

INCREASE ETHANOL & OIL YIELDS

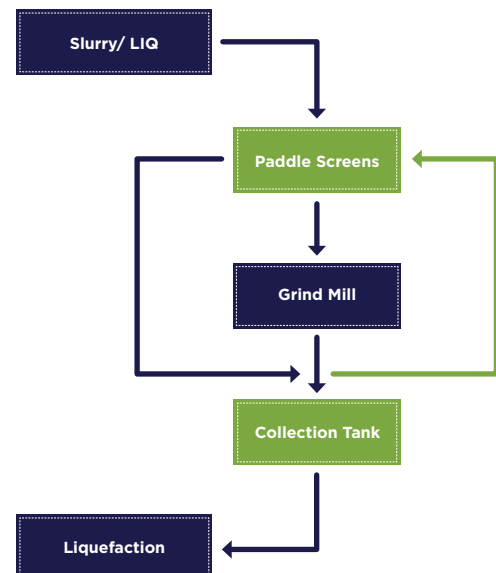
FQT® developed the patented Selective Grind Technology™ (SGT) system to increase ethanol and renewable corn oil yields. The SGT system is installed in the mash cook process to expose more starch conversion to ethanol and to shear open the germ, releasing more renewable corn oil. This system reduces starch in dried distillers grains, reducing dryer loading while also increasing DDGS ProFat levels, depending on plant conditions. This allows for more oil to be recovered while maintaining a DDGS protein specification.

FQT provides customized systems based on plant size and objectives. FQT systems utilize various screen and mill designs including 36", 40", and 52" grind mills, to achieve optimum grind performance.



- Up to 3.0% increase in ethanol yield
- Up to 22% increase in oil yield
- Currently utilized in >2 billion gallons of annual production, globally
- FQT paddle screens utilize a proprietary back-flush screen cleaning system, which can reduce labor
- SGT reduces dough balling from slurry to achieve better corn flour water mixing, resulting in improved enzymatic activity

FQT SGT™ SYSTEM FLOW



THE SGT PROCESS

The SGT system utilizes a liquid/solids separation screening followed by the proprietary Fluid-Quip Incorporated disc mill. The liquid/solids separation step selects the proper size grit and germ particles for the mill while allowing fine particles and liquid to bypass the milling process. This focuses the mill energy on grinding the larger particles to the optimum size while avoiding excess fine particles or grinding liquid. The SGT grind mills utilize proprietary grind plates explicitly designed for ethanol plants.

PROJECT DETAILS

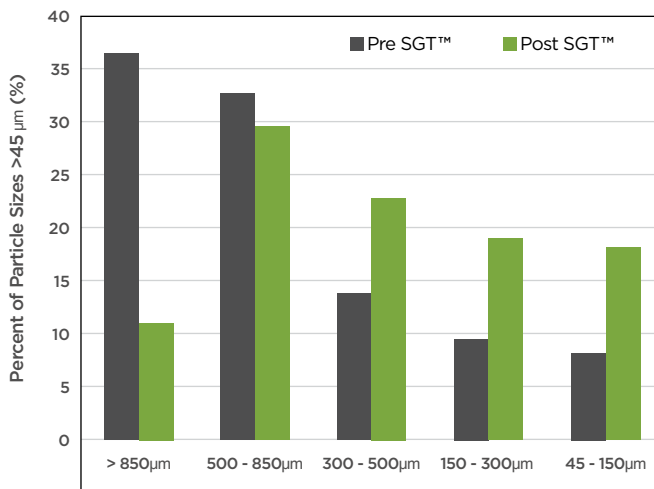
- Secondary milling step to improve ethanol and oil yields
- Multiple disc mill sizes and configurations customized to individual plant needs
- 20 FQT SGT systems operating at >2BGPY capacity
- Investment justification is ~ <3 Year payback



FULL PLANT BENEFITS

- Improved beer/mash heat transfer
- Improved heat transfer in evaporation
- Lower front-end viscosity
- Reduced energy usage in distillation

PRE AND POST SGT AT PLANT



AUTOGAP ADJUSTER™

FQT Technology to Enhance Existing Mills

Adding enhancements to your mill will enable an increase in oil yield and oil recovery. The Autogap Adjuster™ removes the manual labor component of adjusting your plate gaps. This allows for a more consistent grind profile, releasing more oil and starch.

The FQT Autogap Adjuster maintains the optimal peak grind efficiency by ensuring that the grind mill runs continuously at max amps, with optimal plate gap.