



THE CUSTOMER'S FIRST CHOICE

Dellner Polymer Solutions
Wellington Road
Burton upon Trent
Staffordshire
DE14 2AP
United Kingdom
+44 (0) 1283 741 741
www.dellnerpolymer.com



Dellner Romag

Berlin, Germany
Sales Office



Dellner Romag

Consett, UK
125,000 sq ft. Manufacturing Facility
Specialist Glass and Glazing
Transport Glass



Dellner Polymer Solutions

Burton upon Trent, UK
Custom-made Polymer Solutions



Dellner Wizard

Luton, UK
Sealed Units
Bespoke Glazing Solutions



Dellner Percy Lane

Tamworth, UK
Transport Glass & Glazing
Interior & External Rail Products



Dellner Ferrabyrne

Littlehampton, UK
Rubber-to-Metal Bonded Components
and Rail Suspension Systems

02
Dellner Polymer
and Glass Solutions

04
Our Values

05
Our Customers

06
History of
Silverline

07
Fundamental
Operation

08-09
Silverline Applications
& Features

10-11
Bearing Design
& Technologies



ABOUT US

Dellner Polymer Solutions provides technologically advanced vibration control, rubber fabrication and bonding solutions for a global market. Our head office based in Burton Upon Trent, England, provides access to all major road and rail networks ensuring ease of distribution throughout the world.

Technical innovation is integral to our DNA. With over 150 years' combined experience as Silentbloc and Woodville, our expert engineers work in close partnership to overcome not just today's challenges, but tomorrow's too. Our mission is to be the market leader in technical development with qualitative and flexible solutions. We have ambitions to grow, and to increase customer satisfaction throughout this journey.

OUR VALUES

COMMITMENT • INNOVATION • TEAM • JOY

They guide us in our everyday work. Our values are the compass in everything we do, they guide our behaviour and interactions with our colleagues, customers, and partners.



OUR CUSTOMERS

We provide product solutions to many clients of varying sizes across the UK and overseas.

We're extremely passionate about what we do and our team pride themselves on providing a friendly and responsive service, which we feel is reflected in most of our new clients hearing about us through personal recommendation.



Flowserve Brasil greatly appreciates all the work that has been done by Dellner to increasingly efficiently meet our demands. A prosperous and trusting partnership for sure.

Flowserve Brasil



HISTORY: WHY CHOOSE SILVERLINE

Silverline® is a trademarked name for a rubber water lubricated bearings (commonly referred to as Cutless Bearings). It was originally designed and produced by Silvertown UK Ltd in the late 1930's.

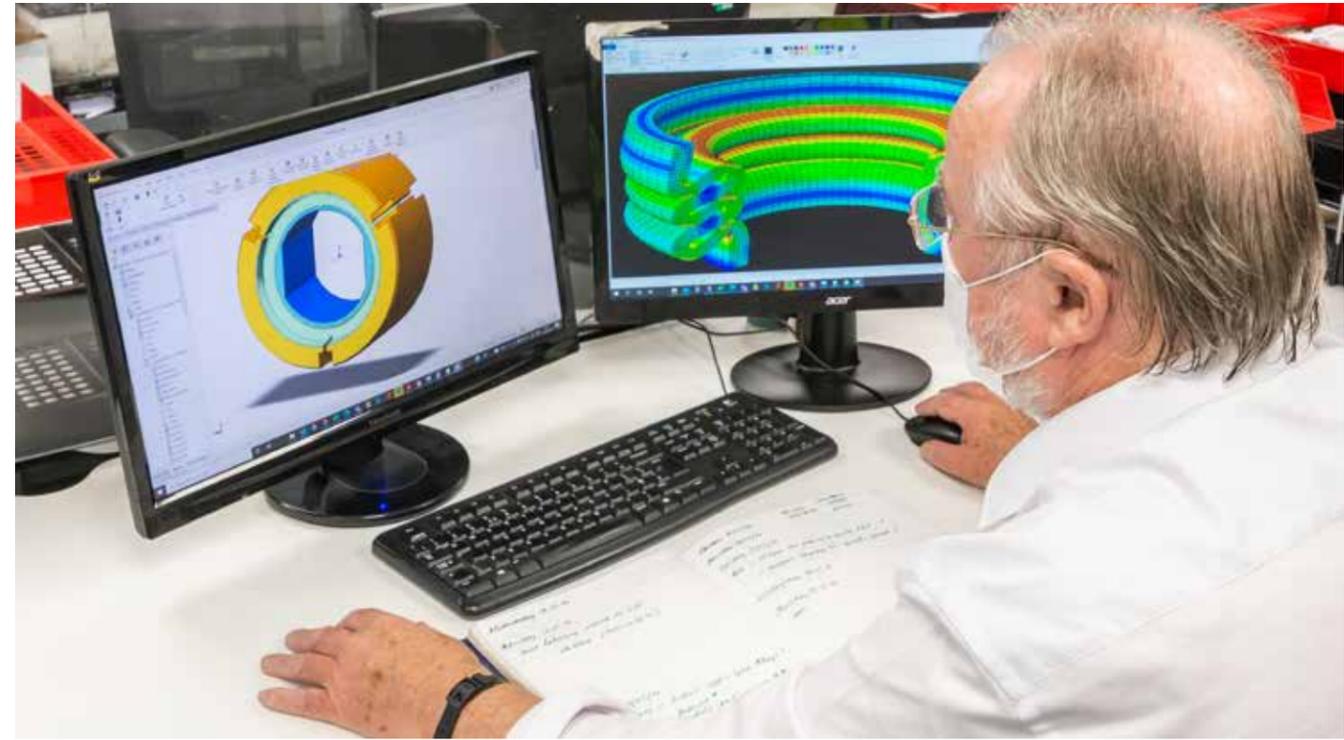
In October 1997 Silentbloc acquired Silvertown.

Silverline® bearings have been in service throughout the world for over eighty years.

Despite the introduction of several new materials in recent years, the performance of Silverline® bearings still surpass any available alternatives.

These bearings are manufactured in accordance with:

ISO 9001:2015. Certificate number FM 594938



FUNDAMENTAL OPERATION

The fundamental principle of a bearing's operation is based on the low co-efficient of friction between the rubber bearing surface and shaft when wetted.

The Silverline fluted bearing design utilizes basic lubrication principles to allow formation of hydrodynamic water-wedges at the bearing surfaces by flow of water from the grooves.

The flexibility of the bearing surface allows adjustment of the approach angle in response to an applied load to maintain water-wedges, acting in a similar manner to modern tilting pad thrust bearings to maintain the film thickness.

This self-adjustment characteristic of the Silverline bearing when allied with the natural resilience of the rubber gives the bearing its shock, vibration and noise absorption properties.

A particular feature of the Silverline bearing is the shape of the bearing strips which prevent the formation of a lubricant wiping lip under severe loading.

SILVERLINE APPLICATIONS

Naval

Propeller shaft bearings in stern tube or struts, rudder bearings, cutterhead bearings, in all inboard engine vessels from pleasure, fishing and general work boats to dredgers, freighters, naval vessels and icebreakers.

Marine

Silverline bearings are also fitted to in-board engine vessels from pleasure, fishing and general workboats to dredgers, freighters and icebreakers. In all these applications, the Silverline design eliminates the need for complex maintenance, intensive oil lubrication, and combines ecological acceptability with robust, reliable performance.

Industrial

Bearings for use in centrifugal pumps in water supply, circulation, irrigation and sewerage, crude oil, water turbines, agitators, classifiers, pulp mills.

Custom Solutions

We can manufacture water-lubricated bearings to meet your exact, custom requirements.



The flexibility of the bearing surface allows adjustment of the approach angle in response to an applied load to maintain water-wedges, acting in a similar manner to modern tilting pad thrust bearings to maintain the film thickness.

The fundamental principle of a bearing's operation is based on the low co-efficient of friction between the rubber bearing surface and shaft when wetted.

Silverline® bearings are suitable for temperatures up to 80°C. Special compounds are available for operation in temperatures up to 200°C. For temperatures above 200°C specific recommendations should be obtained relating to clearance between bearing and shaft.

The **Silverline®** fluted bearing design utilises basic lubrication principles to allow formation of hydrodynamic water-wedges at the bearing surfaces by flow of water from the grooves.

A particular feature of the **Silverline®** bearing is the shape of the bearing strips which prevent the formation of a lubricant wiping lip under severe loading.

This self-adjustment characteristic of the **Silverline®** bearing when allied with the natural resilience of the rubber gives the bearing its shock, vibration and noise absorption properties.

BEARING BORE DESIGN

Essentially, There are Three Types of Bore Profile



Fluted Design

The straight fluted design is the same as the standard marine bearings and allows maximum resistance to abrasive wear. Additional annular water grooves and feed holes can be provided to allow forced feed water flow to the bearing.



Spiral Design

The spiral (helical) groove bearing is recommended where greater stiffness is required. The spiral can be left-handed or right-handed.



Segmented Design

This design is for larger shaft sizes and those applications requiring the use of a high wear resistance nitrile rubber. This type of bearing is built up from a number of moulded segments which are fastened into a shell.

BEARING MATERIAL TECHNOLOGY

Shell Material

The shell material is specified to maintain compatibility with the pump material and at Dellner Polymer Solutions we can manufacture bearings with bronze, brass, stainless steel, phenolic and many more materials to meet our ever-changing customer requirements.

Formulation Ref	Polymer Type	Characteristics / Application
25-520	Nitrile	30 years service for standard bearings
26-430	Nitrile	Low co-efficient of friction for short periods of dry running
26-434	Nitrile	Bearing surface for segments offering low breakout friction and high pressure running
09-001	Nitrile	For high wear resistance





GET IN TOUCH

It's easy to get in touch with one of our experts, whether it's for a technical question or a business enquiry. Simply contact us using the details below.

 **Dellner Polymer Solutions**
Wellington Road
Burton upon Trent
Staffordshire
DE14 2AP
United Kingdom
+44 (0) 1283 741 741

 **General/RFQ Enquiries**
info@dellnerpolymer.co.uk

 **Accounts Enquiries**
accounts@dellnerpolymer.co.uk

 **Sales Enquiries**
sales@dellnerpolymer.co.uk