SCHMITT
chemical resistant pumps

T

VERTICAL NON-METALLIC CENTRIFUGAL PUMPS, SEALLESS, DRY RUN SAFE

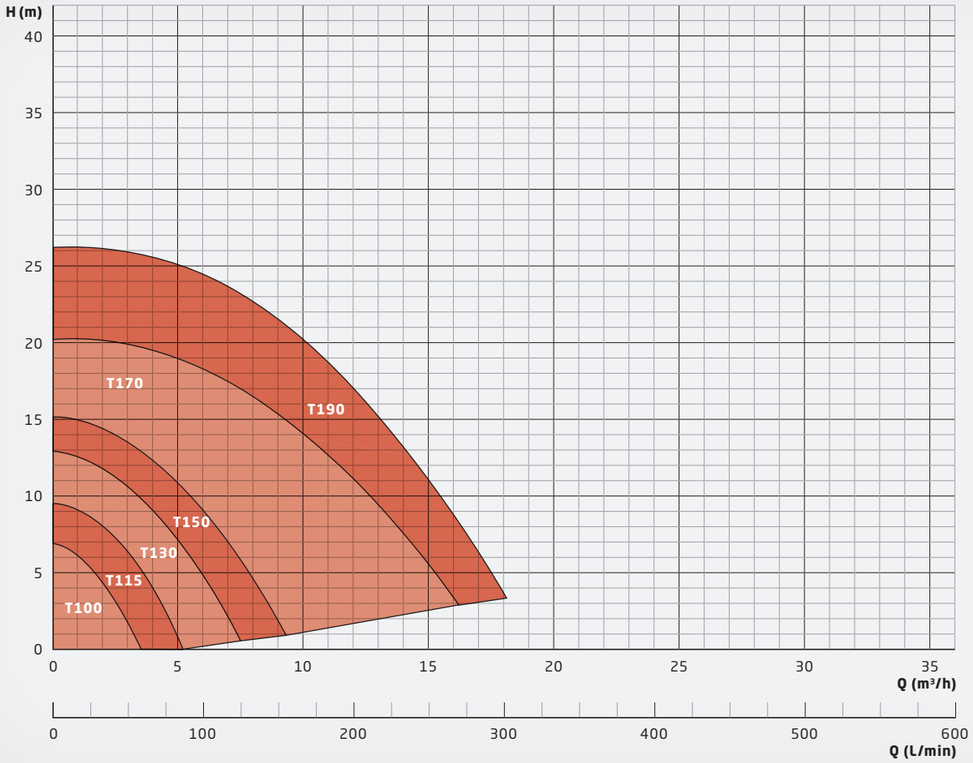
T

Vertical non-metallic centrifugal pumps, sealless, dry run safe

Housing and impeller materials: PP, PVDF
Elastomers: EPDM, FKM (e.g. Viton®), FEP, FFKM (e.g. Kalrez®)

The T series features a vertical shaft extension that directly drives the impeller. The rotating shaft runs completely contact- and abrasion-free inside the housing (“cantilever” design). This design concept eliminates the need for shaft seals and additional bearings. Optionally, the T series can be ordered with a shaft seal as a vapour barrier.

PERFORMANCE CHART



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Advantages:

+ Absolutely dry run safe because of contact-free shaft and impeller rotation
+ No abrasion into the fluid, therefore well-suited for high-purity applications
+ Maintenance-free operation as no wearing parts such as slide bearings or mechanical seals

Solid particles up to 3 mm in size and 10% volume are allowed. The maximum viscosity is 150 mPas; the maximum allowed temperature is 95°C depending on the design.

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DESCRIPTION

Characteristics

Non-metallic, chemical resistant, vertical sealless centrifugal pump, dry run safe

Features

- Absolutely dry run safe because of contact-free shaft and impeller rotation
- Maintenance-free operation as no wearing parts such as slide bearings or mechanical seals
- Available with extension tubes in different lenghts to individually adjust the immersion depth
- Available with inlet strainer to prevent rough dirt and objects from entering the pump housing
- All wetted parts made of high-quality, corrosion-resistant plastics (PVDF or PP)
- Threaded connections (ISO 228-1) as standard
- Optionally available with flange connections (from size 130)
- Universally applicable, low-noise and compact close-coupled design
- Corrosion resistant motor finish

Fields of application

Installation in return vessels, tank tops, container lids, pump sumps, etc. Delivery of acids, bases, lye or other corrosive liquids.

Useful in applications, where dry running of the pump cannot be prevented at times.

For example in the following applications:

- Plating and surface coating
- Semiconductor technology and solar cell production
- PCB and electronics manufacturing
- Wastewater and fresh water treatment
- Laboratory equipment and medical technology
- Emission controls and gas scrubbers
- Battery production and energy storage
- High-purity applications, demineralized water, ultrapure water
- Etc.

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TYPES

Characteristics

- Pump housing: PVDF, PP
- Elastomers: FKM, EPDM, FEP, FFKM

Standard motors (available from stock)

- Three-phase motors: D230 / Y400 V-3ph @ 50 Hz, D277 / Y480 V-3ph @ 60 Hz, IP 55, Ins.-Cl. F, also with PTC
- All motors from 0.75 kW have energy efficiency class IE3
- Single-phase motors (up to 1.1 kW: 230 V-1ph, 50 / 60 Hz, IP 55, Ins.-Cl F)
- ATEX-certified motors (temperature rating T3)

Special motors (available on request, for example)

- Special voltages and frequencies
- ATEX-certified motors (temperature rating T4)
- Three-phase motors with integrated drive / frequency converter
- Four-pole motors with 1450 rpm @ 50 Hz / 1650 rpm @ 60 Hz
- UL- and CSA-certified motors
- Special types of protection, e.g. IP 65
- Special insulation classes, e.g. tropical insulation
- Multi-voltage, e.g. D220-290 / Y380-500 V, 50 Hz; D220-332 / Y380-575 V, 60 Hz
- Direct-current motors (DC or BLDC)

Operating conditions

- Max. flow rate: up to 18 m^3/h
- Max. delivery head: up to 26 m
- Liquid temperature: -5 to 95°C (PVDF), resp. 0 to 80°C (PP)
- Ambient temperature: -10 to 40°C, higher temperatures on request
- Pumps can be adapted to high-density liquids (up to 2.0)
- T series pumps can run dry for unlimited time (except special versions with shaft seals)

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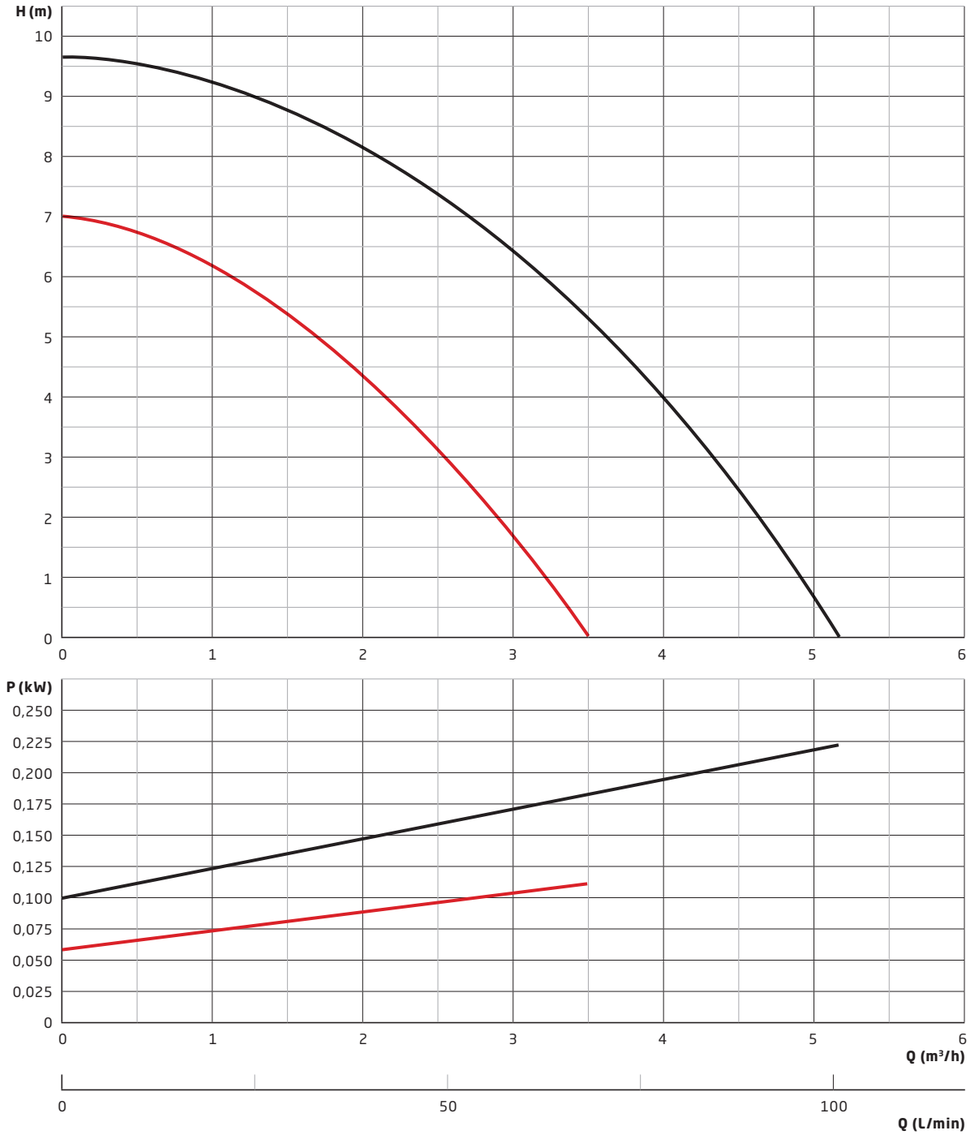
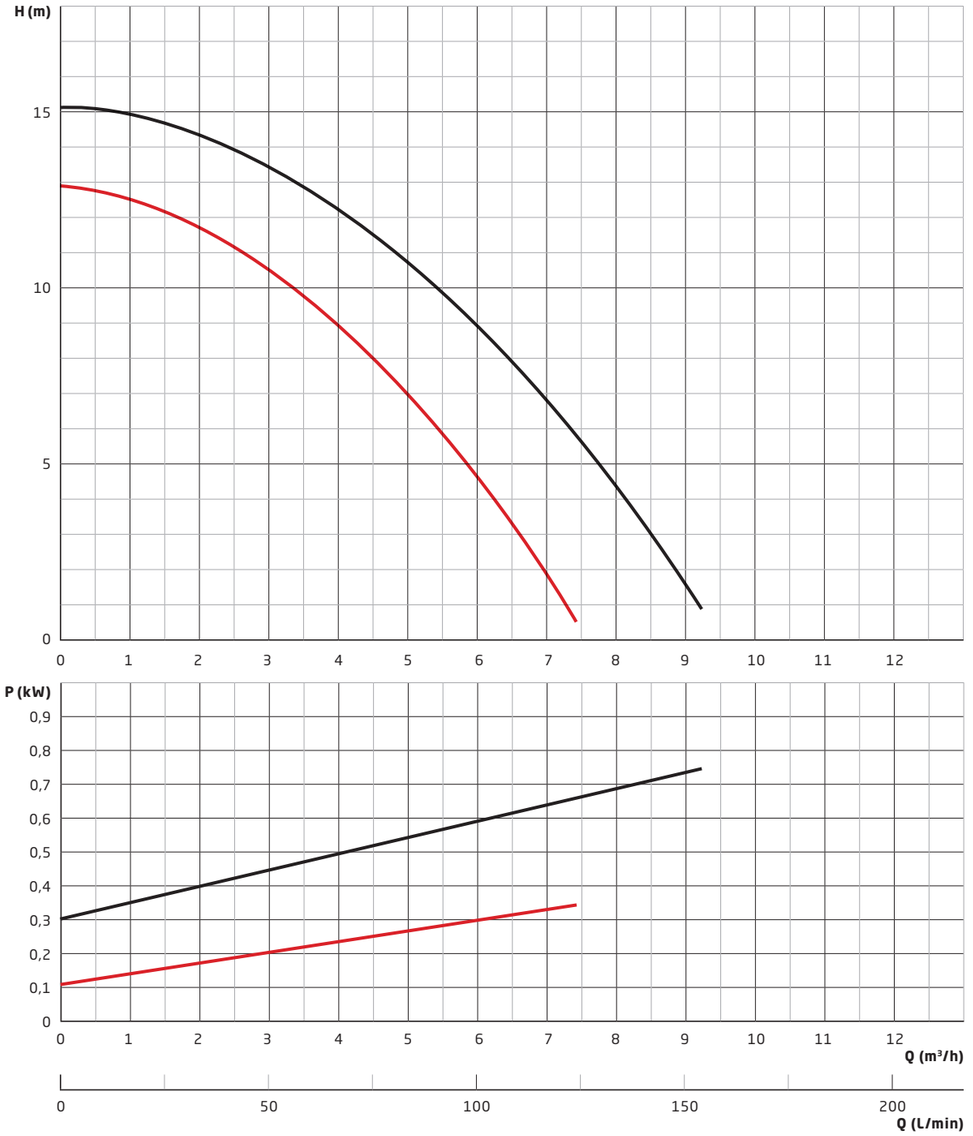
PERFORMANCE CURVE T 100 (0.12 kW) / T 115 (0.25 kW)



PERFORMANCE CURVE T 130 (0.55 kW) / T 150 (0.75 kW)



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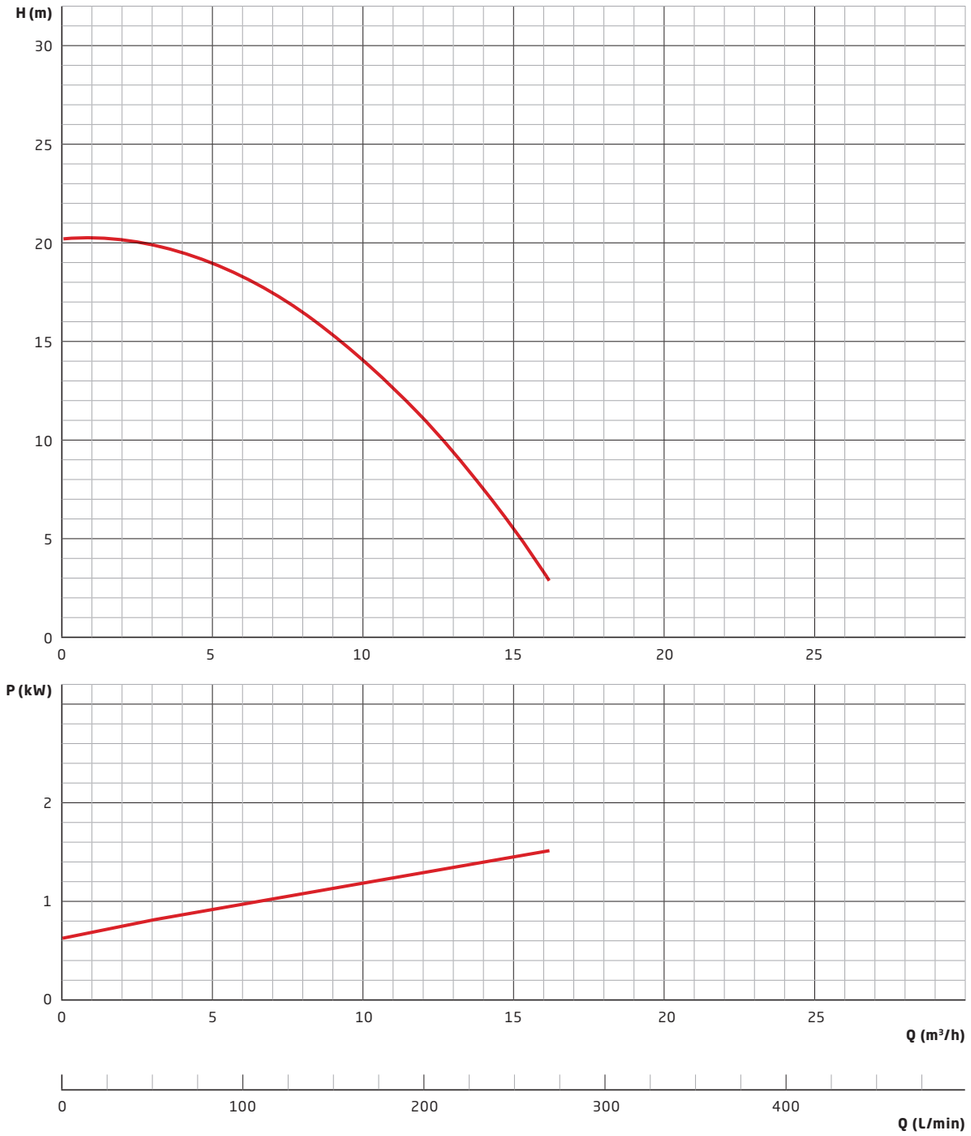
PERFORMANCE CURVE T 170 (1.5 kW)



PERFORMANCE CURVE T 190 (2.2 kW)

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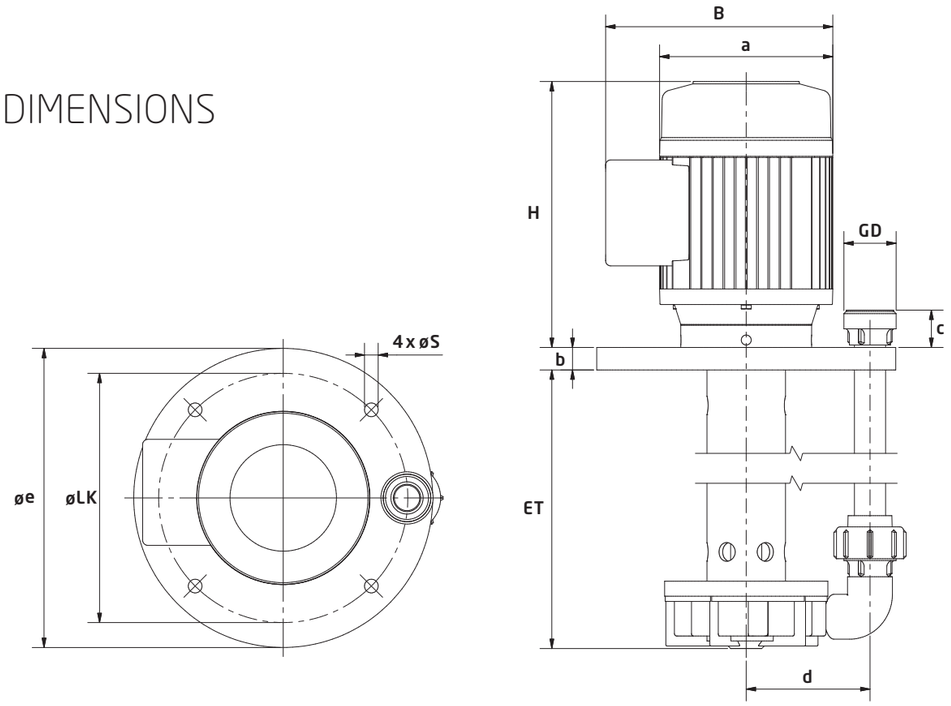
DIMENSIONS



Type	Thread	DN	ET	B (mm)	H (mm)	LK (mm)	S (mm)	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)
100	G1"	15	200	152	199	150	11	113	18	30	83	220
115	G1¼"	20	200/300/400	165	214	170	11	126	18	37	97	230
130	G1¼"	20	200/300/400	183	235	200	11	139	18	30	99	240
150	G1¼"	20	300/400/500	209	252	225	11	158	22	30	113	265
170	G1½"	25	400/600/800	230	304.5	280	13	175	22	55	130	320
190	G1½"	25	400/600/800	230	339	280	13	175	22	55	141	330

FITTINGS

SCHMITT offers an extensive range of fittings to facilitate the installation of the pump into your system:

· flange adaptors
· hose connectors
· welding connectors for stainless steel pipes
· reducers
· NPT threaded adaptors
· inlet strainers for vertical pumps
· extension pipes for vertical pumps

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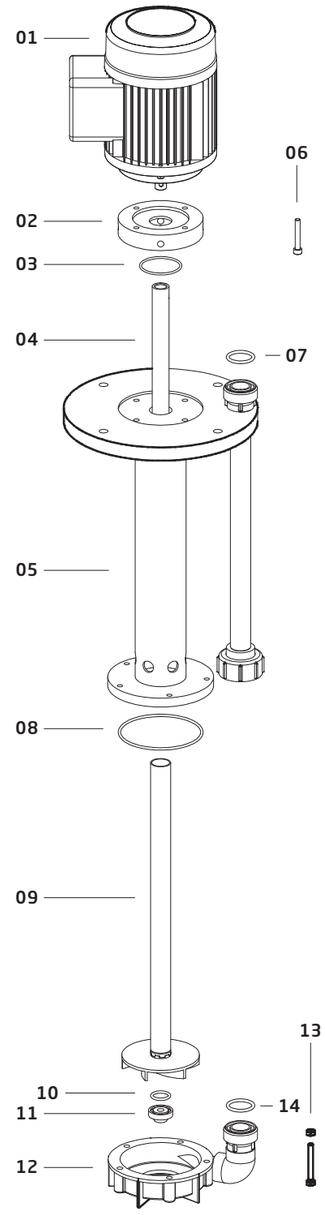
SPARE PARTS LIST

Position	Description	Available materials
01	Motor	
02	Extension flange	PP
03	O-ring	FKM, EPDM, FEP, FFKM
04	Shaft, slotted pin, featherkey	Steel, stainless steel
05	Support tube	PP, PVDF
06	Cylinder screw, washer, nut	V4A
07	O-ring pressure side	FKM, EPDM, FEP, FFKM
08	Housing seal	FKM, EPDM, FEP, FFKM
09	Impeller with shaft sleeve	PP, PVDF
10	O-ring	FKM, EPDM, FEP, FFKM
11	Threaded cap	PP, PVDF
12	Pump housing	PP, PVDF
13	Hexagon bolt, nut, washer	PP, PVDF
14	O-ring	FKM, EPDM, FEP, FFKM



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