

Multi-stage Inline High Shear Mixing

The BSM CX is a high intensity rotor stator machine that offers high to extreme shear rates and tip speeds. The result is a mechanical shear that provides optimal dispersions and emulsions for your process.

Up to 9 Shear Zones

The BSM CX will produce dispersion of soft particles to under 1 micron, or hard particles down to 1-2 microns, with higher production rates compared to competitive designs. Each rotor stator shear head has a double ring design, so there are three high intensity work zones at each shear head. Models with three shear heads provide nine high shear work zones. Tremendous mechanical and hydraulic energy is created to apply maximum shear forces for your toughest processing needs.

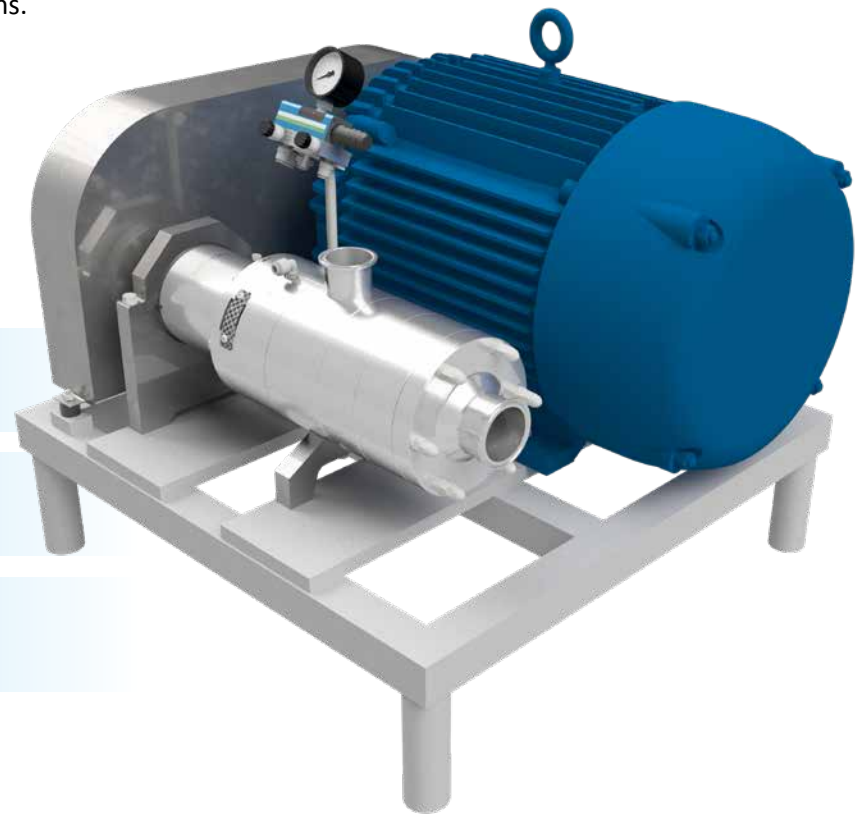
The BSM CX can be used on a wide range of applications. It can also be used in lieu of post process filtration, saving on materials and expense.



Shear head types: coarse, medium, -fine, very fine, ultra fine, chopper, and ripper

Provides 5 – 165 gal. (9 – 625 ltr.) product throughput, depending upon feed rate and viscosity

Single mechanical quench seal rated for 700 psi. Double mechanical seal available.



Application Examples

- Slurries and dispersions: polymer, pigment, catalyst, battery, lubricant, paint, ink, polyurethane, gel coat, resin, fillers, viscosity or gloss modifiers, clay, ceramics, capacitors, metal oxides, liquid to liquid blending
- Rubber & plastic reclaim work
- Macro- and micro-emulsions, and for some applications, a nano-emulsion may be possible

Long Term Reliable Performance

Designed for 24/7 operation, the BSM CX is robust enough for your most critical processing schedules when downtime is not an option. It combines a well-proven rotor-stator principle with an innovative seal design and bearing support technology that is deceptively simple but exceptionally durable.

Standard Models & Specifications

Model	Tip Speed (FPS / MPS)	Throughput (GPM / LPM)	Motor / Speed (HP / kW at RPM)	Fittings*	Footprint (mm)
BSM 25-3 CX	107 / 32.61	5-15 / 18-56	20 / 15 at 10,000 rpm	1.5" In / 1" Out	660x686x534
BSM 37-3 CX	161 / 49.07	15-50 / 56-190	40 / 30 at 7300 rpm	2.5" In / 2" Out	762x762x660
BSM 60-1 CX & 60-3 CX	109 / 33.22	40-165 / 150-625	75 / 55 at 3600 rpm	3" In / 2" Out	1625x635x686

Explosion proof motors optional. *Fittings are Tri-Clamp®

Design Technology and Features

The Manufacturing Process: Rotor and stator ports have wire-cut radii with computer controlled precision. Double thickness housings for the bearing frame and mixer body are built for a lifetime of use. "Cartridge" design on the bearing frame allows quick replacement for servicing. Even our base is twice the strength, weight and rigidity than competitive machines.

1

The Rotor and Stator: Enclosed slot design prevents twisting and bending for maximum durability, longevity and safety. Machined from massive cylinders of AISI 316L or 17-4 SS, and dynamically balanced for smooth rotation through high speeds. Over 20 variations from coarse to ultrafine slots.

2

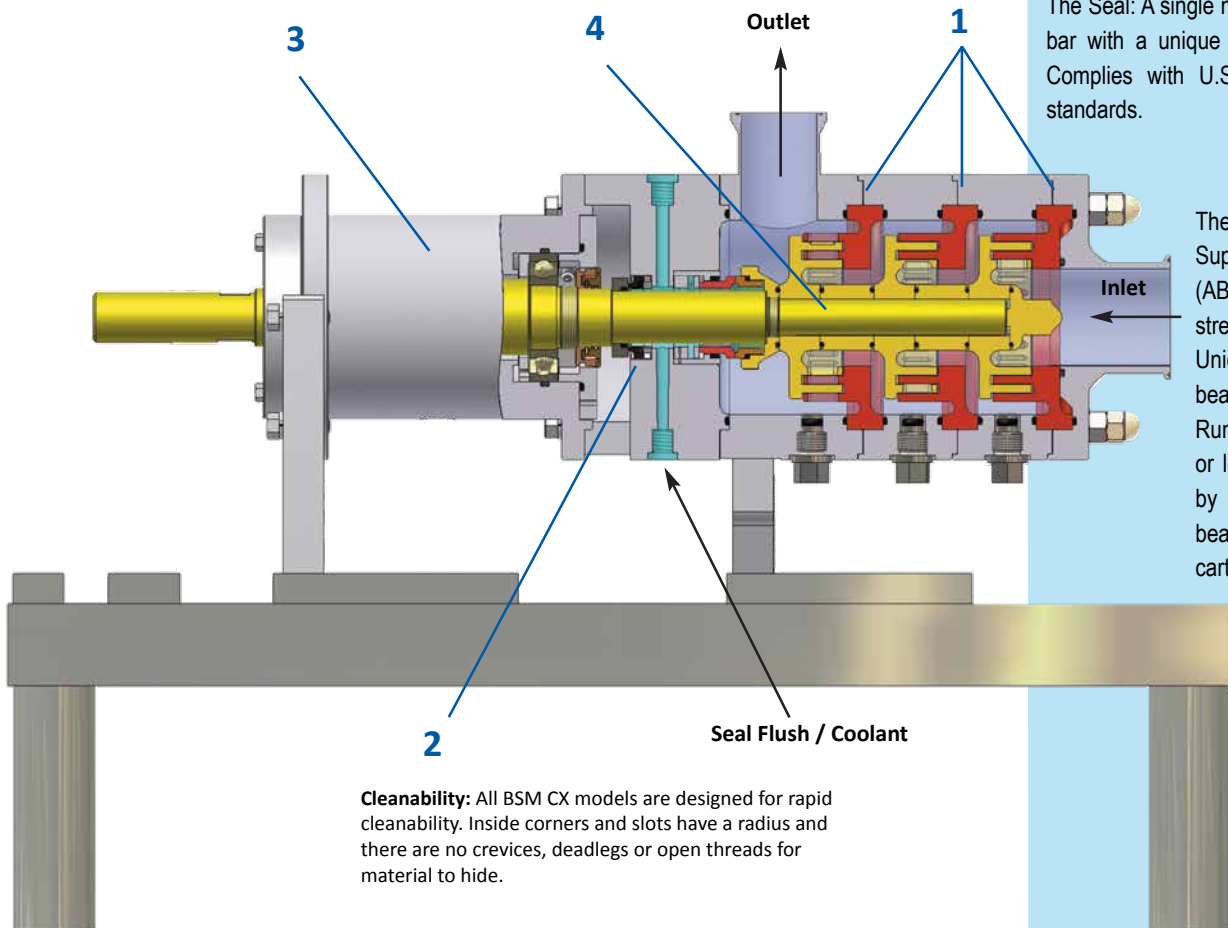
The Seal: A single mechanical seal rated for 48 bar with a unique low-pressure cooling loop. Complies with U.S. and European hygienic standards.

3

The Bearings: We use only Super Precision Ball Bearings (ABEC 7) with abundant strength for high-speed work. Unique preloading of each bearing protects against spikes. Running temperature is 38° C or less in operation. Protected by labyrinth seals. Complete bearing assembly installs as a cartridge for easy replacement.

4

The Shaft: Oversized, hardened 17-4 Stainless. Stout enough to carry three heads, and perfectly balanced for zero run-out.



Cleanability: All BSM CX models are designed for rapid cleanability. Inside corners and slots have a radius and there are no crevices, deadlegs or open threads for material to hide.