



JP3 Rudder Bearings – Type 4

General Characteristics

Installation

Additional Parts

Specifications

General Characteristics

The type 4 rudder bearings have been designed to fit GRP/COMPOSITE and ALUMINIUM rudder shafts and incorporate up to 3 rows of barrel rollers.

100 % WATERTIGHT

- Aviation grade 'V' seals are located on the upper and lower seal carrier plates make the bearing watertight
- "O" rings insure a proper watertight seal between the rudder bearing and rudder stock, and prevent electrolysis occurring.
- The bodies and the inner races of the bearings are machined from solid Aluminium Type 5086 which is protected by Class 15 (15 Micron) Anodization.
- In order to try and avoid any electrolytic problems in a carbon hull, the lower seal carrier plate of the lower bearing is tooled out of Polyacetal (POM).

STAINLESS STEEL SLEEVES ARE NOT NECESSARY

LIGHT RUDDER BEARINGS

- As these bearings are modular, the same diameter of shaft may incorporate up to three rows of barrel rollers, according to calculated loads.
- A lighter weight version for racing boats is available on request.
- Type 4 bearings will accept +/- 3.5 degree maximum rudder shaft deflection.

New!

Type 48: The type 48 is a light weight, potentially low profile spin-off from JP3's I.A.C.C. America's Cup research; this is the next generation of the Type 4. Please contact us for more information on this Type 4 genesis.

Successfully installed on the following Yachts

*Marie-Cha,
Morning Glory,
Destination Fox Harbor,
Visione, TP52's,
12 Meter class,
Titan 12, Open 50's,
to name but a few....*



40.12.11



40.22.11



40.32.11

NOTES ABOUT THE CLASSIFICATION OF TYPE 4 BEARINGS

Each number indicates successively:

Rudder Bearing Type

40.20.10 = Type 4 rudder bearing

Number of rows of barrel rollers

40.20.10 = 2 row of rollers

40.30.10 = 3 rows of rollers

Type of installation:

40.22.10 = conical rudder bearing to be installed in a conical support.

40.20.10 = straight rudder bearing to the bolted or laminated.

Stock diameter range

40.20.10 = diam. from 91 to 100 mm

These bearings are available in ranges from 70–530 mm. Larger diameters available upon request.



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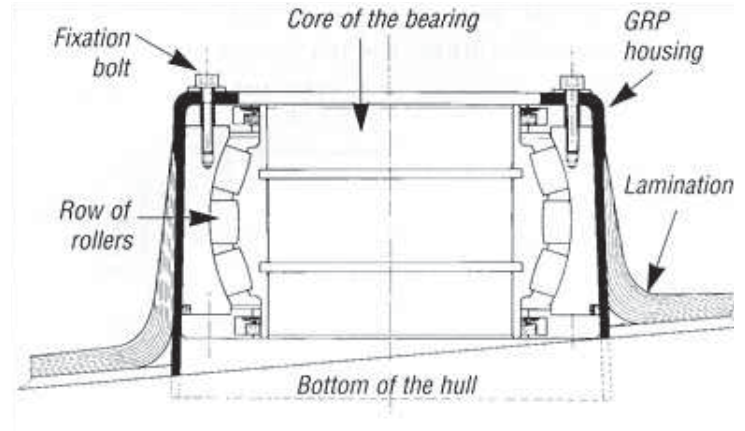
Additional Parts

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INSTALLATION – Type 4 Bearing

GENERAL

- Lightly grease the surface of the stock before fitting, in order not to damage “O” rings.
- If the stock is equipped with sleeves, make sure these have chamfered edges.
- Do not use any resin, gel coat or any sort of glue or paint on the upper and lower plates of the type 4 bearings.
- Do not paint or antifoul the seals.
- Our bearings leave our factory lubricated and ready for installation. An annual inspection of the seals is recommended.

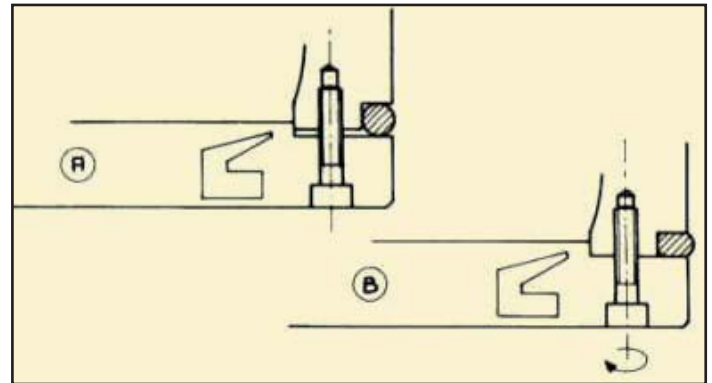


Installation of a Type 4 bearing 40.32.12

INSTALLATION – GRP Housing

The Type 4 can be installed in a GRP or Aluminum housing, which comes complete with a fixing plate (picture A).

After the installation of the bearing into the housing, do not forget to tighten all the Hex head fasteners on the fixing plate (picture B).



ADDITIONAL PARTS – Type 4 Bearings

Retaining Rings

Specifically designed to carry heavy axial loads, retaining rings secure the rudder in position. Designed to seat on the rotating part of the bearing, and manufactured from 5086 Aluminum and anodized to 15 microns.

Flanges

The upper or lower seal carrier plates on the these bearings can be enlarged to provide a flange ideal for deck or custom bracket mounting.

Bearing Housings – Types 3 & 4

Generated from GRP or aluminum, depending on hull material, these low tolerance housings ensure ‘plug and play’ installation, allowing for perfect positioning and alignment.

Sleeves

Composite sleeves designed to fit over existing, or built into new, rudder stocks. These sleeves are built in conjunction with the bearing ensuring ‘true round’ and a perfect tolerance fit between bearing and stock. The outer face is finished with a tooling grade gelcoat, providing a perfect face for upper and lower watertight seals. Inner circumference is peel-ply for easy installation onto composite stock.



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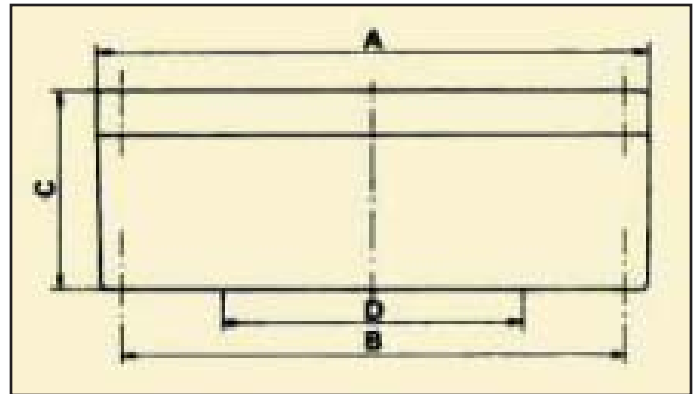
Installation

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SPECIFICATIONS – Type 4 Bearing

40.12.xx Used Only as Upper Rudder Bearing. Flange on Request					
Ref	D mm	A mm	B mm	C mm	PCD mm
40.12.08	70-80	147.25	145.8	56	135 6M6
40.12.09	81-90	157.33	155.8	58	146 6M6
40.12.10	91-100	167.10	165.6	58	155 6M6
40.12.11	101-110	185	183	60	170 8M6
40.12.12	111-120	197.5	195.3	62	182 8M6
40.12.13	121-130	213.3	211.1	64	192 8M6
1 inch = 2.54 cm - 1 pound = 0.453 kg					



40.22.xx Can be used either as Upper or Lower Rudder Bearing. Flange on Request.					
Ref	D mm	A mm	B mm	C mm	PCD mm
40.22.08	70-80	139	135.8	96	125 6M6
40.22.09	81-90	149	145.8	100	135 6M6
40.22.10	91-100	159	155.8	104	146 6M6
40.22.11	101-110	168.85	165.6	106	155 6M6
40.22.12	111-120	186.25	183	110	170 8M6
40.22.13	121-130	198.70	195.3	114	182 8M6
40.22.14	131-140	214.64	211.1	118	192 8M6
40.22.15	141-150	219.85	216.1	124	200 8M6
40.22.16	151-160	224.5	220.5	130	206 8M6
40.22.17	161-170	249	244.5	142	228 12M6
40.22.18	171-180	274	269.3	152	250 12M6
40.22.19	181-190	274.2	269.3	157	250 12M6
40.22.20	191300	298	292.7	170	276 12M6
1 inch = 2.54 cm - 1 pound = 0.453 kg					

40.32.xx Can be used either as Upper or Lower Rudder Bearing. Flange on Request.					
Ref	D mm	A mm	B mm	C mm	PCD mm
40.32.08	70-80	149	145.8	104	135 6M6
40.32.09	81-90	159	155.8	104	146 6M6
40.32.10	91-100	169	165.8	109	156 6M6
40.32.11	101-110	186.5	183	114	170 8M6
40.32.12	111-120	199	195.3	118	182 8M6
40.32.13	121-130	215	211.1	124	192 8M6
40.32.14	131-140	220	216.1	124	200 8M6
40.32.15	141-150	219.85	220.5	130	206 8M6
40.32.16	151-160	224.5	244.5	142	208 12M6
40.32.17	161-170	274.08	269.3	152	250 12M6
40.32.18	171-180	274.20	269.3	157	250 12M6
40.32.19	181-190	298	292.7	171	276 12M6
40.32.20	191300	297.4	292.7	158	276 12M6
40.32.21	201310	318	312.5	176	290 12M6
40.32.22	211320	318.2	312.5	178	310 12M6
40.32.23	221330	339.8	334.2	178	310 12M6
40.32.24	231340	339.8	334.2	178	310 12M6
1 inch = 2.54 cm - 1 pound = 0.453 kg					

NOTE: THESE BEARING ARE ADJUSTED AT OUR WORKSHOP. IT IS RECOMMENDED THAT YOU DO NOT REMOVE THEM WITHOUT FIRST CONTACTING YOUR AGENT.

JP3 will supply entire steering packages, from rudder specifications and manufacture to carbon or titanium wheels, custom pedestals, and auto-pilot disconnect units. Please do not hesitate to contact us with any questions regarding JP3's comprehensive line of products.