DIRECT STEAM INJECTION

Blentech's proven direct steam injection solution is the fast and easy way to cook water based foods. The system delivers culinary steam directly into the products evenly and gently. With interchangeable internals the system can be used for injection of high flow steam, gentle low flow and even water to promote separation processes. These durable assemblies are available on all Blentech Mixers, Cookers, and Kettles. Combined with Blentech's AutoChef, the system can precisely deliver recipe driven steam quantities so moisture content is consistent and precise. For the highest capacity applications, the AutoChef system offers a "turbo mode" which combines the power of both jacket and direct steam injection delivering the highest possible production rates.

BENEFITS TO USER

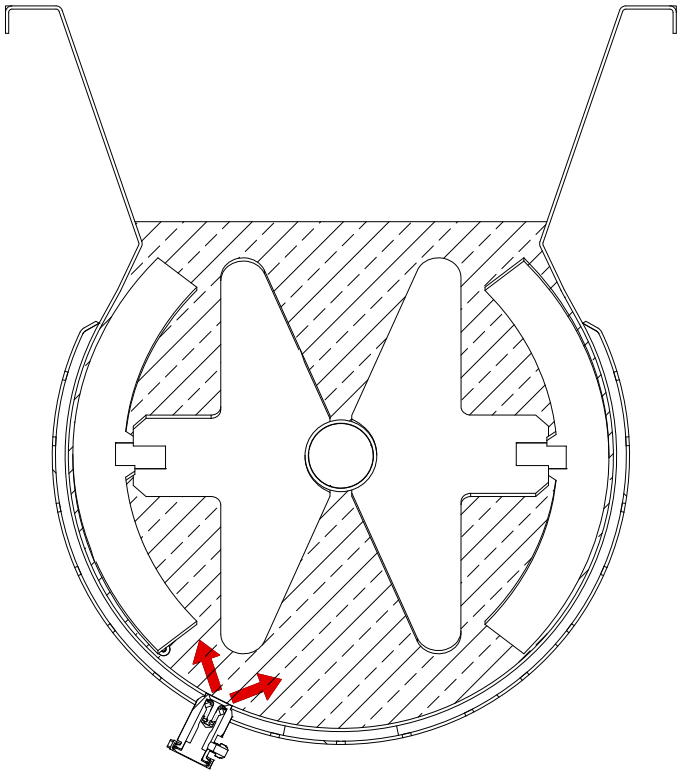
- Even and gentle heating
- Sanitary Design
- Precisely controlled moisture
- Interchangeable for particulates or emulsions

A WIDE RANGE OF OPTIONS IMPROVE DSI PERFORMANCE

- Culinary steam filter systems
- CIP-able headers
- Automated recipe and paperless reporting
- Vacuum breakers and isolation systems
- Retrofit options for existing machines

INJECTION SYSTEM DESIGN

1. Any number of Injection valves can be arrayed across kettle or mixer length
2. Each injector is spring to close minimizing back flow
3. Individual injectors are removable for inspection and cleaning
4. Injectors installed at an angle for easy accessibility
5. USDA approved design for ready to eat and dairy applications
6. Heats up to 10x faster than steam jackets
7. High and low shear injectors available
8. AutoChef Software system controls injection to recipe weight when load cells are included.



The number of injectors on a kettle or mixer can be adjusted up or down per application as use conditions may require.

SEE IT IN ACTION

Blentech CORPORATION

AVAILABLE FOR TESTING AT BLENTECH'S INNOVATION CENTER

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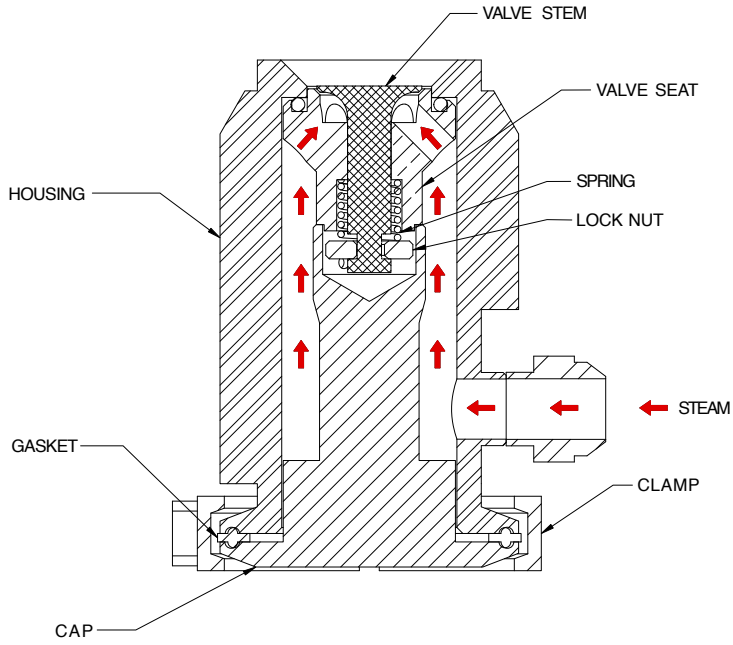
HIGH SHEAR INJECTION SYSTEM

Direct steam injection adds water to the product as it is heated. The rate of addition is shown in the previous chart per injector. Total water addition for a given temperature increase is determined by its composition and physical properties. This water addition can be predicted and precisely controlled to a recipe. Blentech's Applications Engineers can provide water addition projections at no charge upon request. They are also available to train customers how to perform these calculations on their own.

An important note is that water added with direct steam injection is typically removed in full or in part when vacuum cooling is used as well.



APPLICATION EXAMPLES

- Fruits and Spreads
- Meats
- Rice
- Pasta
- Pet Foods
- Soups and Stews
- Vegetables
- Chili

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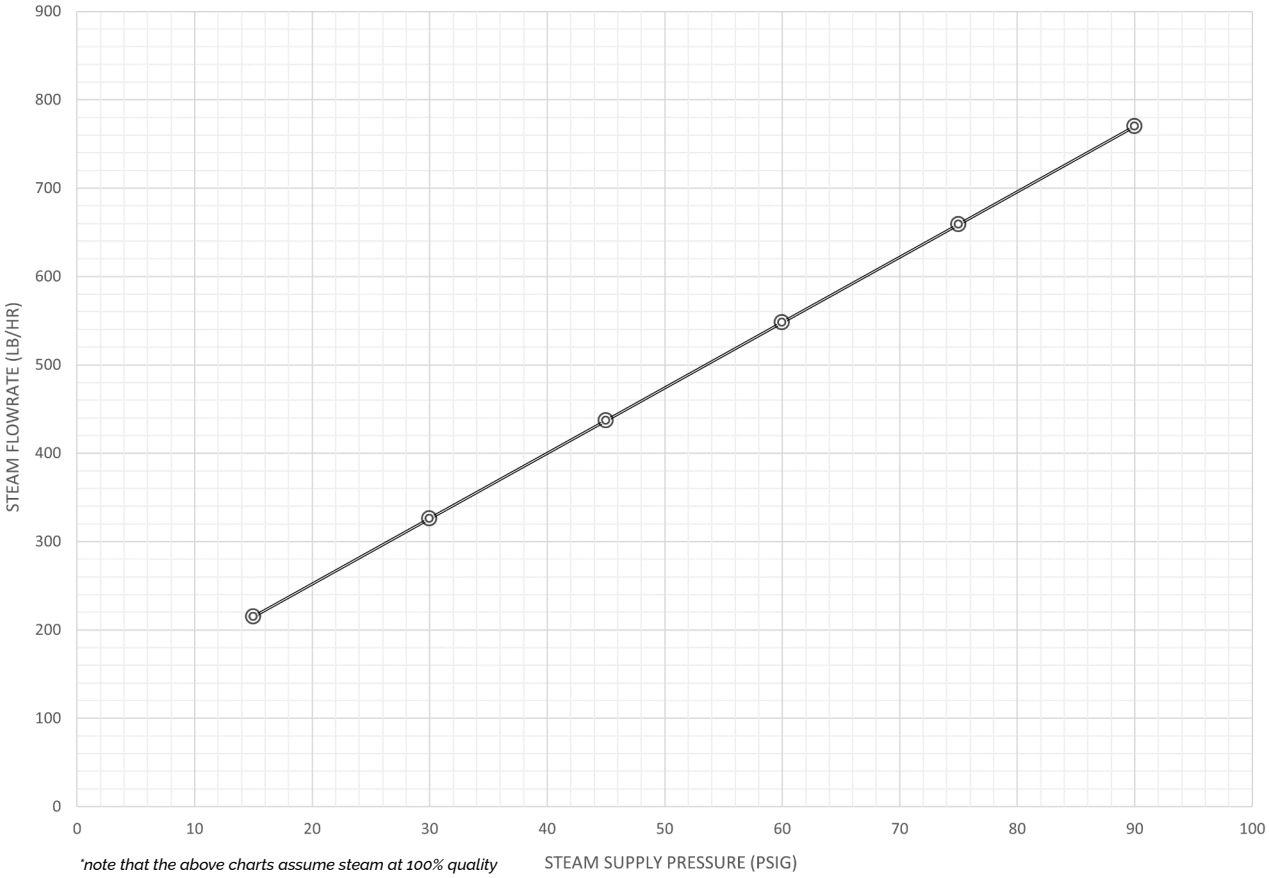
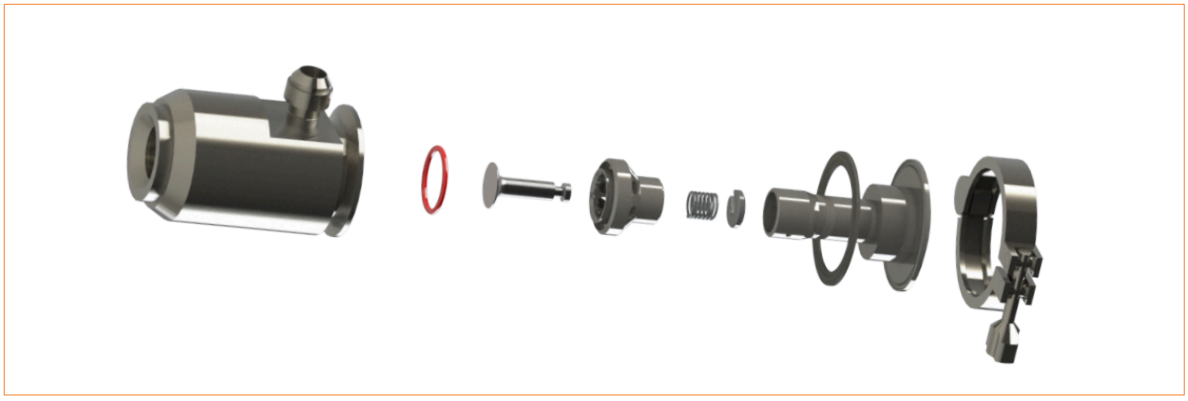
HIGH SHEAR INJECTION SYSTEM

The high shear injectors were invented by Blentech Corporation for the application of rapid heating of high moisture foods. The most common application was the preparation of processed and analog cheese products. The applications uses however are much broader and include soups, sauces and slurries of all types such as beans, meats, salsas, spreads and more. The high shear injection system imparts shearing effects on products which can create/stabilize emulsions which is desirable for many but not all applications. These shear effects are visible on submerged DSI video linked in the QR code.

HIGH FLOW STEAM INJECTOR CAPACITY



**note that the above charts assume steam at 100% quality*



The chart above depicts the flow rates of steam at various steam pressures per injector. If multiple injectors are used the flow rate is multiplied by this number. Note that injection "cracking" pressure is 15 psig.

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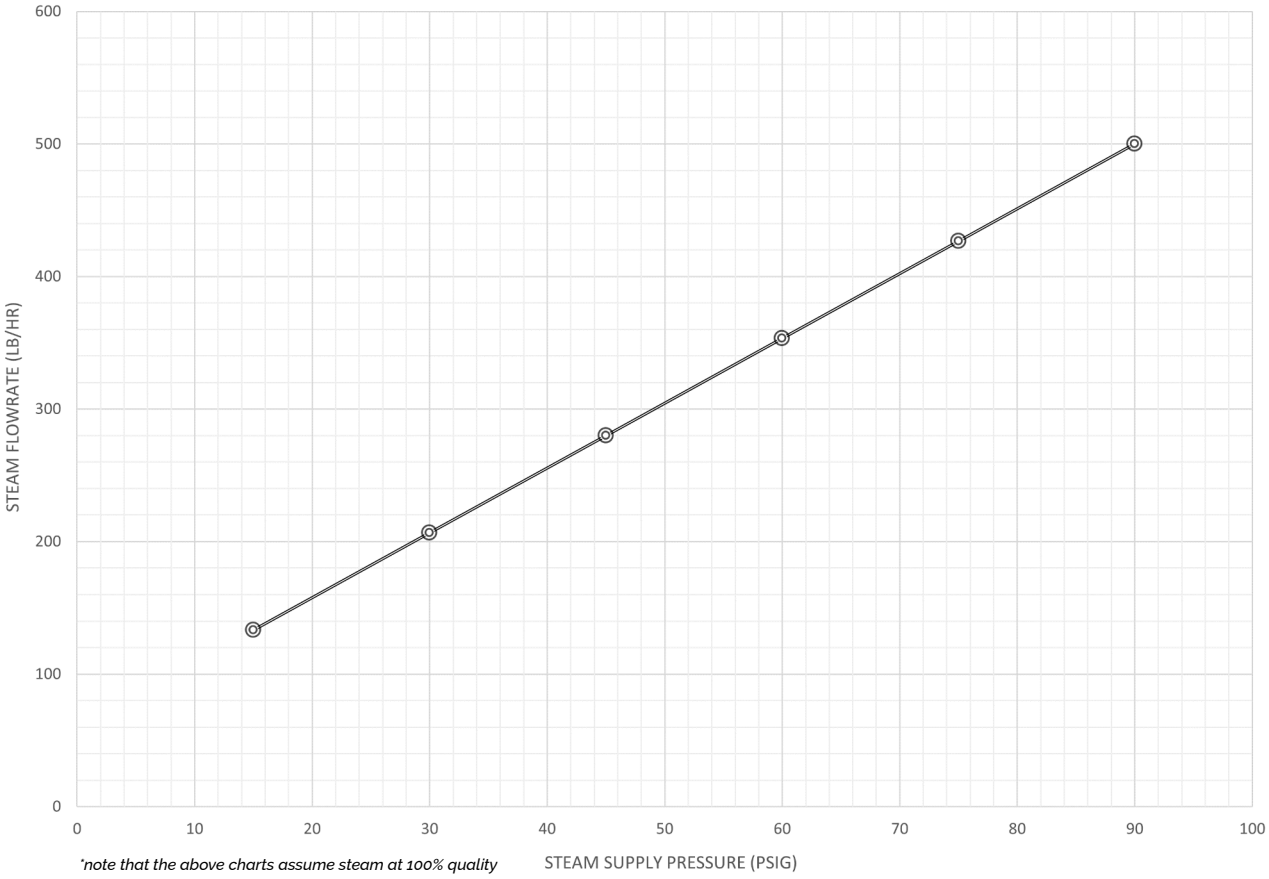
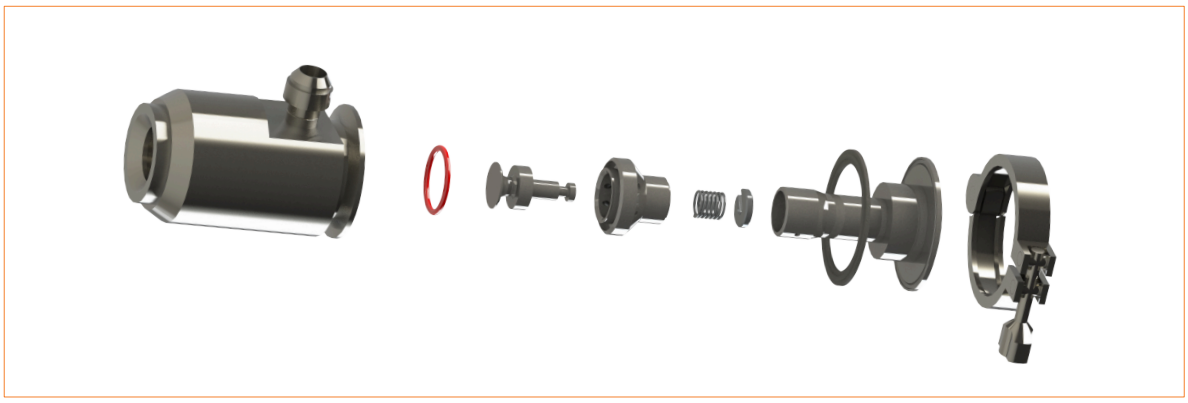
LOW SHEAR INJECTION SYSTEM

The low shear injectors was invented by Blentech Corporation for the applications that could not tolerate the high shear and emulsification effects of the "cheese" style injector. These low shear injectors still facilitate the rapid heating of high moisture foods however applications can include injection into water and oil mixtures that must not be emulsified. Blentech's Applications team can assist if you are uncertain about your application fit. Other applications include foods with high value particulates requiring individual preservation.

LOW FLOW STEAM INJECTOR CAPACITY



*note that the above charts assume steam at 100% quality



The chart above depicts the flow rates of steam at various steam pressures per injector. If multiple injectors are used the flow rate is multiplied by this number. Note that injection "cracking" pressure is 15 psig.

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