

### 抗酸碱塑料轴承/HDPE/PP/UPE Plastic bearings(Anti-Acid and Anti-Alkali bearings)

HDPE、PP、UPE材料已证明能用于相对较弱的酸碱交叉环境（30%CuCl<sub>2</sub>溶液和30%NaOH溶液测试OK）故适用于大多数酸/碱/盐/溶剂/油/气体及海水腐蚀环境。具备一般塑料轴承之无油自润滑，抗磁绝缘等性能，但机械强度较低，容易变形，故不适用于较大负荷及较高转速，相比较而言，UPE材料具备更佳的性能，低摩擦特性及低温应用特性（最低可至-150℃），一般内外圈材料采用HDPE、PP或UPE，保持架材料采用HDPE、PP或UPE，滚珠为玻璃球、不锈钢球或陶瓷球。

HDPE,PP,UPE(UHMWPE)are approved can be used in faintish acid and alkali environment (30% CuCl<sub>2</sub> solution and 30% NaOH solution is tested ok).Such bearings can operate in liquid and contamination sensitive environments as acid/alkali/salt/impregnant/oil/gas/seawater, and have general performance of lubrication and maintenance free, none magnetism,anti-rust and eroded of plastic bearings.But these bearings have not strong mechanical strength, and easy to be out of shape, so couldn't used in heavy load and high speed application.Among these 3 material,UPE more excellent strength and low friction and could be used to lower temperature (lowest to -150°C), Generally the rings and cage made with HDP.PP or UPE, balls made with glass stainless or ceramic.



### 耐腐蚀塑料轴承 PTFE/PVDF

#### Plastic Bearings Made With PVDF or PTFE (Anti-corrosion plastic bearings)

作为氟塑料中最典型的品种，PTFE和PVDF是具有最优良的耐腐蚀性能，其中PTFE更是所有已知工程塑料中耐腐蚀性最好的，可用于所有的浓酸及浓碱场合，包括硫酸，硝酸（98%以上）等，且具有良好的高温表现，PTFE证明可用于180℃的高温，PVDF也能用到150℃，但PTFE材料机械强度极低，且尺寸稳定性较差，温度变形大，所以，不能用于较大负荷及高速运转的。相比较而言PVDF具有更佳的综合性能，一般内外圈材料选用PTFE或PVDF，保持架材料为PTFE或PVDF，滚珠一般为玻璃球，陶瓷球和不锈钢球。

As the typical type of fluoroplastic, PTFE and PVDF have the most excellent anti-corrosion performance, among them PTFE is the best of all the plastic known to man, could be used in all the Strong Acid and Alkali application, including nitric acid and nitric acid H<sub>2</sub>SO<sub>4</sub> HNO<sub>3</sub> or HCL(98% above). etc. and could be used in high temperature application. PTFE could be used in 180°C and PVDF in 150°C. But PTFE has very low mechanical strength, easy to be out of shape and have large Dimension change when the temperature rise or reduce. So couldn't be used in heavy load and high-speed occasion, Compared with PTFE, PVDF.Has better compositive performance, Generally the rings and cage made with PTFE or PVDF, Balls made with glass, ceramic or stainless.



### PEEK/PI塑料轴承(耐高温塑料轴承)

#### PEEK/PI Plastic Bearings (High temperature application plastic bearings)

PEEK和PI作为新兴的工程塑料材料，被证明是所有已知工程塑料中机械强度尺寸稳定性及耐高温性能最好的，其中PEEK长期使用温度达260℃，PI长期使用温度更是高达300℃，且其具有优良的耐腐蚀性能，在中等强度的酸碱腐蚀环境仍可以运转自如，故一般用于制作需要在比较严酷环境中精密运转的轴承，其缺点是材料本身比较昂贵，故使用成本较高。一般内外圈材料选用PEEK或PI，保持架材料为PTFE，PEEK或PI，滚珠一般为ZrO<sub>2</sub>或Si<sub>3</sub>N<sub>4</sub>陶瓷球。

As newly developing engineering plastic material,PEEK and PI have been approved have the strongest mechanical strength and could endure the highest temperature among all the plastic material.PEEK could work at 260°C and PI at 300°C in long-term. Moreover they have excellent anti-corrosion performance which could be used easily in strong acid and alkali environment.So generally they are used to manufacture bearings to realize precision running in rigor environment. As the material is expensive, the costs are high. Generally the rings made with PEEK or PI.Cage with PTFE, PEEK or PI and ball with ZrO<sub>2</sub> or Si<sub>3</sub>N<sub>4</sub>.



### 精密塑料轴承 POM/PA/Pom/Palastic Bearing (precision plastic Bearings)

POM和PA材料具备良好的机械强度及耐磨性，适合制作比较精密的塑料轴承，其良好的自润滑性能及低的摩擦系数，在保持塑料轴承传统优势的基础上，可应用于精密及较高转速运转。其中POM塑料轴承是所有塑料轴承中应用最为广泛的一种，一般内外球材料采用POM或PA，保持架采用玻璃纤维增强的尼龙66（GRPA66-25）。滚珠为玻璃球，不锈钢球或陶瓷球，此种轴承碱性环境下表现良好但不适合在酸性腐蚀环境下运行。

Material POM and PA have excellent mechanical strength and wearing resistance,which is suitable for manufacturing precision plastic bearings with good self-lubrication performance and low friction coefficients. In the base of traditional advantages of plastic bearing, it can be also used in exact and hing-speed running.Plastic bearing made with POM is the most extensive sort of all the plastic bearings.Generally the inner and outer rings made with POM or PA,Cage made with PA 66 and the balls made with glass,stainless or ceramic.These bearings could be used in alkali environment but not proper to acid environment.



### 塑料轴承座及塑料外球面轴承/Plastic plummer block and Plastic insert bearing

塑料轴承座及塑料外球面轴承独具重量轻，耐腐蚀，耐磨，安装简便，免于维护，同时具有常用铸铁座或冲压座所不具有减震抗冲击性能。随着新材料的不断开发正越来越多地在工程上得到广泛应用。针对不同情况，塑料外球面轴承可采用POM，HDPE，PP，UPE，PTFE等不同材料制作，塑料轴承座一般采用PBT材料。并可定做这些塑料轴承座，用于满足不同的使用工况。

Plastic plummer block and Plastic insert bearing specially have the performance of lighter weight, corrosion and wear resistance, reduce vibration and anti-bump differing from normal cast iron bolck and pressing block, are easy to install and free from the maintenance. With the exploitation of new materail, it is widely used in project. Aim at working in different environment, the ball bearing for units made with POM, HDPE,PP, UPE, PTFE or PEEK material, housing of the bearing units generally made with PBT material.We can make these plastic plummmer block by order to meet different project.



### 陶瓷结构件/Engineering Ceramic structural Parts

陶瓷材料是现有已知材料中，唯一能在高温，强腐蚀，无磁，绝缘等苛刻环境要求下长期使用的材料，避开陶瓷本身材料缺陷，如韧性低，脆性大外，它的自身材料优点是其它材料无法相比的。它具有：耐磨性强，耐腐蚀，绝缘，绝磁，自润滑性能，受温度变化尺寸稳定等。

公司可以按客户要定制各种形状的陶瓷结构件，并通过高精度磨床进行加工，保证客户要求的尺寸精度。陶瓷结构件现在在化工机械，食品机械，电子机械，及高要求行业得到越来越广泛的应用。

The ceramic materials is the only material can be use in tough environment as high temperature,strong canker,no magnetism,isolation and so on.Besides the disadvantage of itself,such as low tenacity and high brittleness. Its advantage is: wearing resistance, anti-canker,isolation, no magnetism, self-lubrication, the size is steady according to the change of temperature. We can design all kinds shape of ceramic structural part, processing by the high-precision grinder, insure that meet the requirement of customers. Ceramic structural parts is widely used in chemistry machine,food machine,electronic machine,and high requirement industry.



### 非标轴承及陶瓷环

#### Non-standard bearing and ceramic ring

