
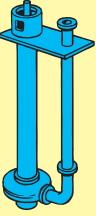
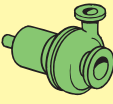
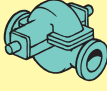

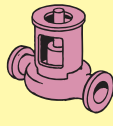


# Application assessment or quotation

Please complete the form and fax to **+27 11 616 22 22** or **+27 11 615 38 10**.

If possible include a cross section or assembly diagram showing pump design and bearing location.

 <b>Axial flow / mixed flow</b> <input type="checkbox"/> Lineshaft <input type="checkbox"/> Pump bowl <input type="checkbox"/> Stuffing box <input type="checkbox"/> Suction cover	 <b>Sump</b> <input type="checkbox"/> Impeller support <input type="checkbox"/> Shaft support <input type="checkbox"/> Wear ring	 <b>Centrifugal</b> <input type="checkbox"/> Wear ring <input type="checkbox"/> Support bearing
 <b>Split case</b> <input type="checkbox"/> Wear ring <input type="checkbox"/> Support bearing <input type="checkbox"/> Lantern ring	 <b>Submersible</b> <input type="checkbox"/> Lineshaft	 <b>In line</b> <input type="checkbox"/> Wear ring <input type="checkbox"/> Support bearing

**Other** (specify).....

<b>Pumped product</b> <input type="checkbox"/> Water <input type="checkbox"/> Other (specify).....		<input type="checkbox"/> Clean <input type="checkbox"/> Dirty (specify).....	
<b>Bearing size</b> <input type="checkbox"/> mm <input type="checkbox"/> inches	Split bearing required	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Housing/casing diameter .....	Flange diameter (if required) .....		
Shaft/impeller diameter .....	Flange thickness .....		
Bearing length .....	Number of bearings .....		
<b>Operational conditions</b>			
Rotational speed (RPM).....	Maximum temperature	<input type="checkbox"/> °C	<input type="checkbox"/> °F
Load <input type="checkbox"/> kg <input type="checkbox"/> lbs	Minimum temperature	<input type="checkbox"/> °C	<input type="checkbox"/> °F
<b>Current material used</b>			
<input type="checkbox"/> Bronze	<input type="checkbox"/> Elastomer	<input type="checkbox"/> Rubber	<input type="checkbox"/> Cutlass
<input type="checkbox"/> Other (specify).....			
<b>Lubrication</b> <input type="checkbox"/> Product <input type="checkbox"/> Water <input type="checkbox"/> Grease <input type="checkbox"/> Oil <input type="checkbox"/> None			

## Contact details

Company ..... Contact Name .....  
 E-mail ..... Website www .....  
 Address .....  
 Country ..... Postal / Zip code .....  
 Telephone + ( ) ..... Fax + ( ) .....  
 Please quote quantity per order ..... Quantity per year .....

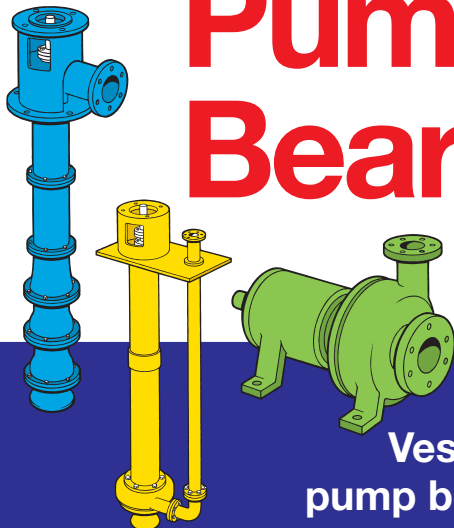


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[vesconite@vesconite.com](mailto:vesconite@vesconite.com)

	<b>Call Toll Free</b>	<b>Fax</b>
USA	1 866 635 7596	(212) 937 3184
UK	0800 731 9745	(207) 681 3444
Canada	1 866 682 3484	(416) 352 1527
Brazil	0800 891 8710	
Chile	800 10 46 46	
Portugal	800 827 007	
UAE	1 800 027 01 03	

# Vesconite and Vesconite Hilube Pump Bearings



**Vesconite and Vesconite Hilube are superior pump bearing materials giving exceptionally long life in tough and critical pumping applications.**

Vesconite has been used worldwide in many critical pumping applications including: Cooling water pumps for power stations, river abstraction pumps, fire fighting and service water pumps, irrigation and potable water pumps.

Vesconite is an internally lubricated low friction long life polymer bearing material specially designed to overcome immersed bearing problems. Vesconite Hilube contains advanced solid lubricants to give an even lower friction and a longer life and the ability to overcome dry start-ups and dry running situations.

Vesconite is available worldwide at international stocking points and has been supplied to over 60 countries for a variety of demanding applications.

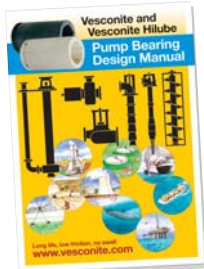
Vesconite is an ideal bearing material when running wet or immersed. Water and many other fluids provide a good lubrication for the bearings. Vesconite has been used in rudder and stern tube bearings in the marine industry, pumps, water treatment plants, dam gates and many other wet applications.

**Go to [www.vesconite.com](http://www.vesconite.com) for:**

- **Online Design-a-Bearing calculators** – correctly designed bearings are only a click away
- **Application success stories** – just some of the pumps successfully fitted with Vesconite.
- **Technical information** – drinking water approval certificates and technical specification sheets

**The Vesconite and Vesconite Hilube Pump Bearing Design Manual gives useful information on:**

- Why Vesconite and Vesconite Hilube are the pump bearing materials of choice
- Design hints for bearings for various pump types
- Correct sizing information and useful technical information



**Vesconite PUMP Design-a-Bearing Calculator Metric v2.4**

Housing size  mm [Help](#)

Shaft size  mm

Bearing length  mm

Press fit? ☒

Maximum operating temp  40 °C

Minimum operating temp  5 °C

Total mass supported  0 kg

Number of bearings supporting total mass  1

Rotation  0 rpm

Scroll down for results

---

Outside Dia  Inside Dia  Length  +0.0/-

---

Loading P =  MPa

Shaft surface speed V =  m/min

PV =  MPa m/min

Expansion gap  mm

Interference fit  mm

Bore closure  mm

Additional clearance  mm

Assembled clearance  mm

Fitted inside diameter  mm

Press fit force  tons

OD after cooling with dry ice  mm

OD after cooling with liquid nitrogen  mm

[Useful links](#)

[Bearing retention](#) [PV calculations](#)

[Production ranges](#) [Grooves](#)

[Machining guidelines](#)

[Temperature calculations & limits](#)

[Press and freeze fitting](#)

[Size calculations](#)

**Request your FREE Design Manual on [www.vesconite.com](http://www.vesconite.com)**

## Why Vesconite and Vesconite Hilube are ideal for pump bearings

Low friction  
Low shaft wear  
Easy to install and remove  
High compression strength  
Resistant to chemicals  
Negligible water swell  
Able to run dry  
Safety and health  
No delamination  
Drinking water approval  
Low thermal expansion  
Environmentally friendly  
Easy to machine

### What is Vesconite?

Vesconite and Vesconite Hilube are specialized plain bearing materials made from internally lubricated low friction polymers. Vesconite bearings give excellent wear in harsh, wet, dirty or unlubricated conditions.

Vesconite and Vesconite Hilube have many advantages over traditional bearing materials such as bronze, acetal, nylons, nitriles, rubbers, elastomers, phenolics and laminates (whether dry or lubricated). Vesconite does not swell or soften when immersed which means that fine clearances are maintained.



#### Vesconite

– low friction, long life, well proven

The internally lubricated long life bearing material that has been proven in thousands of critical applications. Originally developed to overcome bearing problems caused by water swell of traditional non-metallic bearing materials. Gives a long life and low shaft wear.

#### Vesconite Hilube

– lowest friction, longest wear life, lowest shaft wear

The advanced grade of Vesconite with advanced internal lubricants giving a lower friction, lower wear rate and a greater ability to run dry. Able to survive typical dry running pump conditions for over one minute.

Vesconite Hilube has the same dimensional stability, mechanical properties and chemical resistance as Vesconite.



#### Hitemp 150

– high temperature, abrasion resistant

A low wear bearing material specially formulated for higher temperature resistance, Hitemp 150 can run at elevated temperatures up to **150°C (300°F)**, and up to **120°C (235°F)** in water or steam.

Hitemp 150 also has exceptional abrasion resistance and is well suited to pump applications of media with suspended dirt particles.

Hitemp 150 may be the material of choice when corroded or rough shafts cannot be avoided.



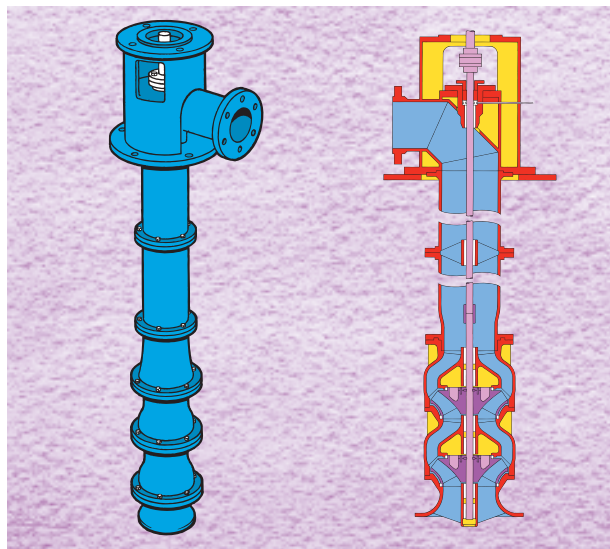
Local Representative:



## Fitting your pump – Summary examples

Vesconite and Vesconite Hilube offer significant advantages over traditional pump bearing solutions in a number of pump applications.

### Vertical spindle turbine pumps



#### Top stuffing box bearings

- Vesconite Hilube is ideal for dry start up conditions where lubricating water may take some time before reaching the bearing
- Closer running clearances mean reduced seal wear

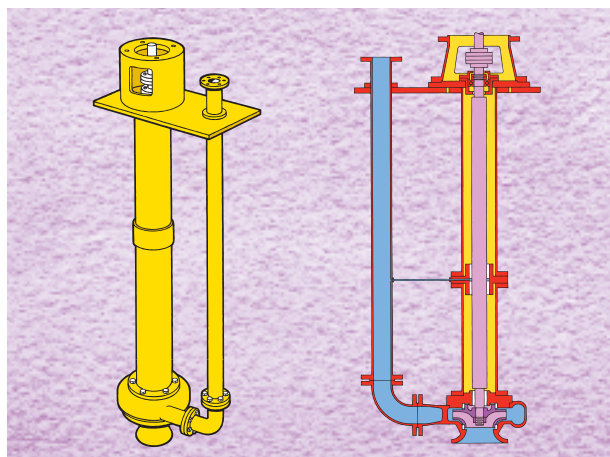
#### Lineshaft and pump bowl bearings

- Long life and low shaft wear
- Can be lubricated with process water as well as oil
- Vesconite Hilube able to survive dry start up conditions or temporary suspension of water flow
- Closer running clearance means less shaft run out and vibration

#### Suction cover bearings

- Good wear life even in dirty conditions
- Can be lubricated with process water rather than dedicated grease or oil supply and so problems with cumbersome lubrication lines are avoided.

### Vertical spindle sump pumps



#### Shaft support bearings

- Can be lubricated with water or process fluids as well as grease or oil, reducing problems with lubrication lines during installation
- Able to survive temporary suspension of lubrication during start up or pump snoring reducing requirements to prime pump and maintenance

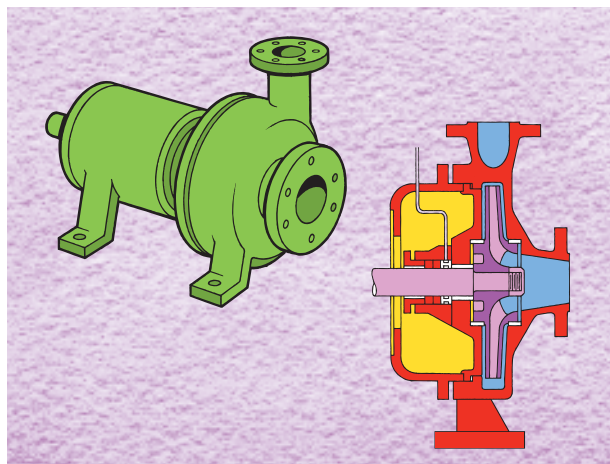
#### Impeller support bearings

- Close running clearances
- Low wear
- Can run dry temporarily

#### Wear rings

- Close running clearances improve pump efficiency
- No damage is caused in the case of contact between wear ring and impeller or casing

### Centrifugal pumps



#### Support bearings

- Low wear rate
- Closer clearances give a stable shaft and lower seal wear

#### Lantern rings

- Low friction gives ability to survive temporary suspension of lubrication water
- Dimensional stability allows for closely defined clearances to regulate water flow

#### Impeller and casing wear rings

- Low friction and low water swell allows smaller running clearances giving better pump efficiency