

## TECHNICAL DATA

### TTS2 BEARINGS

These are 4 point contact ball bearings that evolved from traditional thin section gothic arch bearing raceway geometry.

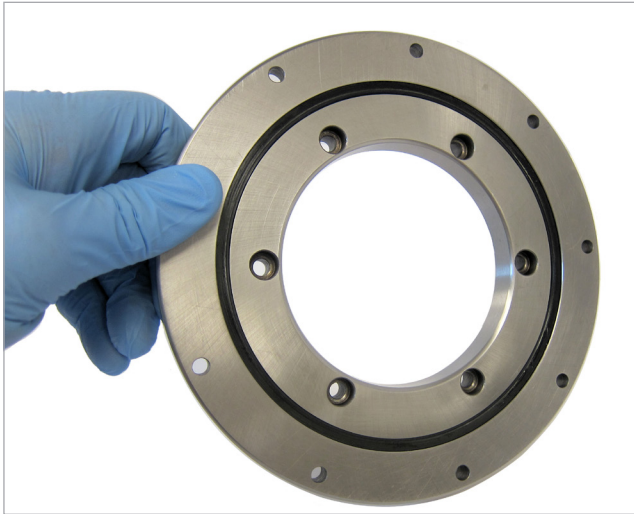
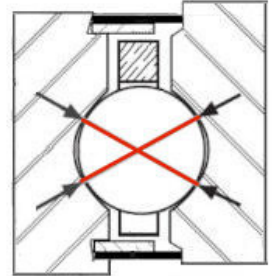
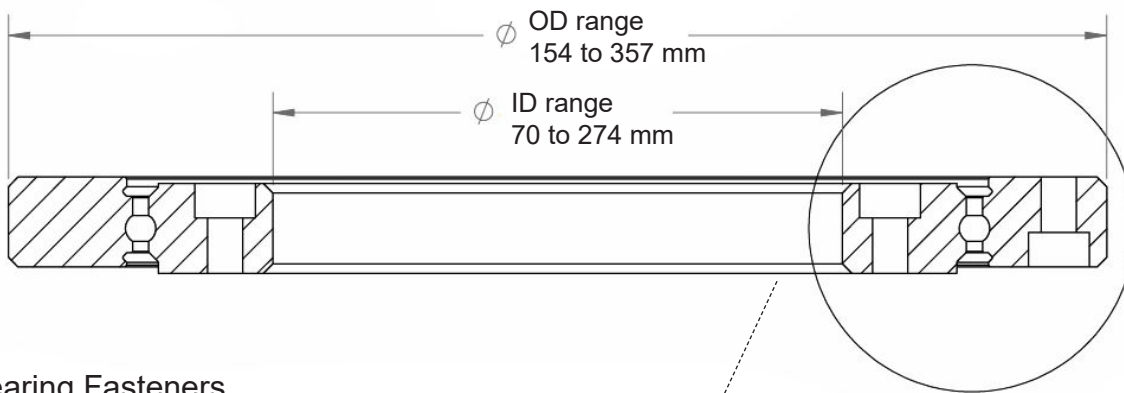


Photo of TTS2 Turntable Bearing

The inner and outer rings are offset by 1 mm (0.040") to allow for mounting directly to flat surfaces. This allows sufficient clearance for one of the rings to rotate freely relative to the other.

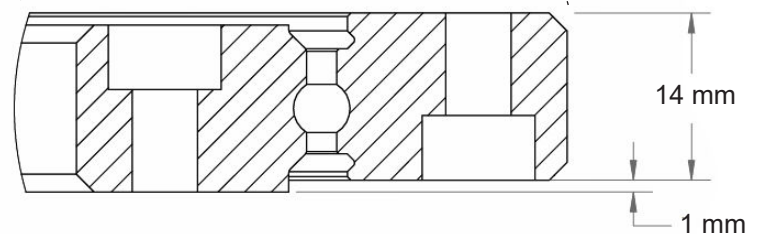


Many applications just need a large bore low height bearing that can be attached to a flat surfaces easily without the hassle of machining additional components. This is where the TTS2 bearing product came to existence for us.



### Bearing Fasteners

Both the inner and outer rings are designed with counterbored through holes for accommodating an **M5 Socket Head Cap Screw (SHCS)**.



# TTS2 Turntable Bearing Products



**TPA MOTION**  
LINEAR MOTION SOLUTIONS

800-284-9784

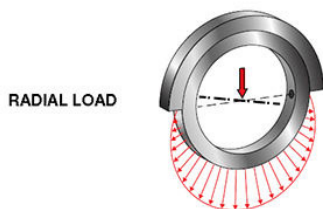
Traditional thin section bearings require very accurate geometrically machined mating components for optimal support and bearing function. Inner and outer rings need to be press fit into close toleranced bores to achieve optimal radial internal clearance.



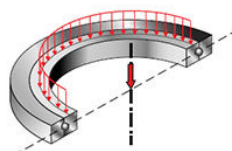
Photo of Unassembled Thin Section Bearing

For many applications this additional expense is only required for high precision, high load, or a high duty cycle.

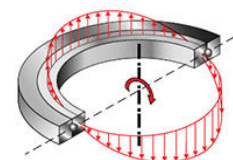
The TTS2 bearings are different from a "Lazy Susan type" stamped metal bearing. Lazy Susan bearings are designed to handle only thrust load. Our TTS2 bearings handle both radial and thrust loads. You can expect them to run smoother and have less internal clearance than any stamped metal bearing.



AXIAL LOAD



MOMENT LOAD



PART NUMBER	ID (mm)	OD (mm)	Width (mm)	Axial Static Cap. (N)	Radial Static Cap. (N)	Static Moment Cap. (N-m)	Max Speed (rpm)	Seal Type	Net Wt. (lbs)
TTS2-070-154-15	70	154	15	21058	8407	468	620	NBR Rubber	3.27
TTS2-077-160-15	77	160	15	22259	8888	523	590	NBR Rubber	3.41
TTS2-083-167-15	83	167	15	23460	9368	581	550	NBR Rubber	3.64
TTS2-089-173-15	89	173	15	24661	9849	643	520	NBR Rubber	3.82
TTS2-096-179-15	96	179	15	25862	10369	707	500	NBR Rubber	3.96
TTS2-108-192-15	108	192	15	28261	11329	844	450	NBR Rubber	4.37
TTS2-121-205-15	121	205	15	30666	12290	994	410	NBR Rubber	4.75
TTS2-134-217-15	134	217	15	33108	13252	1157	380	NBR Rubber	5.06
TTS2-147-230-15	147	230	15	35510	14212	1330	350	NBR Rubber	5.43
TTS2-159-243-15	159	243	15	37913	15173	1517	330	NBR Rubber	5.86
TTS2-172-255-15	172	255	15	40315	16133	1715	310	NBR Rubber	6.15
TTS2-197-281-15	197	282	15	45118	18055	2148	220	NBR Rubber	6.97
TTS2-223-306-15	223	306	15	49922	19977	2632	200	NBR Rubber	7.62
TTS2-248-332-15	248	332	15	54767	21899	3164	180	NBR Rubber	8.46
TTS2-274-357-15	274	357	15	59571	23820	3745	160	NBR Rubber	9.09



## Materials

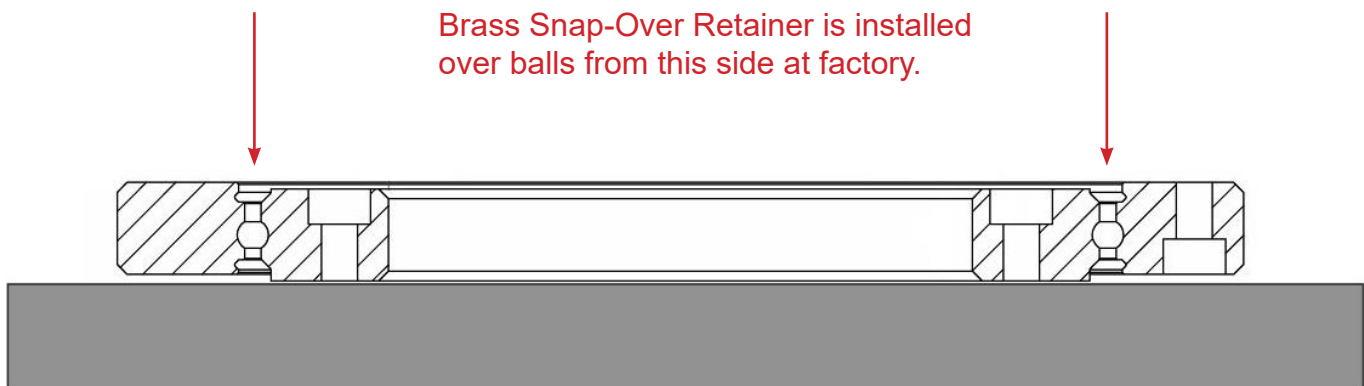
- Inner and Outer ring: High Alloy Bearing Steel, Thru Hardened 58 R<sub>c</sub> Min.
- Balls: 52100 or equivalent, Hardened to 60-64 R<sub>c</sub>
- Ball Retainer or Cage: Brass Snap Over Type
- Seals: NBR Rubber with Metal Reinforcement
- Grease Fill: NLGI #2 Lithium Base Grease

## Installation or Mounting Notes

Holes in both the outer and inner rings are 5.5 mm diameter with a counterbore diameter of 9.5 mm to a depth of 5.4 mm. This will allow sufficient clearance for an M5 Socket Head Cap Screw.

Part Number	Inner Ring		Outer Ring		Part Number	Inner Ring		Outer Ring	
	Bolt Circle Dia. (mm)	Num. of Holes	Bolt Circle Dia. (mm)	Num. of Holes		Bolt Circle Dia. (mm)	Num. of Holes	Bolt Circle Dia. (mm)	Num. of Holes
TTS2-070-154-15	84.75	6	137.50	9	TTS2-147-230-15	160.95	10	213.70	12
TTS2-077-160-15	91.10	6	148.85	9	TTS2-159-243-15	173.65	10	226.40	12
TTS2-083-167-15	97.45	6	150.20	9	TTS2-172-255-15	186.35	10	239.10	12
TTS2-089-173-15	103.80	6	156.55	9	TTS2-197-281-15	211.75	10	264.50	12
TTS2-096-179-15	110.15	10	162.90	12	TTS2-223-306-15	237.15	12	289.90	14
TTS2-108-192-15	122.85	10	175.60	12	TTS2-248-332-15	262.55	12	315.30	14
TTS2-121-205-15	135.55	10	188.30	12	TTS2-274-357-15	287.95	12	340.70	14
TTS2-134-217-15	160.95	10	213.70	12					

For oscillating applications where the bearing is being mounted in the horizontal plane it is important to make sure the inner ring is on the bottom and the outer ring is on top. Otherwise the snap over cage with the help of gravity will contact the seal resulting in higher torque or reduced bearing life.



**3D Models** are available for download. Visit the following web page for details.

<https://www.tpamotion.com/turntable-bearings.html>