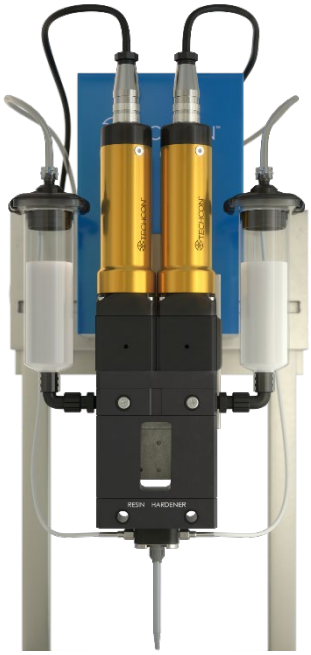
Micro-Meter Mix System

TS8200D Data Sheet

TECHCON



True volumetric measuring, mixing, and dispensing of 2-component materials

The TS8200D Series Micro-Meter Mix is a precision volumetric mixing and dispensing system for 2-component material. It consists of 2 progressive cavity pumps integrated in a fluid manifold connected to the static mixing nozzle. Part A and part B of the material is precisely fed by the progressive cavity pump with the correct ratio into the static mixing nozzle to provide accurate mixing and dispensing output.

Every component of the pump was designed to the highest tolerances and manufactured to the strictest degree of precision, ensuring world class accuracy and repeatability.

TS580D-MM smart controller features an intuitive touchscreen user-interface for easy setup and operation. Pump calibration is quick and easy. Dispensing parameters can be quickly dialed in on the touchscreen.

KEY FEATURES AND BENEFITS:

- True Volumetric/Positive Displacement technology to achieve +/- 1% variation in dispense output
- High quality mixing to ensure proper material curing
- Continuous Flow with adjustable flow rate to provide continuous dispensing process for efficient operation
- Independent of pressure and viscosity change to ensure accurate and precise results
- Suck back action to prevent material dripping
- Quick and easy cleaning to reduce down-time
- Internal fluid pressure alarm to prevent cross-contamination

TYPICAL APPLICATIONS:

- Bonding
- Glob-Top Potting and Encapsulation
- Potting of Electronic Components
- Battery Pack Sealing
- Thermal Paste Dispensing
- Filling

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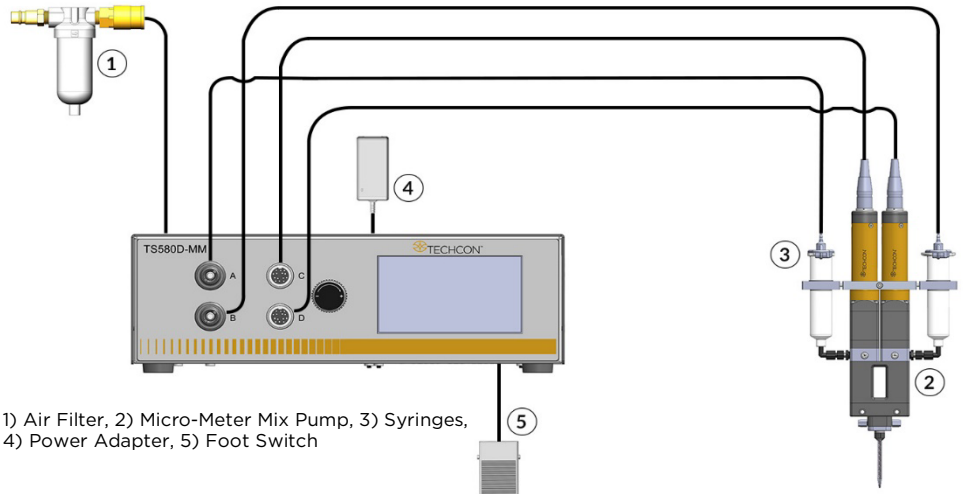
TYPICAL SETUP



1) Air Filter, 2) Micro-Meter Mix Pump, 3) Syringes, 4) Power Adapter, 5) Foot Switch

SPECIFICATIONS

	100	200	300	400	500
Length (mm) L x W x D	276 x 69 x 33	276 x 69 x 33	276 x 69 x 33	302 x 69 x 33	323 x 69 x 33
Length (inches) L x W x D	10.9 x 2.7 x 1.3	10.9 x 2.7 x 1.3	10.9 x 2.7 x 1.3	11.9 x 2.7 x 1.3	12.7 X 2.7 x 1.3
Weight (kg)	1.24	1.24	1.24	1.33	1.47
Weight (lbs.)	2.74	2.74	2.74	2.95	3.25
Motor	24V DC, incremental encoder				
Repeatability	+/- 1% per pump*				
Dispense Accuracy	> 99%				
Fluid Inlet Pressure - Max	Up to 2 bar (30 psi) for viscosity of 1,000 cps or less, up to 5.5 bar (80 psi) for viscosity greater than 1,000 cps**				
Fluid inlet type	1/8" NPT				
Mixing Nozzle	K-type, Standard Bayonet				
Mounting	M4 x 35MM, SHC, S.S				
Operating Temperature	10 – 40°C (50 - 104°F)				
Fluid Temperature	10 – 40°C (50 - 104°F)				
Storage Conditions	10 – 40°C (50 - 104°F)				
Fluid Viscosities	1 - 300K Cps (m.Pa.s)				

WETTED PARTS

Stator Housing	Anodized Aluminium
Rotor	Stainless Steel
Stator	PFE
Flex Coupling	Stainless Steel, Polyolefin
Shaft Seal	UHMW PE
Seal Block, Manifold Plugs	Delrin
Manifold Gaskets	Viton
Pump O-rings	BUNA N
Vent Seals	Fluorosilicone
Fluid Inlet Fittings	UHMWPE, Nylon

*Accuracy measurements are taken for one complete revolution. Absolute deviation in volumetric dispense accuracy exist for incomplete revolutions and may also occur for certain dispensing fluid.

**2 bar self-sealing is for fluid with viscosity of 1000 Cps or lower. The pump can handle up to 5.5 bar for 300K Cps viscosity fluid.

PUMP COMBINATION SELECTION GUIDE

Flow rates vs Ratio Table for different pump types.

Pump Size								
Ratio	**TS8200D-100 (100x100)**	**TS8200D-200 (200x200)**	**TS8200D-2100 (200x100)**	**TS8200D-300 (300x300)**	**TS8200D-3200 (300x200)**	**TS8200D-3100 (300x100)**	**TS8200D-400 (400x400)**	**TS8200D-4300 (400x300)**
1:1	0.26 – 2.64	1.03 – 10.34	1.03 – 2.64	1.76 – 17.60	1.76 – 10.34	1.76 – 2.64	2.64 – 26.40	2.64 – 17.60
2:1	0.39 – 1.98	1.55 – 7.75	0.78 – 3.96	2.64 – 13.20	1.55 – 13.20	1.32 – 3.96	3.96 – 19.80	2.64 – 19.80
4:1	0.66 – 1.65	2.58 – 6.46	0.66 – 6.46	4.40 – 11.00	2.59 – 11.00	1.10 – 6.60	6.60 – 16.50	4.40 – 16.50
6:1	0.92 – 1.54	3.62 – 6.03	0.92 – 6.03	6.16 – 10.26	3.62 – 10.26	1.03 – 9.24	9.24 – 15.40	6.16 – 15.40
8:1	1.19 – 1.48	4.65 – 5.81	1.19 – 5.81	7.92 – 9.90	4.65 – 9.90	1.19 – 9.90	11.88 – 14.85	7.92 – 14.85
10:1	-	-	1.45 – 5.68	-	5.69 – 9.68	1.45 – 9.68	-	9.68 – 14.52

Pump Size							
Ratio	**TS8200D-4200 (400x200)**	**TS8200D-4100 (400x100)**	**TS8200D-500 (500x500)**	**TS8200D-5400 (500x400)**	**TS8200D-5300 (500x300)**	**TS8200D-5200 (500x200)**	**TS8200D-5100 (500x100)**
1:1	2.64 – 10.34	-	6.82 – 68.20	6.82 – 26.40	6.82 – 17.60	6.82 – 10.34	-
2:1	1.98 – 15.51	1.98 – 3.96	10.23 – 51.15	5.12 – 39.60	5.12 – 26.40	5.12 – 15.51	-
4:1	2.59 – 16.50	1.65 – 6.60	17.05 – 42.62	6.60 – 42.62	4.40 – 42.62	4.26 – 25.85	4.26 – 6.60
6:1	3.62 – 15.40	1.54 – 9.24	23.87 – 39.78	9.24 – 39.78	6.16 – 39.78	3.98 – 36.19	3.98 – 9.24
8:1	4.65 – 14.85	1.49 – 11.88	30.69 – 38.36	11.88 – 38.36	7.92 – 38.36	4.65 – 38.36	3.84 – 11.88
10:1	5.69 – 14.52	1.45 – 14.52	-	14.52 – 37.51	9.68 – 37.51	5.69 – 37.51	3.75 – 14.52

Units = ml/min

*Accuracy measurements are taken for one complete revolution. Absolute deviation in volumetric dispensing accuracy exists for incomplete revolutions and may also occur for certain dispensing fluid.

**Flows are based on a standard material, similar to Vaseline, and can vary by viscosity, density, and ratio. The maximum efficient speed of the motor decreases as viscosity increases. Neglecting specified guidelines may lead to pulsation, suggesting that the rotor seals the cavity before it's adequately filled with adhesive.