



GUCHEN[®] POT BEARINGS

Engineered for Movement. Built for Longevity.

Hebei Guchen Engineering Rubber Co., Ltd.

COMPANY PROFILE



Guchen Bridge Systems is a premier manufacturer and Leading Global Supplier of Pot Bearings. Operating from our advanced production facilities in Hebei, China, we engineer durability and reliability into every product, ensuring the safety and longevity of critical infrastructure projects worldwide.

For over 15 years, we have combined precision engineering with rigorous quality control to deliver solutions that stand up to the most demanding conditions—from heavy traffic loads and extreme weather to seismic events. Our commitment is not just to meet expectations but to exceed them, providing unparalleled value and support at every stage of your project.



Why Partner With Guchen?

Engineering Excellence: Our in-house team of experienced engineers utilizes state-of-the-art design and finite element analysis (FEA) to create joints that perform flawlessly under specified movement ranges and dynamic loads. We offer custom-designed solutions tailored to your project's unique requirements.

Uncompromising Quality: From the selection of high-grade, corrosion-resistant steels and advanced, weather-proof elastomers to our meticulous manufacturing processes, every step is controlled to ensure superior product life. Our products comply with major international standards, including EN, AASHTO, and DIN.

Proven Global Performance: Our Pot Bearings have been specified and installed for over 30 projects worldwide, encompassing a wide range of structures including Various Types of High-Grade Highway Bridges and Other Large & Medium-Span Bridges. This global experience equips us with a deep understanding of the diverse challenges faced by engineers and contractors.

Total Project Support: We are more than just a supplier; we are your partner. We provide comprehensive technical documentation, detailed installation guidance, and responsive after-sales support to ensure seamless integration and optimal performance of our systems.

Our Commitment

At Guchen Bridge Systems, our mission is to empower engineers and builders with reliable, innovative, and cost-effective spherical bearings that ensure the structural integrity and safety of bridges for decades to come.

Let us help you build smarter, safer, and longer-lasting.

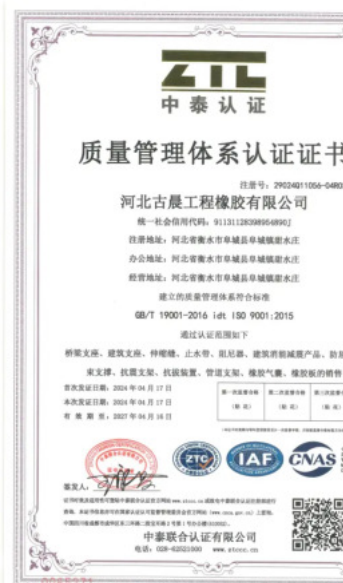
CERTIFICATIONS & COMPLIANCE



国家企业信用信息公示系统网址: <http://www.gsxt.gov.cn>

市场主体应当于每年1月1日至6月30日通过国家企业信用信息公示系统报送公示年度报告。

国家市场监督管理总局监制





GPZ(II) Pot Bearing



I. Bearing Performance

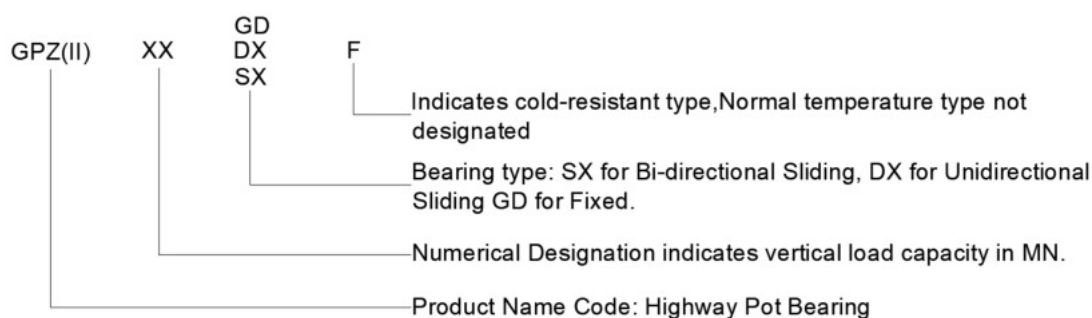
The GPZ(II) highway bridge pot rubber bearing is designed and manufactured in compliance with the recently issued PRC Ministry of Communications industry standard JT391. This product series features rational structure, high load capacity, minimal deformation, large horizontal displacement, and flexible rotation.

II. Applicable Temperature Range:

A. Normal temperature type: Suitable for -25°C to $+60^{\circ}\text{C}$

B. Cold-resistant type: Suitable for -40°C to $+60^{\circ}\text{C}$, designated as F

III. Product Code



IV. Technical Performance:

1. The actual bearing capacity is 110% of the designed capacity, allowing for 10% overload.
2. Within -25°C to $+60^{\circ}\text{C}$, the minimum design friction coefficient is 0.03; within -40°C to $+60^{\circ}\text{C}$, the minimum design friction coefficient is 0.06.
3. The maximum design rotation angle of the bearing is 0.02rad .

V. Material Properties

1. Rubber

1. Rubber

The rubber plates for normal temperature type GPZ(II) series pot rubber bearings are made from chloroprene rubber, natural rubber, or EPDM. Normal temperature type bearings use chloroprene rubber, while cold-resistant type bearings use natural rubber or EPDM. Their physical and mechanical properties are shown in the table below.

Item		Compound		
		Chloroprene Rubber	Natural Rubber	EPDM Rubber
Shore A Hardness		60 ± 3	60 ± 3	60 ± 3
Tensile Strength (MPa), ≥		17.0	18.0	15.2
Elongation at Break (%), ≥		400	450	350
Brittleness Temperature (°C), ≤		- 40	- 55	- 60
Constant Compression Permanent Deformation (Room Temp x 24h)		≤20	≤25	≤25
Ozone Resistance (25pphm, 50pphm), 20% Elongation, 40°C x 96h				
Heat Air Aging Test	Test Conditions (°C x h)	100 x 70	70 x 168	100 x 70
	Tensile Strength Reduction Rate (%), <	15	15	15
	Elongation at Break Reduction Rate (%), <	40	20	40
	Change in Shore A Hardness	< +15	± 10	< +10

2. PTFE Plate

The polytetrafluoroethylene plates used in pot bearings are pure molded sheets, not machined sheets. The raw material for processing shall not contain reprocessed material or any fillers. The physical and mechanical properties of the PTFE plates must comply with the requirements in the table below:

Item	Unit	Specification
Relative Density (Specific Gravity)	kg/m ³	2130~2200
Tensile Strength	Mpa	≥30
Elongation at Break	%	≥300

3. Stainless Steel Plate

The stainless steel sliding plates for bi-directional and unidirectional movable bearings, and the lateral sliding strips for unidirectional movable bearings, are made of precision-rolled stainless steel plates of grades OCr19Ni13Mo3, OCr17Ni12Mo2, or 1Cr18Ni9Ti. Their chemical composition and mechanical properties comply with the relevant provisions of GB/T 3280. The plate surface meets the No.4 finish processing requirements, with a surface hardness of HV150–HV200. For bearings in coastal bridges and sea-crossing bridges, stainless steel sliding plates of grades OCr19Ni13Mo3 or OCr17Ni12Mo2 are preferred.

When the stainless steel plate length is ≤1500mm, the plate thickness is 2mm; when the length is >1500mm, the plate thickness is 3mm.

4. 5201 Silicone Grease

PTFE plates are lubricated with 5201-2 silicone grease. This ensures the grease does not dry out within the service temperature range, is non-harmful to sliding surfaces, and possesses good ozone resistance, corrosion resistance, and waterproof performance. Its performance indicators comply with the relevant provisions of HG/T 2502.

5. Steel Components

A. If steel plates are used for bearing top plates, upper seat plates, intermediate steel plates, etc., the technical requirements for the steel plates shall comply with the relevant provisions of GB 700.

B. If cast steel parts are used for bearing top plates, upper seat plates, intermediate steel plates, and steel pots, their chemical composition, mechanical properties after heat treatment, and

impact toughness shall comply with the relevant provisions for ZG230-450 or ZG270-500 in GB 11352.

VI. Selection of Three Types in GPZ(II) Series Pot Rubber Bearings

The GPZ(II) series pot rubber bearings are divided into Fixed Bearings (GD), Unidirectional Sliding Bearings (DX), and Bi-directional Sliding Bearings (SX). Each of these three bearing types has its own characteristics. Fixed bearings restrict horizontal displacement of the girder in any direction while allowing vertical movement at that location. Bi-directional sliding bearings can accommodate displacement in any direction, whereas unidirectional sliding bearings only accommodate horizontal displacement parallel to the two guide blocks; horizontal displacement in other directions is restricted by the guide blocks.

The concept of the fixed bearing is straightforward, and its selection is not problematic. The issue lies in how to choose the sliding bearing. The basis for selection is the magnitude of the transverse horizontal force. After calculation, if the superstructure, under the action of the bearing's frictional resistance, can ensure a sufficient sliding stability factor across the bridge's transverse direction, it is advisable to select a bi-directional sliding bearing. When the above condition cannot be met, selecting a unidirectional sliding bearing can also resolve the transverse sliding issue of the bridge superstructure. The various loads listed in the Highway Bridge and Culvert Design Specifications include few items that impose transverse horizontal forces on the bridge superstructure, and these are often small in magnitude. Therefore, bi-directional sliding bearings can be selected for most sliding applications. When the bridge is located on a horizontal curve, where vehicle centrifugal force is significant or the transverse forces on the bridge are substantial, the resulting horizontal force may cause the transverse sliding stability of the superstructure to be insufficient; in this case, unidirectional sliding bearings must be selected.

In the GPZ II series, each grade of pot rubber bearing specifies its minimum load capacity. One reason is that the friction coefficient between the PTFE plate and the stainless steel plate is inversely proportional to the applied normal force; meaning, the greater the normal force, the smaller the resulting friction coefficient, and the smaller the normal force, the greater the resulting friction coefficient. A smaller friction coefficient is beneficial for the design of the bridge substructure. Secondly, consideration is given to the fact that for large and medium-span bridges, the proportion of dead load relative to the design load is significant, with dead load potentially reaching 70-80% of the total load. To prevent users from arbitrarily increasing the safety factor and selecting an excessively large bearing, the minimum bearing capacity is provided. Conversely, from a safety usage perspective, the maximum load capacity is also specified.

VII. Installation Method for GPZ Series (II) Type Bridge Rubber Bearings

1. Installation Preparation

It is recommended to set a support pad stone beneath the pot bearing. Bolt hole positions should be reserved according to the spacing of the anchor bolts on the bearing base plate and the specification of the base studs. The surface of the support pad stone must be level. During construction, the elevation of the top surface of the support pad stone must account for the

thickness of the epoxy mortar layer under the bearing base plate. The area of the pad stone outside the bearing base plate should be sloped to prevent water accumulation. The bearing should not be unpacked until immediately before installation, and all components and the packing list should be checked.

The bearing must not be disassembled arbitrarily before installation.

2. Installation Steps and Precautions

Mark the centerline at the designed bearing position. Also, mark the centerlines on the top and bottom plates of the bearing. Thread the anchor bolts through the bolt holes in the bottom plate (or top plate) and screw them into the base studs. Place rubber washers with a diameter slightly larger than that of the base studs between the bottom plate and the base studs.

After the bearing is positioned, aligned, and leveled, grout the anchor bolt holes and the cushion layer under the bearing base plate with epoxy mortar or high-grade mortar. Once the mortar has hardened, remove the leveling shims and fill the spaces they occupied with epoxy mortar. Ensure the epoxy mortar is compactly filled.

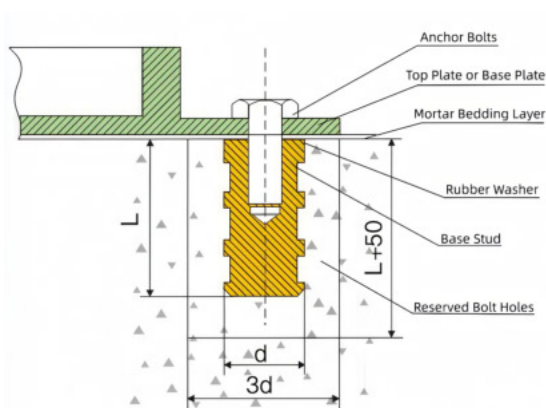
When the bearing connection is by welding, embed steel plates at the corresponding positions on the top and bottom plates of the bearing. After the bearing is positioned, weld using a symmetrical intermittent method.

During welding, take care to prevent excessive heat from affecting the rubber plate and PTFE plate. After welding, apply anti-rust treatment to the welded areas.

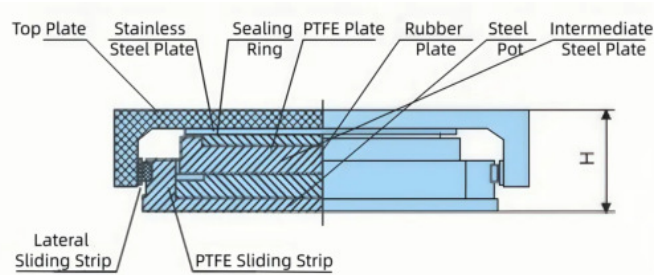
If pot bearings are used for T-beams, temporary support measures must be implemented at the beam ends during construction and installation to prevent the T-beams from tilting sideways. The temporary supports can only be removed after the diaphragm plates between the two T-beams are welded into an integral structure.

For movable bearings, after unpacking, protect the PTFE plate and the stainless steel sliding plate to prevent scratching and the adhesion of dirt onto their surfaces. Also, check whether the 5201-2 silicone grease is fully applied.

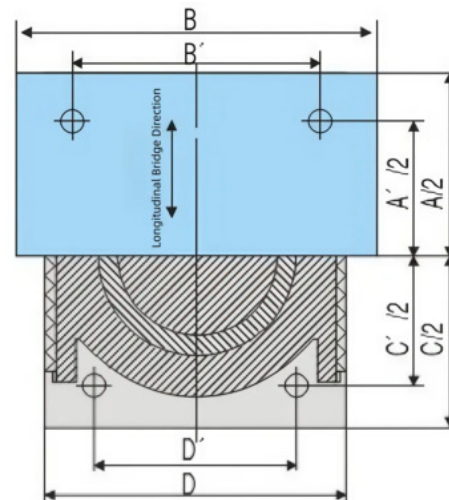
The centerline of the bearing should coincide with or be parallel to the centerline of the main girder. When installing unidirectional movable bearings, the upper and lower guide blocks must remain parallel, with a cross angle not exceeding 5° . During the system transformation of continuous girder bridges, such as when cutting temporary anchorage devices, thermal insulation measures must be taken to avoid damaging the rubber plate and PTFE plate.



GPZ(II) Unidirectional Sliding Bearing (DX) Structural Diagram



Elevation View



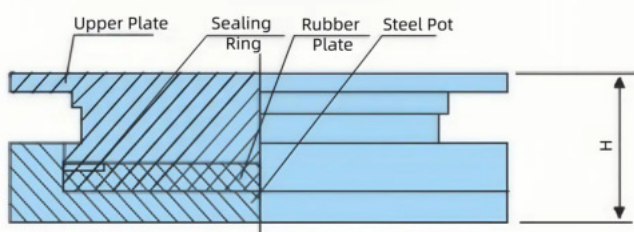
Plan View

GPZ(II) Series Pot Rubber Bearings - Main Dimensions Table for Unidirectional Sliding Bearing (DX) Type

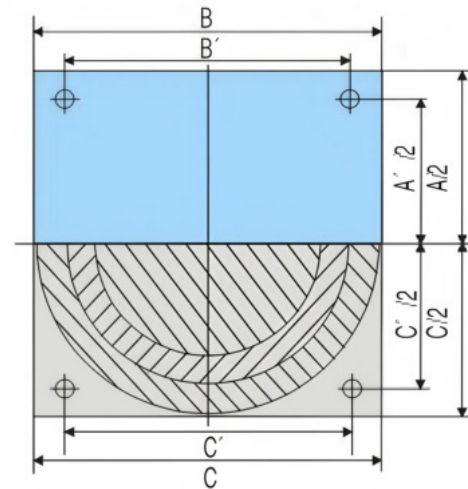
Specification (MN)	Longitudinal Displacement (mm)	Transverse Displacement (mm)	Main Dimensions (mm)											Weight (KG)			Embedded Base Stud (d×L)	Bolt Weight (KG)	
			A			A'			B	B'	C(D)	C'	D'						H
GPZ(II) 0.8DX	± 50 ± 100 ± 150	± 3	320	420	520	280	380	480	315	220	265	230	180	75	34.2	38.8	43.4	Φ 40 × 250	19.9
GPZ(II) 1.0DX	± 50 ± 100 ± 150	± 3	340	440	540	300	400	500	340	245	290	250	200	80	42.6	47.8	53.1	Φ 40 × 250	
GPZ(II) 1.25DX	± 50 ± 100 ± 150	± 3	360	460	560	320	420	520	370	275	320	280	230	85	52.5	58.3	64.0	Φ 40 × 250	
GPZ(II) 1.5DX	± 50 ± 100 ± 150	± 3	380	480	580	340	440	540	410	300	350	310	260	90	66.9	73.9	80.9	Φ 40 × 250	
GPZ(II) 2DX	± 50 ± 100 ± 150	± 3	420	520	620	380	480	580	460	350	400	360	310	100	96.0	104.9	113.8	Φ 40 × 250	
GPZ(II) 2.5DX	± 50 ± 100 ± 150	± 3	460	560	660	420	520	620	505	395	445	405	355	105	122.3	132.3	142.4	Φ 40 × 250	20
GPZ(II) 3DX	± 50 ± 100 ± 150	± 3	485	585	685	435	535	635	565	425	485	435	370	110	157.3	169.6	182.1	Φ 40 × 250	
GPZ(II) 3.5DX	± 100 ± 150 ± 200	± 3	620	720	820	570	670	770	600	460	520	470	400	115	202.6	216.7	230.8	Φ 40 × 250	
GPZ(II) 4DX	± 100 ± 150 ± 200	± 3	640	740	840	590	690	790	635	485	555	505	435	130	258.5	275.7	292.9	Φ 40 × 250	37.4
GPZ(II) 5DX	± 100 ± 150 ± 200	± 3	690	790	890	635	735	835	710	545	620	560	480	140	338.3	358.5	378.7	Φ 50 × 300	
GPZ(II) 6DX	± 100 ± 150 ± 200	± 3	740	840	940	680	780	880	770	600	680	620	540	150	423.7	446.2	468.7	Φ 50 × 300	
GPZ(II) 7DX	± 100 ± 150 ± 200	± 3	780	880	980	720	820	920	820	650	730	670	590	160	516.7	542.5	568.4	Φ 50 × 300	54.2
GPZ(II) 8DX	± 100 ± 150 ± 200	± 3	810	910	1010	740	840	940	890	690	780	710	620	170	634.0	664.7	695.5	Φ 60 × 300	
GPZ(II) 9DX	± 100 ± 150 ± 200	± 3	850	950	1050	780	880	980	935	725	825	755	665	180	744.9	778.9	813.0	Φ 60 × 300	
GPZ(II) 10DX	± 150 ± 200 ± 250	± 3	980	1080	1180	910	1010	1110	985	770	875	800	715	190	907.4	944.9	982.3	Φ 60 × 300	86.1
GPZ(II) 12.5DX	± 150 ± 200 ± 250	± 3	1060	1160	1260	980	1080	1180	1100	860	970	890	780	205	1205.7	1251.4	1297.1	Φ 70 × 350	
GPZ(II) 15DX	± 150 ± 200 ± 250	± 3	1130	1230	1330	1050	1150	1250	1190	950	1060	980	870	220	1513.7	1565.9	1618.2	Φ 70 × 350	
GPZ(II) 17.5DX	± 150 ± 200 ± 250	± 3	1190	1290	1390	1105	1205	1305	1295	1030	1145	1060	935	235	1887.6	1949.1	2010.5	Φ 70 × 350	112.9
GPZ(II) 20DX	± 150 ± 200 ± 250	± 3	1250	1350	1450	1155	1355	1355	1375	1100	1225	1130	1000	250	2263.9	2332.1	2400.2	Φ 80 × 350	
GPZ(II) 22.5DX	± 150 ± 200 ± 250	± 3	1310	1410	1510	1220	1320	1420	1450	1180	1300	1210	1080	260	2620.3	2694.2	2768.1	Φ 80 × 350	
GPZ(II) 25DX	± 150 ± 200 ± 250	± 3	1370	1460	1560	1270	1360	1460	1540	1240	1370	1270	1120	270	3058.8	3134.3	3229.2	Φ 90 × 400	163.5
GPZ(II) 27.5DX	± 150 ± 200 ± 250	± 3	1440	1510	1610	1340	1410	1510	1510	1310	1440	1340	1190	280	3476.4	3539.8	3451.7	Φ 90 × 400	
GPZ(II) 30DX	± 150 ± 200 ± 250	± 3	1500	1550	1660	1400	1460	1560	1670	1370	1500	1400	1250	290	3903.9	3975.0	4072.7	Φ 90 × 400	
GPZ(II) 32.5DX	± 200 ± 250 ± 300	± 3	1610	1710	1810	1500	1600	1700	1750	1420	1560	1450	1270	300	4470.0	4577.4	4684.7	Φ 100 × 400	202.4
GPZ(II) 35DX	± 200 ± 250 ± 300	± 3	1650	1750	1850	1540	1640	1740	1810	1480	1620	1510	1330	310	4949.3	5064.3	5179.3	Φ 100 × 400	
GPZ(II) 37.5DX	± 200 ± 250 ± 300	± 3	1690	1790	1890	1580	1680	1780	1890	1540	1680	1570	1370	320	5512.0	5637.2	5762.4	Φ 100 × 400	
GPZ(II) 40DX	± 200 ± 250 ± 300	± 3	1730	1830	1930	1620	1720	1820	1940	1590	1730	1620	1420	330	6003.4	6134.9	6266.5	Φ 100 × 400	
GPZ(II) 45DX	± 200 ± 250 ± 300	± 3	1840	1910	2010	1710	1780	1880	2070	1680	1840	1710	1510	345	7109.8	7214.2	7361.8	Φ 110 × 450	
GPZ(II) 50DX	± 200 ± 250 ± 300	± 3	1930	1990	2090	1800	1860	1960	2160	1770	1930	1800	1600	360	8124.9	8222.9	8383.5	Φ 110 × 450	275.8
GPZ(II) 55DX	± 200 ± 250 ± 300	± 3	2030	2060	2180	1890	1920	2020	2280	1860	2030	1890	1680	375	9130.3	9486.8	9665.4	Φ 120 × 450	
GPZ(II) 60DX	± 200 ± 250 ± 300	± 3	2110	2130	2230	1970	1990	2090	2360	1940	2110	1970	1760	390	10484.5	10526.4	10718.8	Φ 120 × 450	
Note: All data in the table are in millimeters unless specified with "MN" for Specification.																			

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GPZ(II) Fixed Bearing (GD) Structural Diagram



Elevation View



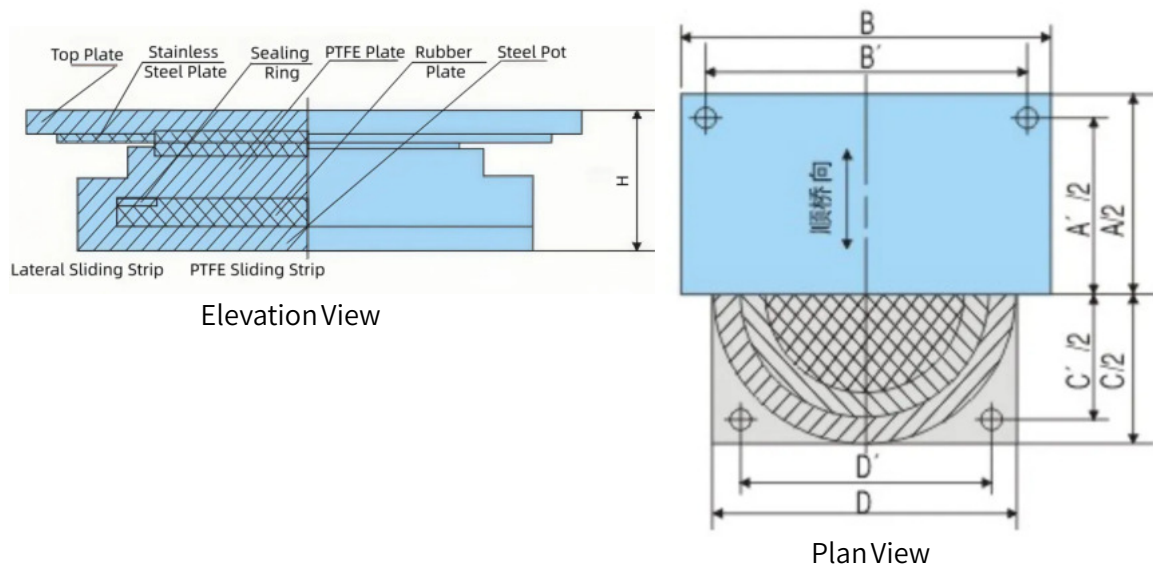
Plan View

GPZ(II) Series Pot Rubber Fixed Bearing (GD) Main Dimensions Table

Specification (MN)	Main Dimensions (mm)			Weight (KG)	Embedded Base Stud (dxL)	Bolt Weight (KG)
	A(B), C(D)	A' (B'), C' (D')	H			
GPZ(II)0.8GD	250	210	75	25.3	Φ40 × 250	19.9
GPZ(II)1.0GD	280	235	80	33.7	Φ40 × 250	
GPZ(II)1.25GD	310	260	85	44.6	Φ40 × 250	
GPZ(II)1.5GD	340	290	90	56.6	Φ40 × 250	
GPZ(II)2SGD	390	330	95	78.9	Φ40 × 250	
GPZ(II)2.5GD	435	370	100	104.4	Φ40 × 250	20
GPZ(II)3GD	475	400	105	131.0	Φ40 × 250	
GPZ(II)3.5GD	510	430	110	157.5	Φ40 × 250	
GPZ(II)4GD	545	460	115	187.3	Φ40 × 250	37.4
GPZ(II)5GD	610	520	130	265.4	Φ50 × 300	
GPZ(II)6GD	670	570	140	347.5	Φ50 × 300	
GPZ(II)7GD	720	610	150	428.0	Φ50 × 300	54.2
GPZ(II)8GD	770	650	155	508.7	Φ60 × 300	
GPZ(II)9GD	815	690	160	592.1	Φ60 × 300	
GPZ(II)10GD	860	730	170	697.0	Φ60 × 300	86.1
GPZ(II)12.5GD	960	810	185	946.6	Φ70 × 350	
GPZ(II)15GD	1050	890	200	1226.9	Φ70 × 350	
GPZ(II)17.5GD	1135	960	210	1496.6	Φ70 × 350	112.9
GPZ(II)20GD	1220	1040	230	1896.0	Φ80 × 350	
GPZ(II)22.5GD	1290	1100	240	2217.2	Φ80 × 350	
GPZ(II)25GD	1360	1150	250	2565.6	Φ90 × 400	163.5
GPZ(II)27.5GD	1430	1220	260	2929.8	Φ90 × 400	
GPZ(II)30GD	1490	1270	270	3295.3	Φ90 × 400	
GPZ(II)32.5GD	1550	1320	280	3708.5	Φ100 × 400	202.4
GPZ(II)35GD	1610	1370	290	4154.1	Φ100 × 400	
GPZ(II)37.5GD	1670	1420	300	4609.5	Φ100 × 400	
GPZ(II)40GD	1720	1460	310	5050.2	Φ100 × 400	275.8
GPZ(II)45GD	1830	1560	320	5856.3	Φ110 × 450	
GPZ(II)50GD	1920	1630	335	6743.8	Φ110 × 450	
GPZ(II)55GD	2020	1720	350	7827.4	Φ120 × 450	329.6
GPZ(II)60GD	2100	1790	365	8817.0	Φ120 × 450	

Note: All data in the table are in millimeters unless specified with "MN" for Specification.

GPZ(II) Bi-directional Sliding Bearing (SX) Structural Diagram



GPZ(II) Series Pot Rubber Bearings Bi-directional Sliding Bearing (SX) Main Dimensions Table

Specification (MN)	Longitudinal Displacement (mm)	Transverse Displacement (mm)	Main Dimensions (mm)								Weight (KG)			Embedded Base Stud (d×L)	Bolt Weight (KG)		
			A	A'	B	B'	C(D)	C	∅	H							
GPZ(II)0.8SX	± 50 ± 100 ± 150	± 40	320 420 520	280 380 480	300	260	245	200	75	26.9	30.1	33.4	Φ40 × 250	19.9			
GPZ(II)1.0SX	± 50 ± 100 ± 150	± 40	340 440 540	300 400 500	320	280	270	225	80	33.9	37.6	41.3	Φ40 × 250				
GPZ(II)1.25SX	± 50 ± 100 ± 150	± 40	360 460 560	320 420 520	340	300	300	250	85	42.0	46.0	50.0	Φ40 × 250				
GPZ(II)1.5SX	± 50 ± 100 ± 150	± 40	380 480 580	340 440 540	360	320	330	275	90	52.5	57.0	61.5	Φ40 × 250				
GPZ(II)2SX	± 50 ± 100 ± 150	± 40	420 520 620	380 480 580	400	360	385	320	100	78.7	84.7	90.6	Φ40 × 250				
GPZ(II)2.5SX	± 50 ± 100 ± 150	± 40	460 560 660	420 520 620	440	400	425	355	105	100.1	107.0	113.8	Φ40 × 250				
GPZ(II)3SX	± 50 ± 100 ± 150	± 40	490 590 690	440 540 640	465	415	465	385	110	124.1	131.7	139.3	Φ40 × 250	20			
GPZ(II)3.5SX	± 100 ± 150 ± 200	± 40	520 720 820	570 670 770	500	450	500	415	115	159.2	168.2	177.2	Φ40 × 250				
GPZ(II)4SX	± 100 ± 150 ± 200	± 40	640 740 840	590 690 790	540	490	540	450	130	210.4	221.8	233.2	Φ40 × 250				
GPZ(II)5SX	± 100 ± 150 ± 200	± 40	690 790 890	630 730 830	600	540	600	500	140	271.6	284.7	297.8	Φ50 × 300	37.4			
GPZ(II)6SX	± 100 ± 150 ± 200	± 40	740 840 940	680 780 880	655	595	655	540	150	341.7	356.5	371.3	Φ50 × 300				
GPZ(II)7SX	± 100 ± 150 ± 200	± 40	780 880 980	720 820 920	705	640	705	580	160	423.7	441.3	458.9	Φ50 × 300				
GPZ(II)8SX	± 100 ± 150 ± 200	± 40	810 910 1010	735 835 935	755	680	755	630	170	512.2	532.2	552.2	Φ60 × 300	54.2			
GPZ(II)9SX	± 100 ± 150 ± 200	± 40	850 950 1050	775 875 975	800	720	800	660	180	608.2	630.7	653.1	Φ60 × 300				
GPZ(II)10SX	± 150 ± 200 ± 250	± 40	980 1080 1180	905 1005 1105	845	765	845	700	190	736.9	762.0	787.0	Φ60 × 300				
GPZ(II)12.5SX	± 150 ± 200 ± 250	± 40	1060 1160 1260	970 1070 1170	945	855	945	780	205	983.47	1013.6	1043.9	Φ70 × 350	86.1			
GPZ(II)15SX	± 150 ± 200 ± 250	± 40	1130 1230 1330	1040 1140 1240	1030	940	1030	860	220	1245.2	1280.5	1315.9	Φ70 × 350				
GPZ(II)17.5SX	± 150 ± 200 ± 250	± 40	1190 1290 1390	1100 1200 1300	1110	1020	1100	920	235	1531.4	1572.1	1612.8	Φ70 × 350				
GPZ(II)20SX	± 150 ± 200 ± 250	± 40	1250 1350 1450	1150 1250 1350	1190	1090	1190	990	250	1864.8	1911.2	1957.6	Φ80 × 350	112.9			
GPZ(II)22.5SX	± 150 ± 200 ± 250	± 40	1310 1410 1510	1210 1310 1410	1260	1160	1260	1050	260	2166.2	2217.4	2268.5	Φ80 × 350				
GPZ(II)25SX	± 150 ± 200 ± 250	± 40	1360 1460 1560	1250 1350 1450	1340	1230	1340	1110	270	2540.1	2597.9	2651.2	Φ90 × 400				
GPZ(II)27.5SX	± 150 ± 200 ± 250	± 40	1410 1510 1610	1300 1400 1500	1410	1300	1410	1170	280	2898.8	2961.5	3019.5	Φ90 × 400	163.5			
GPZ(II)30SX	± 150 ± 200 ± 250	± 40	1470 1560 1660	1360 1450 1550	1470	1360	1470	1220	290	3277.3	3334.5	3403.2	Φ90 × 400				
GPZ(II)32.5SX	± 200 ± 250 ± 300	± 50	1610 1710 1810	1490 1590 1690	1525	1400	1525	1270	300	3714.1	3788.9	3863.8	Φ100 × 400				
GPZ(II)35SX	± 200 ± 250 ± 300	± 50	1650 1750 1850	1530 1630 1730	1585	1460	1585	1320	310	4143.9	4225.5	4307.0	Φ100 × 400	202.4			
GPZ(II)37.5SX	± 200 ± 250 ± 300	± 50	1690 1790 1890	1570 1670 1770	1645	1520	1645	1370	320	4581.9	4669.0	4756.2	Φ100 × 400				
GPZ(II)40SX	± 200 ± 250 ± 300	± 50	1730 1830 1930	1610 1710 1810	1690	1570	1690	1410	330	4993.3	5085.5	5177.7	Φ100 × 400				
GPZ(II)45SX	± 200 ± 250 ± 300	± 50	1810 1910 2010	1680 1780 1880	1800	1660	1800	1500	345	5870.9	5973.3	6075.8	Φ110 × 450	275.8			
GPZ(II)50SX	± 200 ± 250 ± 300	± 50	1890 1990 2090	1760 1860 1960	1890	1750	1890	1570	360	6751.0	6864.5	6977.9	Φ110 × 450				
GPZ(II)55SX	± 200 ± 250 ± 300	± 50	1990 2060 2160	1850 1920 2020	1990	1850	1990	1660	375	7832.4	7921.5	8047.2	Φ120 × 450				
GPZ(II)60SX	± 200 ± 250 ± 300	± 50	2070 2130 2230	1930 1990 2090	2070	1930	2070	1720	390	8823.7	8907.7	9044.9	Φ120 × 450	329.6			
Note: All data in the table are in millimeters unless specified with "MN" for Specification.																	

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