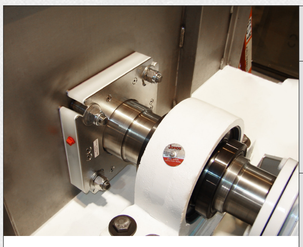
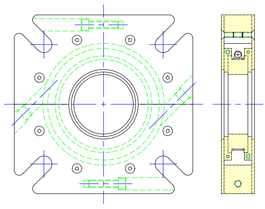
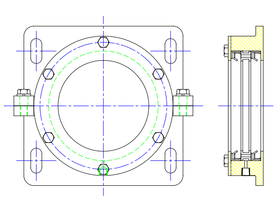




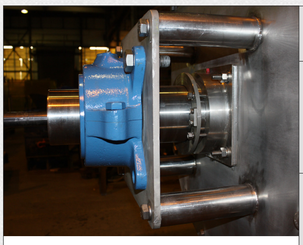
MECHANICAL SEAL

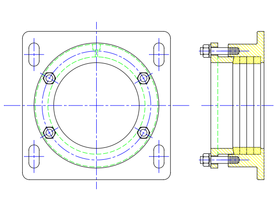
Description:	Consists of a rotating low friction seal face which attaches to the shaft and a stationary seal face which mates with the rotary face. Used for materials down to very fine powder size or where material head pressure is significant. Supplied with or without air purge for additional protection.
Advantages:	• Very tight seal where even minor loss or contamination can not be tolerated. • Dynamic seal in which centrifugal force of the rotating face and high surface prevent leakage of powder.
Limits:	• More expensive to overhaul than packing glands (depending on the application). • Seal depends on maintaining the absolute “flatness” of the faces.



DOUBLE LIP SEAL

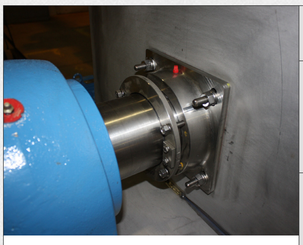
Description:	Mechanical spring action maintains contact of seal material to shaft at two points along shaft. Used for similar applications as single lip and somewhat finer powders when air purge is added.
Advantages:	• Automatic tension on seal by spring mechanism reduces regular maintenance. • Very inexpensive.
Limits:	• Can not tolerate out of round shafts. • Requires frequent replacement in dry powder applications. • 2 Points of failure possible, spring mechanism and seal material. • Generally, not good for high pressure. • Subject to “catastrophic” failure.

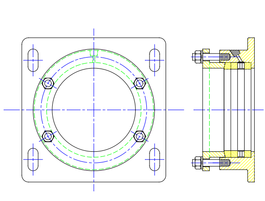




STANDARD PACKING GLAND

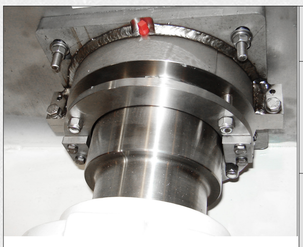
Description:	Multiple strands of materials such as fibers, elastomer, metals or composite compressed against the shaft between solid plates. Seals well for material down to fine particle size or where material head pressure is significant.
Advantages:	• Periodic tightening maintains seal against leakage and extends time between overhaul.
Limits:	• Periodic maintenance required. • Must be able to remove support collar of end of shaft to replace. • More expensive compared to lip seals.

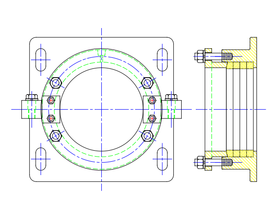




PACKING GLAND WITH LANTERN RING

Description:	Hollow ring inserted between conventional packing to allow air or other compressed gas purge. Used when minor loss or contamination can not be tolerated.
Advantages:	• Provides positive pressure on seal discouraging particles from migrating along shaft as packing wears or foreign material from entering.
Limits:	• More costly with respect to packing glands without the ring.





SPLIT PACKING GLAND

Description:	Packing material is supported in two half-circle collars that are bolted together. Used to facilitate maintenance on larger shaft sizes.
Advantages:	• Allows change of the seal assembly without having free end of shaft or shaft removal.
Limits:	• More costly with respect to packing glands without the ring.