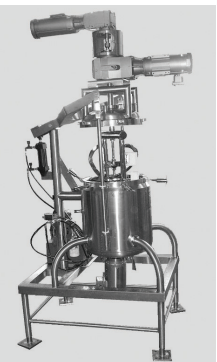
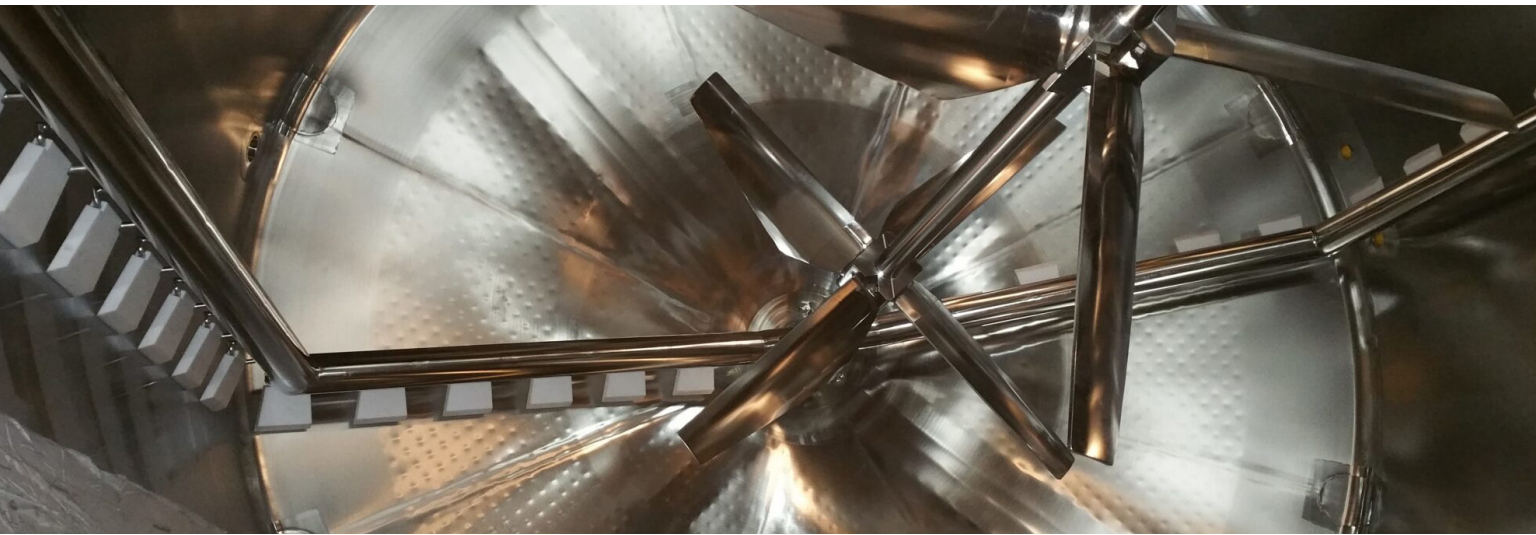




# COSMETIC AND PERSONAL CARE PRODUCTS

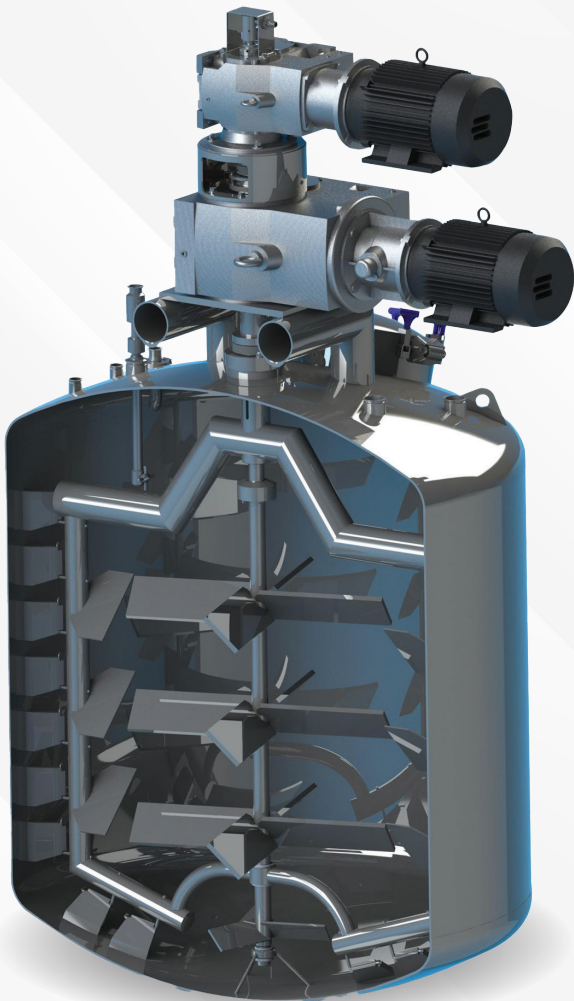


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# SO MANY VESSEL OPTIONS. ONE TRUSTED MANUFACTURER.

At Feldmeier Equipment, there's not one item that sets our company apart. Instead, it's the wide range of options and configurations available with our cosmetic and personal care solutions that makes us truly different. Regardless of the requirements at your facility, we have the designs you need to maintain quality and maximize production.



## VESSEL STYLES

- Vessels can be single shell or have heat transfer jackets with insulation and sheathing
- Vessels can be atmospheric or pressure & Full Vacuum rated
- Mix tanks can be from a few liters to over 30,000 gallons
- Bottom heads can be hemispherical, toriconical, flanged and dished heads including standard, shallow and deep dished, and flat pitched
- Tops can be closed or open with hinged covers for easy ingredient addition
- We also offer many different manway and dump chute openings

## HEAT TRANSFER JACKETS

- Channel Wall
- Formed Mechanical Dimple
- Half Pipe Jacket
- Inflated Dimple Jacket

## ACCESSORIES

- Instrument connections
- Cleaning devices
- Sensors
- Venting options
- Nozzles
- Internal vessel

## AGITATOR CONFIGURATIONS FOR EVERY SIZE AND EVERY APPLICATION.

Feldmeier offers a comprehensive array of agitator styles to suit your process requirements. Advanced engineering technology like 3D solid modeling, CFD (Computational Fluid Dynamics) and FEA (Finite Element Analysis) is employed in the design of these complex agitation systems.

### AGITATION DESIGN CONSIDERATIONS

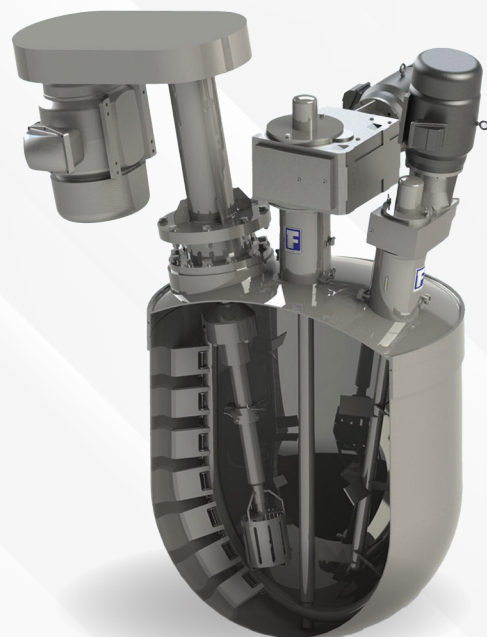
- Mixing performance
  - Minimize blend times
  - Maximize heat transfer
  - Minimize product holdup
- Sanitary designs
  - High finish - with options below 15 ra and
  - In-house electropolishing
  - Custom sanitary impeller options
  - Custom sanitary scraper blades that require no pins, o-rings or clips to fasten
  - Sanitary features minimizing difficult-to-clean locations such as round stock on all frames
- Versatility
  - Individual speed control of each agitator
  - Designed for lowest practical mixing volumes
  - Oversized reducers & shafts

### SEALING OPTIONS

For atmospheric & pressure rated vessels, Feldmeier offers a wide variety of sealing options including designs that permit seal service without the need to enter the vessel or disturb the gear reducer. Split seals are frequently the best choice for ease of maintenance.

### MULTI-AGITATOR SYSTEMS

- Co-Axial Counter Rotating
  - Outer scrape surface with inner turbine agitator for viscosities up to 2,000,000 cps
  - Stacked gearmotors for independent speed control
  - Optional bottom-entering high shear mixers
- Dual & Triple Entering Mixers
  - Outer scrape surface agitators can be paired with off-set turbine, prop and high shear mixers
  - Customer stationary baffles can also be incorporated





## GET THE PERFECT MIX OF EXPERIENCE AND CRAFTSMANSHIP.

Feldmeier Equipment has long been a leader in manufacturing sanitary equipment to meet the most demanding requirements in mixer performance, sanitation, and heat transfer efficiency. We custom design solutions for any application including mix tanks for products such as:

- Creams
- Lotions
- Gels
- Shampoos
- Conditioners
- Toothpastes
- Medical Ointments
- Antiperspirants & Deodorants

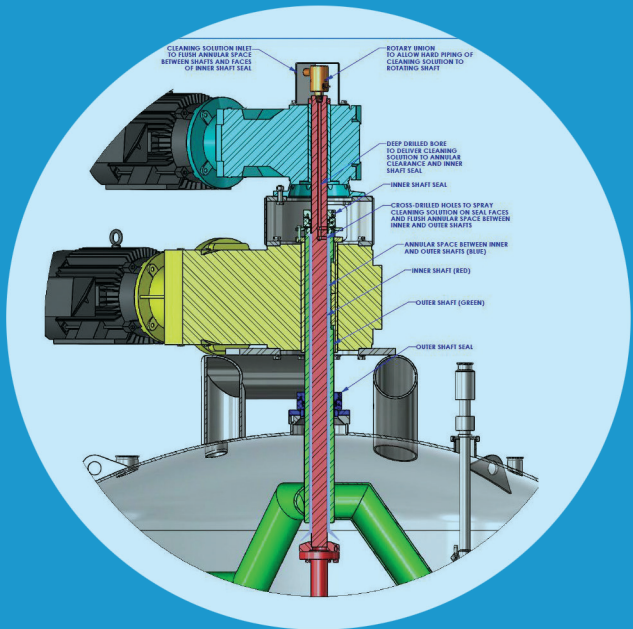
No matter what your application, standards or requirements may be, the skilled craftsmen at Feldmeier Equipment deliver.

## THE FIRST TRUE SOLUTION TO INTERSHAFT AND SEAL GLAND CLEANING.

For decades, manufacturers and sanitarians have combatted the cleaning issues surrounding the area where agitator shafts penetrate the top head of mix tanks and annular space between counter rotating shafts.

In response to these concerns, seal manufacturers have improved seal designs, tank manufacturers have opened up spaces to allow for more flushing, sprayball manufacturers have developed better technology, and sanitarians continue to develop more rigorous standards for seal design.

Despite these efforts, most designs on the market would still not pass a pharmaceutical riboflavin test. Ledges, seal faces, tight annular spaces and o-ring grooves prevent the internals of mechanical seals from seeing acceptable flushing with cleaning solution. The annular space between counter rotating shafts is another location that could never be consistently cleaned. **Until now.**



## FELDMEIER EQUIPMENT DEVELOPED THE THRU-SHAFT CLEANING STRATEGY. (patent pending)

Thru-Shaft Cleaning delivers impingement cleaning that is guaranteed to pass a riboflavin test in the areas that aren't easy to inspect - the tank flange, seal gland, the intricate surfaces of the mechanical seal and the annular space on counter rotating agitators with concentric shafts.

This innovative solution is accomplished by using the mixer shaft as a rotary spray device. Cleaning solution is piped to the top of the agitator shaft in parallel with the in-tank spray devices. The top of the shaft has been gun bored down to the seal elevation where a series of cross-drilled holes delivers cleaning solution to the seal and shaft area. A rotary union is located on the top of the shaft to make the transition from the shaft to CIP piping.

The option for Thru-Shaft cleaning is only one of numerous innovative designs that differentiate Feldmeier agitators from the competition.

