



Our Technologies Realize Your Dreams

Pressure Roller Bearings



Pressure roller bearings have an outer ring that is lined with urethane rubber, and offer precise rotation thanks to special machining. They can be used by exploiting the coefficient of friction and hardness specific to the rubber when loaded appropriately in the radial direction.

Urethane rubber has larger Young's modulus and tensile strength compared to natural rubber and other synthetic rubbers, offers excellent oil resistance and wear resistance, and is suitable for a wide range of applications including the feed mechanisms, guide bearings, and idler bearings in various types of machines.



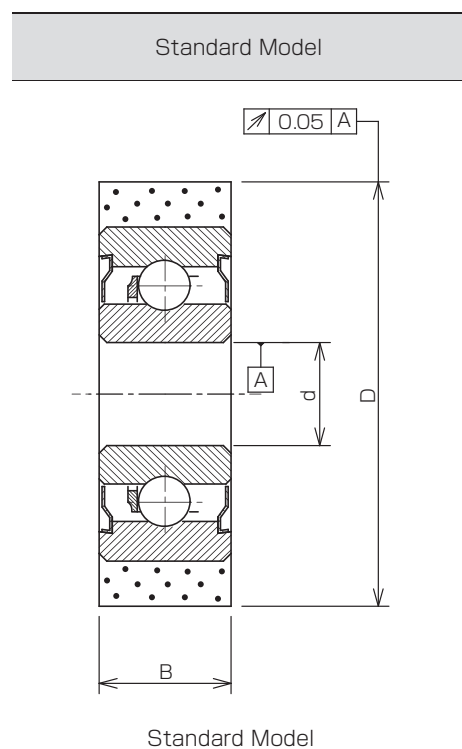
01 Specifications for the Standard Models

Naming and Auxiliary Symbols

Bearing numbers			Auxiliary codes
Material codes	Size codes	Features codes	
SS	4-12	RMZZ	HS55
SS =Martensite stainless steel	Bore – Outside dia. (mm)	RM = Rubber rollers ZZ = Shield	<ul style="list-style-type: none"> • No Code= Ether HS90 • HS55= Ester HS55

Standard Model

Unit=mm



Please be noted that different sizes of the bearing components may be used without a notice.

Nominal Number	Bore $d^{+0.002}_{-0.01}$	Outside dia. $D \pm 0.1$	Width (B)	Basic bearing sizes
SS 3-11 RMZZ	3	11	4	3-8ZZ
SS 3-12 RMZZ		12	4	
SS 3-13 RMZZ		13	4	
SS 3-14 RMZZ		14	4	
SS 4-11 RMZZ	4	11	4	4-9ZZ
SS 4-12 RMZZ		12	4	
SS 4-13 RMZZ		13	4	
SS 4-14 RMZZ		14	4	
SS 4-15 RMZZ		15	5	4-13ZZ
SS 4-16 RMZZ		16	5	
SS 4-17 RMZZ		17	5	4-15ZZ
SS 4-18 RMZZ		18	5	
SS 4-19 RMZZ		19	5	
SS 4-20 RMZZ		20	5	
SS 4-21 RMZZ		21	5	
SS 4-22 RMZZ		22	5	
SS 5-15 RMZZ	5	15	5	5-13ZZ
SS 5-16 RMZZ		16	5	
SS 5-17 RMZZ		17	5	
SS 5-18 RMZZ		18	5	
SS 5-19 RMZZ		19	5	5-15ZZ
SS 5-20 RMZZ		20	5	
SS 5-21 RMZZ		21	5	
SS 5-22 RMZZ		22	5	
SS 5-24 RMZZ		24	5	
SS 6-15 RMZZ	6	15	4	6-12ZZ
SS 6-16 RMZZ		16	4	6-15ZZ
SS 6-17 RMZZ		17	5	
SS 6-18 RMZZ		18	5	
SS 6-19 RMZZ		19	5	
SS 6-20 RMZZ		20	5	
SS 6-21 RMZZ		21	5	
SS 6-22 RMZZ		22	5	
SS 6-23 RMZZ		23	5	
SS 6-24 RMZZ		24	5	

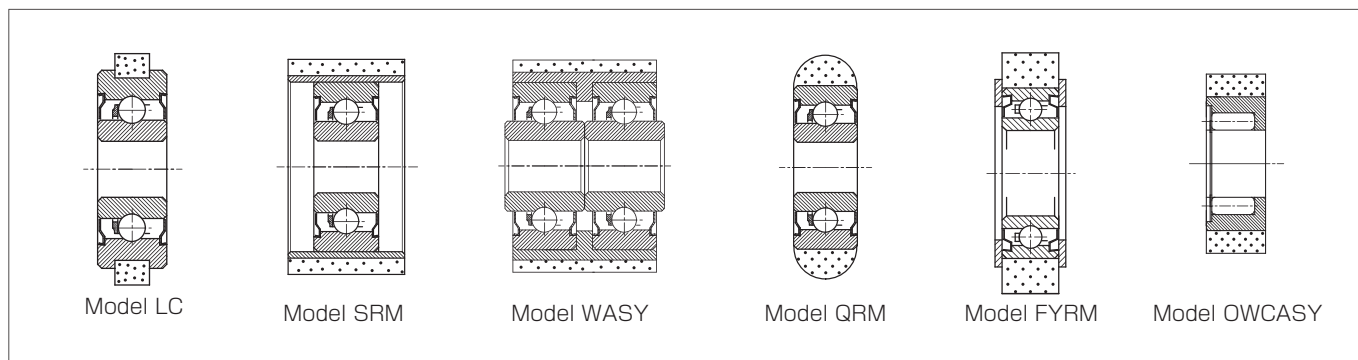
02 Physical Properties of Urethane Rubber

Urethane rubber	Polyether	Polyester
Physical Properties		
Hardness (JIS)	HS90±5	HS55±5
Tensile strength (Kpa)	309	196
Tear strength (N/cm)	872	343
Elongation (% normal temp.)	450	675
Elastic repulsion (%)	55	38

This chart shows the main characteristic of polyurethane rubber which is used in Pressure Roller Bearing. Polyether rubber has a degree of rubber hardness of HS90°, and its color is natural. Polyester rubber has a degree of HS55°, and its color is black. Please consult us if you require the degree of hardness and color to be different from the above specified.

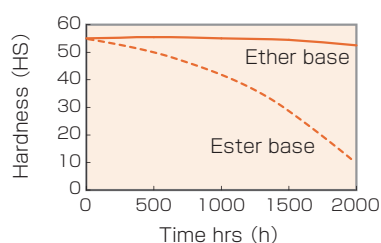
03 Special Specifications Example

Please consult us when using the special applications shown below.

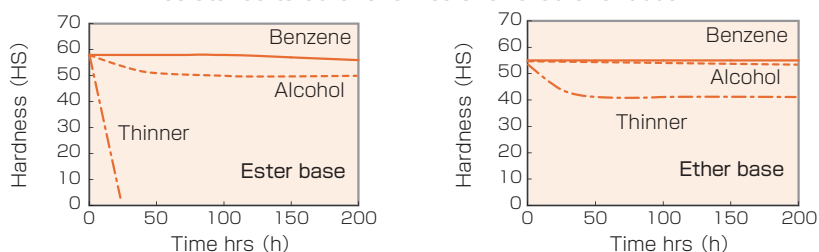


04 Technical data

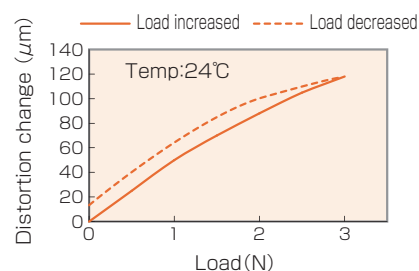
Moisture resistance of Urethane rubber



Resistance to other chemicals for Urethane rubber

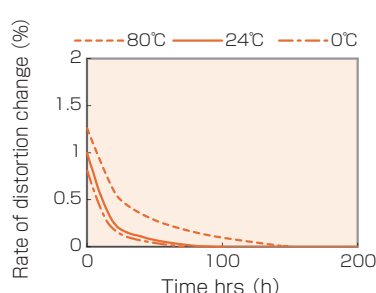


Amount of distortion due to load changes (SS4-12RMZZ)



This graph shows the distortion change and load under the condition that the load was increased from 0N to 30 N and then decreased. (SS4-12RMZZ)

Recovery force of Urethane rubber



This graph shows time to distortion change relationship after removal of the load. The rubber was loaded for 24 hours under 30N at 0°C, 24°C and 80°C, and then the load was removed. (SS4-12RMZZ)



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Safety
Warning

The data presented in this catalog are for general application purposes. Do not use this product in such a way that may be harmful to people or exceed its performance.

Safety
Precaution

To avoid accidents and/or failures as well as to ensure safety , do not use this product exceeding the specifications noted in this catalog and ignoring the precautions.

*Specifications are subject to change without a notice for future development.