

mmk BIG BORE TYPE NC-ROTA HIGH ACCURACY, HIGH RIGI



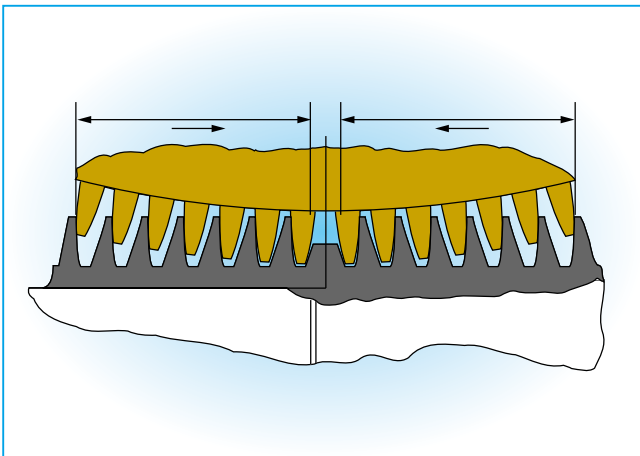
OTT WORM GEAR DRIVE SYSTEM!!

The ultra super special worm/wheel, which was developed in cooperation with OTT(Germany) and SMP(France), is installed to obtain high rigidity, accuracy, and efficiency(patent protecting).

Axial-radial bearing with a large diameter is adapted to ensure high rigidity and accuracy, by accepting high machining force.

High torque transmission provides long life.

Table may be used horizontally or vertically.



CHARACTERISTICS

LONGER SERVICE LIFE!!

Multi-tooth engagement and face contact gives much higher accuracy and the longest service life.

ADJUSTMENT OF BACKLASH IS EASY!!

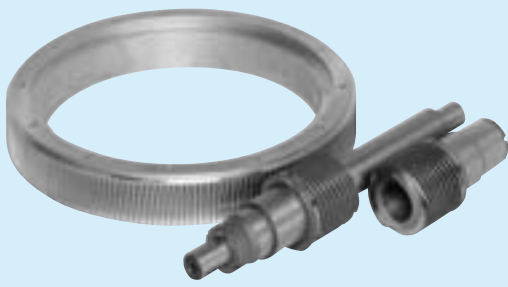
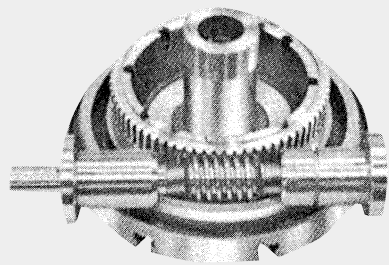
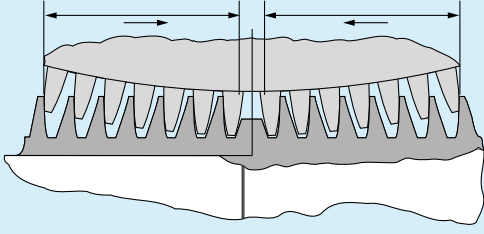
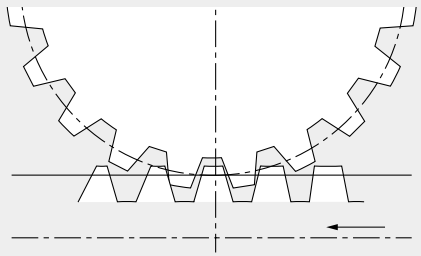
By this special worm gear, the backlash can be eliminated very easily and it is possible to adjust backlash nearly zero.

LARGE THRU-HOLE!!

The large thru-hole facilitates adapting chucks and tooling on the table in order to follow multiple applications(for example, long machining work, etc...).

ARY TABLE WITH DITY AND LARGE THRU-HOLE.

Comparison of OTT Worm Gear Drive System and Double-Lead Worm Gear

	OTT WORM GEAR DRIVE SYSTEM	DOUBLE-LEAD WORM GEAR
MANUFACTURED		
DRAWING		
ENDURANCE	Gear rate 180 : 1. High contact ratio. Large surface engagement by a special tooth shape. These improvements can ensure a high endurance and a positive indexing for a long continuous use.	Gear rate 60 : 1. This type has a less endurance and a large surface stress.
BACKLASH RATE	0.003mm ~ 0.008mm This low backlash rate is allowed to use for positive indexing table.	0.04mm ~ 0.05mm When using a tilting table , the center of gravity in moved due to the backlash and a table itself is slide down.
ADJUSTMENT OF BACKLASH	Backlash can be eliminated by adjusting the phases of the gears so that distance between each gears tooth can be shortened. As shown is the drawing. One side of a tooth of the worm within the length of the action always make contact with wheel gear and an another side have clearance. This results no seizure in case of zero backlash.	By providing different pitch size for each side of a tooth, the gear is turned toward thicker tooth in order to adjust backlash. The table clamp signal is automatically turned on/off when it is positioned. In this case there should be at least 0.04mm ~ 0.05mm of clearance in order to allow thermal expansion because both side of a tooth are used to rotate the table.If this has a smaller clearance, it causes seizure of a tooth surface.