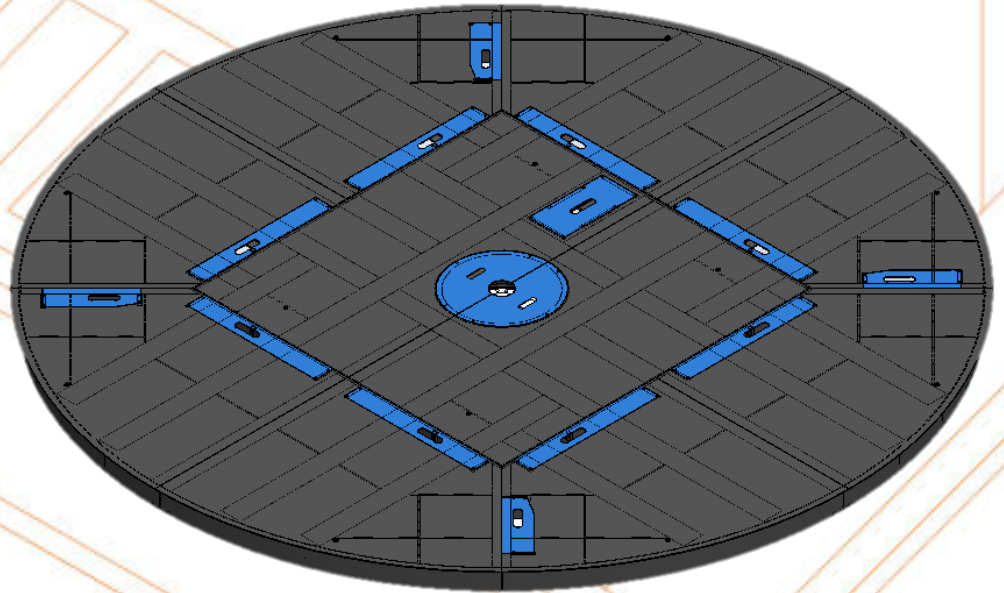


STANDARD OPERATING MANUAL MTT-35 SERIES TURNTABLES



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I . IMPORTANT PRECAUTIONS

Read the following safety precautions before operating or servicing your Align equipment.

- Lockout and tagout at the Electrical Disconnect BEFORE any service or maintenance is performed to this equipment.
- Prevent personnel from leaning on equipment and containers, or placement of arms, hands, legs or any bodily member in pinch point areas throughout the system i.e. the gear mesh area of the pinion and slewing bearing.



- Always wear the proper personal protective equipment i.e. safety glasses and goggles, gloves, boots with steel toes, etc.
- Instruct personnel in the proper placement of product on the turntable. Failure to place containers or loads in the engineered locations may hinder the operation of the turntable or cause structural damage.
- Never operate the turntable without the provided covers and guards properly installed.
- Never walk or climb into or onto the turntable while it is in motion.
- Never operate system sensors by hand.
- Never restore power or air pressure to the control system without first clearing the turntable of personnel, tools or other obstructions.
- Never alter the equipment in any way unless authorized by a qualified Align employee.

II. DESCRIPTION OF EQUIPMENT

This equipment consists of a 12'-0" - 18'-0" diameter (depending on model number) mechanical turntable that stands 1'-4" tall and has 360° rotation. A 480VAC/3Ph/60Hz gearmotor rotates the table top on a mechanical center bearing.

III. INSTALLATION INSTRUCTIONS

When the turntable parts arrive to the jobsite, store turntable parts in a clean, dry area, sheltered from weather situations, i.e. rain, mud, debris, corrosive environments, etc. Failure to comply will void the warranty of the turntable. Rig the turntable sections and crates in a safe manner, paying close attention so as not to damage any turntable parts. Each turntable section has four (4) locations on the top surface for use with 3/4"-10 UNC hoist rings.

There are three basic parts to the turntable assembly:

- Turntable Center Pivot Frame w/ Drive
- Turntable Center Section
- Turntable Wing Sections (4)

Install Center Pivot Frame w/ Drive:

1. Set center pivot frame in desired location on a clean, level floor.
2. Using the base plate as a template, mark, drill and blow/vacuum the dust out of the anchor bolt holes. To help keep the frame from moving, temporarily insert an anchor bolt into each hole once it is drilled. Use 3/4" diameter anchors. (See anchor bolt manufacturer's installation instructions for hole size, depth, and torque.)

Install Turntable:

1. The center pivot frame has already been installed per above.
2. Position the turntable center segment on top of the center pivot frame. Verify turntable height equals specified height. Align has set the initial height to be 16" $\pm 1/8$ ". If the table height is outside acceptable range, remove or add shims as necessary to obtain desired final height.
3. Install center turntable top weldment. Use M20 X 120mm long bolts to attach to center segment. Torque all bolts to 288ft-lbs in three (3) stages using a crisscross pattern.
4. Install turntable wing weldments. Turntable segments are match marked for ease of assembly. Use 5/8" X 2-1/2" long bolts to attach the wing segments to the center section. Install lower bolts with lock and flat washers, but do not tighten. Insert

shims over lower bolts. Install upper bolts with lock and flat washers. Use 5/8" x 2" bolts to attach wing section to adjacent wing section. Torque all bolts to 160ft-lbs.

CONNECT CONTROLS:

1. Once unit is properly installed, the 480VAC gearmotor power supply can be connected to the main control stand.
2. Attach the foot control pedal (if equipped) or hand control stand (if equipped) to the main control stand.
3. The main power supply may now be connected to the control stand.

NOTE: IT IS THE CUSTOMER'S RESPONSIBILITY TO MEET ALL LOCAL SAFETY AND BUILDING CODES.

IV. SPECIFICATIONS

Model Number	Capacity ¹ (lbs)	Diameter (ft)	Table Height (in)	RPM ²	Accuracy ³ (deg)	No. of Pieces (shipping)
MTT-35-12	35,000	12	16	0.5-2.2	0.3	5
MTT-35-13	35,000	13	16	0.5-2.2	0.3	5
MTT-35-14	35,000	14	16	0.5-2.2	0.3	5
MTT-35-15	35,000	15	16	0.5-2.2	0.3	5
MTT-35-16	35,000	16	16	0.5-2.2	0.3	5
MTT-35-17	35,000	17	16	0.5-2.2	0.3	5
MTT-35-18	35,000	18	16	0.5-2.2	0.3	5

¹ - Based on centrally located load

² - 2RPM fixed expected. Unless controlled by optional VFD (or provided by others).
0.5-2.2RPM possible

³ - Based on slewing drive rated backlash

V. SERVICE AND MAINTENANCE

MAINTENANCE SCHEDULE:

Monthly or as required:

1. Inspect turntable structure for cracks. (Contact Align for repair recommendation)
2. Inspect center pivot frame assembly structure for cracks. (Contact Align for repair recommendation)
3. Check bolts for tightness and tighten if loose.
4. Check concrete lag down nuts for tightness and tighten if loose.
5. Inspect oil level of gear motor. Add oil as necessary.

Every 6 months or as required:

1. Grease slewing drive. (Use 7014-1 High Temp. or similar NLGI No. 2 grease)

VI. TROUBLESHOOTING

Turntable will not rotate:

CAUSE	REMEDY
Loose electrical wire	Check and tighten connection
Motor/Gearbox Problems	Inspect and/or replace motor/gearbox

VII. RECOMMENDED SPARE PARTS

<u>Installed Quantity</u>	<u>Description</u>	<u>Part Number</u>
1	Bearing, Center Pivot	BRG0161
1	1 HP Motor & Gearbox	EMT0017

VIII. LIMITED WARRANTY



Align Production Systems LLC warrants all of its products to be free of defects in material and workmanship for a period of one (1) year from date of shipment to the original purchaser or 2,000 operating hours, whichever comes first, provided purchaser gives Align Production Systems LLC prompt notice of the alleged defect(s) and, if requested by Align Production Systems LLC, returns the defective items, freight prepaid (F.O.B. Align Production Systems LLC's plant in Decatur, Illinois). THE WARRANTIES SET FORTH HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY, ALL OF WHICH ARE EXPRESSLY DISCLAIMED.

For any claim under warranty, Align Production Systems LLC may elect to repair or replace the defective component or components. All claims for warranty must be accompanied by a Return Goods Authorization number, which may be obtained from Align Production Systems LLC. This warranty does not cover, and Align Production Systems LLC is not responsible for, any labor or other expense for inspections, removal or reinstallation of components or products.

This warranty does not cover, among other things, damages resulting from foreign matter or water, negligence, accident, unreasonable use, abuse or misuse, alterations not authorized by Align Production Systems LLC, failure to provide reasonable and necessary maintenance or failure to follow operating instructions or load limits. IN ADDITION, IN NO EVENT SHALL ALIGN PRODUCTION SYSTEMS LLC BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR CONTINGENT DAMAGES, WHETHER OR NOT IT HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Align Production Systems LLC makes no representation that the product complies with local, state or federal safety/product standards codes. If the product fails to comply in any way with those codes, it shall not be considered a defect in materials or workmanship and Align Production Systems LLC shall not be liable for any damages resulting from noncompliance. This limited warranty is provided to the original purchaser (meaning the original end user) and is nontransferable. This limited warranty constitutes the complete and final agreement regarding Align Production Systems LLC warranty obligations for the product.