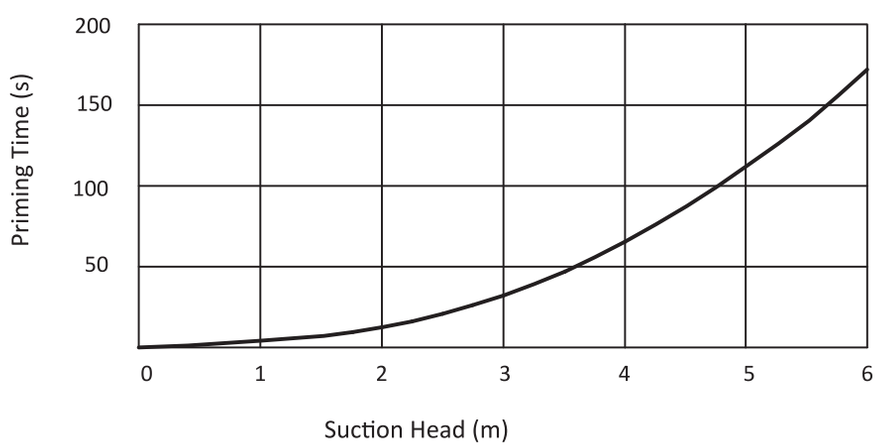
Fluid Specifications:

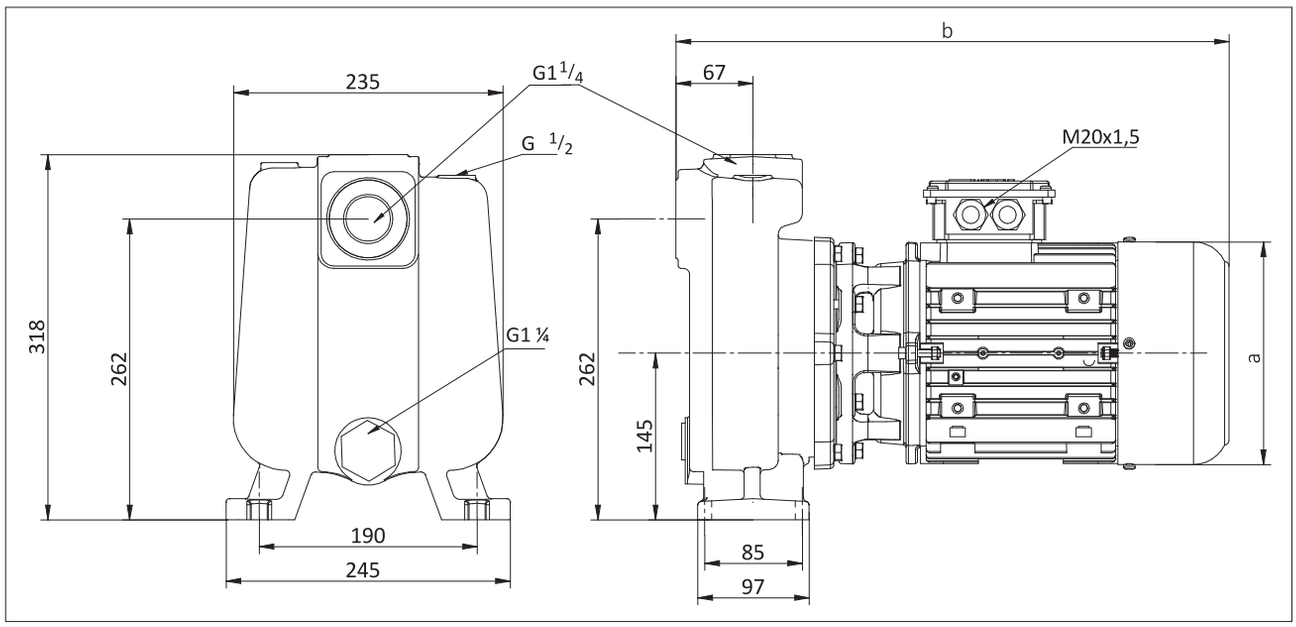
- Coolants,
- Cutting oils,
- Grinding oils,
- Water
- Chip containing liquids (max. 5 mm)
- Fluid temperature 0...60 °C
- Kinematic viscosity 1...30 mm^2/s

Materials:

Pump body	: Cast iron - DIN GG25
Motor Flange	: Cast iron - DIN GG25
Impeller	: Cast iron - DIN GG25
Shaft	: Stainless steel - AISI 420 (DIN 1.4021)
Mechanical Seal	: C-SiC-Viton
Electric motor	: 3 phase induction motor - 2 pole, Protection degree IP 54

Suction Head and Priming Time



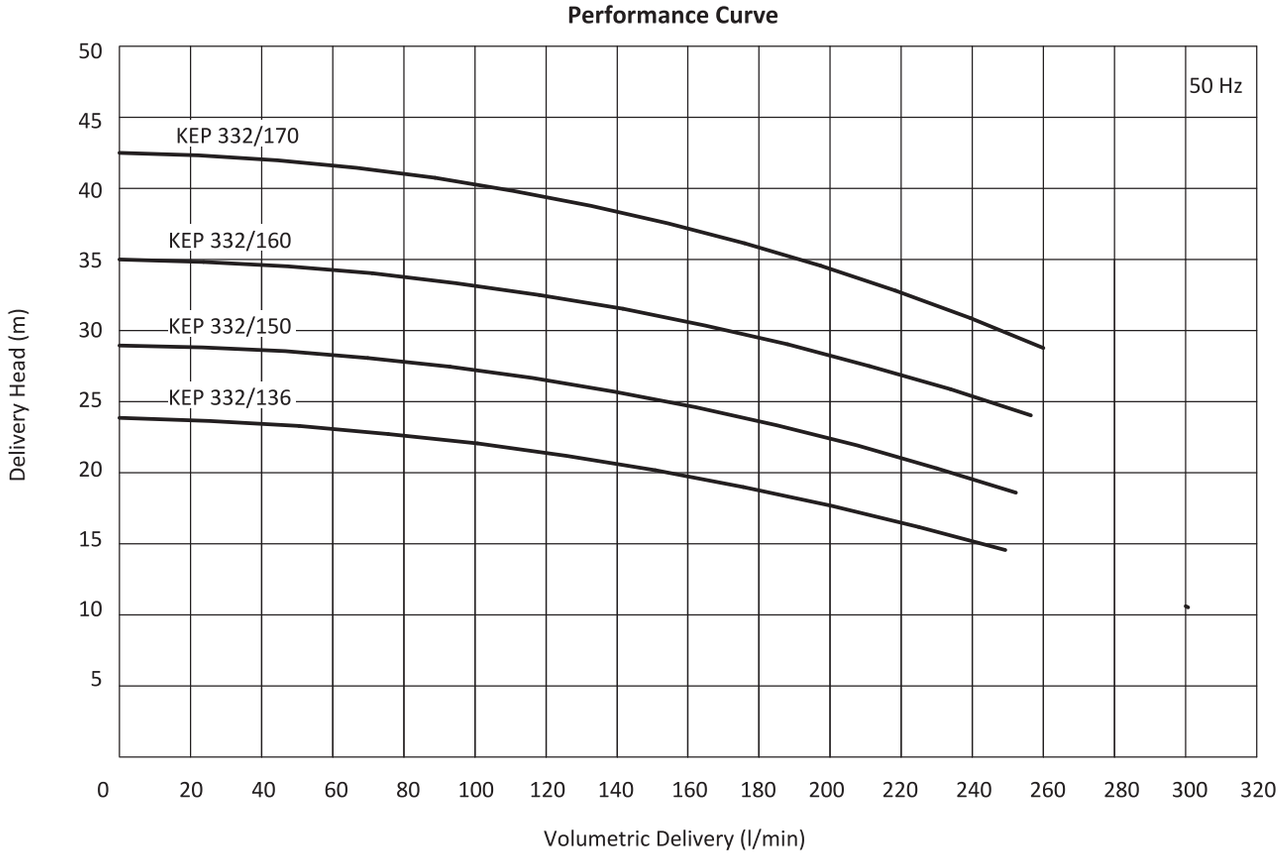


DIMENSIONS & NOMINAL VALUES

TYPE	a (mm)	b (mm)	Weight kg	Power kW	Voltage V(Δ/Y)	Frequency Hz	Rated current A	Speed rpm
KEP 332/136	176	425	34	1.5	230/400	50	5.72/3.3	2910
KEP 332/150		445	37	2.2			7.79/4.5	2905
KEP 332/160	194	478	43	3.0			10.39/6.0	2905
KEP 332/170			45	4.0			13.68/7.9	2900

* The performance curves are based on 1 mm^2/s (cSt) kinematic viscosity values and 997 kg/m^3 density
** Curve tolerance according to ISO 9906:2012 Grade 3B.

Performance Curve



KEP 450 PUMP

Applications:

- Cutting, turning, milling, boring, grinding and similar applications of the machine tools,
- Filtration systems,
- Circulation systems.
- KEP Pumps are used for pumping of cutting / cooling fluids.

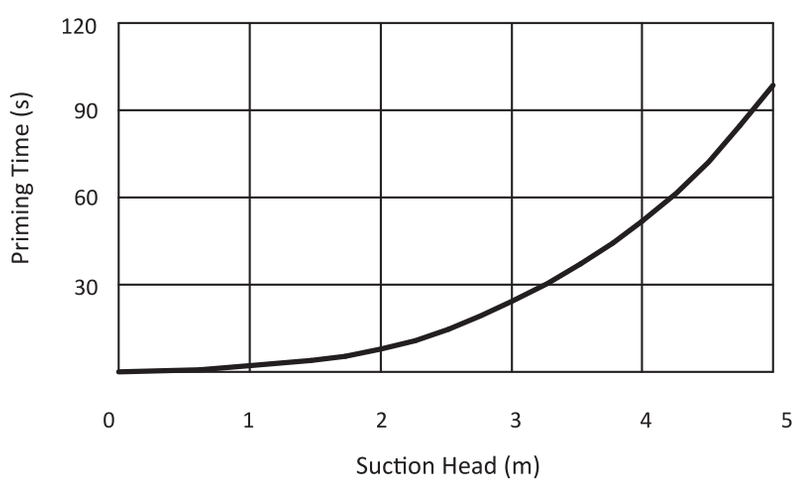
Fluid Specifications:

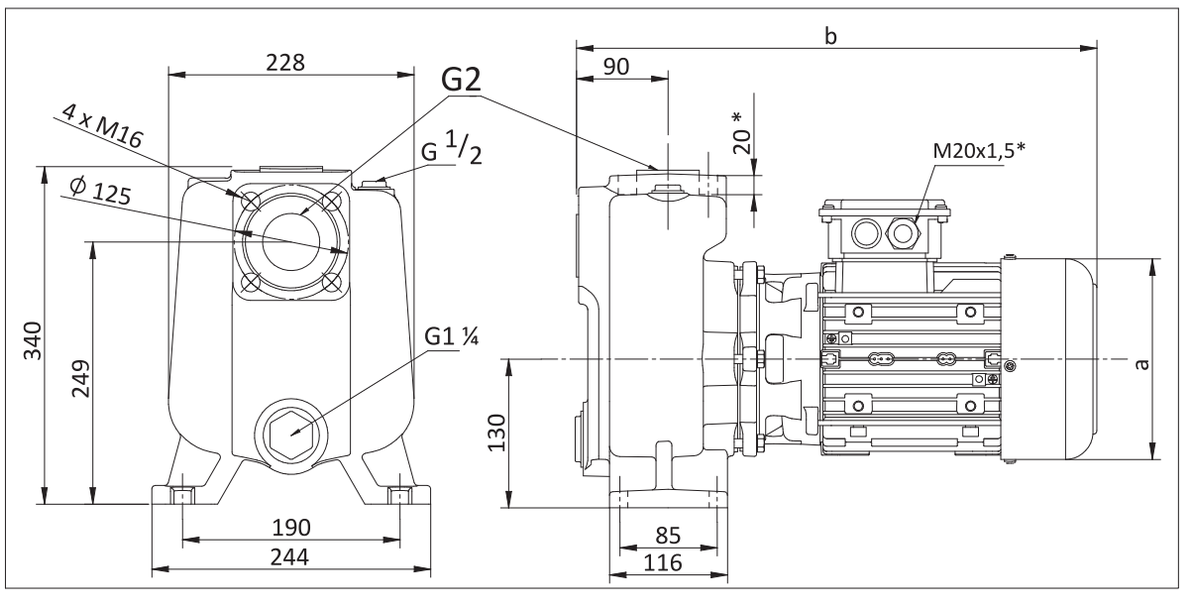
- Coolants,
- Cutting oils,
- Grinding oils,
- Water
- Chip containing liquids (max. 12 mm)
- Fluid temperature 0...60 °C
- Kinematic viscosity 1...30 mm^2/s

Materials:

Pump body	: Cast iron - DIN GG25
Motor Flange	: Cast iron - DIN GG25
Impeller	: Cast iron - DIN GG25
Shaft	: Stainless steel - AISI 420 (DIN 1.4021)
Mechanical Seal	: C-SiC-Viton
Electric motor	: 3 phase induction motor - 2 pole Optionally 4-pole, Protection degree IP 54

Suction Head and Priming Time



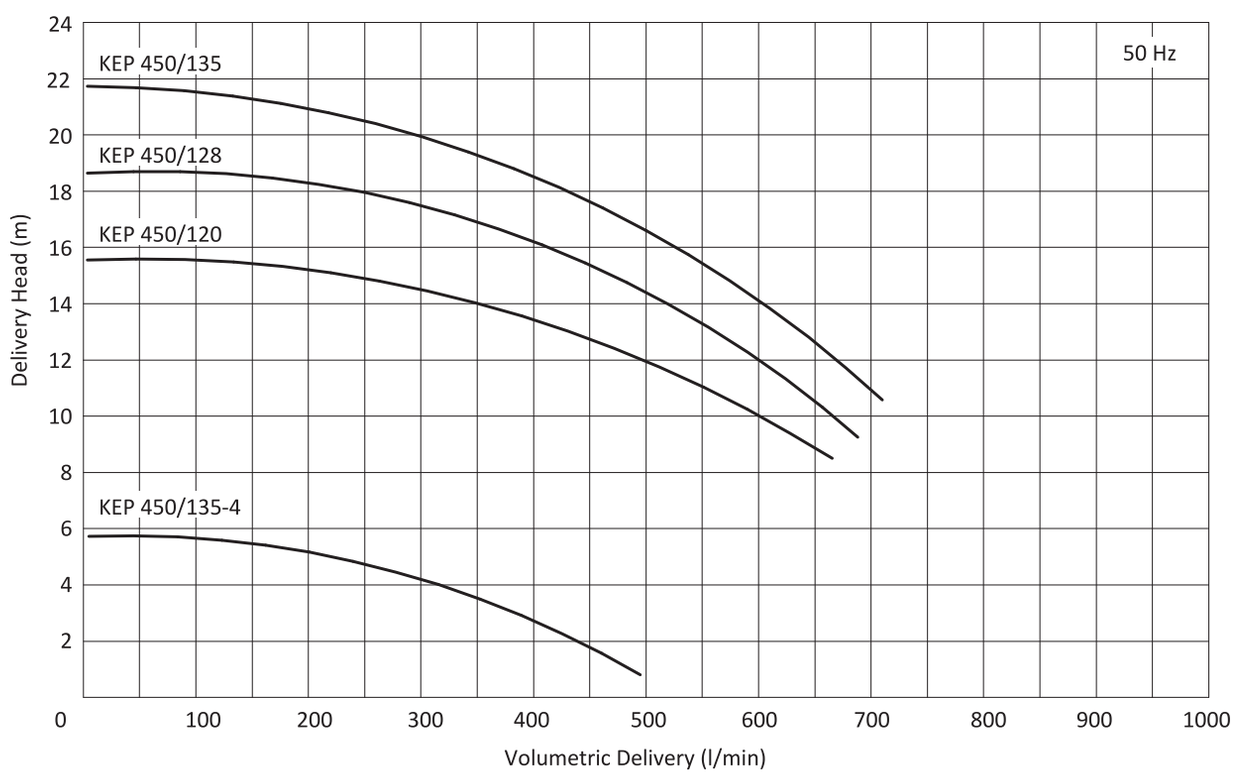


DIMENSIONS & NOMINAL VALUES

TYPE	a (mm)	b (mm)	Weight kg	Power kW	Voltage V(Δ/Y)	Frequency Hz	Rated current A	Speed rpm
KEP 450/135-4	176	485	44	1.1	230/400	50	4,85/2,8	1440
KEP 450/120			45	2.2			7.79/4.5	2905
KEP 450/128	194	515	52	3.0			10.39/6.0	2905
KEP 450/135			54	4.0			13.68/7.9	2900

* The performance curves are based on 1 mm^2/s (cSt) kinematic viscosity values and 997 kg/m^3 density
** Curve tolerance according to ISO 9906:2012 Grade 3B.

Performance Curve



LP SERIES PUMPS

LP series pumps designed as a single stage and pumps inlet and outlet port is aligned (inline design). Therefore pump has compact design and requires small installation space.

Application Fields;

- Filter systems and recirculation applications,
- Contaminated liquids,
- Liquids containing solid particles,
- Surface washing, cleaning, degreasing,
- Machine-tool industry,
- Air–conditioning systems,
- Circulation of coolant,

Fluids;

- Water,
- Emulsions,
- Cutting oils,

Specifications;

- Due to the compact design lower installation space required.
- No back flow valve required.
- Chip size max. 8 mm,
- Easy to discharge the fluid via drain plug.
- All pumps include single mechanical seal.

Materials;

Pump Body	***- GG 25***
Motor Flange	***- GG 25***
Impeller	***- GG 25***
Pump Shaft	***- AISI 420***
Mechanical Seal	***- SiC-SiC-Viton***
	- TC-TC-Viton (optional for grinding app.)
O - ring	***- Viton***

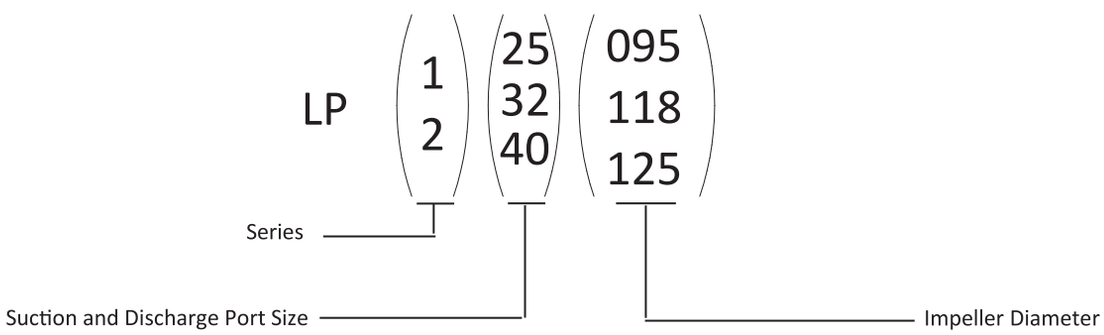


Figure 32 - LP Series Pumps

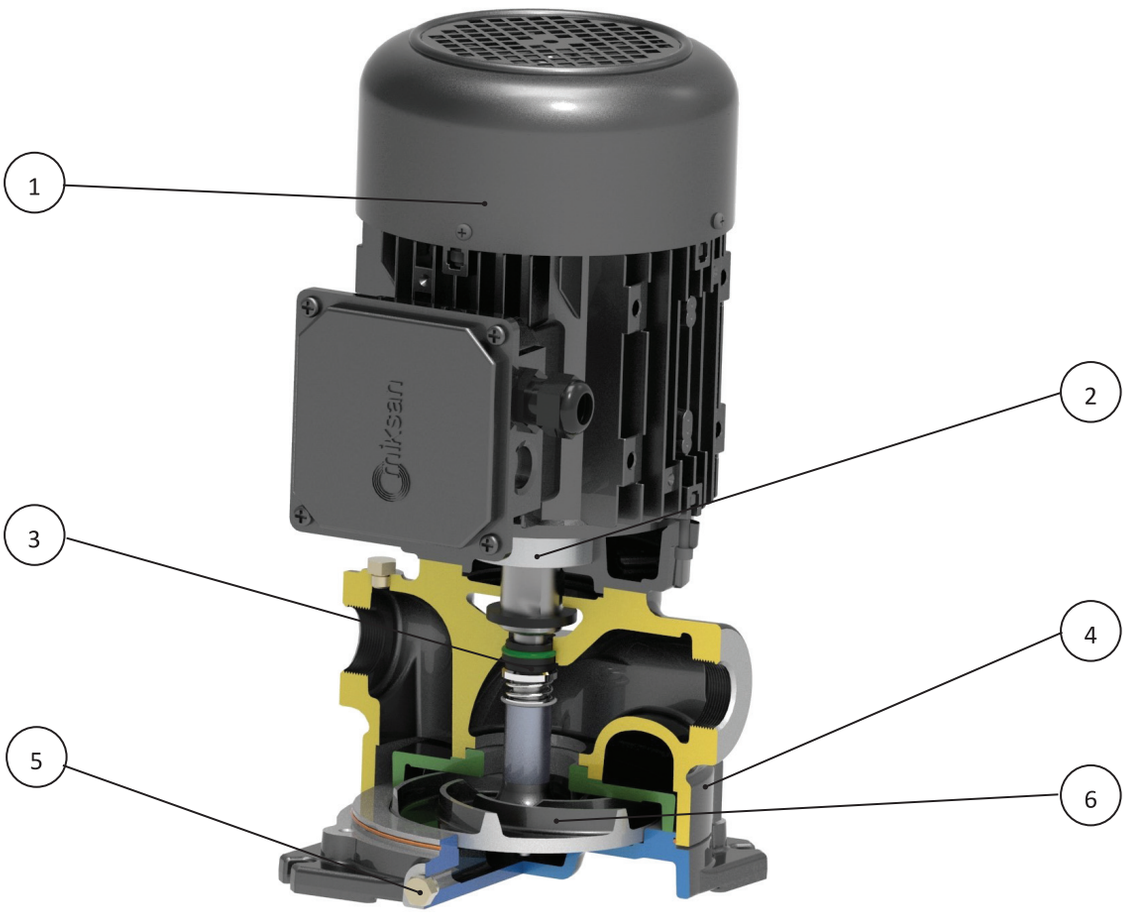


Figure 33 - LP Series Pumps Section View

1. Electric Motor

Special shaft and flange mounted electric motors are used on LP series. Impeller is directly mounted to the motor shaft.

Power of 3 phase electric motors are 2,2 kW and 1,5 kW in frame size of 90; 1,1 kW in frame size of 80; 0,75 kW and 0,55 kW in the frame size of 71; 0,37 kW and 0,25 kW in frame size of 63.

2. Bearings

Motor flange is made of cast iron and the front bearing is bigger than standard electric motors so it offers increased strength against to axial forces.

3. Mechanical Seal

Standard mechanical seal material is SiC-SiC-Vİton. TC-TC-Viton mechanical seal is available upon request.

4. Pump Body

Compact design requires lower installation space.

5. Drain Plug

The fluid inside the pump can easily discharge via drain plug without dismantling the pump from the system.

6. Impeller

Special impeller design provides high efficiency.

LP 125 PUMP

Applications:

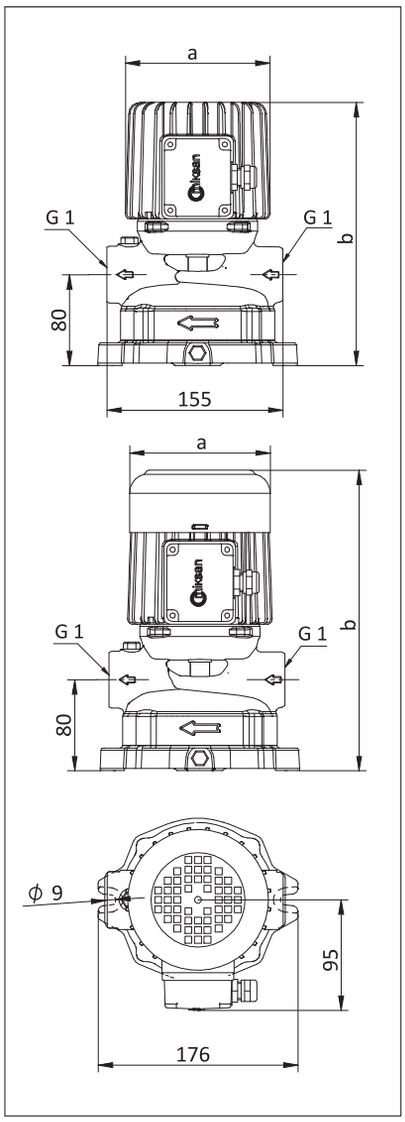
- Machine tools,
- Filtration systems,
- Circulation systems,
- Air conditioning systems,

Fluid Specifications:

- Coolants,
- Cutting oils,
- Grinding oils,
- Water
- Chip containing liquids (max. 5 mm)
- Fluid temperature 0...60 °C
- Kinematic viscosity 1...90 mm^2/s

Materials:

Pump body	: Cast iron - DIN GG25
Motor Flange	: Cast iron - DIN GG25
Impeller	: Cast iron - DIN GG25
Shaft	: Stainless steel - AISI 420 (DIN 1.4021)
O-ring	: Viton
Mechanical Seal	: SiC-SiC-Viton
	: TC-TC-Viton (optional for grinding application)
Electric motor	: 3 phase induction motor 2 pole Protection degree IP 54



DIMENSIONS & NOMINAL VALUES

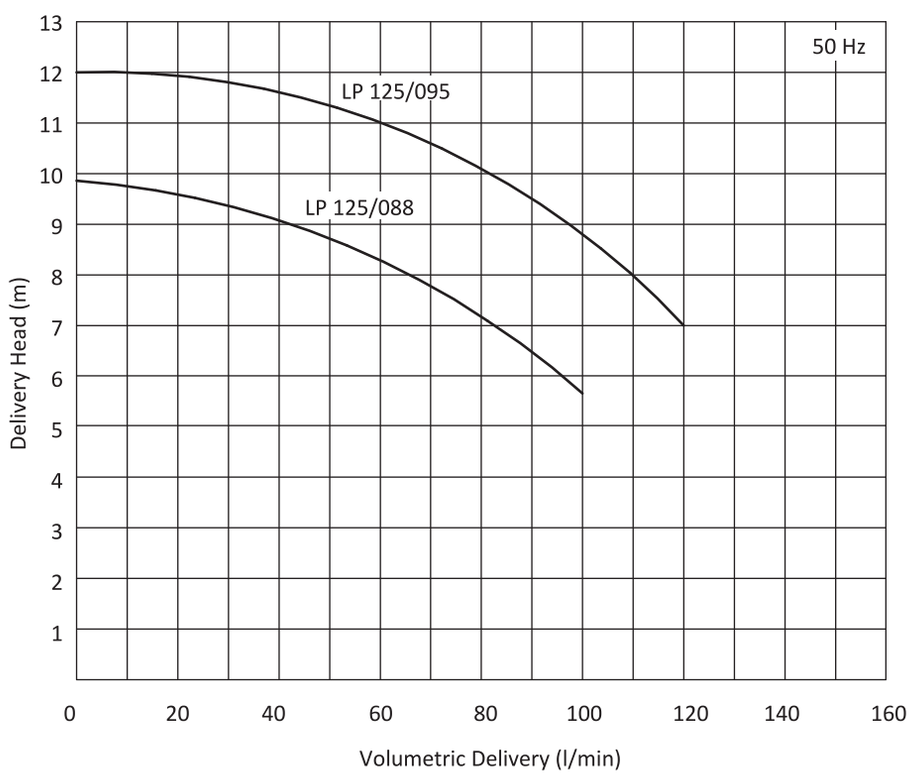
TYPE	a (mm)	b (mm)	Weight (kg)	Power (kW)	Voltage V(Δ/Y)	Frequency (Hz)	Rated current (A)	Speed (rpm)
LP 125/088	127	232	9.0	0.25	230/400	50	1.26/0.73	2760
LP 125/095	124	265	9.5	0.37			2.16/1.25	2820

* The performance curves are based on 1 mm^2/s (cSt) kinematic viscosity values and 997 kg/m^3 density.

** Curve tolerance according to ISO 9906:2012 Grade 3B.

*** LP 125/088 is provided without coolant fan.

Performance Curve



LP 225 PUMP

Applications:

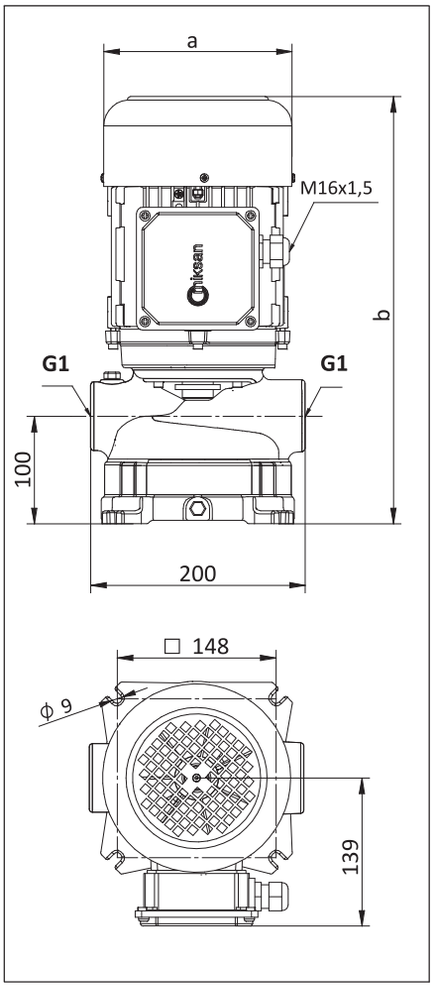
- Machine tools,
- Filtration systems,
- Circulation systems,
- Air conditioning systems,

Fluid Specifications:

- Coolants,
- Cutting oils,
- Grinding oils,
- Water
- Chip containing liquids (max. 5 mm)
- Fluid temperature 0...60 °C
- Kinematic viscosity 1...90 mm^2/s

Materials:

Pump body	: Cast iron - DIN GG25
Motor Flange	: Cast iron - DIN GG25
Impeller	: Cast iron - DIN GG25
Shaft	: Stainless steel - AISI 420 (DIN 1.4021)
O-ring	: Viton
Mechanical Seal	: SiC-SiC-Viton
	: TC-TC-Viton (optional for grinding application)
Electric motor	: 3 phase induction motor 2 pole, 2900 rpm Protection degree IP 54



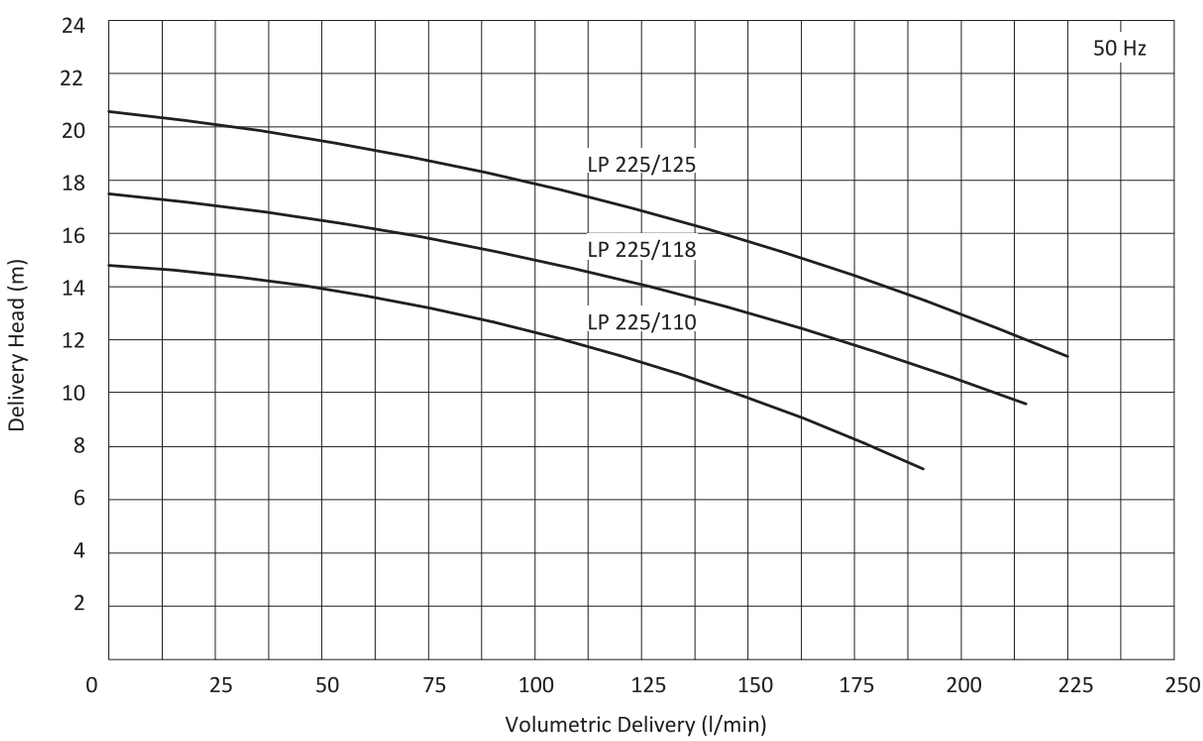
DIMENSIONS & NOMINAL VALUES

TYPE	a	b	c	Weight	Power	Voltage	Frequency	Rated current	Speed
	mm			kg	kW	V(Δ/Y)	Hz	A	rpm
LP 225/110	138	350	111	17.0	0.55	230/400	50	2.25/1.3	2780
LP 225/118				17.5	0.75			3.12/1.8	2820
LP 225/125	157	380	118	20.0	1.10			4.16/2.4	2890

* The performance curves are based on 1 mm^2/s (cSt) kinematic viscosity values and 997 kg/m^3 density

** Curve tolerance according to ISO 9906:2012 Grade 3B.

Performance Curve



LP 232 PUMP

Applications:

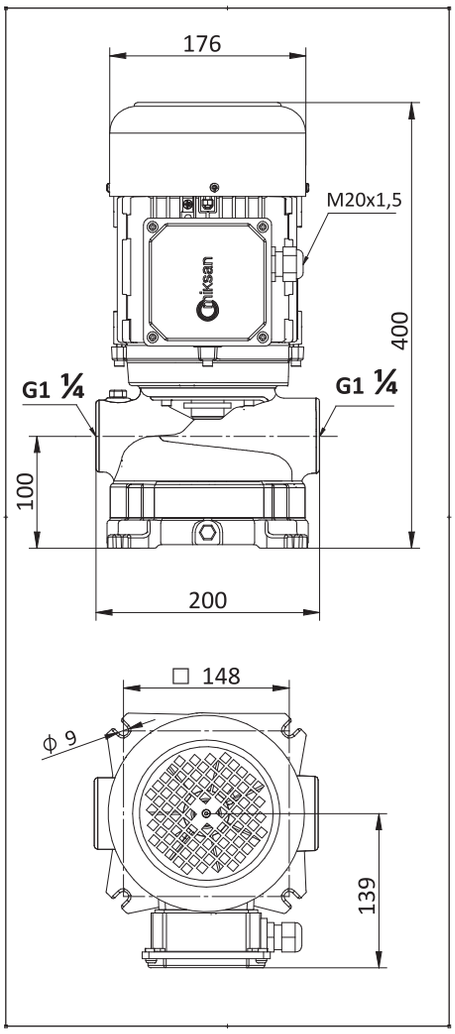
- Machine tools,
- Filtration systems,
- Circulation systems,
- Air conditioning systems,

Fluid Specifications:

- Coolants,
- Cutting oils,
- Grinding oils,
- Water
- Chip containing liquids (max. 8 mm)
- Fluid temperature 0...60 °C
- Kinematic viscosity 1...90 mm^2/s

Materials:

Pump body	: Cast iron - DIN GG25
Motor Flange	: Cast iron - DIN GG25
Impeller	: Cast iron - DIN GG25
Shaft	: Stainless steel - AISI 420 (DIN 1.4021)
O-ring	: Viton
Mechanical Seal	: SiC-SiC-Viton
	: TC-TC-Viton (optional for grinding application)
Electric motor	: 3 phase induction motor 2 pole Protection degree IP 54



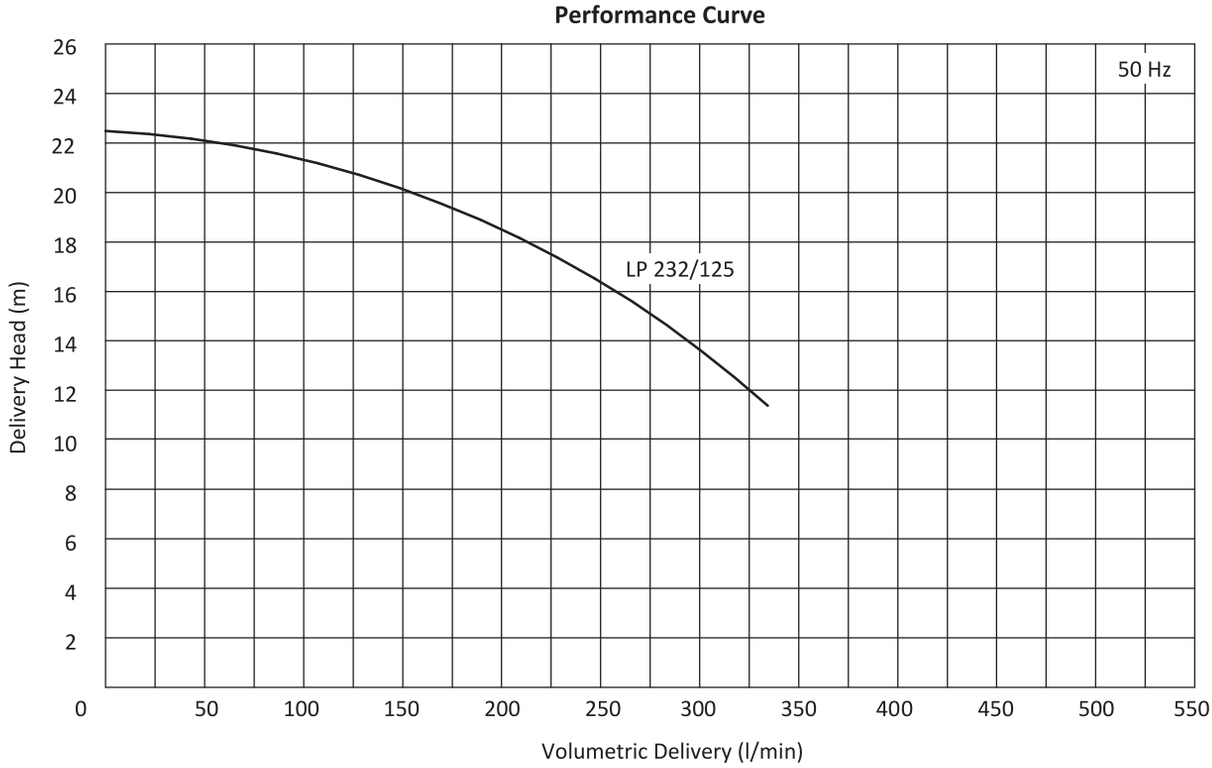
DIMENSIONS & NOMINAL VALUES

TYPE	Weight kg	Power kW	Voltage V(Δ/Y)	Frequency Hz	Rated current A	Speed rpm
LP 232/125	23.5	1.5	230/400	50	5.72/3.3	2910

* The performance curves are based on 1 mm^2/s (cSt) kinematic viscosity values and 997 kg/m^3 density

** Curve tolerance according to ISO 9906:2012 Grade 3B.

Performance Curve



LP 240 PUMP

Applications:

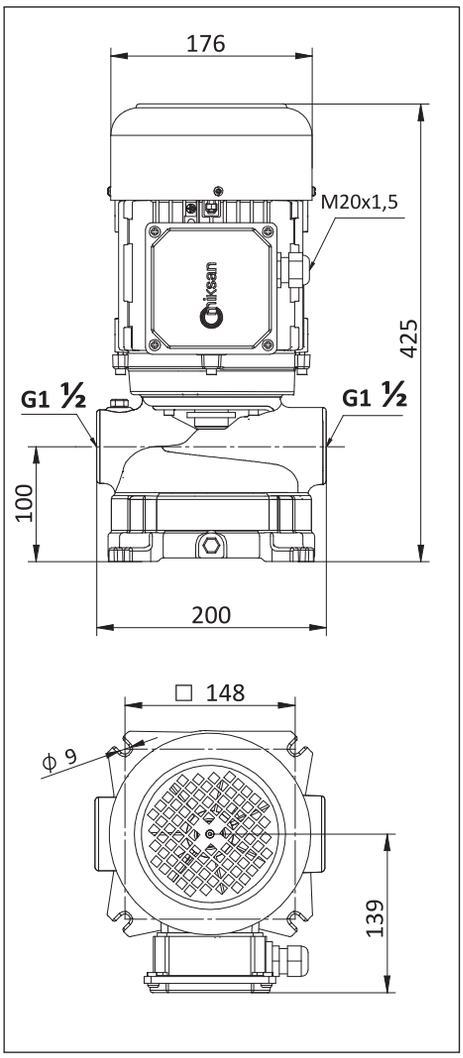
- Machine tools,
- Filtration systems,
- Circulation systems,
- Air conditioning systems,

Fluid Specifications:

- Coolants,
- Cutting oils,
- Grinding oils,
- Water
- Chip containing liquids (max. 8 mm)
- Fluid temperature 0...60 °C
- Kinematic viscosity 1...90 mm^2/s

Materials:

Pump body	: Cast iron - DIN GG25
Motor Flange	: Cast iron - DIN GG25
Impeller	: Cast iron - DIN GG25
Shaft	: Stainless steel - AISI 420 (DIN 1.4021)
O-ring	: Viton
Mechanical Seal	: SiC-SiC-Viton
	: TC-TC-Viton (optional for grinding application)
Electric motor	: 3 phase induction motor 2 pole Protection degree IP 54



DIMENSIONS & NOMINAL VALUES

TYPE	Weight kg	Power kW	Voltage V(Δ/Y)	Frequency Hz	Rated current A	Speed rpm
LP 240/125	26.0	2.2	230/400	50	7.79/4.5	2905

* The performance curves are based on 1 mm^2/s (cSt) kinematic viscosity values and 997 kg/m^3 density

** Curve tolerance according to ISO 9906:2012 Grade 3B.

Performance Curve