# M-700 CP Series Microfluidizer® Processor



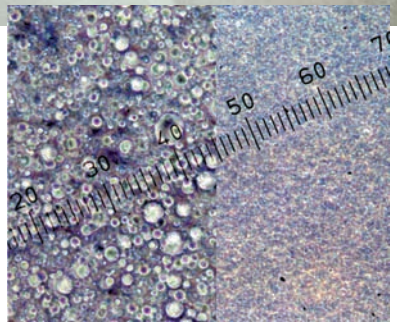
## Constant Pressure Microfluidizer Processor for Continuous High Shear Fluid Processing

### M-700 Constant Pressure Series Microfluidizer Processors - Models M-7250 and M-710

### Recommended for:

- Immiscible Liquid Emulsions
- Solids in Liquid Suspensions
- Submicron Particle Size Reduction
- Deagglomeration & Dispersion

Microfluidics produces patented Microfluidizer processor equipment with high-pressure, fixed-geometry interaction chambers that impart high shear rates to product formulations. The M-700 generates up to 40,000 psi operating pressure for premium results at an affordable cost.




*Patented Microfluidizer processor creates uniform dispersions with submicron size particles.*

*M-7250-30 CP XP (Explosion Proof)*

## M-7250 and M-710 Constant Pressure Series Microfluidizer processors combine superior, scaleable results for pilot and production environments

### Key benefits:

- Increased reliability and reduced downtime from less stress.
- Significantly quieter operation
- Ensures the fewest number of passes; most processes require only 1 pass.

### Key features:

- Proven to be highly reliable at operating pressures up to 40,000 psi in pilot and production environments.
- Generates the highest shear rates of any fluid processor on the market today. This results, most often, in achieving desired product quality in a single pass.
- Patented interaction chamber — wear-resistant construction; geometrically fixed design ensures that entire product stream will encounter equal energy per unit fluid volume.
- In-line cleaning with no disassembly required.
- All stainless steel construction.

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## Operating Principle

The digitally controlled constant pressure M-700 series Microfluidizer® high shear fluid processors achieve a nearly uniform pressure profile. Coupled with its proprietary fixed geometry interaction chambers, the constant pressure equipment ensures that all product is exposed to the same level of shear force. This means that fewer passes are required in production and translates directly to cost savings. Operating at constant process pressure also minimizes component stress, resulting in longer life and significantly increasing machine reliability.

The intelligent built-in pump position transducers automatically adapt to changing requirements and easily maintain constant process pressure. This full digital control of the dual high pressure intensifier pumps ensures that the product flows at constant pressure and velocities through the interaction chambers. This control eliminates pressure spikes, provides extremely uniform processing, and permits the M-700 CP system to operate more quietly and efficiently.

The constant pressure system offers an explosion-proof (XP/ATEX) version which utilizes an explosion-proof motor and sensors and incorporates control technology that automatically shuts the system down.

| | |
|---|---|
| Sample Size | 1 gallon to continuous |
| Power Requirements | 3 phase electric service, 208/230/460V 50-100 HP |
| Utility Requirement | Cooling water for hydraulic oil heat exchanger and optional process product heat exchanger |
| Dimensions | model dependent |
| Weight | 2000-7000 lbs (with oil) [900 kg-3182 kg] |

| Operating Pressure (psi) | *Nominal Flow Rate (gpm) (model dependent) | |
|---|---|---|
| | M-7250 | M-710 |
| 5K | 4 | 15 |
| 10K | 4 | 4.5-9.0 |
| 20K | 2 | 2.2-4.4 |
| 30K | 1.3 | 1.6-3.0 |
| 40K | 1.1 | 1.1-2.3 |

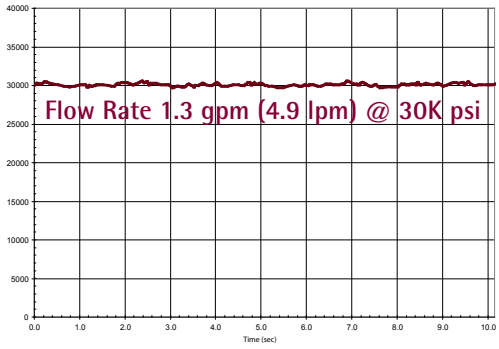
*water

## Available Options

- Chamber sets - diamond or ceramic optimized for your product and process
- Hazardous environments - compliant to NEC 505 or CE-ATEX
- Pressure transducer and display
- CIP and SIP for sanitary and/or sterile manufacturing requirements
- Automated processes with PLC and/or PC control options
- PC based data acquisition and transmission via Ethernet (requires Windows XP)
- Integration with process automation DCS or SCADA available
- Validatable under Part II, CFR 21 for US FDA regulated environments

### Ideal Pump


### Pressure Profile of M-7250-30 Digitally Controlled CP Processor

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*Microfluidics reserves the right to change specifications without notice.*