



DAIHEN Inc.

CAT. NO. A450-1

ADVANCED WELDING & ROBOTIC SYSTEMS

Arc Cells – Complete Robotic Welding Systems

Pre-Engineered and Custom Built Systems

FEATURING ROBOTS



Total Solutions from the Single Source Provider

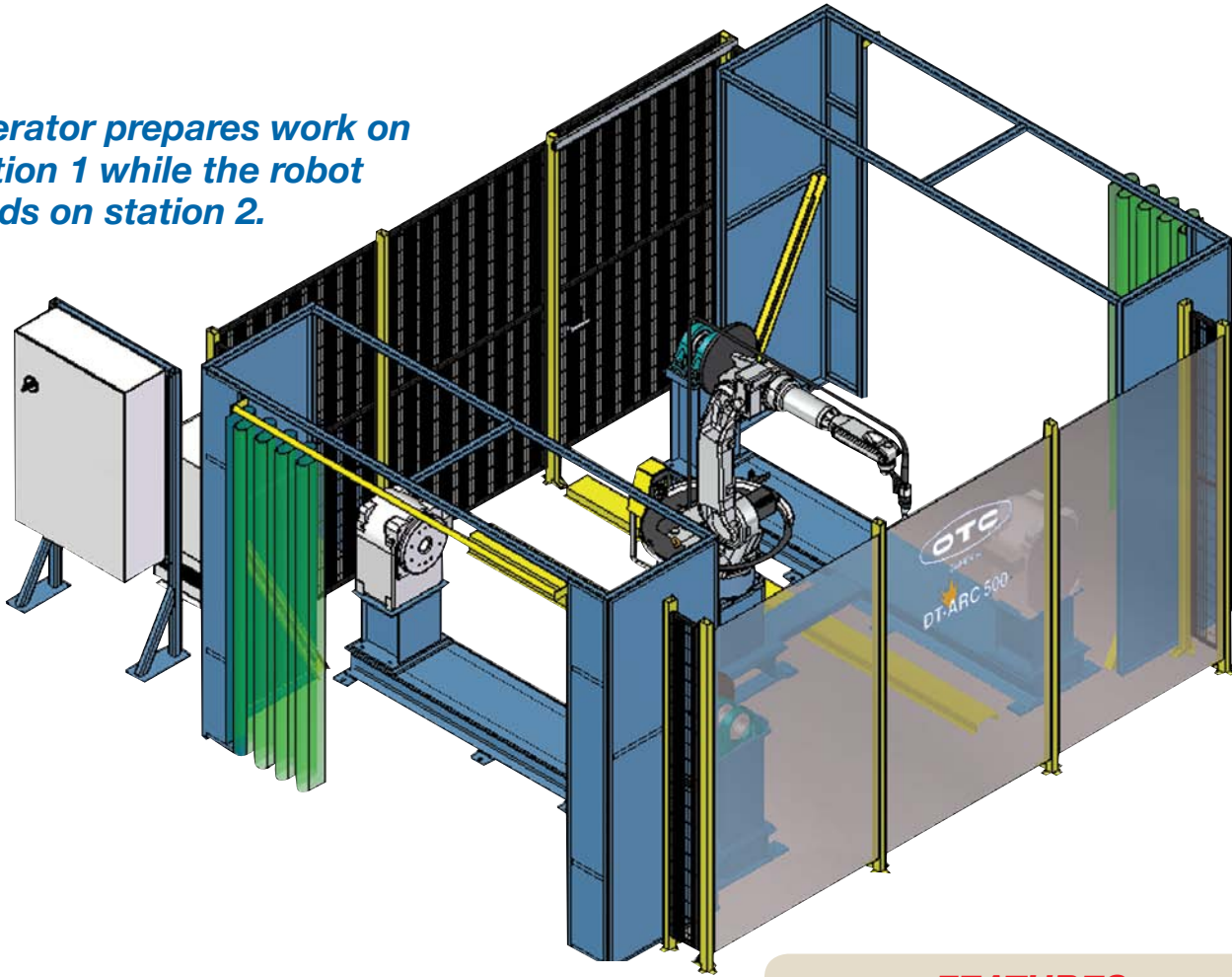


DAIHEN Inc.

ROTA-ARC 1000

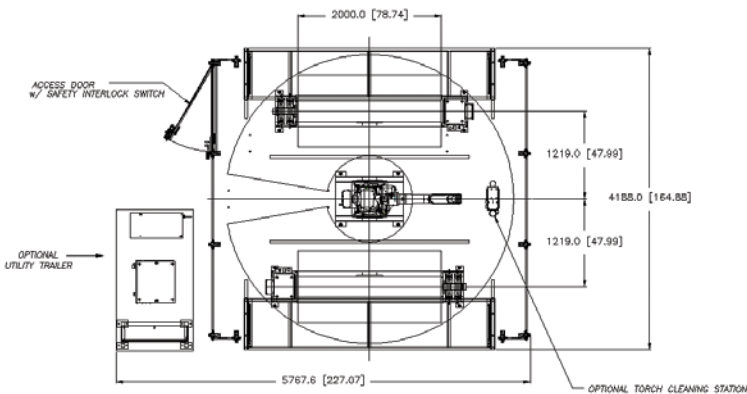
OTC DT-ARC 500

Operator prepares work on station 1 while the robot welds on station 2.



FEATURES

- Welding solution for medium and large size parts and assemblies
- Flexible layout configuration for 180 degree and 120 degree station orientation
- Ability to upgrade to 3000mm max part span
- Configurable for 1000kg Headstock positioners



Specifications

Model Number	Tooling Dimensions	Drive Method	Payload Capacity
DT-ARC 500	78.5" x 39.4" (2000mm x 1000 mm)	Servo / Internal PLC	1100 lbs. (500 kg) per side

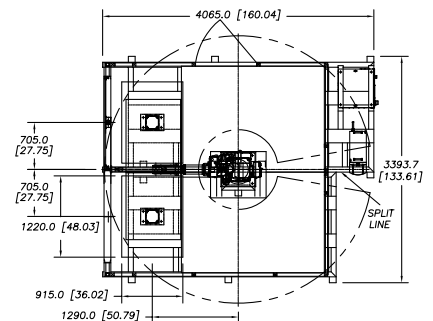
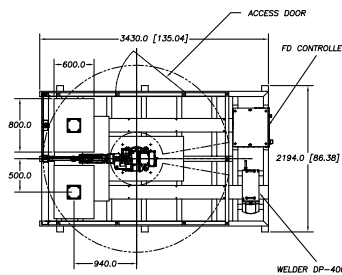
OTC ECO-ARC series

Economically designed with fixed tables for durability and high cycle times.



Options

- Arc Monitoring
- Touch Screen Operation
- Seam Finding / Tracking
- PC Program Storage
- Program Editing
- Offline Programming
- Wide Variety of Welding Power Sources



Specifications

Model Number	Table Dimensions	Payload Capacity
ECO-ARC 200	24" x 32" (600 mm x 800 mm)	2200 lbs.(1000 kg) per side
ECO-ARC 200L	36" x 48" (915 mm x 1220 mm)	

OTC SERVO-ARC and PT-ARC series

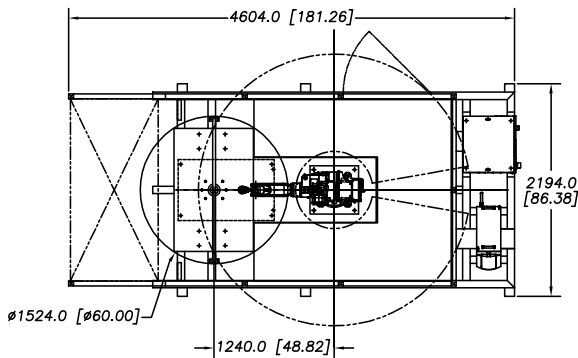


PT-ARC 600

Designed for small and medium size parts with minimal operator movement required.



Shown without side panels for viewing



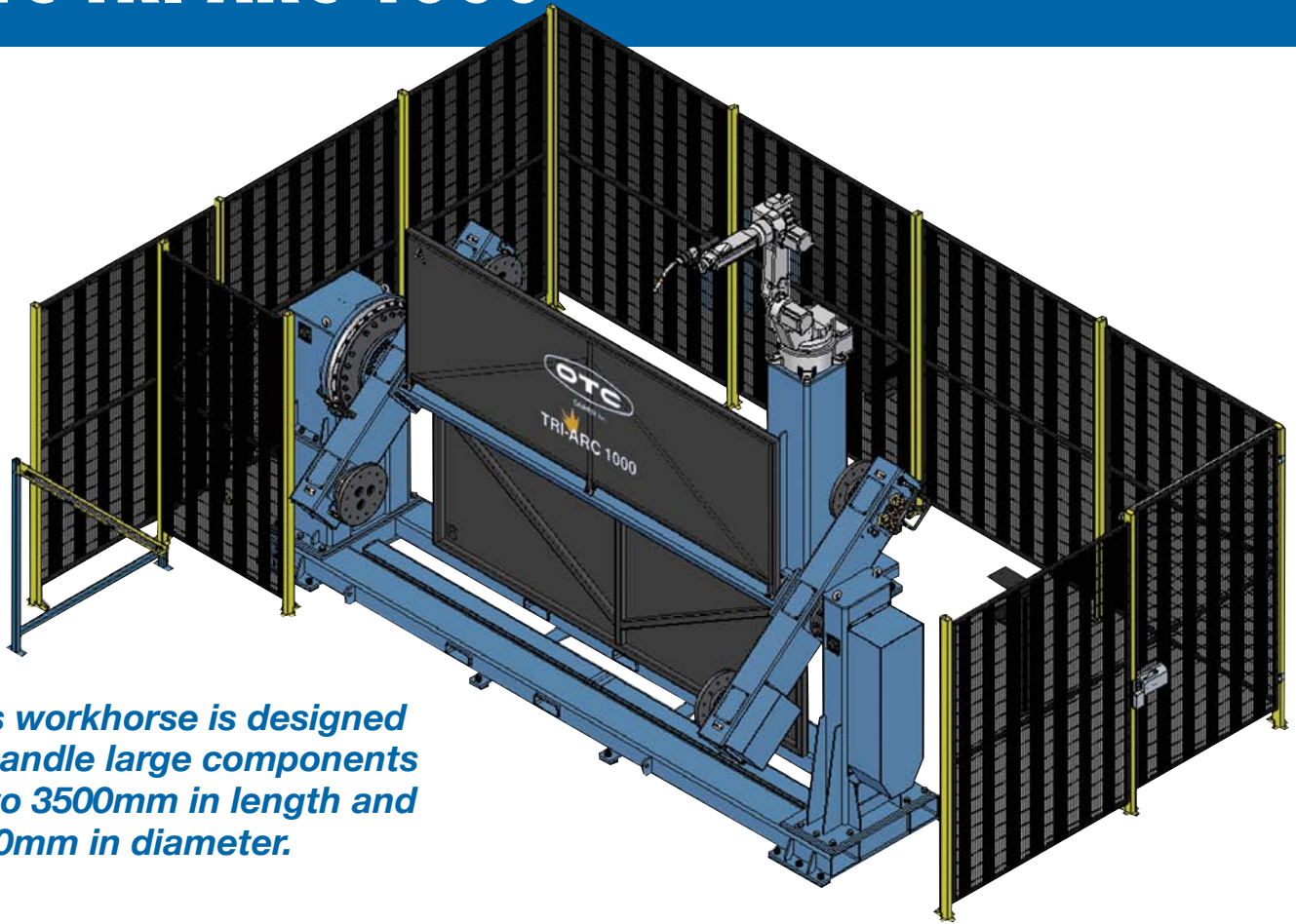
QUICK & EASY SETUP

- Shipped pre-assembled to reduce installation time
- Fork-lift pockets allow for easy placement in your manufacturing area
- Up and running in just a few hours
- Single point station controls for all cell functions

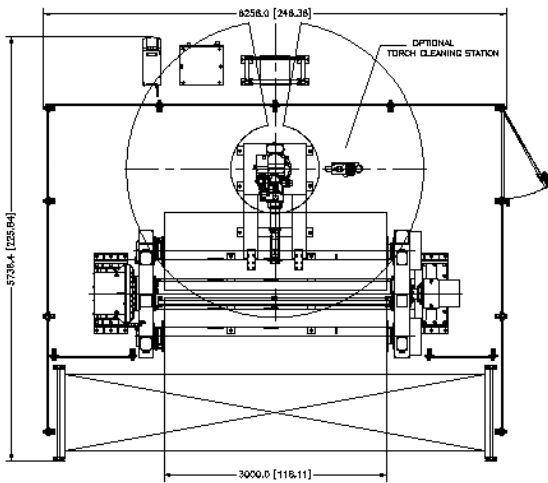
Specifications

Model Number	Table Diameter	Drive Method	Payload Capacity	Index Range	Index Speed
SERVO-ARC 720	72 Inches	Servo / Internal PLC	550 lbs. (250 kg) per side	180° 2 position	4 sec. avg.
SERVO-ARC 600	60 Inches	Servo / Internal PLC			
PT-ARC 600	60 Inches	Pneumatic			

OTC TRI-ARC 1000



This workhorse is designed to handle large components up to 3500mm in length and 1050mm in diameter.



SAFETY

- Tamper resistant safety interlocks
- Fully enclosed robot operating area
- Protective arc shield
- Light curtains prevent operation when entering working area
- RIA / ANSI compliant

Specifications

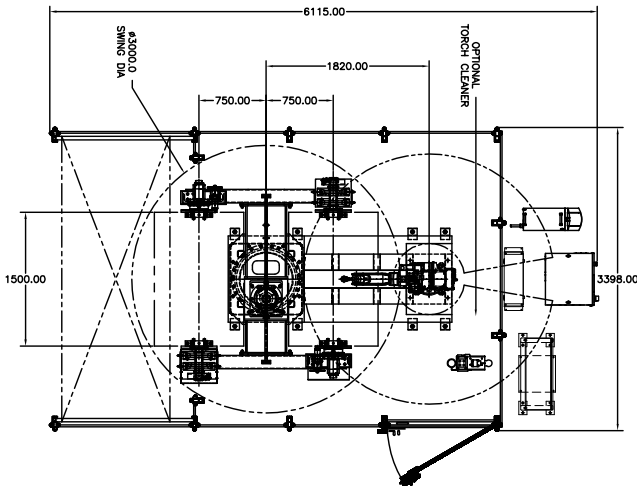
Model Number	Tooling Dimensions	Drive Method	Payload Capacity	Index Speed
TRI-ARC 1000	137.79" x 41.34" (3500 mm x 1050 mm)	Servo / Internal PLC	2200 lbs. (1000 kg) per side	12 sec. avg.

OTC ROTA-ARC 1000



Compact design is ideal for complex parts in small spaces.

ROTA-ARC 1000 with FD-B4



3-AXIS HORIZONTAL POSITIONER

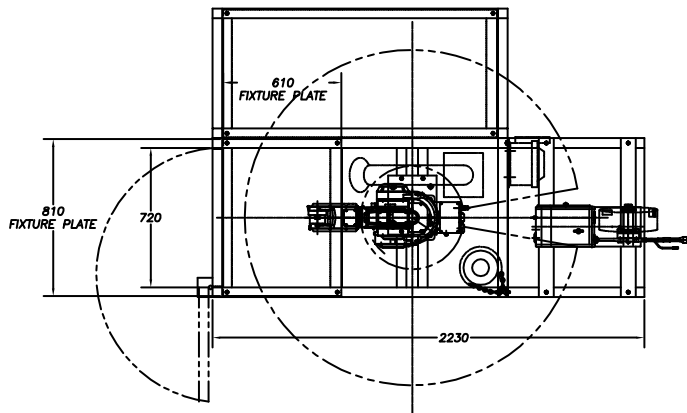
- Adopts maintenance-free AC servo motors and absolute encoders
- Tailstock comes with a through hole for easy electrical and pneumatic routing
- Dedicated current collector and welding cable connecting terminals
- Teach pendant operates both robot & positioner for programming

Specifications

Model Number	Tooling Dimensions	Drive Method	Payload Capacity	Index Speed
ROTA-ARC 1000	59.06" x 39.37" (1500mm x 1000 mm)	Servo / Internal PLC	2200 lbs. (1000 kg) per side	6 sec. avg.

OTC ED-ARC 100

A completely mobile, fully-enclosed and safety interlocked arc welding training station.



CONVENIENCE

- Mobile design and package for training rooms and lab setting
- Lightweight aluminum design with polycarbonate arc-flash enclosure
- Dual access points allow for ease of part loading and robot maintenance
- Optional secondary work station expands work and training areas

Model Number	Table Dimensions	Payload Capacity
ED-ARC 100	32" x 24" (810 mm x 610 mm)	550 lbs. (250 kg) per side

HEADSTOCK POSITIONERS

Features

- The 5 sides of the housing are provided with tapped holes, which permit random mounting positions allowing various jig systems to be set up
- A hole through the center of the rotary table enables easy routing of cables and hoses
- A secondary terminal for welding (500A) is provided as standard built-in equipment
- Can be used as a single-axis, double support positioner in combination with the tailstock and stand (optional)
- Application signal cable and 4 air inlet ports can be fed through the center of the table (optional)
- Voltage detection wire and connection terminal to let the low spatter welding power supply DL350 to perform optimally are provided as standard.



Model A2PB-250



Model A2PB-500



Model A2PB-1000

Specifications

Model Number	A2PB-250	A2PB-500	A2PB-1000
Maximum Payload Capacity	250kg	500kg	1000kg
Rotating Speed	2.6 rad/s (150°/sec)	2.1 rad/s (120°/sec)	1.3 rad/s (172°/sec)
Allowable Rotating Moment	206 N•m	490 N•m	1078 N•m
Positional Repeatability	±0.1mm (Position at R300mm)	±0.1mm (Position at R300mm)	±0.1mm (Position at R300mm)
Stop Position	Any Position	Any Position	Any Position
Mass (Weight)	110kg	170kg	220kg

2 AXIS POSITIONERS

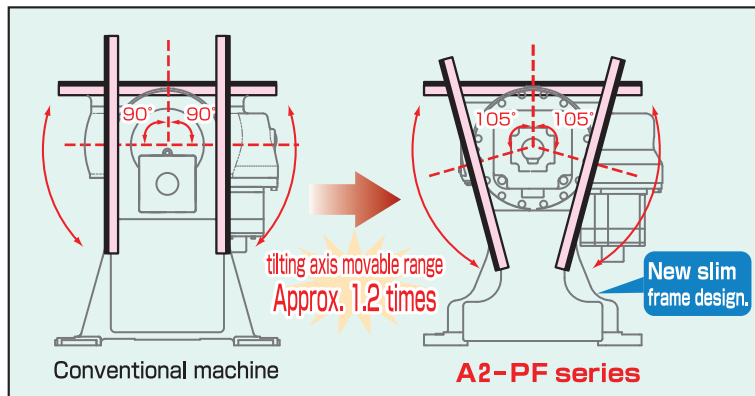
High speed motion increases production efficiency – An increase in the maximum rotation speed of the tilting axis by 2.5 times and in rotation axis by 2 times was achieved in comparison with the conventional machine 300kg payload type.

Continuous welding (100% duty cycle) at 500A can be standard – providing a collecting brush additionally as an option can increase the maximum welding current up to 1000A at 60% duty cycle.

Our product line includes a model with a maximum payload capacity of 1000kg for large workpieces.



Model A2PF-1000



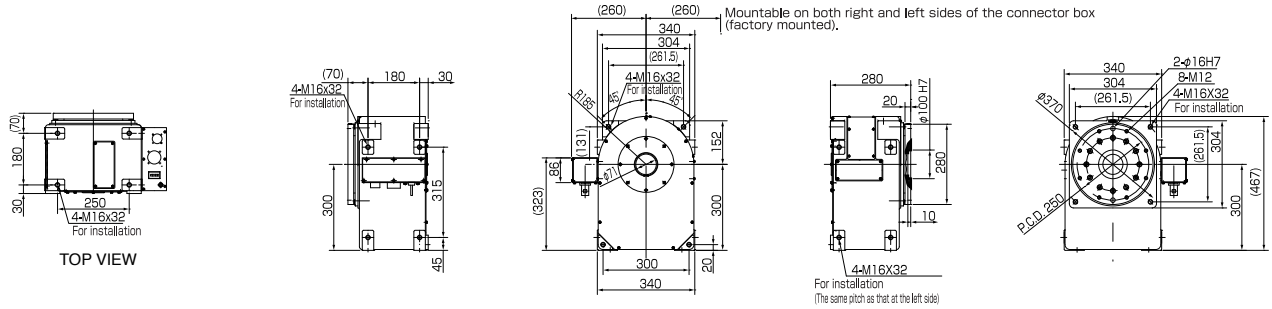
- Streamlining of the frame increases the movable range of the inclined axis by 1.2 times in comparison with that of the conventional machine. (the ratio in case of mounting a jig and workpiece (Ø600mm or less) larger than that of the face plate)
- Because the inclined axis falls down to both sides ($\pm 135^\circ$), a workpiece can be carried in and out easily and an optimal welding posture can be taken
- The application cable (for signal) and 4 air inlet ports can be fed through the center of the table. (Option)
- The voltage detection wire and the connection terminal let the low spatter welding power supply DL350 perform optimally are provided as standard

Specifications

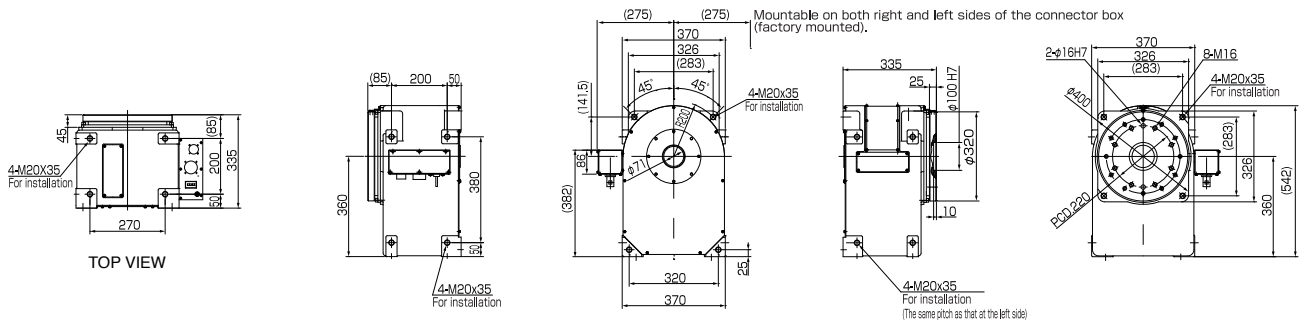
Model Number	A2PF-300	A2PF-500	A2PF-1000
Maximum Payload Capacity	300kg	500kg	1000kg
Rotating Speed	3.1 rad/s (180°/sec)	2.8 rad/s (162°/sec)	2.9 rad/s (166°/sec)
Tilting Speed	2.2 rad/s (125°/sec)	1.5 rad/s (84°/sec)	1.4 rad/s (82°/sec)
Allowable Rotating Moment	294 N•m	392 N•m	882 N•m
Allowable Tilting Moment	882 N•m	1347 N•m	3704 N•m
Positional Repeatability	± 0.08 mm (Position at R250mm)	± 0.08 mm (Position at R250mm)	± 0.08 mm (Position at R250mm)
Stop Position	Any Position	Any Position	Any Position
Mass (Weight)	260kg	260kg	470kg

POSITIONER DIMENSIONS

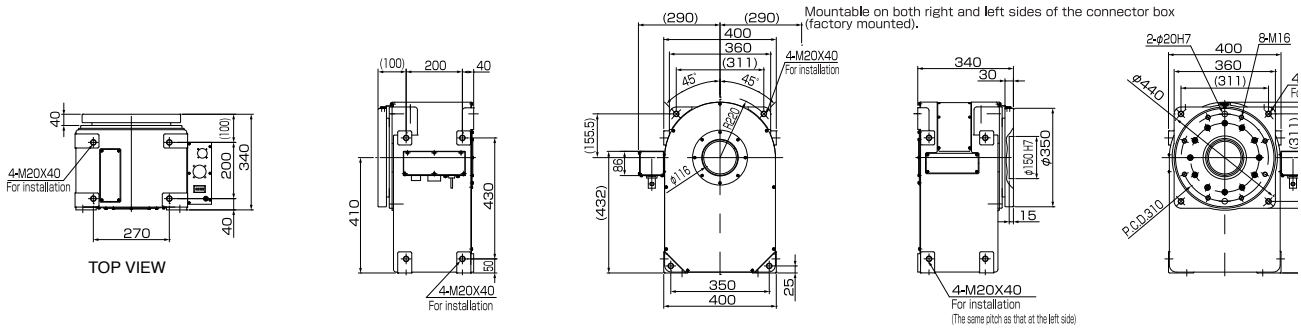
A2PB-250 Dimensions



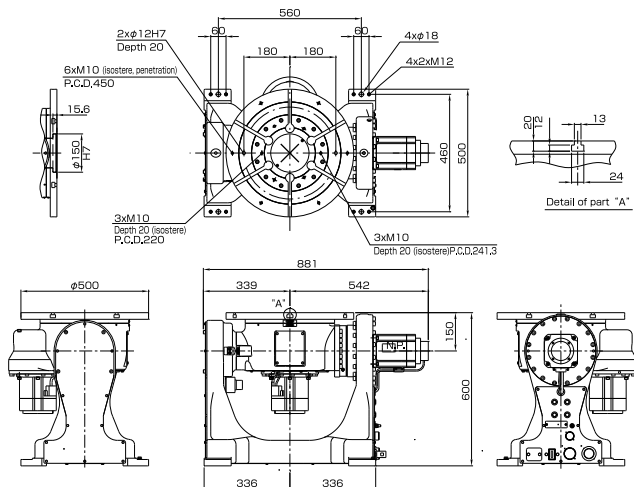
A2PB-500 Dimensions



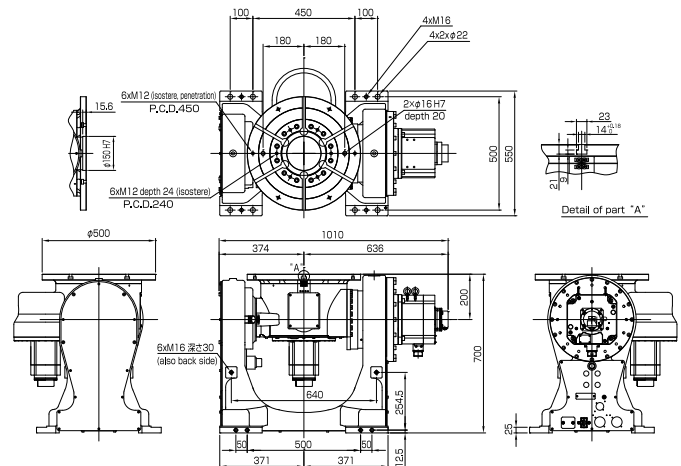
A2PB-1000 Dimensions



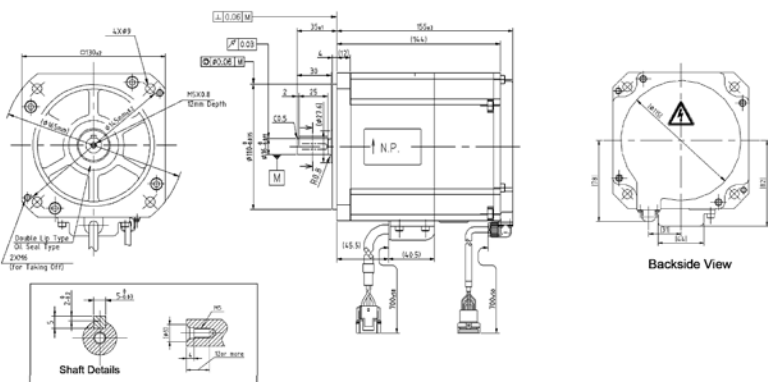
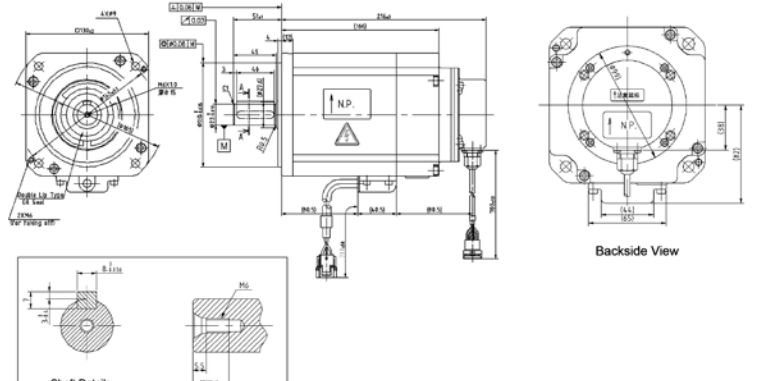
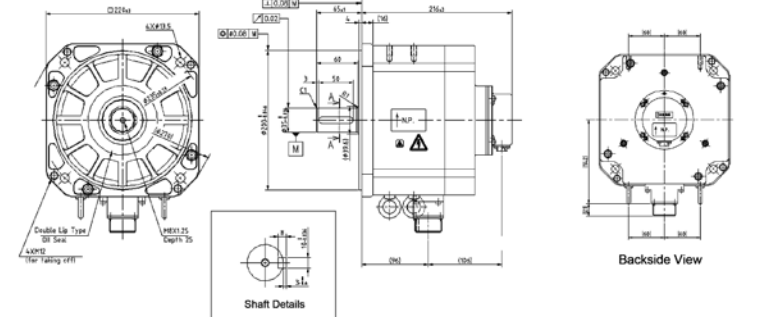
A2PF-300, A2PF-500 Dimensions



A2PF-1000 Dimensions



EXTERNAL AXIS PACKAGES

Motor / Specifications	Dimensions
<p>1.2kW</p> <p>Part Number W-L02641</p> <p>Output Power: 1200W Rated Speed: 2000 rpm Rated Torque: 5.7 N•m Maximum Torque Peak: 16 N•m Inertia (Rotor + Brake): 6.1×10^{-4} kg•m² (Rotor), 0.5×10^{-4} kg•m² (Brake) Static Friction Torque on Brake: 9.0 N•m or more Weight: 18 lbs (8.3kg)</p> <p>Assembling: Running: Max F_R: 640 N Max F_R: 640 N Max F: 1300 N Max F: 340 N Max F1: 1300 N Max F1: 340 N</p>	 <p>Technical drawings for the 1.2kW motor, including front view, side view, backside view, and shaft details. Dimensions are provided in millimeters.</p>
<p>2.0kW</p> <p>Part Number W-L02152</p> <p>Output Power: 2000W Rated Speed: 2000 rpm Rated Torque: 9.5 N•m Maximum Torque Peak: 30 N•m Inertia (Rotor + Brake): 12.2×10^{-4} kg•m² (Rotor), 0.5×10^{-4} kg•m² (Brake) Static Friction Torque on Brake: 12 N•m or more Weight: 27 lbs (12.3kg)</p> <p>Assembling: Running: Max F_R: 1700 N Max F_R: 640 N Max F: 1400 N Max F: 340 N Max F1: 1400 N Max F1: 340 N</p>	 <p>Technical drawings for the 2.0kW motor, including front view, side view, backside view, and shaft details. Dimensions are provided in millimeters.</p> <p>Note: All dimensions above are in [mm]</p>
<p>4.5kW</p> <p>Part Number W-L02157</p> <p>Output Power: 4700W Rated Speed: 2000 rpm Rated Torque: 22.5 N•m Maximum Torque Peak: 54 N•m Inertia (Rotor + Brake): 55.0×10^{-4} kg•m² (Rotor), 5.1×10^{-4} kg•m² (Brake) Static Friction Torque on Brake: 42 N•m or more Weight: 61.7 lbs (28.0kg)</p> <p>Assembling: Running: Max F_R: 2300 N Max F_R: 1500 N Max F: 1900 N Max F: 490 N Max F1: 1900 N Max F1: 490 N</p>	 <p>Technical drawings for the 4.5kW motor, including front view, side view, backside view, and shaft details. Dimensions are provided in millimeters.</p>

OPTIONAL EQUIPMENT

Torch Cleaning Equipment

Item		Part Number
		K-2724
		K-2725
		K-2726
Spring Reamer & Vacuum Cleaner (100VAC Input)		L-10748
Step Down Transformer (Required for all Stations)		VC500J
For Cleaning and Cleaning & Cut Stations	13mm Reamer Drill (#8 Nozzle)	5096-145
	13mm Reamer Bushing (#8 Nozzle)	5096-148
	16mm Reamer Drill (#10 Nozzle)	5096-146
	16mm Reamer Bushing (#10 Nozzle)	5096-149
	19mm Reamer Drill (#12 Nozzle)	5096-147
	19mm Reamer Bushing (#12 Nozzle)	5096-150
For Cut and Cleaning & Cut Stations	Shearing Blade for Wire Cutter	5096-306
	Shearing Blade for Wire Cutter	5096-307
Clean Kit Stand Assembly		1L0298B00

Robotic Zone Kits

Item	Part Number
2 Station Zone Kit for FD-V6 / FD-B4	1L0448A00
2 Station Zone Kit for FD-V6L / FD-B4L	1L0370A00
3 Station Zone Kit for FD-V6L / FD-B4L	1L0396A00
400mm Robot Pedestal for FD-V6/B4 & FD-V6L/B4L	L-3626
800mm Robot Pedestal for FD-V6/B4 & FD-V6L/B4L	L-3626-800

For more information on brand products from DAIHEN Inc., visit our website at www.daihen-usa.com, or send us e-mail at sales@daihen-usa.com.



OTC DAIHEN INC.
 (Headquarters)
 1400 Blauser Dr., Tipp City, OH 45371
 Ph: 937-667-0800 • Fax: 937-667-0885

Branch Offices: Atlanta, Georgia
 Charlotte, North Carolina
 Monterrey, Mexico
 Novi, Michigan