

POSITIVE DISPLACEMENT PUMP

# FRISTAM FKL



***Fristam***  
**PUMPS®**  
*Engineered For Lasting Performance®*

# FKL: ENGINEERED FOR LASTING PERFORMANCE

## KEEPS YOUR PROCESS UP AND RUNNING

Simply put, downtime is lost money. The FKL was designed, from its inception, to be the toughest positive displacement (PD) pump on the market. FKL pumps simply run better and last longer than all others to maintain the integrity your product and of your process.

## BUILT TO LAST, WITH NO REBUILDS NEEDED

Instead of paying again and again to rebuild your pump, choose the pump that is designed and built to last. The FKL withstands as much as three times the pressure of other pumps and won't rub and wear out. Plus, FKL shafts are guaranteed for life to never break.

## CLEANS WITH EASE

The FKL is the first close-clearance PD pump to be designed for "True CIP" (Clean In Place). Fristam's FKL needs nothing removed from the pump for CIP. This provides a simple and effective solution with minimal downtime.

## COMES WITH THE SERVICE YOU DESERVE

Fristam FKL pumps are designed, manufactured, and assembled in Middleton, Wisconsin. We have a unique ability to be responsive. With the industry's most knowledgeable team and the best channel partners, we have the expertise to support you before and after the sale.

## FKL SPECIFICATIONS

- 11 Models
- Max. Discharge Pressure 500 psi (35 bar)
- Max. Flow Rate 900 gpm (204 m<sup>3</sup>/hr)
- Max. Viscosity 1,000,000 cps

For drawing, curves, and manuals visit [fristam.com/fkl](https://fristam.com/fkl)

# FKL APPLICATIONS

## DAIRY

- Butter
- Cheese curd and whey
- Milk and cream
- Processed cheese
- Sweetened condensed milk
- Yogurt and sour cream



## FOOD

- Chocolate and nut butters
- Condiments and dressings
- Dough, batter, and sponge
- Fruits, fillings, and frostings
- Soup and stew
- Tomato sauce and paste



## BEVERAGE & BREWING

- Beer and wort
- Coffee extract
- Corn syrup
- Juice concentrate
- Soft drink syrup
- Yeast



## PERSONAL CARE

- Body wash and scrub
- Deodorant
- Detergent and dyes
- Lip balm and lipstick
- Lotion and cream
- Shampoo and conditioner
- Toothpaste



## BIO-PHARMACEUTICAL

- Cell broth
- Cough syrup
- Medicated lotion and cream
- Resin



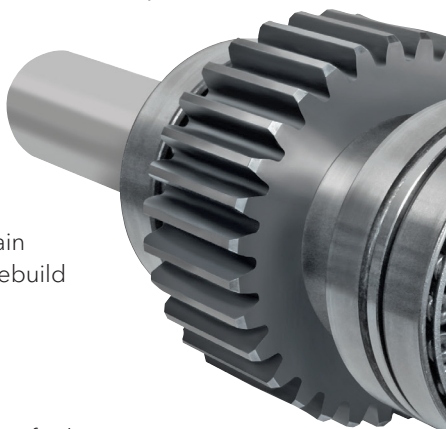
# RELIABILITY BEGINS ON THE

Stop rebuilding, replacing, and spending your valuable time on the precise machining, and robust construction of a Frisam pump for reliability. Frisam pumps simply run better and last longer.

## STRONGER SHAFTS

The diameter of a Frisam FKL shaft is up to 25% larger than other manufacturers' shafts. It's made from a solid piece of 316L stainless steel and has a shorter overhung load to withstand elevated pressures without breaking.

In a less robust pump, the deflecting shaft and rotor strike the pump housing with every revolution. This continual rubbing wears not only the rotors but the internal surface of the pump, increasing its clearances. With an FKL, clearances remain tight and efficiencies remain high, saving you a costly rebuild or pump replacement.



## LARGE BEARINGS

The FKL uses large bearings for longer bearing life, meaning less maintenance. Quite simply, larger means stronger, and stronger lasts longer.

## BEARING-SUPPORTED GEARS

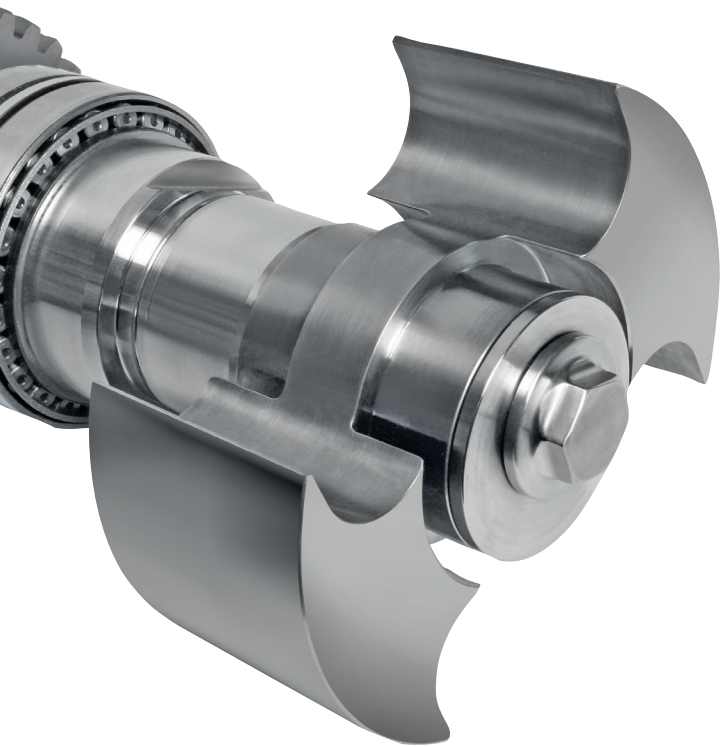
Frisam gears are located between the front and rear bearings for even load distribution and less shaft deflection. FKL gears are straight-cut for easy timing.

# INSIDE

able time on other PD pumps. The solid design,  
stam FKL ensure efficiency and operational  
t longer.

“There is no doubt the FKL  
is stout!”

–Consumer chemical manufacturer

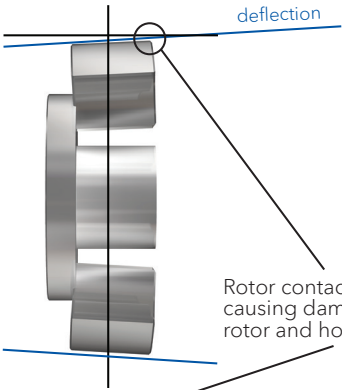


## BALANCED ROTORS

Fristam FKL rotors are balanced, meaning the support hub is centered so that force acts through the center of the rotor to keep the lobes from distorting. Other pumps' unbalanced rotors do not distribute force evenly. At higher pressures, unbalanced rotors can bend at their tips (deflection), damaging the pump.



FKL Balanced  
Rotor



Unbalanced  
Rotor

# DESIGNED FOR EASY MAINTENANCE

The FKL requires less maintenance than other PD pumps, but when it is necessary, the FKL has features that are designed to make it easier and safer.

## SEAMLESS SEAL CHANGEOVER

FKL seals are completely contained within a cartridge. They can be pre-assembled and shelved for easy, one-piece replacement.

Additionally, no housing or pump modification is needed to change the Fristam FKL from a single seal to a double seal or from an O-ring seal to a mechanical seal.



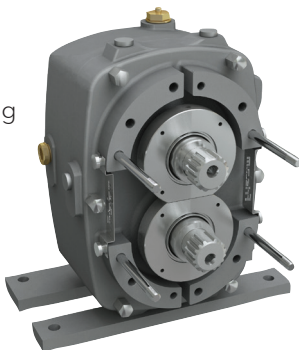
## OFFSET ROTOR BOLTS

Traditional rotor nuts can back-off when pumping viscous products. Once loose, they can severely damage pumps. The FKL is equipped with offset rotor bolts that lessen the unwinding force of the product. Plus, the FKL bolts require much less torque to stay tight.

As it rotates eccentrically, the bolt provides natural agitation to promote cleanability in the cavity.

## EXTENDED HOUSING STUDS

The long housing studs guide the housing past the shaft during assembly and disassembly. This protects against housing-to-shaft contact to prevent accidental seal and shaft damage.



# REVOLUTIONARY GEARBOX

The gearbox may be the most important part of a uninterrupted performance. The Fristam FKL's revolutionary design provides easy access to bearings and shafts.

## EASY ACCESS

Using simple forcing studs, the gearbox halves can be separated in less than one minute.

## COMPLETE SHAFT ASSEMBLY

Once separated, only a few bolts need to be loosened; then, the entire shaft, gears, and bearings assembly can be removed as one complete set.

## SIMPLE REASSEMBLY

Reassembly is just as simple, and there is no need for an arbor press to reinstall the shaft assembly into the gearbox or to join the two gearbox halves.

## LOW MAINTENANCE LUBRICATION

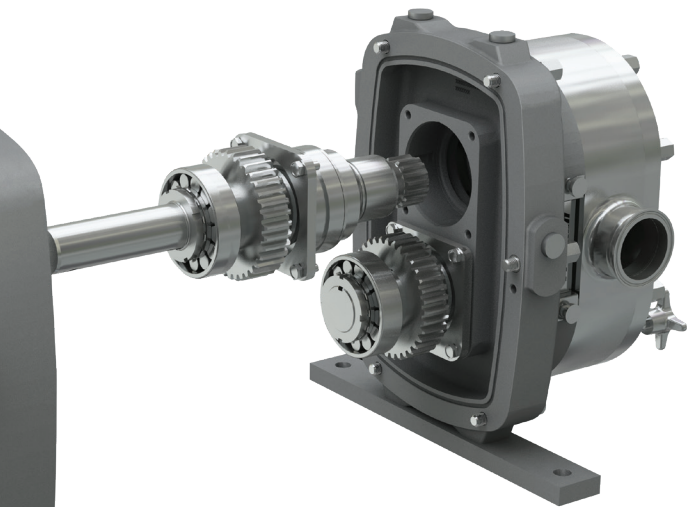
The FKL uses food grade oil instead of grease to lubricate its gears. With this design, the oil lasts eight times longer than grease and only needs to be changed once every 4,000 hours. Using oil avoids the need for grease change-out and eliminates grease-related contaminant build-up that reduces bearing life.





# DESIGN

pump when it comes to long life and  
revolutionary split-style gearbox provides quick and



"It's built like a tank!"

—Salad dressing and sauce producer



# TRUE CIP – NO DISASSEMBLY REQUIRED

The FKL is the first close-clearance PD pump to be designed for “True CIP” (Clean In Place). A proper CIP system allows the pump to operate during cleaning.

## NO ROTOR REMOVAL

Fristam’s FKL needs nothing removed from the pump for CIP. The cover and rotors remain in place. This provides a simple and effective solution with minimal downtime.

## NO DAMAGE

Eliminating rotor removal and reinstallation reduces costly downtime and eliminates the chance of damaging pump parts, or worse yet, injuring employees.

## NO PERFORMANCE LOSS

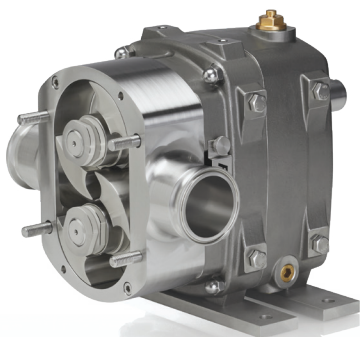
Other manufacturers have retrofitted their designs to accommodate CIP by increasing the internal slip path. This “shortcut” significantly reduces efficiency. The FKL cleans in place without losing any performance.

“It has proved to clean perfectly and drastically reduce our maintenance costs and downtime.”

–Egg Product Processor

# FKL COP OPTION

Fristam has taken the toughest, most durable sanitary PD pump and created a version designed for those who need to strip clean their pumps daily or between batches.



## STREAMLINED SEALING

The FKL COP requires fewer parts for sealing—just two O-rings and a sleeve for each shaft. Plus, sleeves are bi-directional for longer life.



## EASY MAINTENANCE

Low-torque locknuts make rotor removal easy and safe. The FKL COP pump features the same easy-access gearbox as the standard FKL.

## PERFORMANCE AND DURABILITY

The tight internal clearances allow for maximum efficiency pumping and energy savings. All the same features remain that make the FKL rated for 500 PSI standard.



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| [www.fristam.com/usa](http://www.fristam.com/usa)



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