

LIQUID DISPLACEMENT  
PIPETTOR



# LIQUID DISPLACEMENT PIPETTOR

STRATEC's Liquid Displacement Pipettor is a steel probe liquid filled pipetting module for highest pipetting performance. A liquid filled system is less prone to environmental influences than an air displacement pipettor. Minimal carry over and low water consumption is the result of a seamless, low retention fluidic channel,

optimized for low dead volume and low eddying. Steel probes are easy to replace by end users with one thumb-screw. STRATEC offers two configurations with different characteristics with regard to individual space and footprint requirements. Both configurations have the same functionality.



Optimized fluidic channel for high precision pipetting and highest cleaning efficiency

Highly flexible pipetting profiles

Optical Liquid Verification (OLV) incl. dispense volume supervision

Self-diagnosis ready

Process monitoring

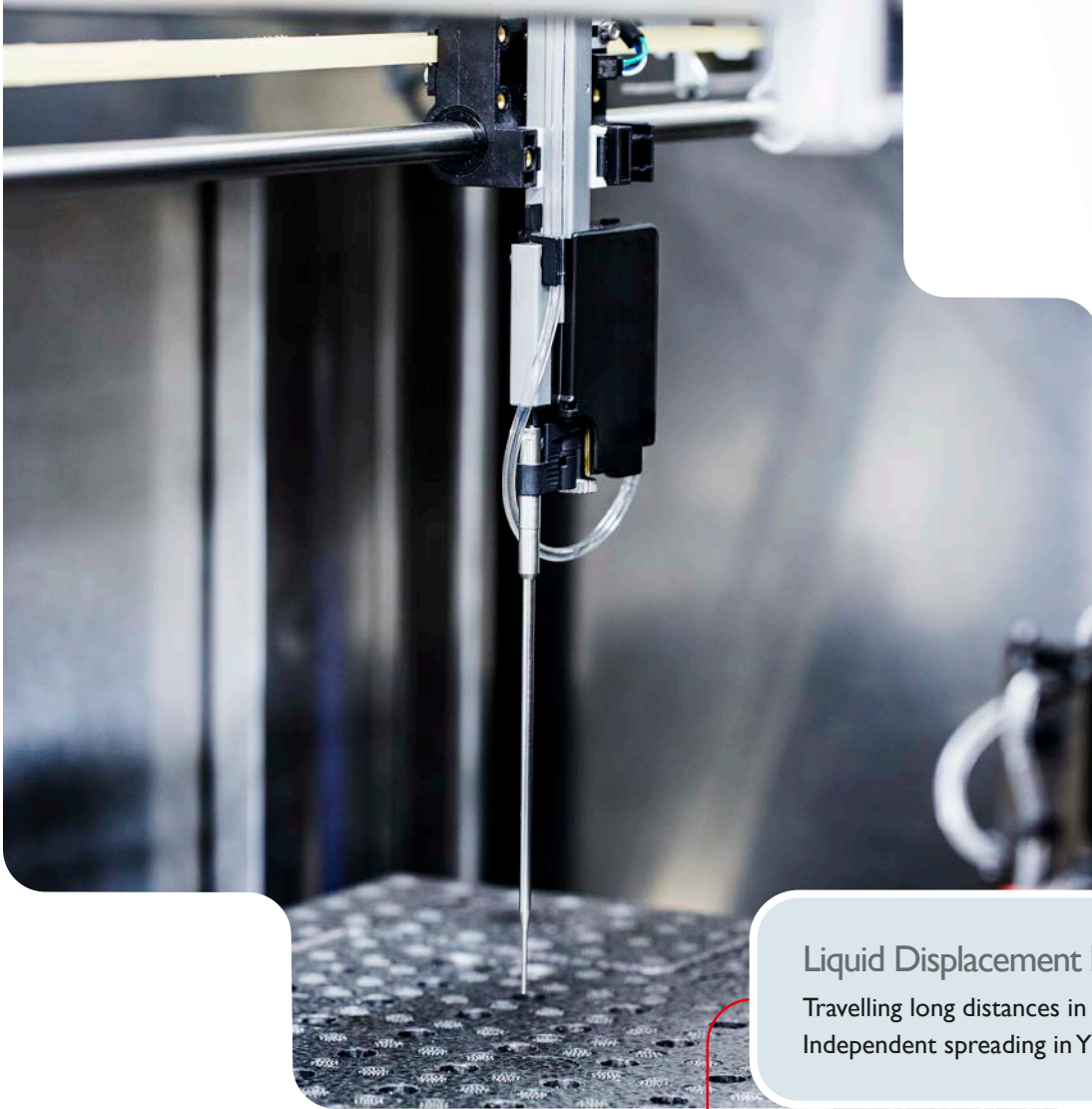
Flexible applications incl. multi-aspirate and multi-dispense

Cost efficient

Integrated tubing coil exchangeable by end user

**Ceramic components** for enhanced lifetime and maintenance free syringe

**Syringe drive, syringe and liquid reservoir** fully integrated into pipettor housing for best pipetting results



## Liquid Displacement Pipettor

Travelling long distances in Z direction  
Independent spreading in Y direction

All liquid displacement pipetting modules are equipped with sensors, enabling advanced process controls and smart functions. Thus, qualitative assessments of each pipetting cycle are enabled and highest pipetting performance is guaranteed.

**Pressure sensor** enables clot detection and monitoring of rinse pressure

**Optical Liquid Verification (OLV)** enables volume monitoring of aspirated and dispensed liquid

**Capacitive liquid level detection (cLLD)** for confirmation of liquid presence and clot detection

Comparing specific measured values with reference values according to STRATEC protocol enables **intelligent functional** checks

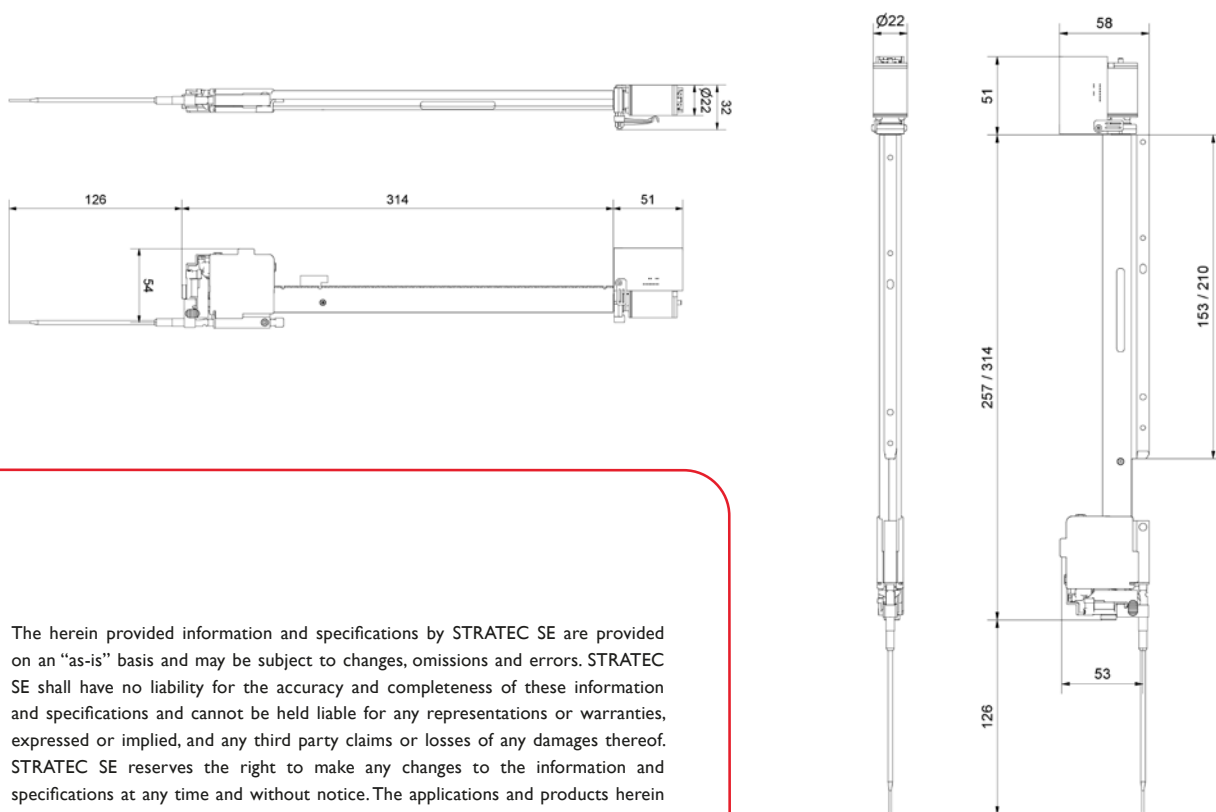
**Encoder** on pump drive enables dynamic motion control for highest pipetting performance



## SPECIFICATIONS

<b>Drive</b>	Brushless DC motor with rotary encoder and home sensor		
<b>Nominal volume</b>	1000 $\mu$ l		
<b>Pipetting range</b>	1 – 1000 $\mu$ l		
<b>Volume resolution</b>	0.33 $\mu$ l		
<b>Max. pump drive speed</b>	1000 $\mu$ l/s		
<b>Pipetting performance</b>	<b>Target volume</b>	<b>Accuracy*</b>	<b>Precision CV*</b>
	5 $\mu$ l	$\leq 20.0 \%$	$\leq 2.0 \%$
	10 $\mu$ l	$\leq 10.0 \%$	$\leq 1.0 \%$
	100 $\mu$ l	$\leq 2.0 \%$	$\leq 0.3 \%$
	1000 $\mu$ l	$\leq 0.6 \%$	$\leq 0.2 \%$
<b>Sensors</b>	Position encoder for syringe drive, probe capacity sensor, optical liquid/air sensor at probe tip, pressure sensor, supply voltage supervision		
<b>Recommended system liquid</b>	DI water		
<b>Expected lifetime</b>	Several million dispenses/fluid transfers		
<b>Max. inlet rinse pressure</b>	5 bar		
<b>Power requirements</b>	24 V <sub>DC</sub> $\pm$ 1.5 V <sub>DC</sub> , 400 mA		
<b>Communication</b>	RS232, TCP/IP		

\*Pipetting performance is specified based on EN ISO 8655 standards under optimized conditions.



The herein provided information and specifications by STRATEC SE are provided on an "as-is" basis and may be subject to changes, omissions and errors. STRATEC SE shall have no liability for the accuracy and completeness of these information and specifications and cannot be held liable for any representations or warranties, expressed or implied, and any third party claims or losses of any damages thereof. STRATEC SE reserves the right to make any changes to the information and specifications at any time and without notice. The applications and products herein may not be available in all markets.

STRATEC is a registered trademark. © 2023, STRATEC SE, Germany, all rights reserved.