VESCONITE

Pump Wear Parts

- Low friction
- No delamination
- No swell or softening
- Reduced shaft wear
- Low maintenance
- Extended life

NO-SWELL BEARINGS FOR PUMPS

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INDEX

PG 3 Vesconite Hilube pump applications

PG 6 Vesconite Hilube wear components in pumps

PG 10 Vesconite Hilube case study

VESCONITE HILUBE IS SELF-LUBRICATING AND REQUIRES NO GREASING. THESE BEARINGS REQUIRE NO MAINTENANCE.

VESCONITE HILUBE

LONG LIFE, LOW FRICTION, NO SWELL

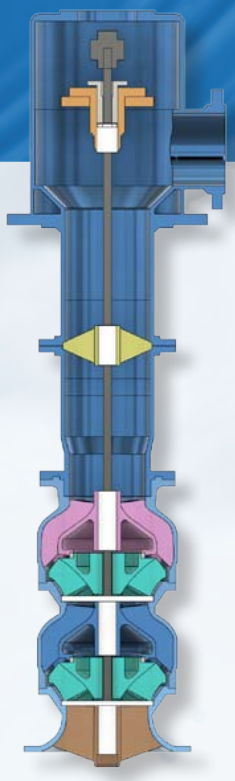
Reasons to consider Vesconite Hilube pump bearings and wear rings:

- Able to run dry
- Improve efficiency
- Low friction
- Low shaft wear
- Negligible swell
- Resistant to chemicals
- Low thermal expansion
- No delamination
- Drinking water approval
- Easy to install and remove
- High compression strength

Where Vesconite Hilube has been successful:

- Irrigation
- Sea water
- Desalination
- Reverse osmosis
- River water
- Flood water
- Drinking water
- Water treatment
- Fire-fighting
- Service water
- Cooling water to power plants

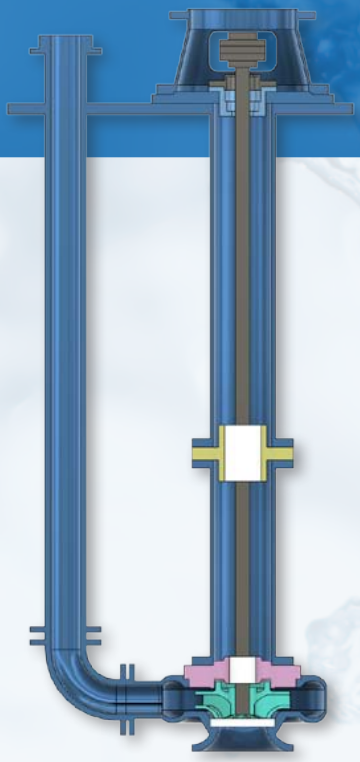
VESCONITE **PUMP APPLICATIONS**



VERTICAL TURBINE PUMPS

OUR APPLICATIONS:

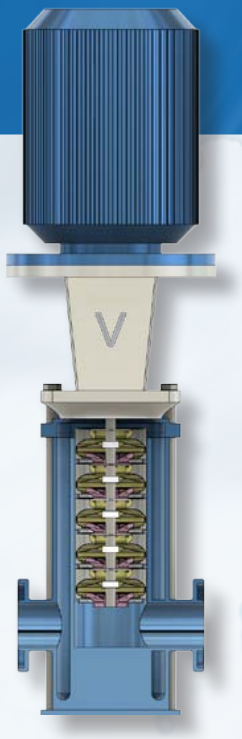
- Top stuffing box bearings
- Lineshaft / spider / support bearings
- Bowl bearings
- Casing wear rings
- Inlet / suction bearings



VERTICAL SPINDLE SUMP / MIXED FLOW PUMPS

OUR APPLICATIONS:

- Lineshaft / spider / support bearings
- Casing wear rings
- Inlet / suction bearings



VERTICAL MULTI-STAGE SURFACE / CANISTER AND BOOSTER PUMPS

OUR APPLICATIONS:

- Neck rings / liners
- Diffuser bearings

SUBMERSIBLE PUMPS

OUR APPLICATIONS:

- Neck rings / liners
- Casing wear rings
- Diffuser bearings

OTHER COMMON VESCONITE APPLICATIONS :

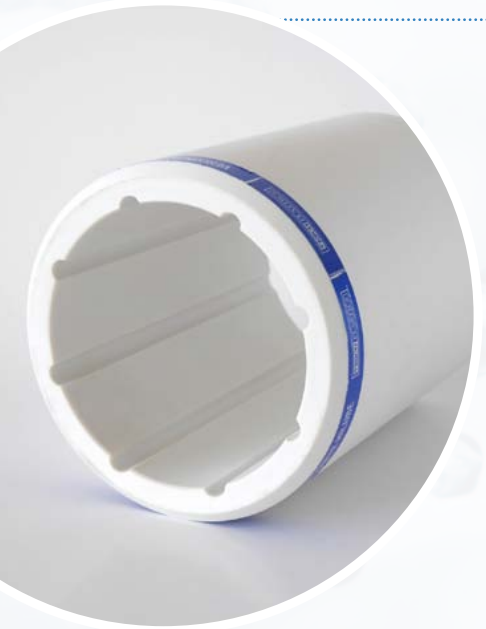
- Horizontal centrifugal pumps and split-case pumps
- Diaphragm pumps
- Gear pumps (external and internal)
- Rotary vacuum vane pumps and exhausters
- LPG pumps

VESCONITE HILUBE
WEAR COMPONENTS IN PUMPS

TOP STUFFING BOX BEARINGS

Stuffing box bearings restrict water flow. Our bearings are valuable here because they offer low friction and operate with limited water flow, including periodic dry start up of the pump.

Some water flow is necessary so a pressure feed line or a low-pressure dump line may be installed to ensure limited water flow. In addition, a lantern ring groove may be added to allow a well distributed flow across the bearing.



LINESHAFT / SPIDER / SUPPORT BEARINGS

When pump shafts are long, intermediate bearings are needed to support the shaft. Vesconite Hilube bearings can be designed with close running clearances, which result in more stable shafts and less shaft run out.

Our shaft support bearings can be intake cooled using a dedicated lubrication supply, or process water fed from the pump discharge pipe with no need for additional lubrication systems.

The self-lubricating Vesconite Hilube range allows successful operation of the bearings even when the water flow from the intake pipe is temporarily suspended.

BOWL BEARINGS

Bowl bearings increase pump life: located at critical shaft and impeller surfaces, they protect shafts and impellers against wear.

Vesconite Hilube bowl bearings prevent metal-on-metal wear. They are sacrificial parts that protect expensive shafts and impellers from wear while providing support to pump bowls.

Bowl bearings are locating guides for shafts and need to be rigid, dimensionally stable and to operate occasionally with limited water flow – properties that the Vesconite Hilube range is well known for.

INLET AND SUCTION COVER BEARINGS

Inlet and suction bearings are located at the bottom of the pump set and support the end of the shaft. These bearings are typically longer than bowl bearings. Normally inlet bearings are not flushed with the pumped medium as they are located in a sealed cavity. This is generally not a concern when using the Vesconite Hilube range as there is enough heat dissipation to the surrounding fluid to prevent the bearing from over heating. The running tolerances can be the same as used with the bowl bearings.

DIFFUSER BEARINGS

Diffuser bearings must be able to run dry occasionally and handle load to support the shaft and keep it straight: with the versatile Vesconite Hilube range this can be achieved. Unlike some traditional materials such as carbon graphite, Vesconite Hilube will not break easily, for example when press-fitted. Vesconite Hilube bearings are also harder than some traditional materials such as PTFE (Teflon). This gives them great compressive strength and they keep their size.

GEAR PUMP BEARINGS

Vesconite Hilube bearings are used in light-duty gear pumps. Vesconite Hilube bearings have been successfully used in transfer gear pumps and have been able to cope with many chemicals that have damaged traditional bearings. Vesconite Hilube bearings have also been used in gear pumps that pump at high pressures and slow speeds.

NECK RINGS AND LINERS

Vesconite Hilube neck rings offer excellent dimensional stability: closer running clearances may be achieved. With the neck ring acting as a “seal”, it reduces pressure loss from the high pressure stage. The overall lifespan is also much longer with Vesconite Hilube neck rings since they do not soften over time or absorb water.

CASING WEAR RINGS

Vesconite Hilube casing wear rings have been successful in horizontal and vertical pumps.

Vesconite Hilube wear rings can reduce the bypass of liquid between the impeller and the wear ring. They can be designed to run with smaller clearances between the casing wear ring and the impeller. This means a higher pumping efficiency due to lower by-pass.

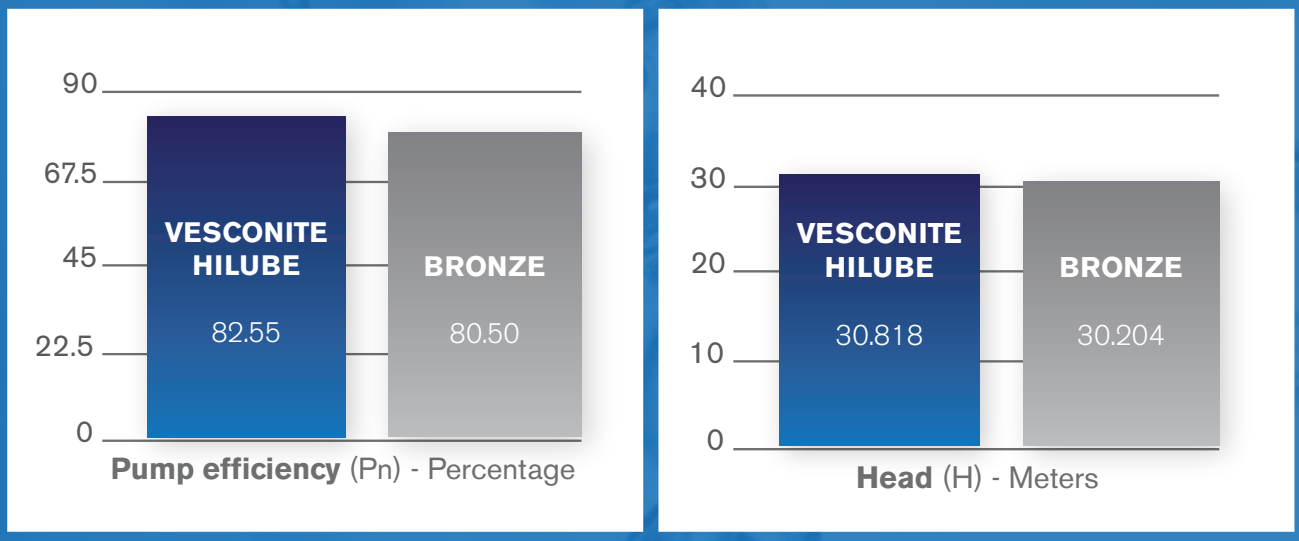
If a Vesconite Hilube wear ring makes contact with the impeller, no damage is caused as the wear ring will be “machined” to the new size and maintain a close clearance. This is a major advantage compared to metal wear rings, where contact between the impeller and casing wear ring may lead to galling and even catastrophic failure.

VESCONITE HILUBE **CASE STUDY**

VESCONITE HILUBE VS BRONZE WEAR RINGS

Independent tests done by a major pump manufacturer revealed that using Vesconite Hilube casing wear rings could safely reduce the running clearance between the wear ring and the impeller and improve pump efficiency considerably. Bronze wear rings with a diametrical running clearance of 0.30 mm were put to the test against Vesconite Hilube with a 0.10 mm clearance.

With the change in running clearance the pump manufacturer noted a 2.5% increase in pump efficiency and a 2% increase in the total head produced.



OEM test results - Vesconite Hilube vs bronze wear rings.

VESCONITE
BEARINGS

Founded in 1958, Vesconite Bearings is a world-leading manufacturer of low-friction, low-wear bearing materials for a wide range of industries. These include the pump, agriculture, railways, mining, heavy-transport, hydro, renewable-energy, earthmoving, marine and construction industries.

The story of Vesconite goes back to 1968, when founder and chemical engineer Alain Leger began the research and development of a bearing material for use in the ultra-deep gold mines of South Africa – a notoriously harsh environment characterised by extreme dirt and wetness.

The Vesconite Bearings factory spans 20,000 m^2 and features advanced extrusion, injection-moulding and CNC machining facilities. Both standard stock (rods, bushings and plates) and high-precision machined parts are produced. The company is ISO 9001:2015 certified.

EXTENSIVE PRODUCT RANGE

SHORT LEAD TIMES

QUICK GLOBAL DELIVERY

HOW CAN WE HELP YOU?

www.vesconite.com
vesconite@vesconite.com

ISO 9001 2015 CERTIFIED

USA	+1 713 574 7255
UK	+44 20 3239 9044
EU	+31 303 200 200
New Zealand	+64 20 4011 3659
Australia	+61 3 9796 4098
Singapore	+65 6481 8728
Argentina	+54 9 11 6724 7641
Worldwide	+27 11 616 1111

77 Mimetes Street
Denver
Johannesburg
2094
South Africa