

Screw Spindle Pumps KTSV

**KNOLL**  
.It works

Issue 07-2025



## Properties

- Long service life thanks to high resistance to wear
- Virtually pulsation-free
- Good temperature stability
- Minimal noise generation
- Gentle conveying of the medium
- Excellent suitability for dosing applications
- Customized solution for customer-specific applications

## Specification

Flow rate: 0.2 – 900 l/min  
 Pressure increase: 1 – 200 bar  
 Inlet pressure\*: max. 20 bar  
 Temperature: 160 °C  
 Kinematic viscosity: 1 – 12,000,000 mPas

\* Higher pressure and temperature ranges available upon request

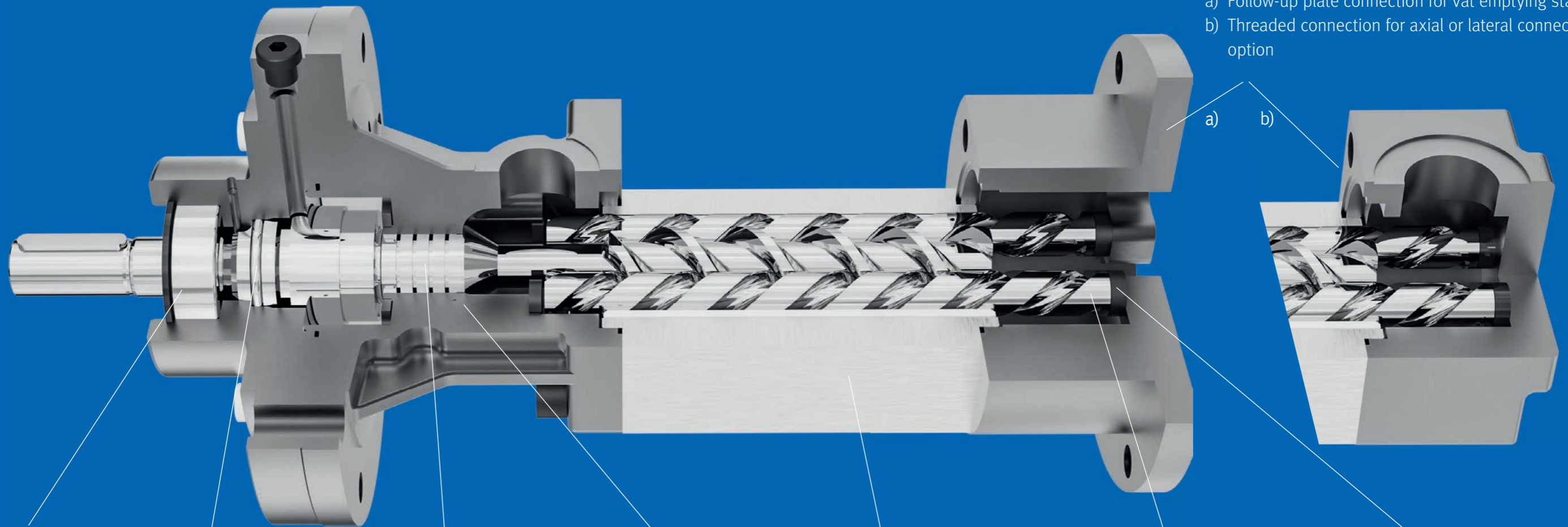
## Layout

KNOLL screw spindle pumps of the KTSV type are self-priming, positive displacement pumps that are suitable for both lubricating and non-lubricating media. These include oils, highly viscous adhesives, as well as demineralised water.

The pump comprises 3 main components:

1. Suction housing, 2. Spindle housing with a drive spindle and two co-rotating running spindles,
3. Pressure housing with sealed shaft feedthrough and main bearing

Suction housing with  
 a) Follow-up plate connection for vat emptying stations  
 b) Threaded connection for axial or lateral connection option



External main bearing  
 • Long service life  
 • Thermally stable  
 • Optional:  
 Bearing combinations with angular contact ball bearings

Labyrinth for effective pressure reduction  
 • High efficiency  
 • High viscosity media, model without labyrinth  
 • Optional: Special coating for wear and temperature resistance

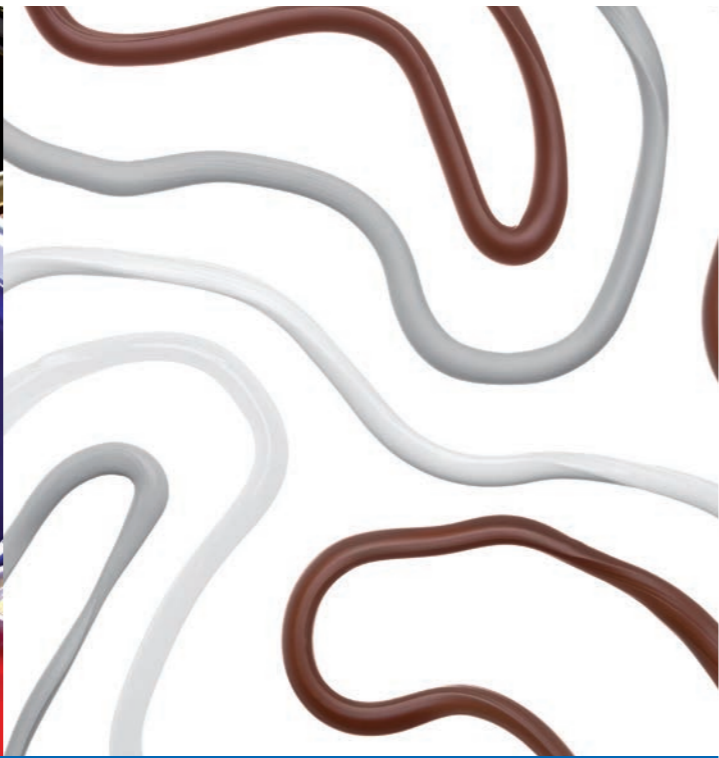
Spindle housing precision-manufactured from ceramic, making it virtually wear-free  
 • Optional: One-piece spindle housing, specially hardened or coated

Screwed-in carbide plate  
 • Optional: Wear-resistant axial thrust compensation

Installation of various shaft seals  
 • Various mechanical seal variants  
 • Shaft seal  
 • Rotary seal

Optional ceramic piston bushing  
 • Minimized wear at the throttle gap

Screw spindles made of tool steel, specially hardened and precision-manufactured  
 • Long service life and high efficiency  
 • Optional: Special coating or special material versions



### Applications

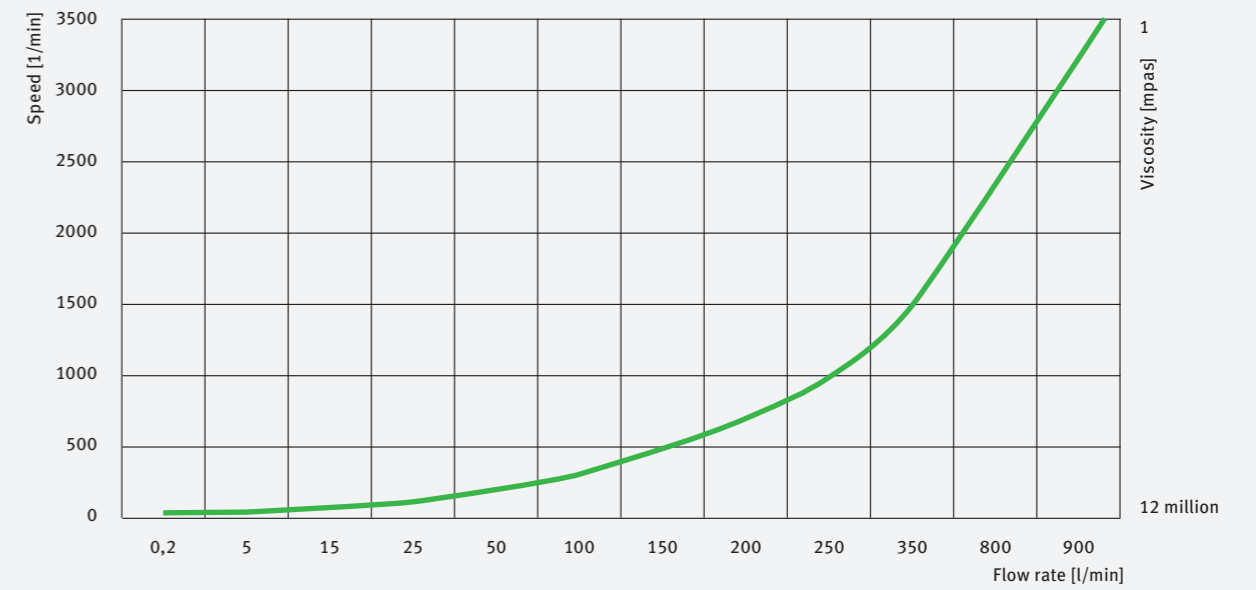
- Adhesive application with A+B components
- Automotive industry
- Chemical industry
- Aerospace industry
- Wind power and energy

### Equipment

- Transfer pump
- Dosing pump
- Mixing and dosing systems
- Hot melt adhesive applications (160 °C)
- Vat emptying pump
- Booster pump for higher inlet pressures



### Dependence on speed/flow rate and viscosity



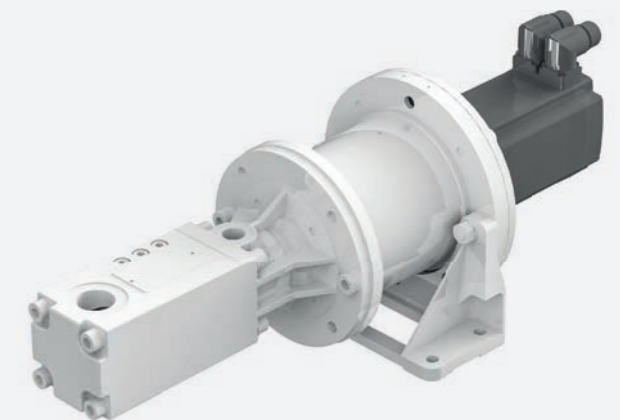
### Models

- Horizontal + vertical installation (dry or submerged)
- Suction or discharge pump
- Spindle pitch according to the modular system
- Various sealing options
- Material selection according to application and customer requirements

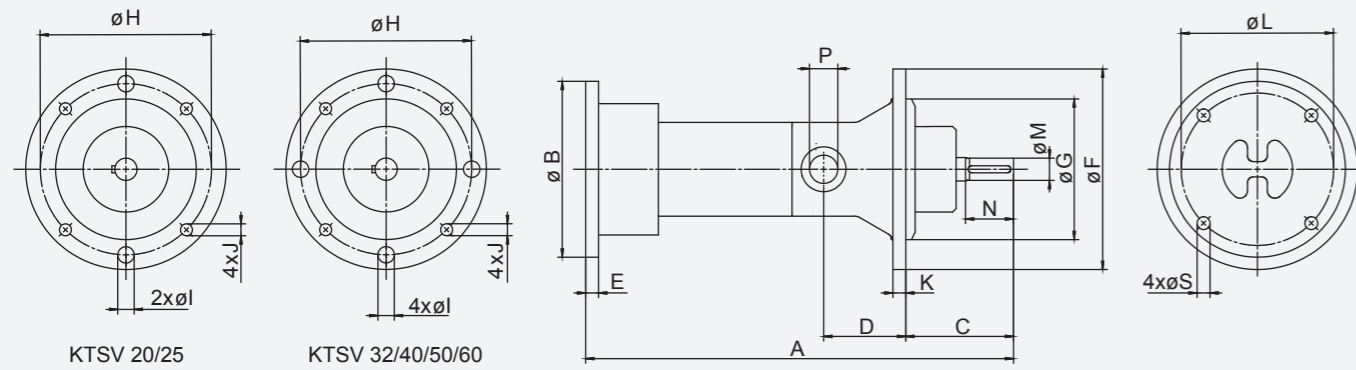
Model with follow-up plate



Model with suction housing

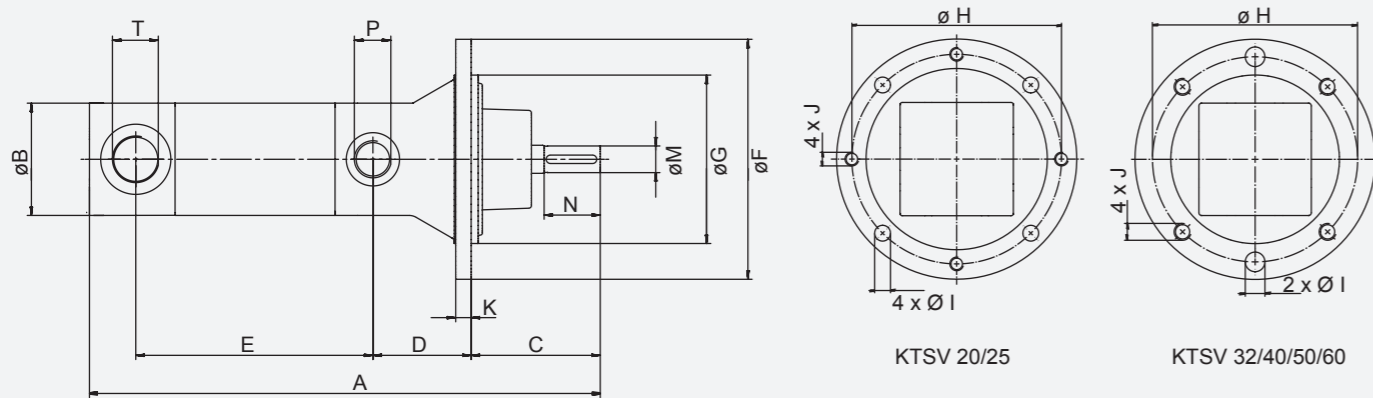


## Dimensions of KTSV screw spindle pump with follow-up plate connection



Pump size KTSV	Key dimensions [mm]													Pressure connection [mm]	Shaft end [mm]		Weight [kg]
	A	B	C	D	E	F	G	H	I	J	K	L	S		M	N	
20 ...	341	80	92	70	144	171	120	146	14	M12	11	130	11	G ½	19	40	12
25 ...	366	80	92	70	169	171	120	146	14	M12	11	130	11	G ¾	19	40	13
32 ...	440	100	100	82	213	212	155	185	14	M12	14	130	11	G 1	24	40	24
40 ...	508	120	105	84	272	212	155	185	14	M12	14	130	11	G 1½	28	45	36
50 ...	599	140	119	97	329	240	170	205	18	M16	17	130	11	G 1½	32	55	55
60 ...	751	176	143	102	408	350	250	300	22	M20	19	130	13	SAE2	48	65	114

## Dimensions of KTSV screw spindle pump with suction housing



Pump size KTSV	Key dimensions [mm]											Pressure con- nection [mm]	Suction connection [mm]	Shaft end [mm]		Weight [kg]
	A	B	C	D	E	F	G	H	I	J	K			M	N	
20 ...	341	80	92	70	144	171	120	146	14	M12	11	G ½	G 1	19	40	12
25 ...	366	80	92	70	169	171	120	146	14	M12	11	G ¾	G 1	19	40	13
32 ...	440	100	100	82	213	212	155	185	14	M12	14	G 1	G 1½	24	40	24
40 ...	508	120	105	84	272	212	155	185	14	M12	14	G 1½	G 2	28	45	36
50 ...	599	140	119	97	329	240	170	205	18	M16	17	G 1½	G 2	32	55	57
60 ...	751	176	143	102	408	350	250	300	22	M20	19	SAE 2	SAE 3	48	65	121

Weight and dimension specifications refer to the models shown.

The KTSV screw pump is a solution tailored precisely to the customer's specific application.

What is your application?

KTSV  
Checklist

Contact details

Company

Address

Service representative

Telephone/Email /

Technical specifications

Medium

Flow rate

l/min

Viscosity

mPas

Density

kg/dm³

Temperature

°C

Concentration

%

Particle size

mm

Inlet pressure

bar

Outlet pressure

bar

Installation

Horizontal

Vertical

Adjustment range

Pipework

Pressure limiting valve

Shaft seal

Mechanical seal

Single-acting

Double-acting for quench

Double-acting for sealing pressure

Radial shaft seals PTFE compound

Motor

Voltage

Frequency

Protection class

Heat class

Regulations

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KTSV