

Product Overview

Motorized Turn Tables

AMET is pleased to provide the following product overview on our standard and precision model of motorized turn tables. AMET's turn tables are designed to operate as stand-alone units, or compliment our Advent, XM and QII controls. The MTT is produced in a full range of weight capacities and in standard or precision models in order to meet your application requirements. AMET will also consider your special requests for turn tables and features as well, including special speed ranges.

Purpose:

Motorized Turn Tables are used to produce high quality welds in a variety of different applications. They are typically used to rotate a part accurately about its centerline. They can also be used to rotate parts for fit-up applications and pre/post weld heating processes. You can perform various types of welds in a multitude of positions. Welding is performed using GTAW, PAW, GMAW, FCAW, SAW or YAG Laser.



MTT-1000 Precision 1 Ton Motorized Turn Table

Benefits:

The AMET Turn Tables have several benefits over welding the part manually or by using just a motorized carriage or "orbital" approach, including:

- Able to rotate the part continuously without having to worry about entangling cables and hoses
- Able to rotate the part accurately and consistently
- Secure weld ground point
- Gas back purge capability
- Add tooling to support part and/or weld joint
- Increased weld (arc-on) time
- No need to assemble track around part

- Typically, the torch stays in one position resulting in consist weld parameter settings
- Reduced operator fatigue and involvement

These benefits greatly reduce the time to prepare a part for welding and the time to finish a part after welding. Also, rework time will be reduced and part scrap will be cut.

AMET can include optional features, such as digital speed read-out, welding chucks and grippers, foot switches for manual operation, rotary gas unions, and special tooling, to increase the productivity of the standard positioners.



MTT-P-500 used on Bore Cladding System

Capacities:

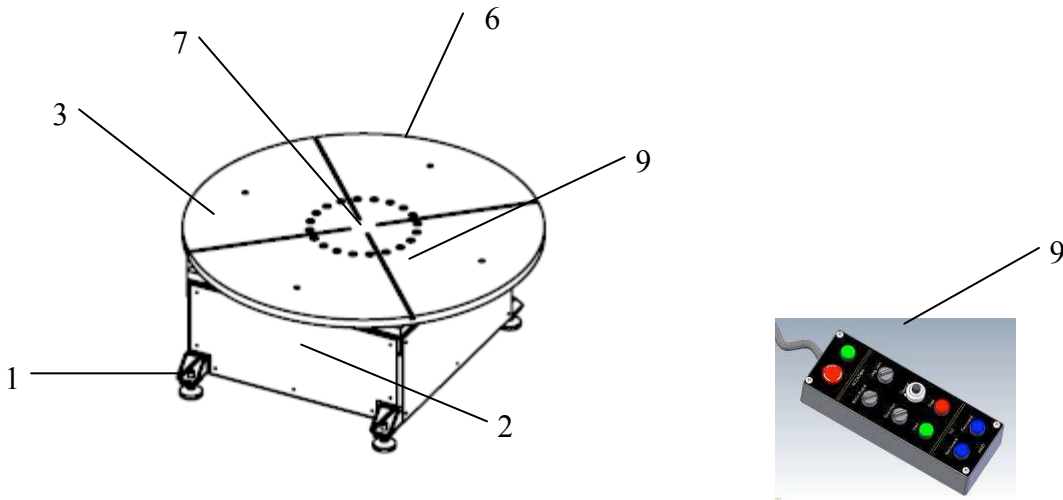
AMET currently produces motorized turn tables with weight capacities from 250 to 60,000 kg (550 to 132,500 lbs).

All turn tables have the following general capacities and specifications:

- Rotational Speed Accuracy: +/- 2% of base speed or +/- 1% on precision models
- Spindle Accuracy: 0.1 mm TIR (.005")
- Rotational Backlash less then 20 arc minutes on Standard, less than 5 arc minutes on precision
- AC Motor with AC Vector Drive control on standard units, upgraded to Servo Drive on precision units
- Speed Range Ratio of 40 to 1 on standard units, 200:1 on precision units

Product Overview

STANDARD FEATURES on Motorized Turn Tables



1. Robust machined frame assembly, which is stress relieved and fitted with spindle bearings.
2. Helical Worm Gearbox driven Spur Gear assembly on standard drives, upgraded to planetary gearbox and precision helical spur gear on precision units
3. Motorized Rotation – see chart below on speed ranges
4. Motorized Rotation using AC motor with speed range ratio of 40 to 1 on standard units. Use servo motor with encoder feedback with speed ratio of 200:1 on precision models. (Not Shown)
5. Helical worm gear driven rotation for a backlash rating of less than 20 arc minutes. Backlash is less than 5 arc minutes on precision models. (Not Shown)
6. Steel Faceplate with 4 tooling slots at 90 degree intervals. Diameter of faceplate depends on size of positioner. See chart below.
7. Thru-Hole used for gas backing or for tooling. Diameter of the hole depends on size of positioner. See chart below
8. Weld Ground Capacity = 500 amps (Not Shown)
9. All units include operator control hand pendant, when used in stand-alone configuration.
10. Ground Spindle and dual bearing construction to insure spindle TIR is less than 0.1 mm (.005”) (Not Shown)
11. Proper protection added for High Frequency arc starting (Not Shown)



MTT-1000 used on Advent Bore Cladding System

Product Overview

MTT Motorized Turn Table Capacity Information

Model Number	Weight Capacity		RPM		Faceplate Diameter		Load Rating*		Weld Ground Capacity (amps)
	(kg)	(lbs)	Standard	Precision	(mm)	(inch)	(mm)	(inch)	
MTT-250	250	550	0.1 to 4.0	.03 to 6.0	900	35	150	6	500
MTT-500	500	1100	0.1 to 4.0	.03 to 6.0	900	35	150	6	500
MTT-1000	1000	2200	0.1 to 4.0	.02 to 4.0	900	35	150	6	500
MTT-2500	2500	5500	.07 to 2.8	.02 to 4.0	900	35	300	12	500
MTT-3500	3500	7700	.07 to 2.8	.015 to 3.0	900	35	300	12	500
MTT-5000	5000	11,000	.05 to 2.0	.015 to 3.0	1200	47	300	12	500
MTT-7500	7500	16,500	.05 to 2.0	.015 to 3.0	1200	47	300	12	500
MTT-10000	10,000	22,000	.025 to 1.0	.01 to 2.0	1200	47	300	12	500
MTT-20000	20,000	44,000	.025 to 1.0	.01 to 2.0	1500	59	300	12	500
MTT-40000	40,000	88,000	.025 to 1.0	.01 to 2.0	1500	59	300	12	500
MTT-60000	60,000	132,500	.025 to 1.0	.005 to 1.0	1500	59	300	12	500

* Load Rating - Eccentric load rating

NOTE: Precision models (MTT-P-xxxxx) offered only up to weight capacities up to 10,000 kg.

Please contact AMET for detailed specification on each model of motorized turn table. More details and specifications are available on these data sheets.

OPTIONAL FEATURES – MOTORIZED TURN TABLE

Home Limit Switch Kit

AMET will add a limit switch to turn table. Some projects require a homing sequence after each weld.

Start/Stop Foot Switch (FSW-1)

Allows operator to press foot pedal to start rotation and lift foot off pedal to stop rotation

Start/Stop + Variable Speed Foot Switch (FSW-2VS)

Allows operator to press foot pedal to start rotation. Rotation speed is controlled by amount foot pedal is depressed. Lift foot off pedal to stop rotation..

3-Jaw Self-Centering Chucks

Available with 6" and 12" (150 and 300 mm) diameter capacity

3-Jaw Grippers

Available in 20", 30" and 40" (500, 750 and 1000 mm) diameter capacities.

XMS-Rotation Control

Upgrade basic control to XMS-Rotation control. Includes the following capabilities:

- Program in degrees of rotation
- Program in surface speed or RPM
- 9 program storage
- Ability to sequence weld
- Hand pendant displays speed and allows for override

