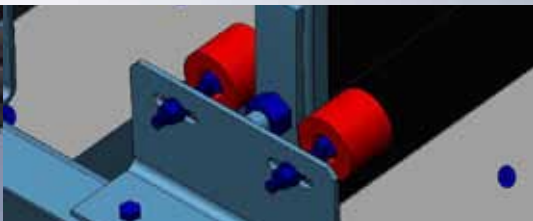
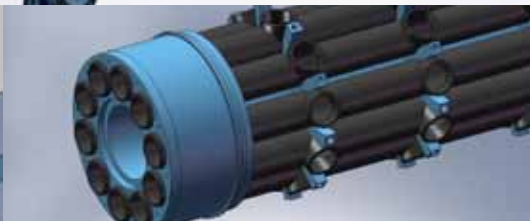
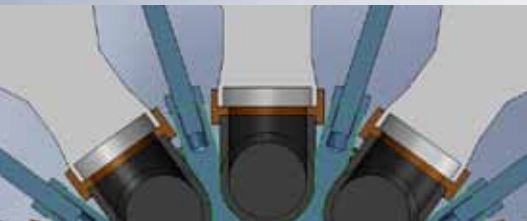
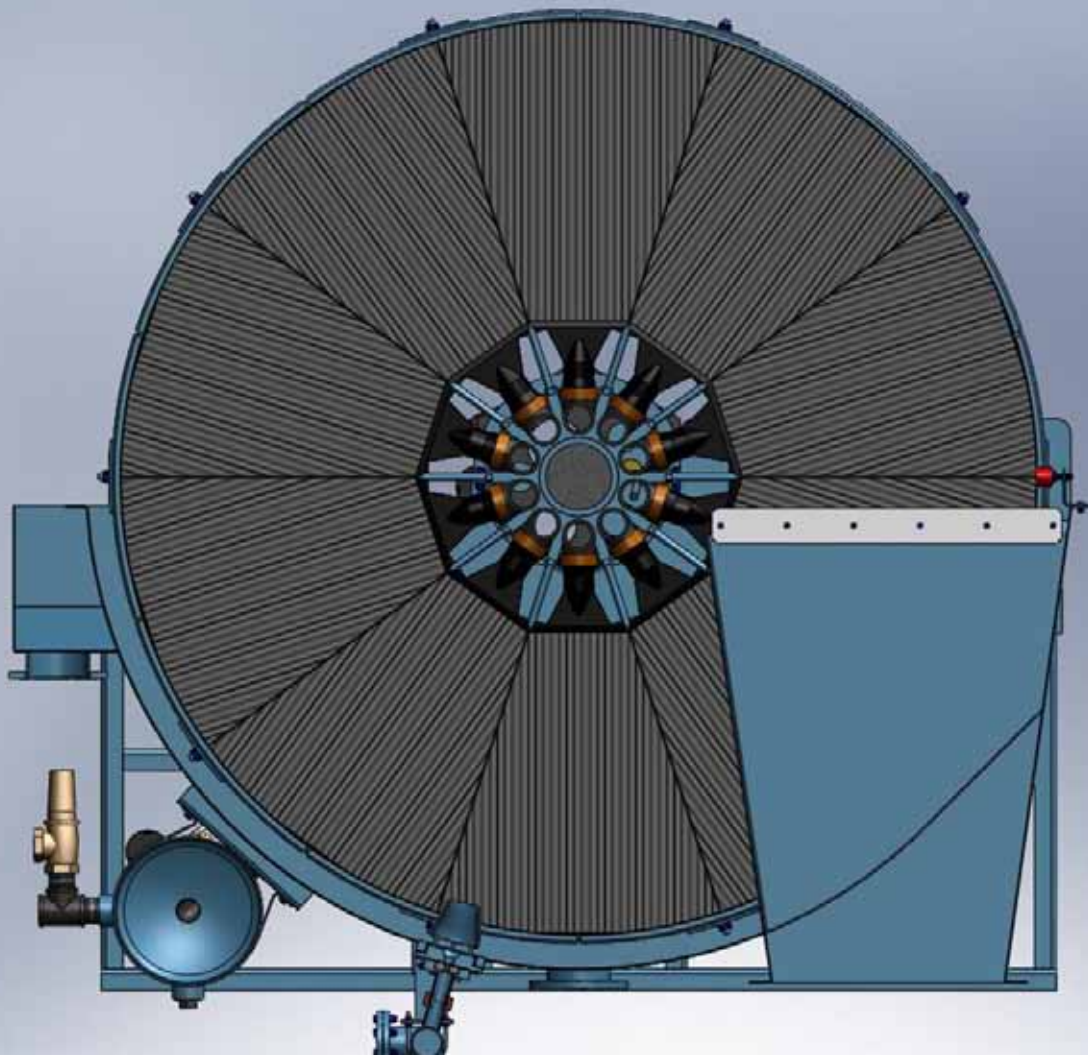
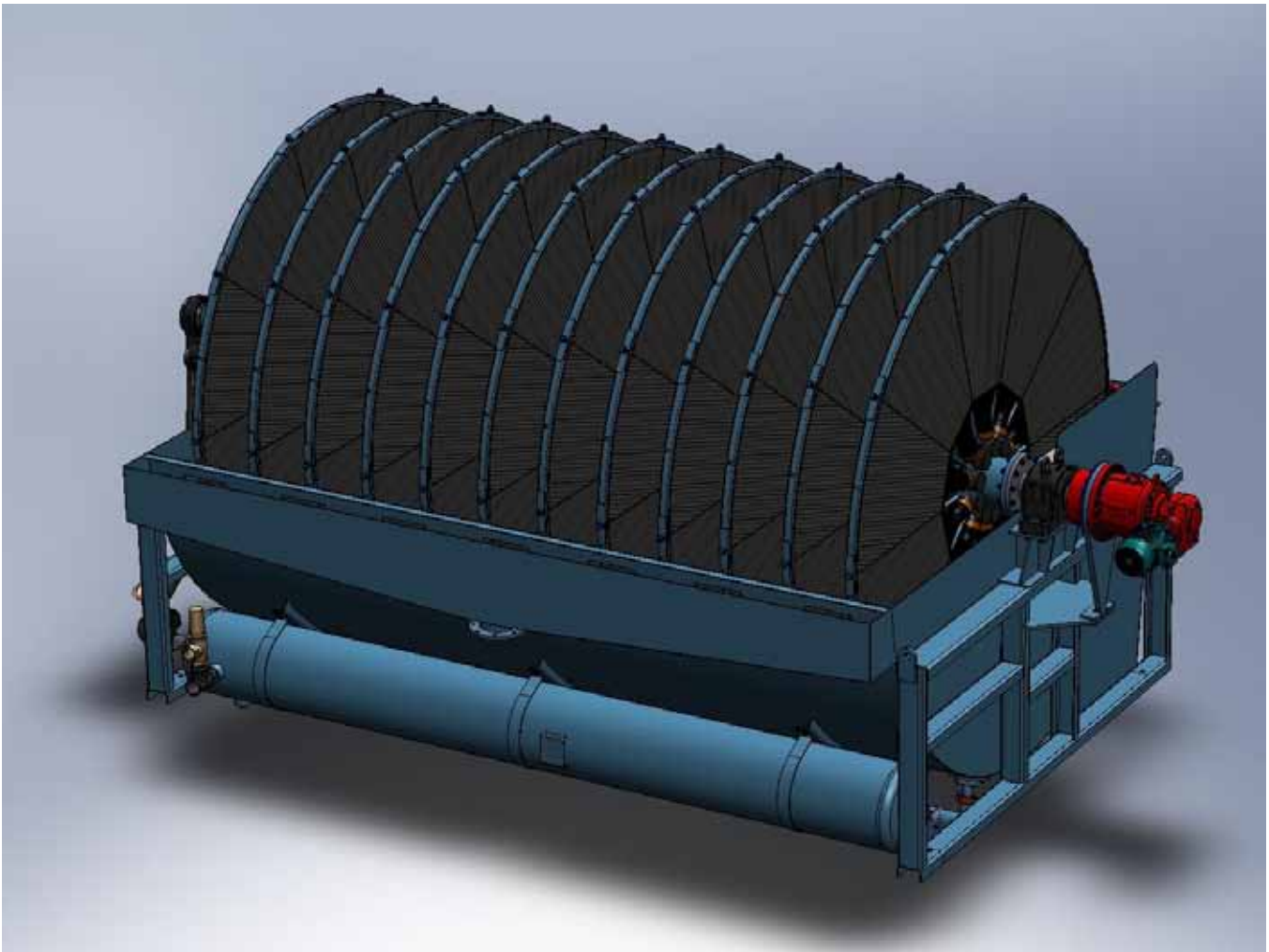


# FLSmidth E-Disc



# E-Disc technology and innovation



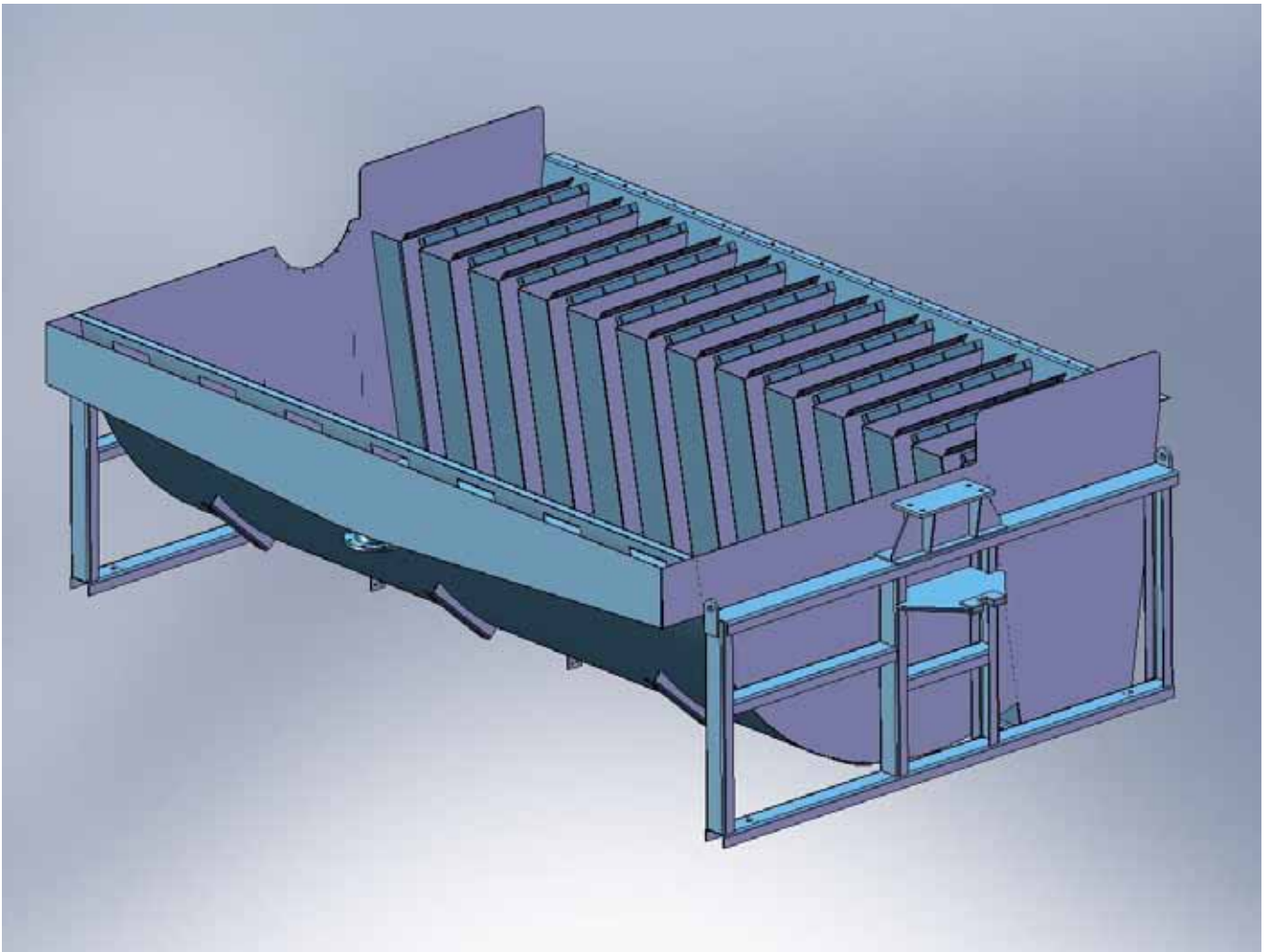
**The new FLSmidth E-Disc brings you the best of everything: proven technologies, modern innovations, and economy for non-abrasive applications.**

The FLSmidth E-Disc combines the Dorr-Oliver and Eimco technologies of our previous disc filters, and adds the E-Duc feed agitation system to provide you with the best filter for your money in paste backfill and other applications.

For years our customers have come to rely on the dependability and efficiency of our American Disc Filter, AgiDisc, Large Diameter Disc Filter, and German model disc filter. The E-Disc combines the best features of these filters with added innovations.

The FLSmidth E-Disc features the E-Duc feed agitation system which eliminates the need for a paddle agitator, and drastically reduces associated maintenance issues and costs. The E-Duc system utilizes the venturi effect in feed agitation rather than the mechanical approach which reduces downtime and costs due to maintenance issues.

# Filter vat



The E-Disc has been converted to a hard metric design. The disc spacing has gone from 406.4mm (16") to 400mm. All dimensions are rounded off to 5 and 10mm increments where possible.

We've reduced plate thickness to 5mm (3/16") typical of the Agidisc filters.

The E-Disc has a changed support structure to lighter Agidisc style end frames. These end frames can easily be made shorter to accommodate through-floor installations.

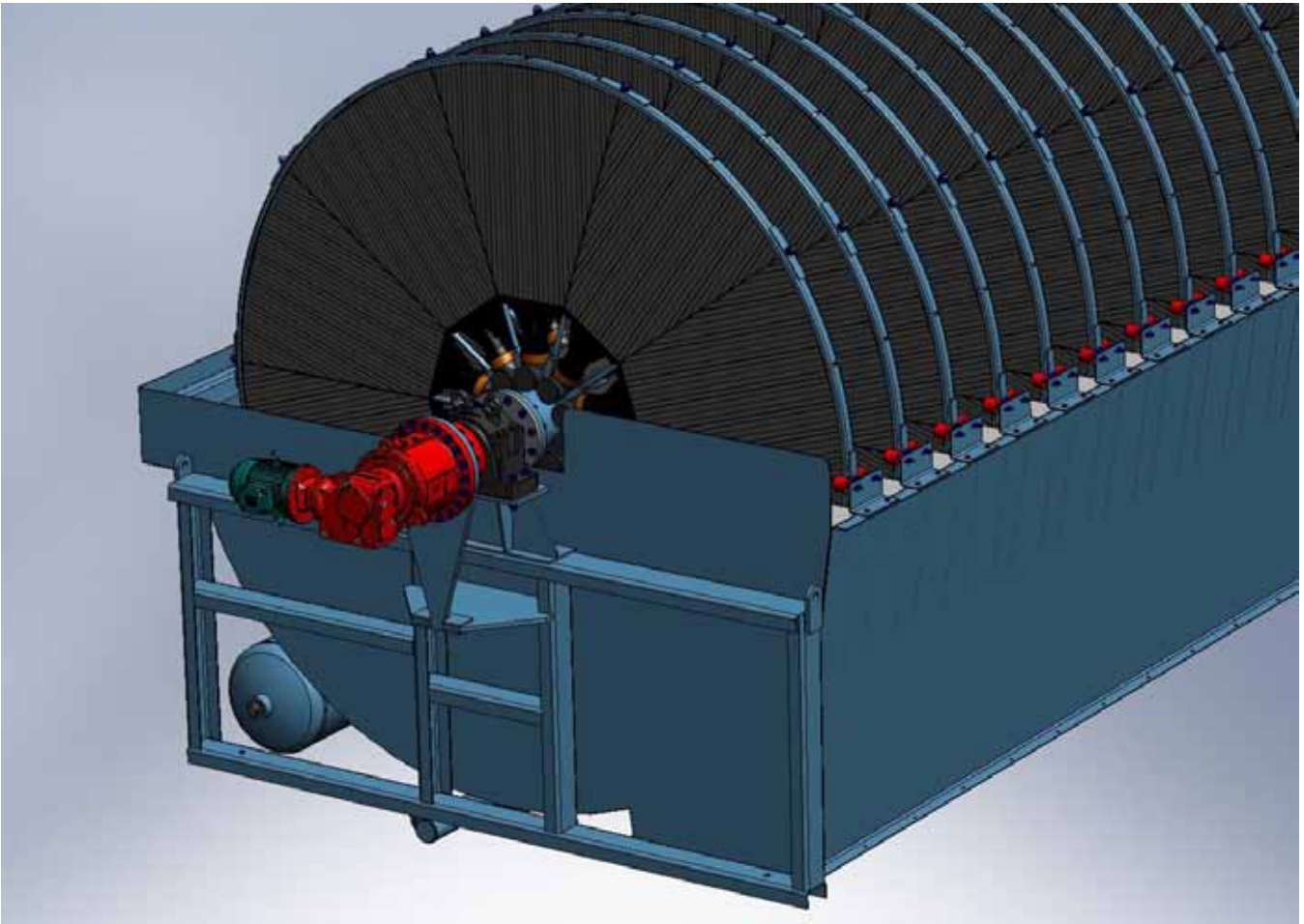
We have eliminated the "V" trough in the bottom of the vat for paddle agitator. Replaced with pad flanges for feed eductors.

The Feed box has been eliminated.

The Overflow box has been changed to sloped bottom with bottom discharge.

Cake end shields were raised higher than the American Disc but lower than the Agidisc.

# Filter drive

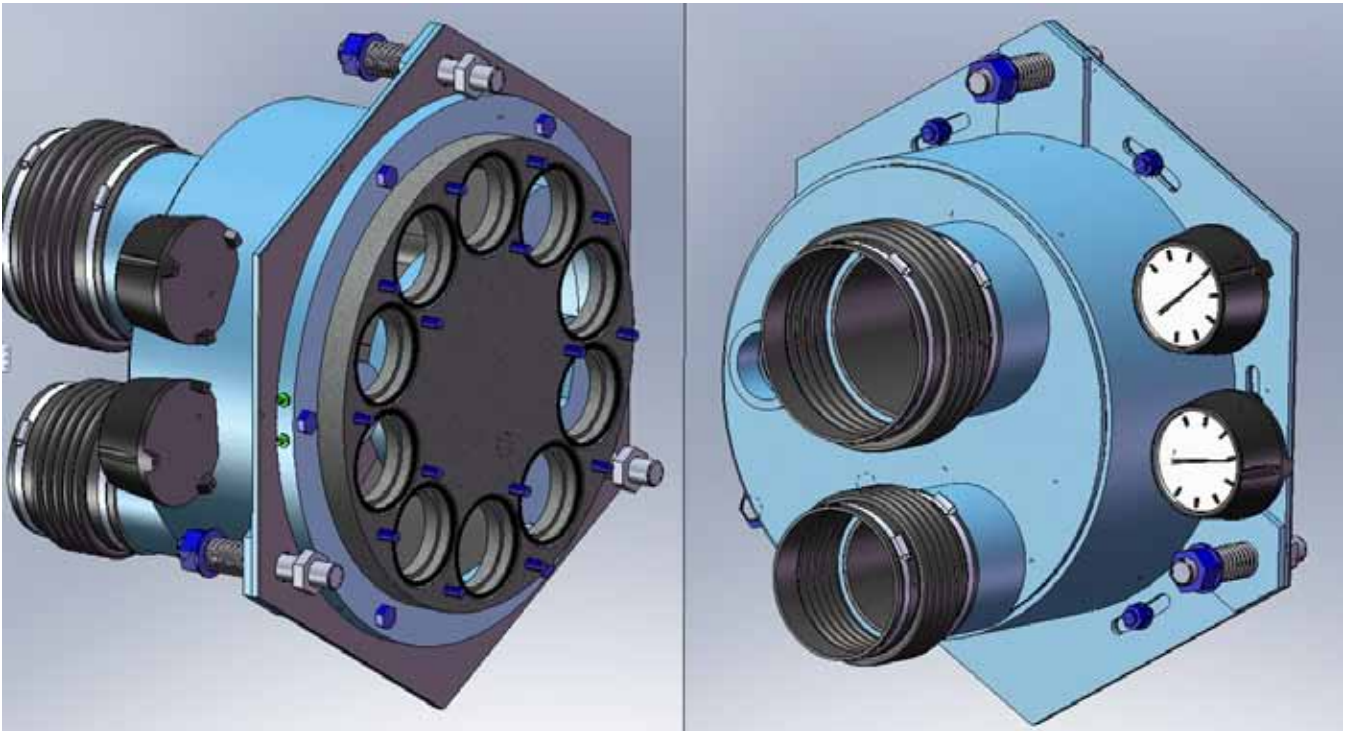


The worm drive has been replaced with a modern, state-of-the-art shaft-mounted gear reducer. The model above shows a Eurodrive helical-bevel planetary gearbox but the design can be modified to accommodate other types.

A chain drive has been developed, and is available as a low-budget option.

Efficiency gains allow a smaller motor to be used. For the 12-disc machine shown, a 4kW motor can replace the 5.5 kW (7.5 hp).

# Valve

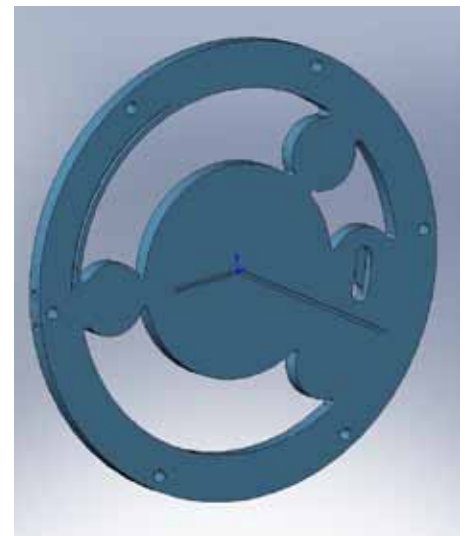


A fabricated, 2-solution valve has been designed to be an “almost” bolt-on interchange with the 21.5” cast high capacity valve. “Almost” because it has been converted to hard metric like everything else on the new filter. If a cast valve body is required, the raw casting can be drilled to the hard metric dimensions.

The bridge plate holder with moveable/removable bridge plates is replaced with a single-piece bridge

plate designed for high capacity. The rotational adjustment of the bridge plate relative to the valve body is still available in the new design. Vacuum retract is also incorporated in the new bridge plate design.

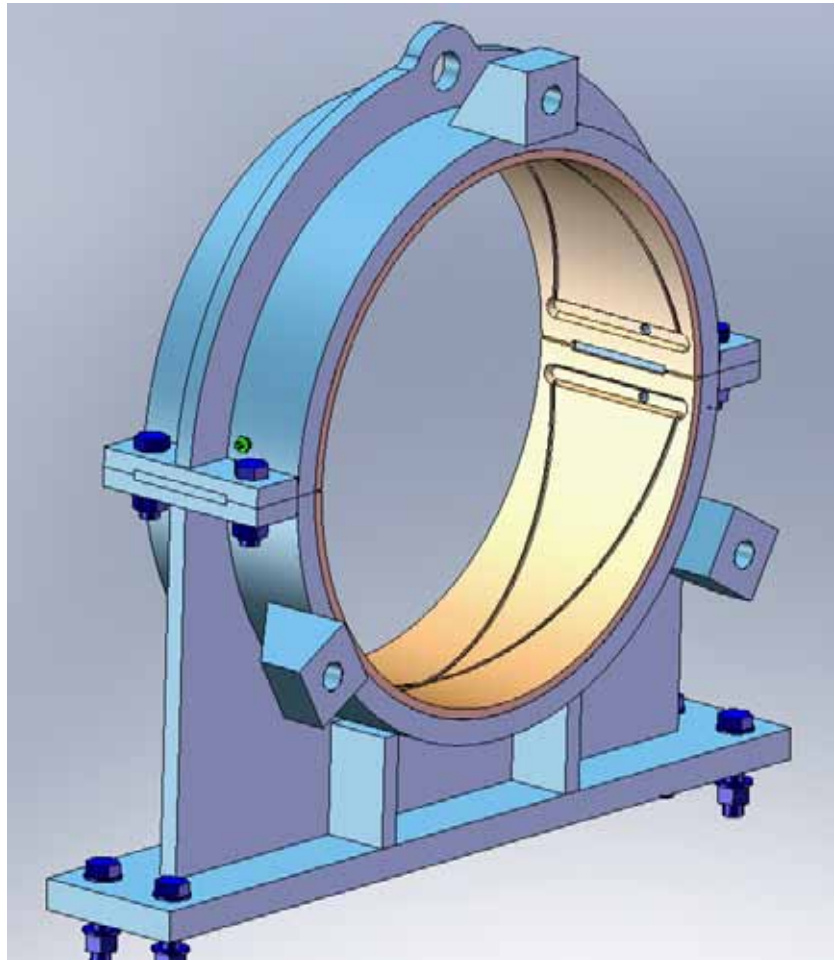
The wearplate design remains pretty close to the original. Material remains as phenolic.



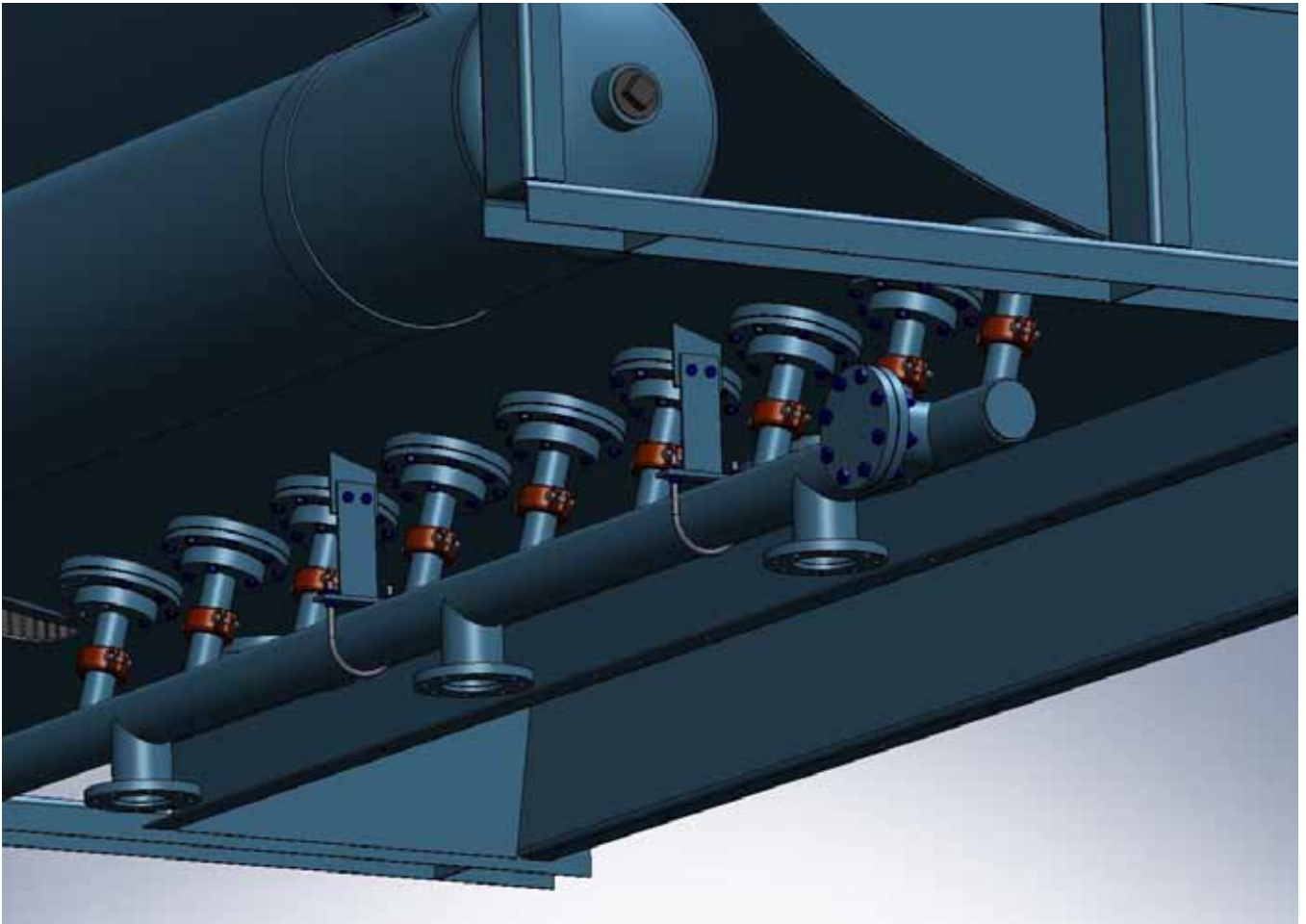
# Trunnion bearing

A fabricated trunnion bearing has been designed to be an "almost" bolt-on interchange with the 21.5" cast bearing housing. Again, "almost" because it has been converted to hard metric. If a cast bearing housing is required, the raw casting can be machined to the hard metric dimensions.

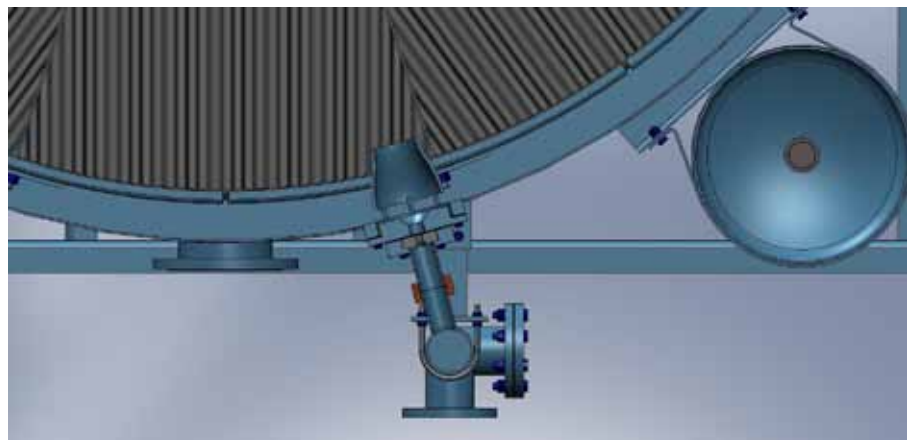
The new bearing design uses bronze bearing liners with grease lubrication.



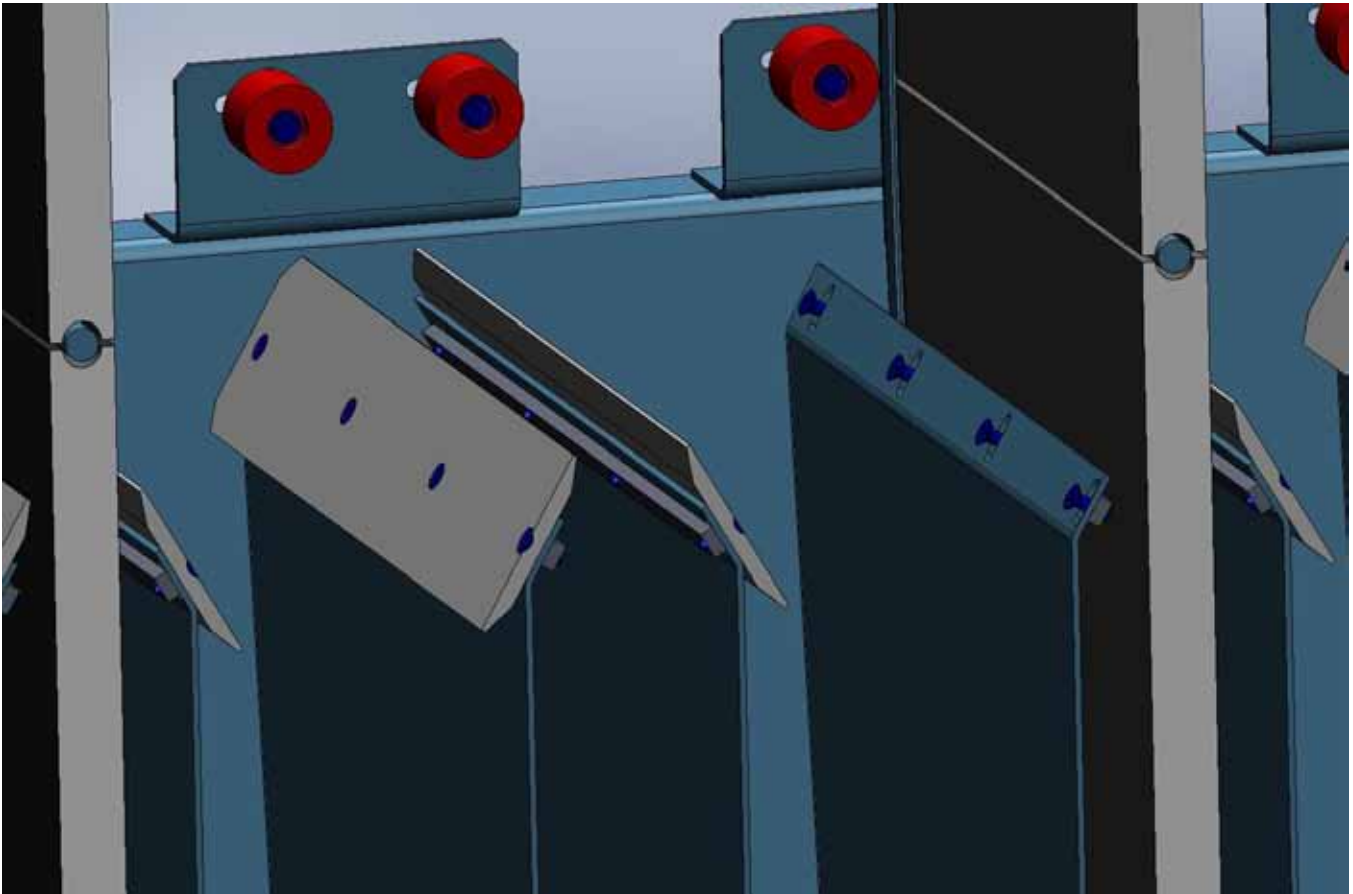
# Agitator



The paddle agitator is replaced with our patented Claridisc feed eductors in the bottom of the vat which replace the paddle agitator of previous disc filters and reduces maintenance costs and delays.



## Cake deflector blades

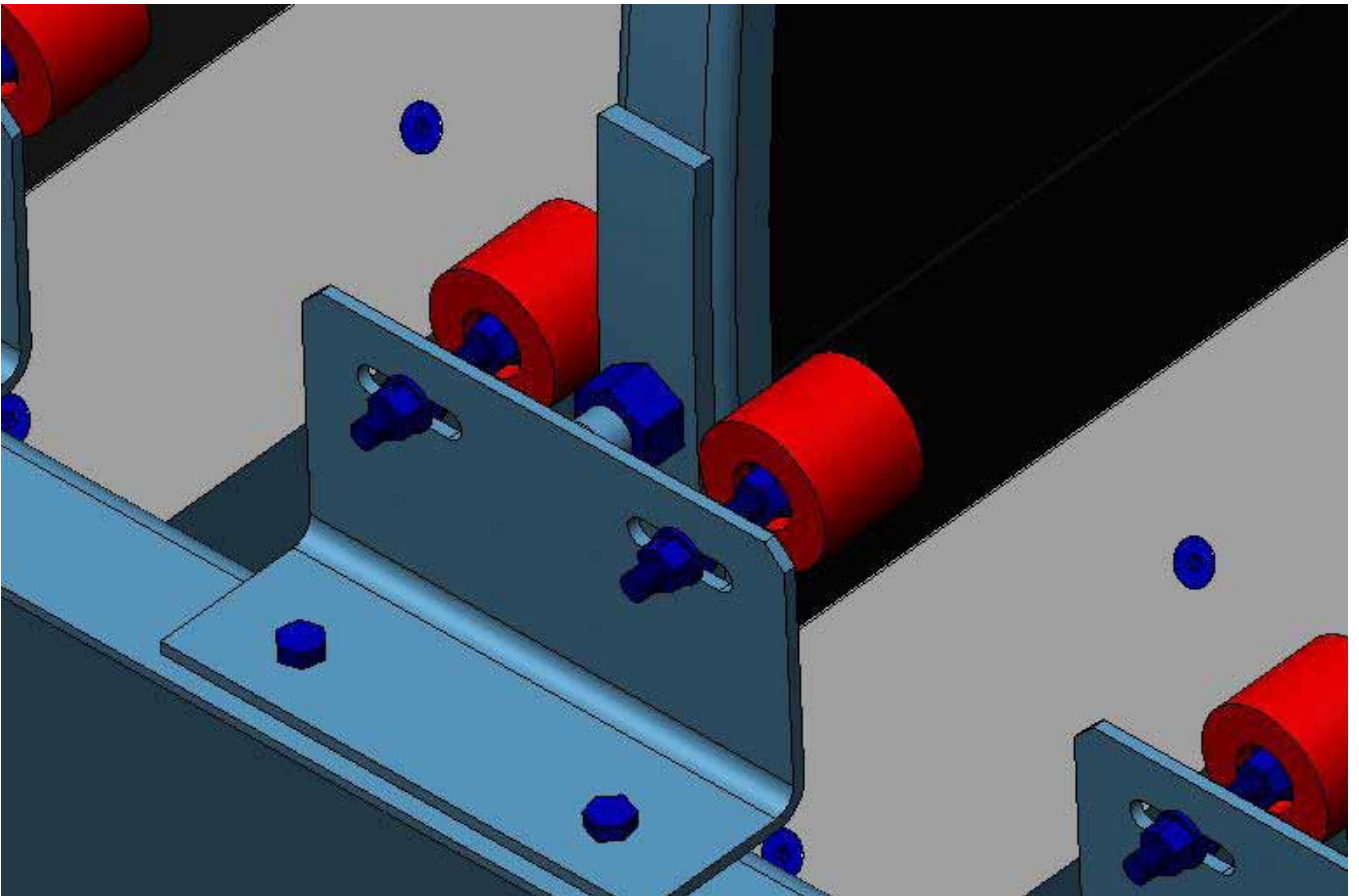


Adjustment slots were moved from the deflector blade to the chute walls. With the addition of the guide rollers, it was felt that not as much adjustment would be necessary.

Backing bar was moved from the top of the deflector blades to underneath the chute wall lip. It was felt that this would get the backing bar out of the wear path and provide a cleaner, smoother surface to deflect the cake.

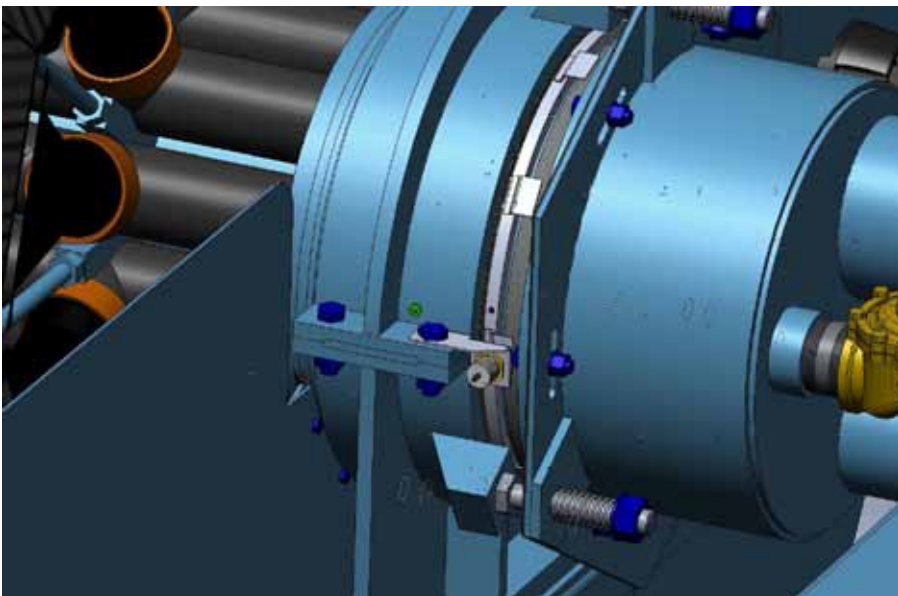
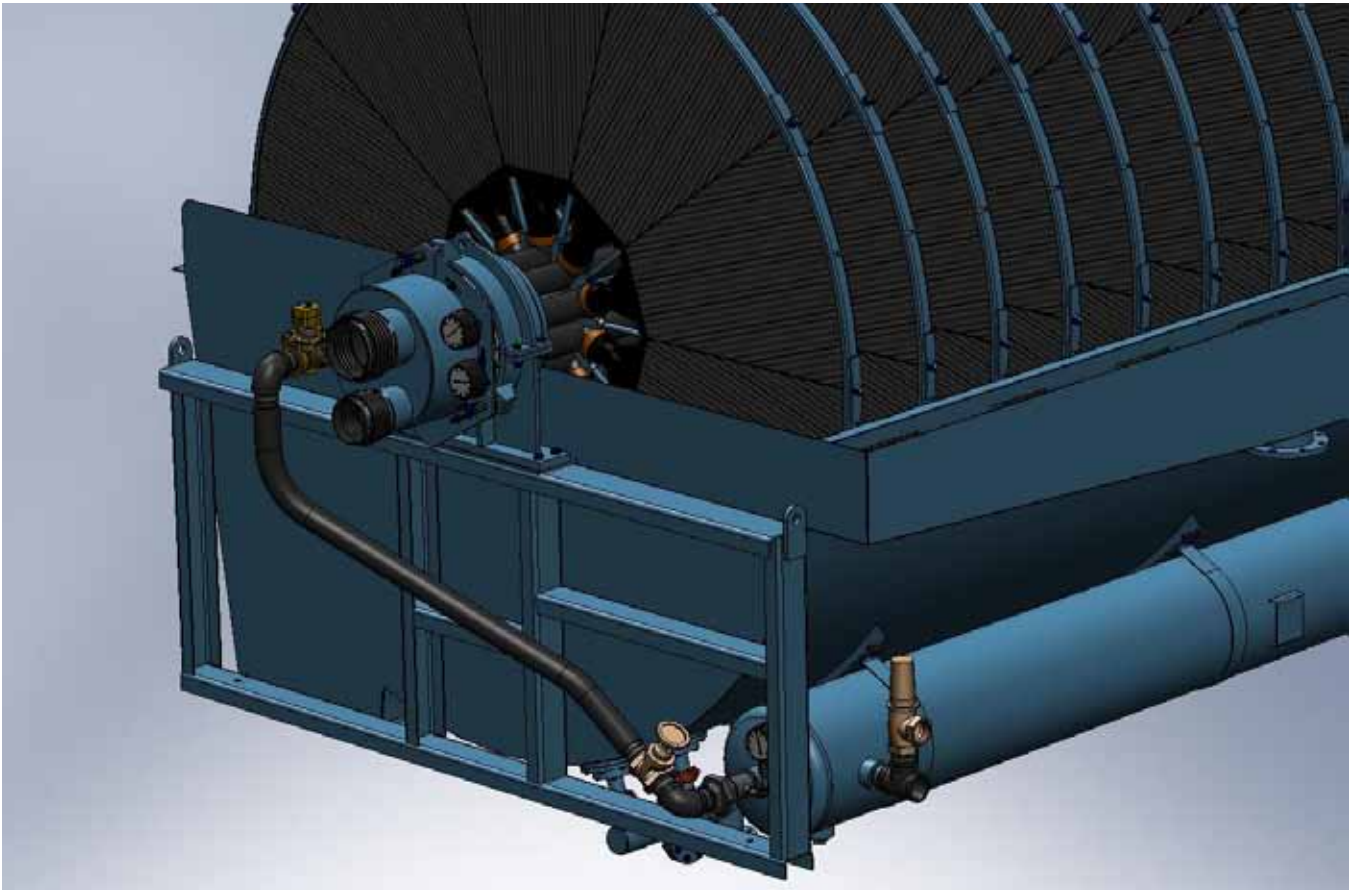


# Guide rollers



Guide rollers were added to help keep the sectors in line between the cake deflectors.

# Snap air blow system

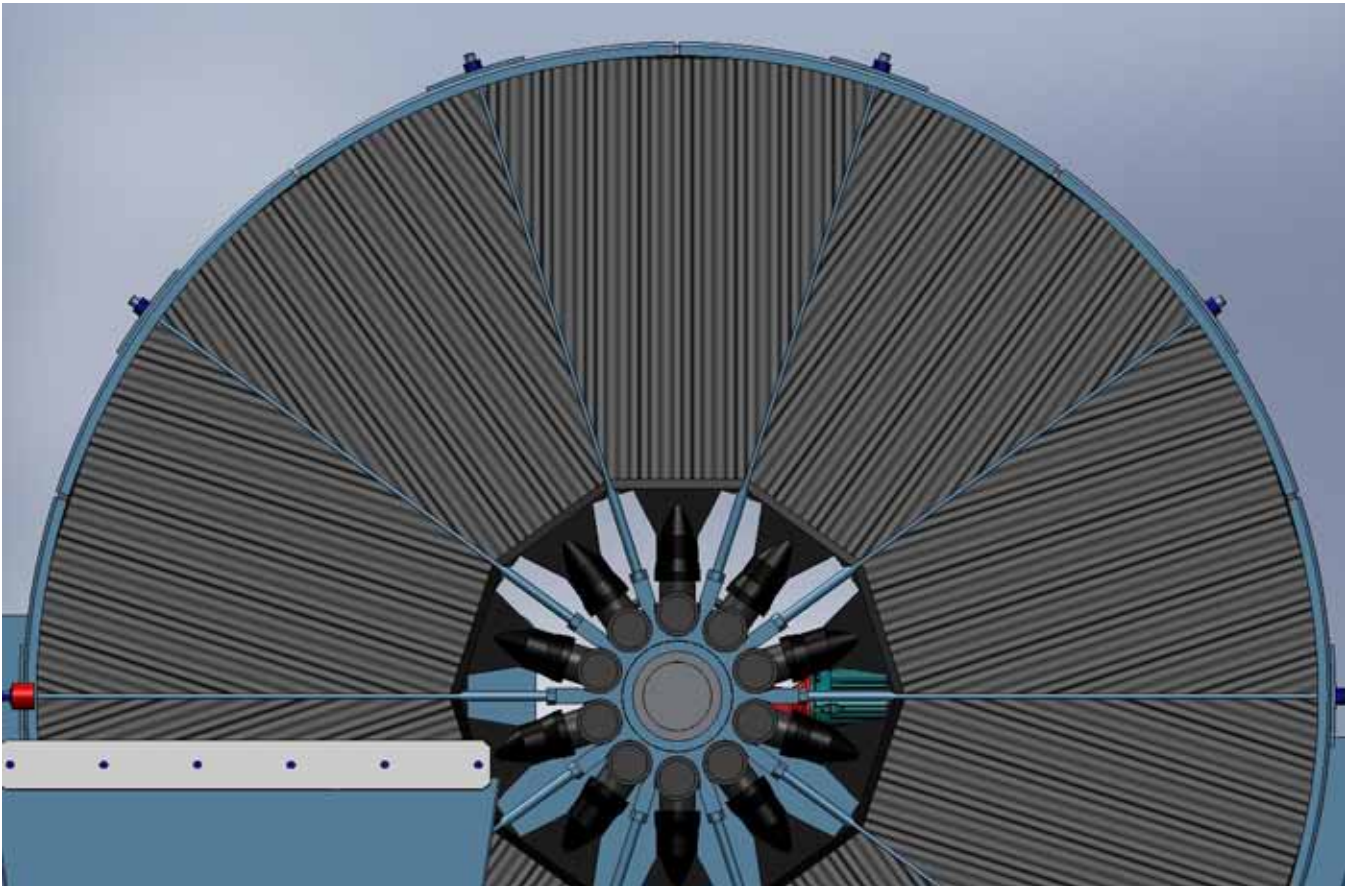


The vat-mounted receiver was adapted to the new PBF.

We increased the line size from 2" to 3".

The E-Dic was switched to a barrel type proximity sensor due to space limitations.

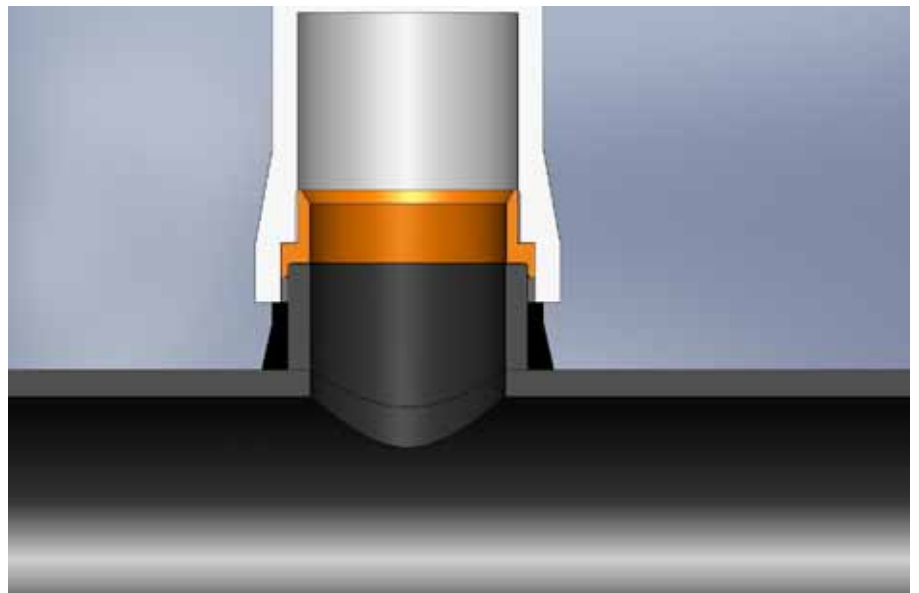
# Sector assembly



The sectors have remained unchanged.

FLSmith went with a one-piece sector rim clamp with reinforcement bar in middle and no interlocking.

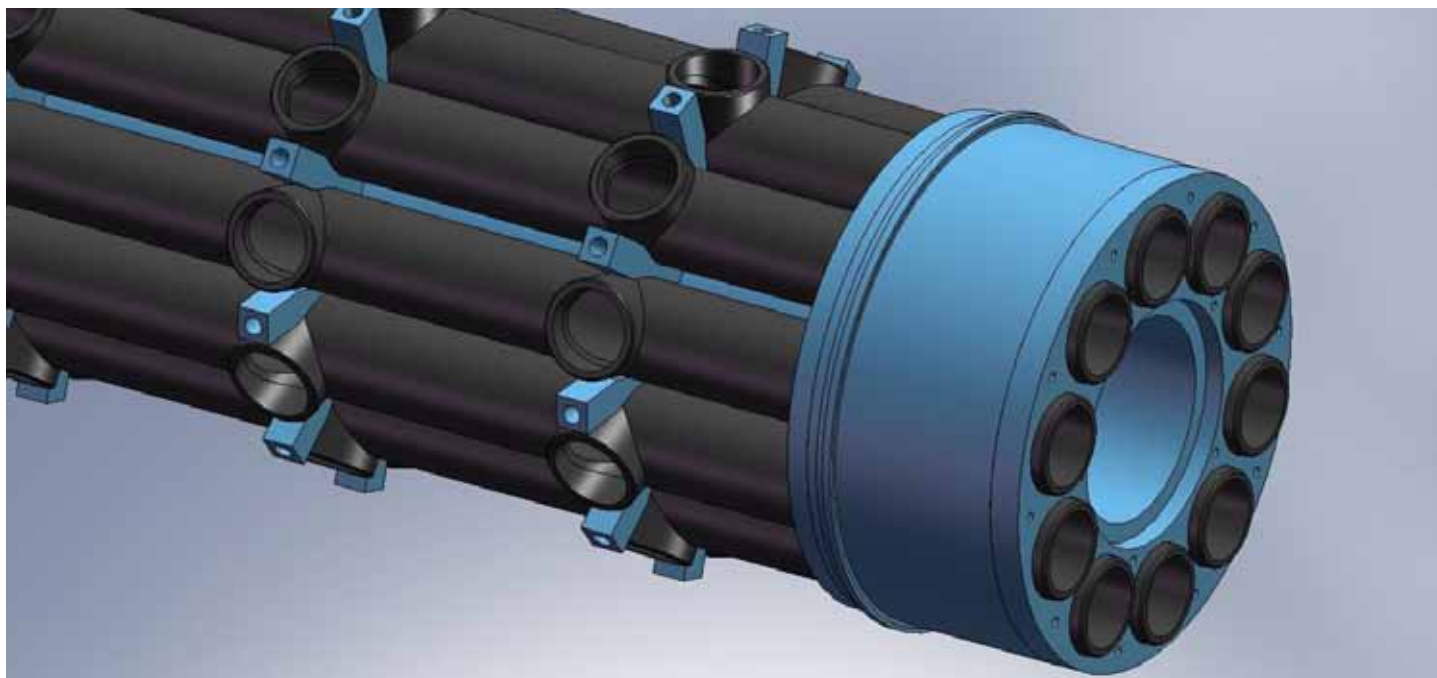
Sector sealing is accomplished by an internal urethane ferrule that would fit snugly inside the sector bell. The ferrule would stay with the sector when the sector is pulled from the filter.



## Center barrel

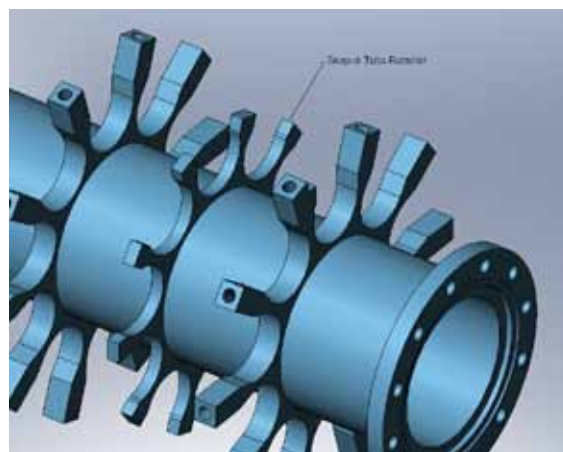
[www.flsmidth.com](http://www.flsmidth.com)

Rev 3/8/2012 al-us



Center barrel design remains mostly unchanged except for converting to hard metric and adding stub shaft for drive. Main shaft remains 10" (DN250) pipe. 14-disc machine may

need additional reinforcement. Filtrate pipes were changed from 3" SCH 80 steel pipe to 110mm O.D. HDPE pipe (metric standard).



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