

## AIR DISPLACEMENT PIPETTOR



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STRATEC air displacement pipettors are fully automatic pipetting modules using disposable tips (DiTis). The usage of DiTis prevents cross-contamination. Integration of the syringe into the pipettor housing close to the DiTi, results in the omission of a tubing system connecting a DiTi to an externally

placed syringe. Minimized internal air volumes lead to highest pipetting performance and precision. Considering our partner's design requests, STRATEC offers two configurations with different characteristics with regard to individual space and footprint requirements. Both configurations have the same functionality.

Highest pipetting performance

Self-diagnosis ready

Flow profile parametrization and aspirate/dispense verification

Prevention of cross-contamination

Minimized dead volume

Flexible applications incl. multi-aspirate and multi-dispense

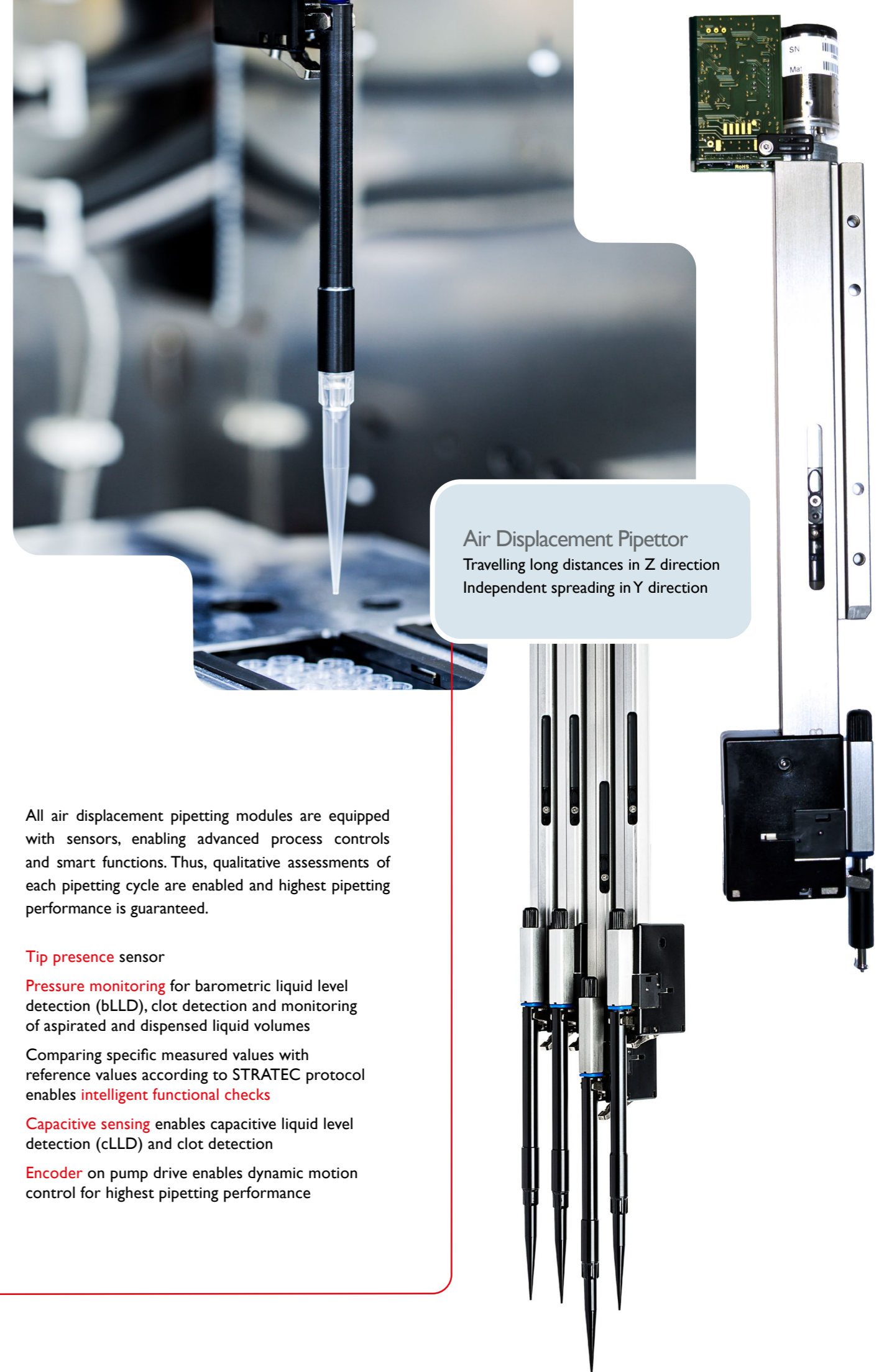
Maintenance free

Free choice of tips

**Open system** allows usage of tips from many manufacturers

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

**Syringe drive and syringe** fully integrated into pipettor housing



**Air Displacement Pipettor**  
Travelling long distances in Z direction  
Independent spreading in Y direction

All air 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.

**Tip presence sensor**

**Pressure monitoring** for barometric liquid level detection (bLLD), clot detection and monitoring of aspirated and dispensed liquid volumes

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

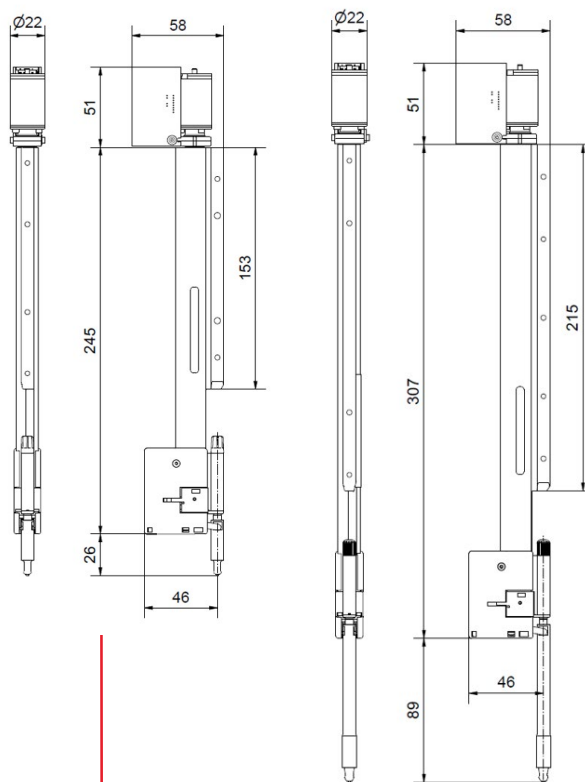
**Capacitive sensing** enables capacitive liquid level detection (cLLD) and clot detection

**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 µl			
<b>Pipetting range</b>	1 – 1000 µl			
<b>Volume resolution</b>	0.33 µl			
<b>Max. pump drive speed</b>	1000 µl/s			
<b>Pipetting performance</b>	<b>Tip size</b>	<b>Target volume</b>	<b>Accuracy*</b>	<b>Precision CV*</b>
	300 µl	5 µl	≤ 20.0 %	≤ 2.0 %
	300 µl	10 µl	≤ 10.0 %	≤ 1.0 %
	300 µl	100 µl	≤ 2.0 %	≤ 0.3 %
	1100 µl	1000 µl	≤ 0.8 %	≤ 0.3 %
<b>Sensors</b>	Position encoder for syringe drive, probe capacity sensor, pressure sensor, supply voltage monitoring			
<b>Expected lifetime</b>	Several million dispenses/fluid transfers			
<b>Disposable tip compatibility</b>	Adapters for tips between 50 µl and 1100 µl from several manufacturers available			
<b>Power requirements</b>	24 V <sub>DC</sub> ± 1.5 V <sub>DC</sub> , 400 mA			
<b>Communication</b>	RS232, TCP/IP			

\*Pipetting performance is specified based on EN ISO 8655-5 standards under optimized conditions with suitable tip



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