

# Bearing for a Turntable

idea after SAC Girati Grande

## Concept:

Inverted 'hanging' bearing for dynamic stability.

A centrally in the turntable platter fixed bearing ball, resting in a conical shaped bore of a thrustpad.

The ball contacts with the thrustpad in form of a ring. Thereby the platter is fixed in the vertical as well as the horizontal direction. Due to its larger rest area -compared to a classical flat thrustpad- the weight of the platter results in lower pressure/area and maybe also a bit of braking inertia which might be advantageous for the driving motor. If the thrustpad is mounted vertically recessed in the spindle bore, the recessed volume may be filled with a lubricant.

Whilst running the rotation dynamically stabilizes the platter. Still though tilting along the vertical axis may appear at startup and shutdown. A bearing sleeve made from a bearing plastic e.g. from Igus or Vesconite may suffice to prevent the tilt. Alternatively a O-ring resting in a notch of the spindle, or a notch in the platter bore may suffice (maybe the O-ring requires a a bit of lubrication?).

The spindle doesn't require precision machining apart from the thrustpad-bore and maybe the ring-shaped area of the bearing sleeve/O-ring. It is essential though that one can manufacture a sufficiently precise bore into the platter. Then, even the bearing sleeve might be omitted with.

