

GRAPHALLOY® Case and Wear Rings

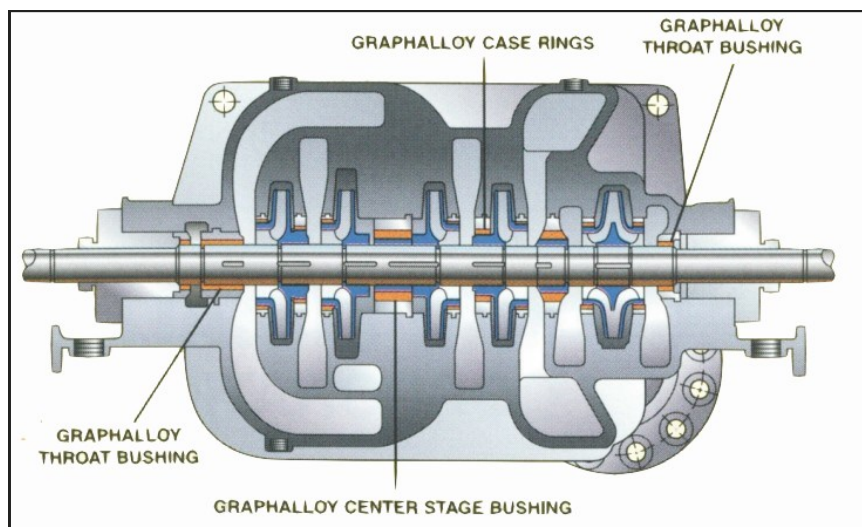
For Improved Pump Reliability

Pump wear rings and case rings made from Graphalloy materials can significantly improve the reliability and efficiency of both horizontal and vertical pumps. The unique properties of the Graphalloy material, a range of self-lubricating graphite-metal alloys, benefit users across a wide variety of pump services.

RELIABILITY: Graphalloy is self-lubricating and non-galling. This means that the material is “kind” to the shaft and will minimize damage in the event of dry-run, loss of suction, and slow roll on standby service – conditions that can severely damage or destroy conventionally fitted pumps.

A common problem in pumps with polymer or metal fittings is rapid thermal expansion causing loss of clearance that results in pump seizure. The common solution to this problem is to open up the clearances, which has the unwanted impact of increasing vibration and reducing pump efficiency. Graphalloy is dimensionally stable and has a low coefficient of thermal expansion across a wide temperature range, allowing very tight clearances without risking pump seizure.

EFFICIENCY: Graphalloy can be designed to run at 50% of API’s recommended clearances for metallic wear part materials. Tighter clearances decrease vibration, shaft deflection, and leakage across wear rings and this can result in several percentage point increases in efficiency, leading to very real money saved in annual energy costs. The reduction in vibration levels also result in fewer seal and bearing failures and an increased MTBF.



GRAPHALLOY works in temperatures ranging from -450°F to over 1000°F (-267°C to over 540°C). It is corrosion resistant and performs in conditions where metal or polymer wear parts fail. Our US-based manufacturing facility can install the Graphalloy for you in your own metal rings or can provide a turnkey ring assembly ourselves.

We take pride in our quick turnaround time, with our lead times quoted in days or weeks, not months.
Email Sales@graphalloy.com today or call us at 914-968-8400.



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GRAPHALLOY® ‘Disaster’ Bushings for Improved Safety in Case of Seal Failure

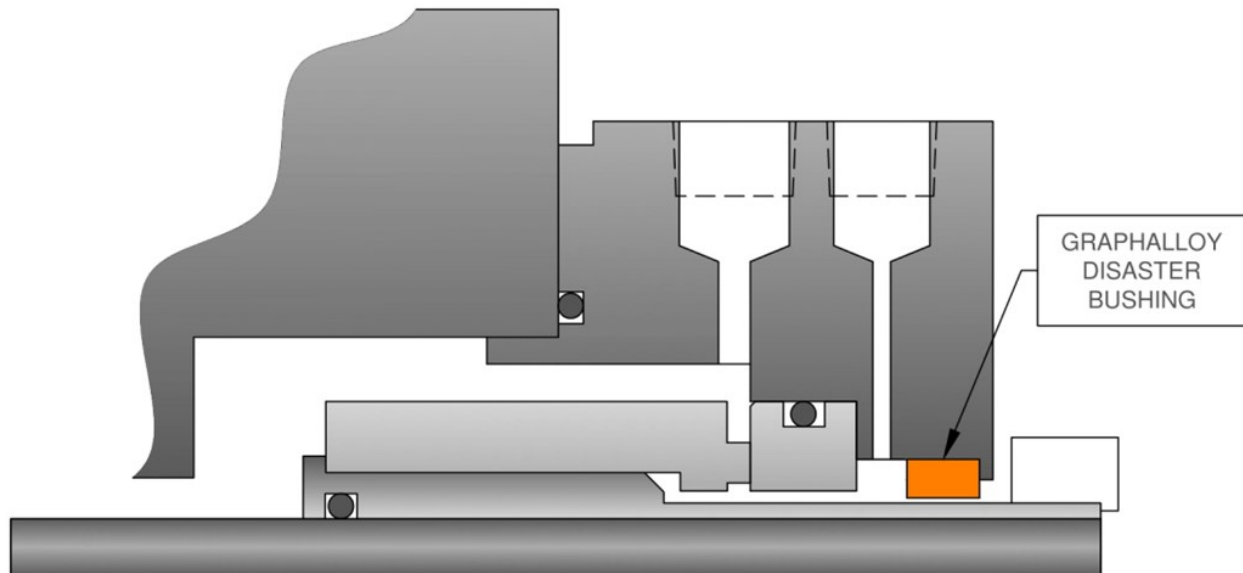
“Disaster Bushings” are used in pumps outside the seal to minimize product leakage to the environment in the event of a seal failure.

There are several properties of GRAPHALLOY material that make it an excellent candidate for these applications:

TIGHTER CLEARANCES: Graphalloy can be used with very tight clearances, allowing any leaked fluid from the seal to be directed through the appropriate drain.

NON-GALLING: Graphalloy is solid, uniform material. It is non-galling and self-lubricating. It is not a surface coating and therefore will not chip off. As Graphalloy is the “sacrificial part”, if the shaft comes in contact, it will not be damaged.

LOW COEFFICIENT OF THERMAL EXPANSION: Thermoplastics or metal wear parts used for “disaster bushings” need to be designed to handle a rapid rise in temperature from hot service fluid coming in contact or from touch-off against the shaft. This means designing with wider clearances, partially defeating their purpose. Graphalloy’s low coefficient of thermal expansion relative to metal or thermoplastic means it won’t expand under the high temperatures and can be designed with extremely tight clearances, resulting in more effective leak protection.



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