

PUMP SEALING OPTIONS FOR SUGAR LIQUIDS

PACKED GLAND:

Packed Glands are the most common shaft sealing for sugar liquids because they are simple, forgiving, and handle very high viscosities. The downside is that they must be tensioned to allow some leakage of liquid for cooling and lubrication of the packing. Viking's Universal pumps feature a drip well with tapped port on the bracket to collect leakage at the seal gland and divert it to a collection container. Packing can be replaced without removing the pump, by loosening the seal gland and sliding it toward the bearing housing, removing the packing rings with a packing hook, and re-packing, alternating the location of the cut on the seal rings. The bearing housing can be easily removed to slide the gland even further back to provide best access.

BEHIND-THE-ROTOR MECHANICAL SEAL:

Where leakage is not allowable, some mechanical seal options are available. On H through QS size Viking pumps, the 4124B (non-jacketed) or 4224B (jacketed) series pumps offer an optional Abrasive Liquid Seal with Silicon Carbide faces located immediately behind the rotor. The rotating face is pinned to the shaft and the stationary face is pinned to the bracket bushing, enabling use on viscosities up to 250,000 SSU, or 55,000 cSt. The bracket is filled with grease, retained by a lip seal, to lubricate the bracket bushing and minimize air which could enable crystallization at the seal faces. Viking's Abrasive Liquid (4624B) Series offers these seals as standard, along with Tungsten Carbide idler pin and idler bushing.

CARTRIDGE DOUBLE SEAL:

Double cartridge seals with hard faces inboard and water barrier can successfully handle sugar liquids to about 50,000 SSU, or 11,000 cSt, which makes them suitable for some syrups and molasses. These are available on all sizes of Viking pumps.

CARTRIDGE TRIPLE LIP SEAL:

Cartridge-style triple lip seals are capable of virtually unlimited viscosities, but are not well suited to abrasives. In general, these seals should not be used on massecuite or magma, but can handle syrups and molasses with a water flush or low pressure steam quench. These are available on all sizes of Viking pumps.