



This pan and tilt pedestal is designed for heavy duty operation providing 360° pan rotation. It has all metal gearing, is EMI gasketed and has aluminum housing with a powder coat finish as well as a stainless steel base and external hardware. The BMA-7000 comes with a heater to seal against water and dust penetration. This pedestal has a 100 lbs (45.4 kg) load capacity, resolvers for position feedback and motor tachometers for speed control also included.

Applications:

- ▶ Off-Road Operation
- ▶ Tripod/Portable Operation
- ▶ Fixed/Permanent Operation

Key Features

- ▶ 360° Pan Rotation
- ▶ Heater to Seal Against Water & Dust Penetration
- ▶ 100 Lbs. Load Capacity

Selecting the Proper Size (AWG) of the Wiring Conductors

Adequate wire size insures that sufficient voltage will appear across the pan/tilt motors which will provide the required torque to move the load. Among the many factors that influence the determination of wire size are minimum line voltage anticipated, the weight of the load, the distribution of the load, the minimum tilt angle, and the distance between the pan/tilt controller and the pan/tilt unit. Adherence to the data provided in the wire selection table will insure proper operation of the pan/tilt unit when operated with the rated load and at line voltages 10% below nominal. The information in Table 1 refers to all pan/tilt wires with the exception of the wires required for the operation of the position feedback, tachometers, and heater.

The wires required for operation of the position feedback should be shielded twisted pair and can be #24 AWG or larger for distances of up to 1000 feet (#20 AWG or larger for distances up to 2000 feet). The resolver signals are converted to 16 bit digital signals and sent via the twisted pair. The heater primary power is normally supplied from the power mains at the pan/tilt site. The heater power requirements are 115 watts, @ 115 VAC. Consult the schematic of the pan/tilt unit and use wire sizes commensurate with your local electrical codes.

Max. Length (Ft.) for Each Unit @ Full Load	
Wire Gauge	115 VDC
#24	66
#22	106
#20	168
#18	268
#16	428
#14	677
#12	1077
#10	1713
#8	2724

Chart Reflects Following Assumptions:

1. A 5% drop in voltage due to IR loss in the wiring.
2. A voltage drop of 10% from the nominal line voltage
3. A 12% increase in wire resistance due to +50°C operation

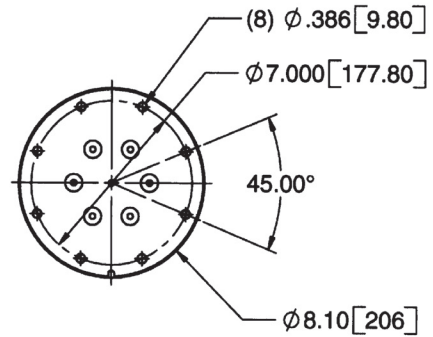
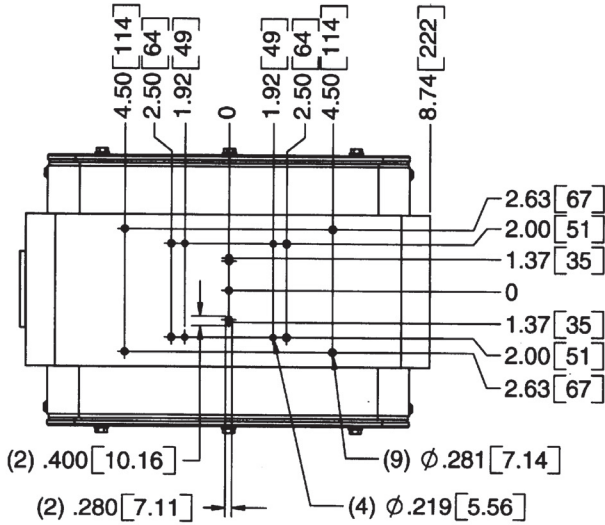
Specifications	
Motor Voltage	115 VDC
Load Capacity	100 lbs (45.4 kg)
Duty Cycle	Intermittent
Pan Range	360° Continuous
Pan Speed Range	(±1°) 1° to 20°/sec.
Pan Torque	50 Foot-Pounds
Pan Motor Current	1.0 Amps
Tilt Range	180° (±90°)
Tilt Speed Range	(±1°) .1° to 13°/sec.
Tilt Torque	100 Foot-Pounds
Tilt Motor Current	1.5 Amps
Motor Type	Permanent Magnet
Connector	PT01E-22-32P (Power/Signal - Base) PT02E-10-98SX (Power/Signal - Table)
Dimensions	15"H x 17.75"W x 11.75"D (38.1 x 45.1 x 29.8 cm)
Weight	84.5 lbs (38.3 kg)
Drive Train	Steel Gear & Worm, Ball & Tapered Roller Bearing
Microwave Rotary Joint	1,000,000 Hour Life, Sealed
Tachometers	100,000 Hour Life
Slip Ring	9 Feed-thru Circuits @ 5 amp Each
Backlash	Adjustable to 0
Accuracy	0.1° with Resolvers
Material	Housing - Aluminum Hardware & Base -Stainless Steel
Exterior Color/Finish	Dupont 326162A, Ford PFWS9 Powder Coated
Environmental Enclosure	Gasketed & Sealed to Withstand Water & Dust Penetration, EMI Gasketed
Operating Temperature	+5 °F to 131 °F (-15 °C to +55 °C) Without Heater Operating -22 °F to +131 °F (-30 °C to +55 °C) With Heater Operating

Rotary Joint Specifications	
VSWR Max. @ f (GHz)	1.20 @ DC to 10 1.35 @ 10 to 18
Insertion Loss Max. (db) @ f (GHz)	0.2 @ DC to 10 0.5 @ 10 to 18
Power Handling	100 W Avg. @ 1 GHz, derates for higher frequencies to 40 W @ 4 GHz, to 14 W @ 20 Ghz. Also Additional derating for altitude - Consult Factory

Required Accessories	
SAA	Servo Amplifier Assembly for 110 or 220 VAC

Optional Accessories	
BPC-500	Pedestal Controller
SAA-CABLE	Control Jumper Between BMA-7000 and SAA Unit (Up to 50')
CONTROL CABLE	Main Cable Between SAA Unit and Pedestal Controller (Up to 1,000')

Ordering Information	
115 VDC; Pan Continuous 20°/sec; Tilt ±90°, 13°/sec with Resolvers, Motor Tachometers, Heater, Stainless Steel Base	



**MOUNTING
BASE**

