



Tri-Blender[®]
The Faster, More Effective
Dry Ingredient/Liquid
Blending System



Tri-Clover Inc.

Tri-Blender®



Fast, Thorough & Trouble-Free Blending

Tri-Clover makes it easier than ever to mix dry ingredients with liquids, and avoid the time, trouble and lost product associated with reprocessing and pre- and post-blending operations.

Our Tri-Blender is specially designed to thoroughly and efficiently blend dry ingredients and liquids, while minimizing the air introduced into the process. That means the lumping, foaming and flooding associated with conventional mixing equipment is almost totally eliminated.

Unique Tube-in-Tube Design

The Tri-Blender incorporates a unique tube-within-a-tube design which keeps dry ingredients and liquids separated until they are introduced to the mixing chamber. That's key to the Tri-Blender's efficient operation. And that's why companies from every process industry are turning to the Tri-Blender to streamline blending applications.



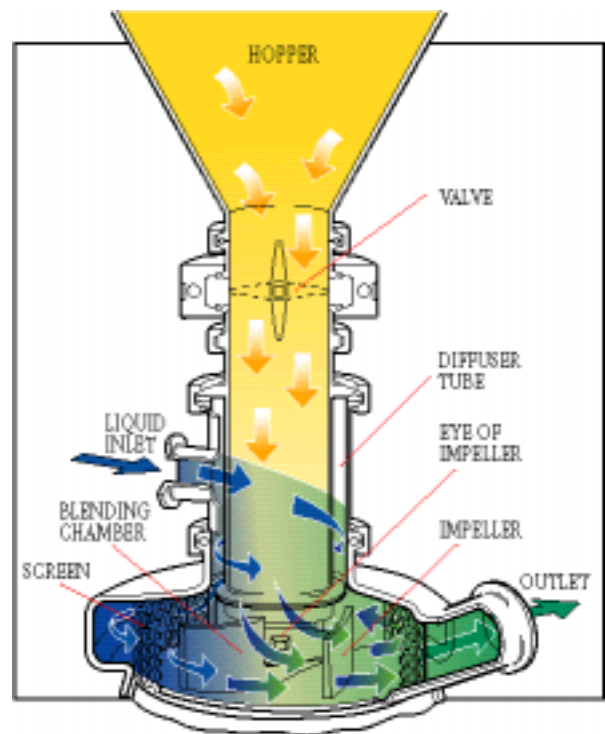
The Tri-Blender is designed to integrate easily into your present process system. Plus, its compact size and easy portability means it can be moved or installed virtually any place in the process.

Other Key Tri-Blender Benefits Include:

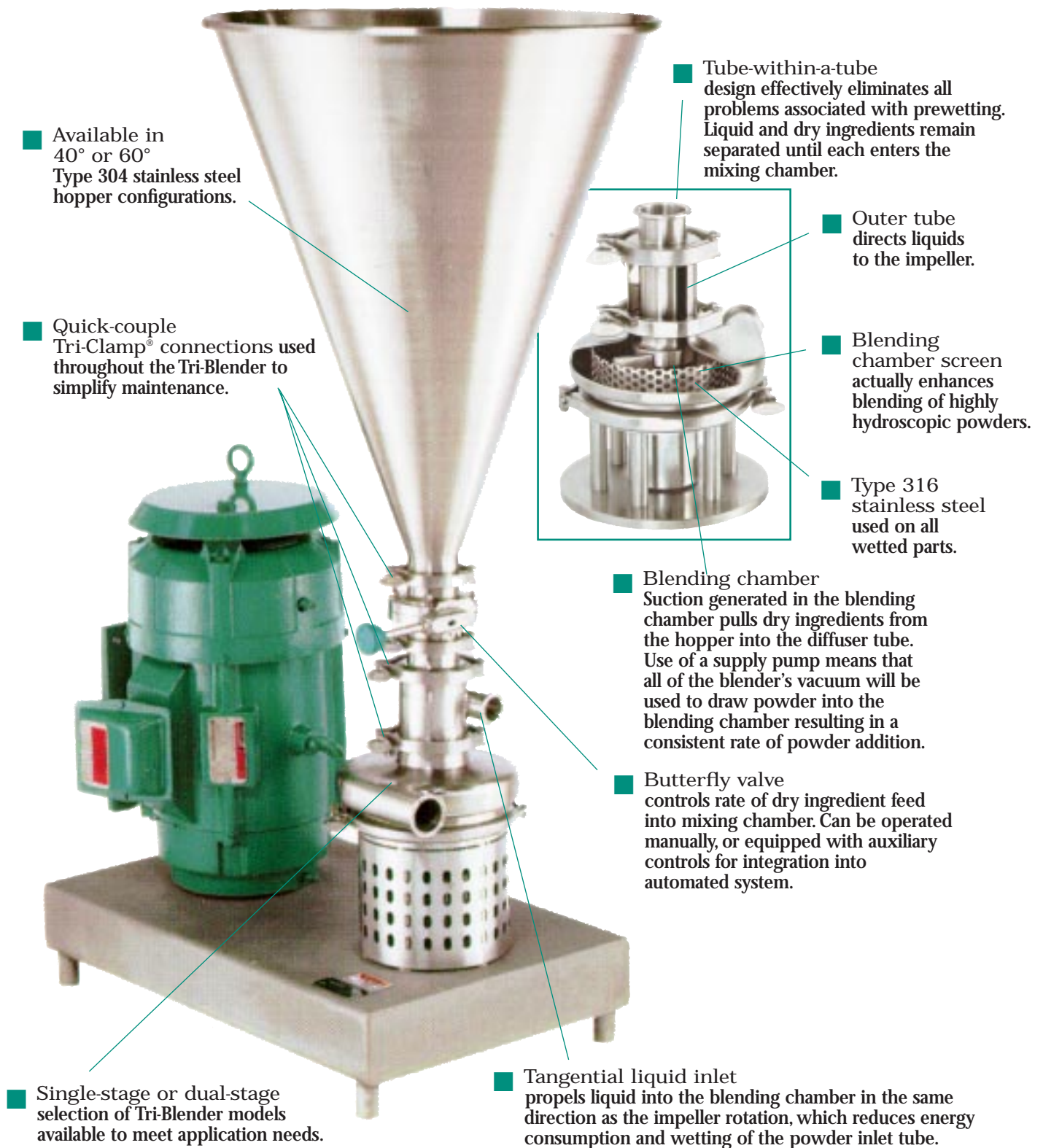
- Fast, uniform and continuous material absorption - up to 350 lbs. (159 kg) per minute
- Choice of automatic or manual feed controls
- Designed for batch blending in some in-line applications
- Dual-stage Tri-Blender is recommended for higher concentrations where consistent addition rates are needed over a long run
- Easily adapted for CIP applications (Dual-stage only)

Proven In Applications Throughout The Process Industry

The unique Tri-Blender design means easy adaptation to a variety of blending applications in the food, beverage, dairy, chemical and biopharmaceutical industries.



Proven in Applications Throughout the Process Industry



Wide Selection of Capacities to Meet Your Blending Application Needs



- Model F3218MD Single Stage
Dry ingredient capacity up to 100 lbs. (45 kg) per minute. Short runs lower concentrations



- Model DS3218 Dual Stage
Dry ingredient capacity up to 100 lbs. (45 kg) per minute. Double mixing. Addition rates remain consistent as concentration increases

- Model F2116MD Single Stage — *Not shown*
Dry ingredient capacity: Up to 50 lbs. (23 kg) per minute

- Model F4329MD Single Stage
Dry ingredient capacity: Up to 350 lbs. (159 kg) per minute



- Model F2116EZ Single Stage Portable
Dry ingredient capacity: Up to 50 lbs. (23 kg) per minute



To enhance application convenience, the portable F2116EZ System Tri-Blender goes where you need it. Portable units come complete with supply pump, motor starters, dolly and tube assembly.

A choice of single-stage or dual-stage Tri-Blenders means you can select a model that fits your application like a glove. Simply choose the model you need, and specify the electrically actuated valve, pneumatic valve, or the manual valve. Other options include skid mounting, automatic custom control packages, and automatic feeds.

The Model F2116EZ is equipped with a wheeled platform for easy portability from application to application. However, the wheeled platform can be ordered as an option on all other Tri-Blender models.

Seals

Single-Stage Models

Standard units are furnished with Type D sanitary external balanced seal. Optional sanitary seals available include:

- Type DG – clamped-in seal/seat design
- Type E – water-cooled balanced double seal

Double-Stage Models

Standard clamped-in seat design is Carbon vs. SS featuring the convenience of a replaceable insert. Optional materials also available.

Patented Dual-Stage Tri-Blender® Maximizes Efficiencies

Our patented Model DS3218 Dual-Stage Tri-Blender incorporates a secondary blending chamber which effectively “double blends” liquid and dry ingredients for improved end-product consistency and a smoother, more uniform blend.

Depending on the application, the secondary chamber effectively functions as a discharge pump. In applications up to 500 CPS and up to 50 feet (15 m) of discharge head, the DS3218 entirely eliminates the need for an additional discharge pump, and also delivers significantly higher and more consistent vacuum rate over a wider range of process conditions. That means fast, consistent product flow rates with minimum drop-off through the entire production run.

Try It Before You Buy It – The Tri-Blender Rental Program

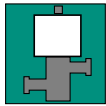
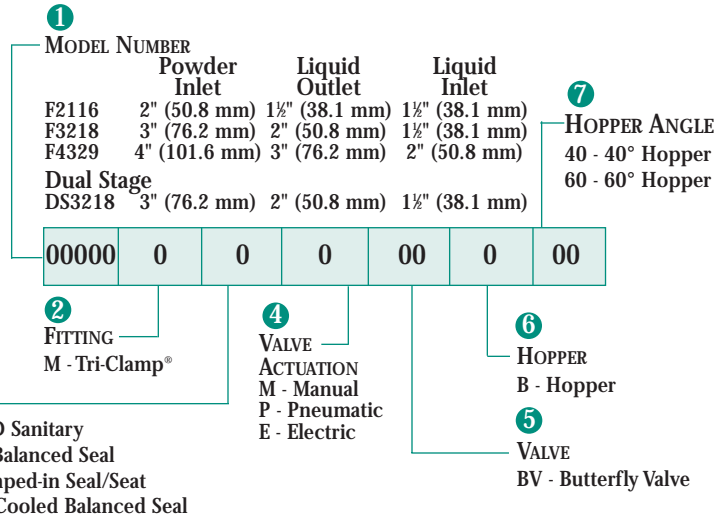
Find out how the Tri-Blender simplifies your blending application with little risk and no long-term commitment. Our “loaner” program lets you experience the simplicity and efficiency of the Tri-Blender in your own application. Ask your Tri-Clover distributor for complete details.

Ordering Information

Product Numbering System

MODEL NUMBER EXAMPLE

① ② ③ ④ ⑤ ⑥ ⑦
F2116 M D - M BV - B 60



Valves

Tri-Flo® Mix-Proof – *Catalog MPV*

Multiple actuator stem designs with full-stroke capability.

Air-Actuated – *Catalog AV*

Many styles for automatic flow, and full CIP capability. Also available with optional control top housing. 1" - 4" (25.4 - 101.6 mm) sizes.

Fractional Sizes – *Bulletin FV*

Type 316L SS ½" and ¾" (12.7 - 19.0 mm) sizes.

Ball – *Bulletin BV*

3-piece body with PTFE seats and packing. 1" - 4" (25.4 - 101.6 mm) sizes.

Butterfly – *Bulletin BFV*

Aluminum body. Adaptable to a variety of end connections. 1" - 4" (25.4 - 101.6 mm) sizes.

SS Butterfly – *Bulletin B-51*

Stainless steel body. Tri-Clamp® end connections. Variety of seat materials. 1½" - 4" (38.1 - 101.6 mm) sizes.

Diaphragm – *Bulletin SV*

Maximum product flow with minimum agitation. ¾" - 4" (6.4 - 101.6 mm) sizes.

Diaphragm – *Bulletin DV*

Low-cost systems-oriented diaphragm valve. 1" - 3" (25.4 - 76.2 mm) sizes.

Following are all registered trademarks of Tri-Clover Inc.

Tri-Clover	Tri-Blender
Tri-Clamp	Tri-Flo
Tri-Weld	Super-Speed
Zephyrweld	Tri-Taper
Mainstream	Streamline

AL-6XN is a registered trademark of Allegheny Ludlum Corporation.



Pumps

Tri-Flo® Centrifugal – *Catalog TF*

5 sizes in capacities to 1150 GPM (261 m³/hr). 1½" - 6" (38.1 - 152.4 mm) inlet.

Tri-Flo® CL Series Centrifugal – *Catalog CL*

11 sizes in capacities to 2000 GPM (454 m³/hr). 2½" - 4" (63.5 - 101.6 mm) inlet.

Tri-Flo® Centrifugal (Water For Injection/Pharmaceuticals) – *Bulletin WFI*

4 sizes in capacities to 700 GPM (159 m³/hr). 1½" - 4" (38.1 - 101.6 mm) inlet.

Series EH Centrifugal (Low Shear) – *Bulletin EH*

3 sizes in capacities to 1000 GPM (227 m³/hr). 3" - 6" (76.2 - 152.4 mm) inlet.

Positive Rotary – *Catalog PR*

6 sizes to 300 GPM (68 m³/hr) 1" - 6" (25.4 - 152.4 mm) inlet and outlet.

T Series Positive Rotary – *Bulletin TS*

(TSR Standard Rotor Design) 12 sizes to 500 GPM/290 psi (113 m³/hr/20 bar) 1" - 6" (25.4 - 152.4 mm) inlet and outlet.

(TSK Ultra CIP) 5 sizes to 250 GPM/145 psi (56 m³/hr/10 bar) 1" - 3" (25.4 - 76.2 mm) inlet and outlet.

Diaphragm Pumps – *Bulletin AOD*

5 sizes to 200 GPM/100 psi (45 m³/hr/7 bar) ¾" - 4" (6.4 - 101.6 mm) inlet and outlet.



Fittings

The Complete Line – *Catalog FTGS*

Tri-Clamp®

Sanitary, ½" - 6" (12.7 - 152.4 mm) Tube OD; General service, 1" - 12" (25.4 - 304.8 mm) Tube OD.

Tri-Weld®

Standard, 1" - 4" (25.4 - 101.6 mm) Tube OD; Extended tangent, ½" - 4" (12.7 - 101.6 mm) Tube OD.

Bevel Seat

Acme thread fittings with combination ends and adapters, 1" - 4" (25.4 - 101.6 mm) Tube OD.

Zephyrweld®

For general service, ¾" - 12" (19.0 - 304.8 mm) Tube OD.

Tri-Flo® – *Bulletin TF-FT*

Sanitary, 1" - 4" (25.4 - 101.6 mm) Tube OD.

AL-6XN® Alloy – *Bulletin AL6-FTG*

Sanitary 1" - 3" (25.4 - 76.2 mm) Tube OD.



Automated Systems

Tri-Blender® – *Bulletin TB*

Blends up to 350 lb./min. (159 kg) dry powder with up to 150 GPM (34 m³/hr).

CIP Systems – *Bulletin CIP*

Four standard models. Variations for hot sanitizing service.

Filters/Strainers – *Bulletin BFS*

Built to sanitary standards. Low pressure drop and extended service.

Bio-Pharm Systems – *Bulletin B-P*

For sterile integrity.



A Company Engineered For The Customers We Serve

Our Food & Dairy, Bio-Pharm, and Export Divisions ensure the highest levels of customer support in the industry. Each division is organized to provide specific application, equipment and logistics support to help our customers achieve the highest levels of process system efficiency. For more information on how Tri-Clover can be of benefit to your company, contact your local Tri-Clover distributor, or call us at 1-800-242-4000.



Tri-Clover Inc.

Food & Dairy Division

9201 Wilmot Road
Kenosha, Wisconsin 53141-1413
PHONE: 1-800-242-4000
FAX: 414-694-7104

Distribution Centers

Memphis, TN
PHONE: 1-800-238-0142
Union City, CA
PHONE: 1-800-852-3178

Bio-Pharm Division

PHONE: 1-800-511-5444
FAX: 414-694-2454

Tri-Clover Canada

101 Milner Avenue
Scarborough, Ontario M1S 4S6
PHONE: 416-297-3400
FAX: 416-299-5095

Export Division

PHONE: +1-414-697-3170
FAX: +1-414-694-8188

Tri-Clover Mexico

Recursos Petroleros No. 7
Fracc. Ind. La Loma
54060 Tlalnepanitia, Edo. de Mexico
PHONE: 52-5-397-0601
FAX: 52-5-362-3246

