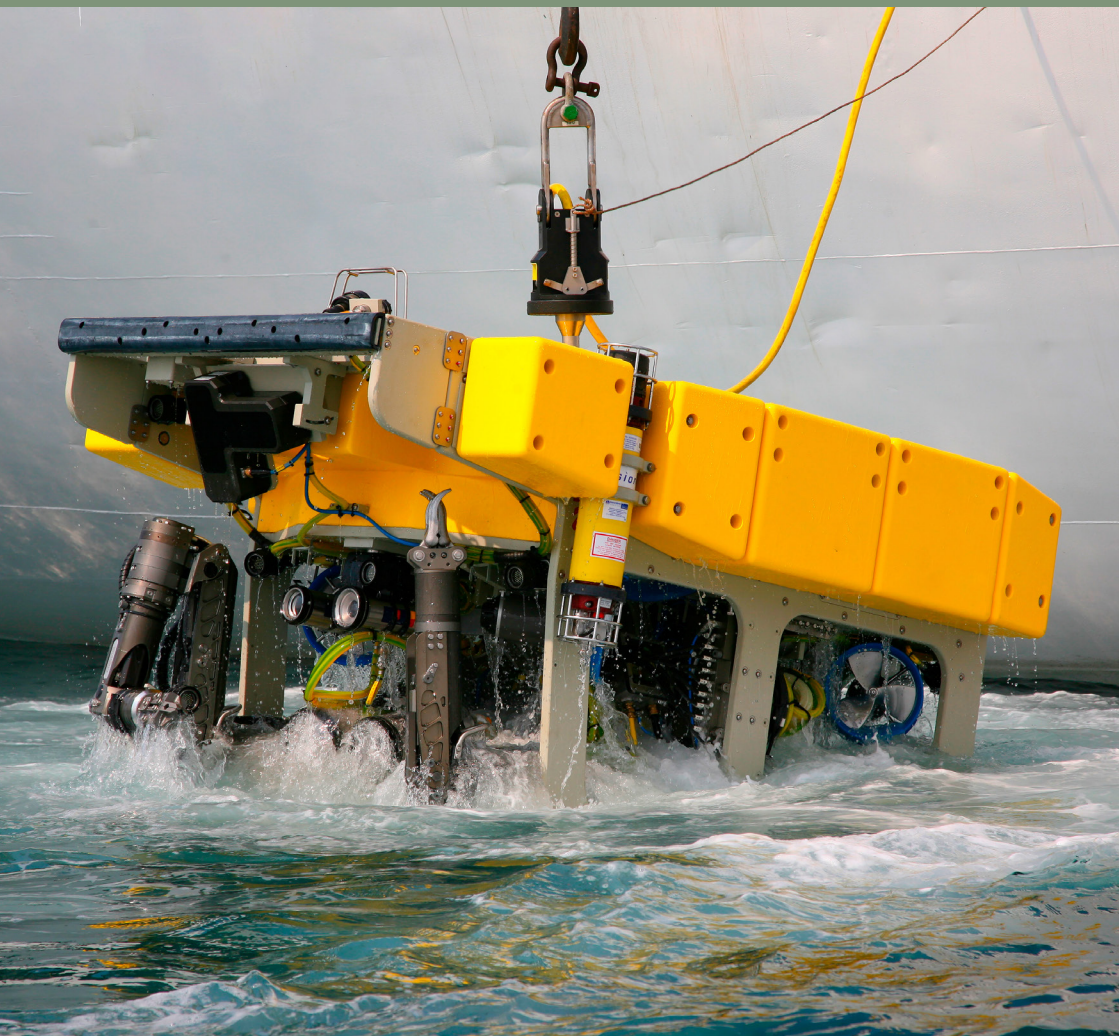
BGB™

FIBRE OPTIC ROTARY JOINTS

FORJ

Our Vision:

“ To be a trusted leader in smart rotary transfer solutions supporting global sustainability ”



BGB - FIBRE OPTIC ROTARY JOINTS

Dependable, high-speed data transmission is essential across numerous industries as assets and applications become more interconnected.

Fibre Optic Rotary Joints (FORJs) transmit optical communication signals across rotating interfaces without loss or noise.

Our range of FORJs exploit our industry leading manufacturing facilities and rigorous process control to bring micron level precision to industrial applications.

BGB have been supplying large and small equipment manufacturers with FORJs for over a decade.

OUR RANGE

Rugged stainless steel single channel and multi-channel FORJs for the most common fibre types:

- Single Mode (9/125) link 9/125
- Multimode (50/125) link 50/125 link 50/125 with leads
- Multimode (62.5/125) link 62.5/125
- Other fibre types possible by request contact us

Media convertors suitable for 10/100/1000 Mbps Profinet/Ethernet communication.

Single Mode (9/125)

BGB Part No: **GA100448-001**

Multimode (50/125)

BGB Part No: **GA5942-200**

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OUR RANGE

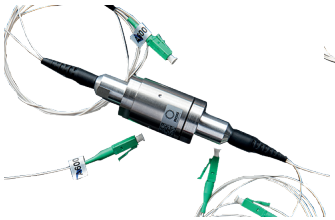
Multimode (50/125) (Pig Tailed)

BGB Part No: **GA5942-125**

Multimode (62.5/125)

BGB Part No: **GA4438-01**

Other FORJ Types (available on request)



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TURNKEY SOLUTIONS

BGB can provide FORJ alongside other rotary transfer solutions (e.g. Electrical Slip Rings), accompanying media converters, and/or cable harnesses.

As a solutions provider, BGB can provide design guidance and develop a bespoke, fit for purpose solution for your application.

BGB FORJ on a BGB Slip RIng & Hydrualic Union Package

We consistently deliver for our customers, earning an “Excellent” rating for overall performance and quality, and receiving praise for our responsiveness, transparency, and reliable collaboration in customer feedback.

APPLICATIONS

FORJs are most commonly used for communication between controllers and sensors/actuators in manufacturing, process automation and industrial machines. Our FORJs support any control or automation that has to happen over a rotating interface.

Our key application areas are:

- Rotating manufacturing processes (e.g. centrifugal casting, rotomoulding)
- Pitch control in turbines (e.g. tidal/wind)
- Robotics
- Aerial and marine UAVs in civil and defence applications
- Mechanically rotating radar/antennas
- Cable reels for feeding in and out or laying cables
- Video cameras or displays on rotating platforms

.... And many more.

Contact us today to discuss your specific application requirements and discover how our fibre optic rotary joints can revolutionise your system performance.

WHY FORJ ?

Whatever your rotating application, it is likely that there will be sensors and controls on the rotor side.

Traditional limitations:

- Electrical/brush contacts can introduce unwanted noise
- Electrical/brush contacts wear and need maintenance/ replacement
- Rotational variation in FORJs can cause optical limits to be exceeded
- Reflections from connectors and components can cause light source instability
- Oils/fluids from dirty environments can affect the signal
- Hard to integrate/small space claim requirements

ADVANTAGES OF FIBRE OPTICS

Our range of products enhance performance and reduce asset downtime through:

- Lossless optical signal transmission
- Designed for long product life (50M cycles +) with no maintenance
- Micron level precision engineering for low rotational variation
- Careful optical design for low reflections/internal noise
- An ST range designed to be IP68 in oil/water
- Small form-factor with option for flexible or bespoke flange mounting

FAQs

Here are some common terms and questions we get asked or you need to know when buying a BGB FORJ:

1 *- "How many channels do I need with my FORJ?"*

This means, how many cables go in and out of the FORJ. You might refer to these as channels", "ways" or "passes".

We can offer single or multiple channels. Most common is single but some customers want 2, 4 or more.

2 *- "What fibre type do I need to use on my FORJ?"*

There are two main types of fibre. These are 9 / 125 also called single mode and 50 / 125 also called multi mode. The 9 or 50 refers to the size of the glass fibre

Some customers might not know their fibre type. If not, check the cable colour or the printed text on the cable. 9 /125 cable is normally yellow and 50 /125 is normally orange.

The word "Mode" is a common source of confusion for customers. It's a term for how the light travels in the fibre and relates to the core diameter - It has nothing to do with the number of channels.

FAQs

3 *- "What cable length and connectors do I need on a Fiber Optic Rotary Joint?"*

BGB can supply cables and connectors for any customer need. Connectors are normally 2 letter abbreviations, like ST, SC, LC or FC.

4 *- "What's the difference between Singlemode and Multimode FORJ?"*

Multimode fibre has a larger 50 micron diameter core, allowing multiple light paths, suitable for shorter distances in industrial, manufacturing and office applications.

Single-mode fibre has a tiny 9 micron diameter core, allowing only one light path, ideal for high bandwidth over very long distances up to 100km.

WHY BGB?...

As the world's most trusted brand in Slip Ring Systems we have a longevity of quality and service life history for our rotary assemblies in major OEMs around the globe. BGB are one of the only slip ring companies to manufacture and design own brand Fibre Optic Rotary Joints.

Our Vision:

" To be a trusted leader in smart rotary transfer solutions supporting global sustainability "

Our Purpose:

" An exceptional company to work for and with, attracting and developing great people, sharing success whilst staying true to our values "

Our Mission:

" We are tenacious in our pursuit to engineer & deliver innovative Products and Services with our selected partners worldwide "

BGB has supplied rotary solutions to over 50 industry sectors worldwide...

1976

Established

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