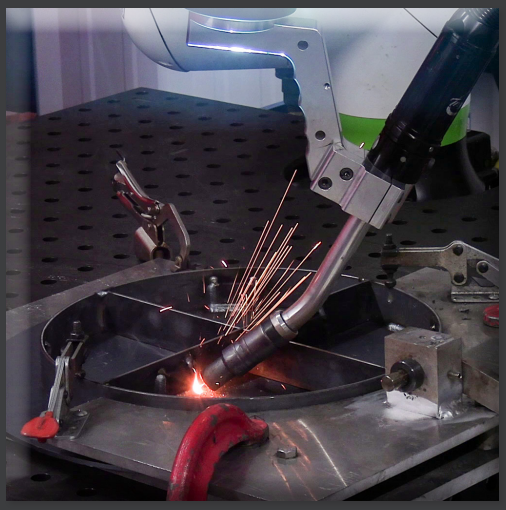






Robotic Welding & Cutting

Product Catalog

APT MANUFACTURINGsolutions

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ABOUT US



APT Manufacturing Solutions, based in Hicksville, Ohio, has been providing high-tech solutions to manufacturing problems for our customers since 1996.

Founded initially in a 2500 square foot facility as machining & machine building, APT is now manufacturing in a 100,000 square foot facility with state-of-the art equipment, technology, and people. Our operations are ISO 9001 certified. We are an authorized FANUC robotic integrator & certified at the highest level (V), as well as being an A3 Certified Robot Integrator. We specialize in Robotic Packaging Systems, Robotic Welding & Plasma Cutting Systems, and Industrial Education Solutions.

APT MANUFACTURINGsolutions

PRODUCT OVERVIEW

Robotic Welding & Plasma Cutting

Welding & Plasma Cutting Robots Overview

Product Model	Robot Type	Welding	Plasma Cutting	Mobile	Robot Reach	Product Features
MOD-WELD Cart	Cobot	✓		✓	55"	Expandable side-cart options accommodate multiple welding fixtures, allowing the next job to be staged while the robot is welding.
MOD-WELD Traveler	Cobot	✓		✓	55", 74"	Bring the cobot directly to the workpiece or welding table, transforming a manual welding area into a flexible robotic welding station.
MOD-WELD Navigator	Cobot	✓	✓	✓	27"	Bring robotic welding directly to the workpiece and secure the cobot using the magnetic mounting system. Mobile platform options support up to two cobots and two power supplies.
MOD-WELD Drop Center	Cobot	✓		✓	74"	Adds two auxiliary axes to position & rotate the workpiece for optimal torch access. Accommodates parts up to 5 feet in diameter.
MOD-WELD Fixed Table	Robot	✓			36", 57", 72"	A divided flat-table design allows the operator to load and unload one station while the robot welds in the other.
MOD-WELD Rotary Table	Robot	✓			36", 57", 73"	A rotary indexing flat-table allows the operator to load & unload one station while the robot welds in the opposite station.
MOD-WELD H-Frame	Robot	✓			72", 89"	A horizontal headstock/tailstock positioner rotates the workpiece for improved access to multiple weld locations. The operator loads & unloads on one side while the robot welds on the opposite side.
MOD-WELD Ferris Wheel	Robot	✓			72", 89"	A vertical indexing positioner rotates workpieces between the operator loading station & the robotic welding station, supporting continuous loading & welding.
MOD-WELD Headstock/Tailstock	Robot	✓			80", 89"	Rotates the workpiece to provide better access to multiple weld locations and improve loading ergonomics. The operator alternates between stations A and B while the robot welds.
MOD-CUT Cart	Cobot		✓	✓	55"	A downdraft-ready cutting table featuring a 6" fume-extraction connection. An optional 34" x 36" tabletop burn box enhances containment of sparks, slag, and cutting debris.
MOD-CUT Traveler	Cobot		✓	✓	55", 74"	Bring the cobot directly to the workpiece or cutting table, transforming a manual cutting area into a flexible robotic cutting station.
MOD-CUT Navigator	Cobot	✓	✓	✓	27"	Bring robotic cutting directly to the workpiece and secure the cobot using the magnetic mounting system. Mobile platform options support up to two cobots and two power supplies.
MOD-CUT Drop Center	Cobot		✓	✓	74"	Adds two auxiliary axes to position & rotate the workpiece for optimal torch access. Accommodates parts up to 5 feet in diameter.

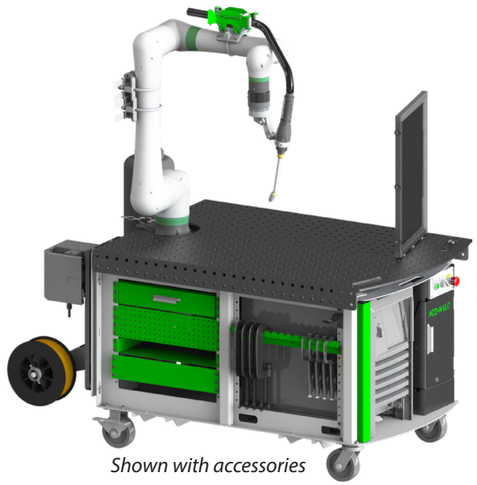
MOD-WELD CART
Cobot Welding

Features

- Easily move the cobot between work areas & production environments.
- Quickly adapt the cart to different welding applications, parts, and workspaces.
- Provides a complete cobot welding solution without requiring a large, dedicated cell.
- Expandable work area, add up to four side carts to customize your workspace
- 6" Casters for ease of movement, lockable box for FANUC Tablet, powder coat finish
- Ready to accept accessories, Wire feed accessibility
- Low lift for tank
- Exclusive with FANUC CRX Cobot
  - FANUC CRX 8-Year Zero Maintenance

Options

- Power supply options:
  - Miller
  - Fronius
  - Lincoln
  - For additional information, see page 26
- Software options:
  - FANUC
    - TPW (Touch Sensing, Through ARC Seam Track, Root Memorization)
  - Fronius
    - PMC (Pulse Multi Control) - included in purchase
    - LSC (Low Spatter Control)
    - CMT (Cold Metal Transfer)
  - For additional information, see page 27
- Additional equipment options available, see page 11
- Side carts for extending space



Shown with accessories

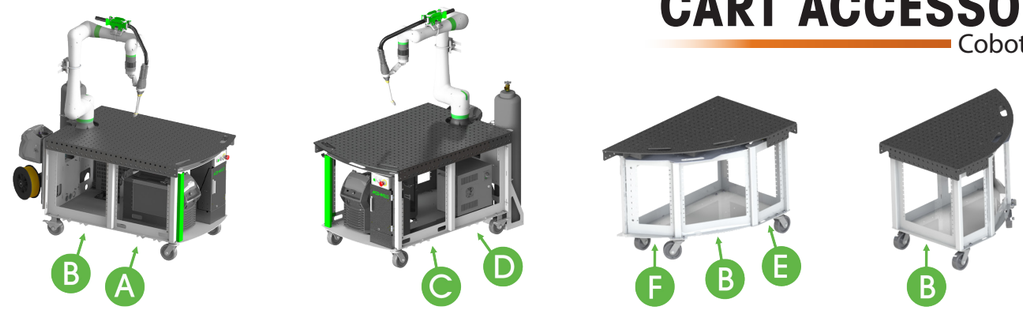
System Model	CART10L
6-Axis Robot	FANUC CRX-10iA/L
Robot Reach	55"
Robot Power	120v 20 amp
Robot Programming	Tablet only
Robot Torch Guidance	Clever Torch Teach Guidance
Torch Dress-out	APT Custom Rollers
Torch Angle	22.5 degree torch angle
Cart Footprint	40"W x 78" D
Cart Table Work Space	40" W x 58-1/2" D
Cart Table Hole Size	16mm Dia, 2"x2" Hole Pattern
Approx Weight w/ Welder	1300 lbs
Side Cart Workspace	34 3/8" W x 54" D w/ 16mm holes
SCLFRR - Left Front or Right Rear Side Cart **SCRFLR** - Right Front or Left Rear Side Cart	



Side Cart Options Sold Separately

Patented Product

CART ACCESSORIES
Cobot Welding



Side carts have locations for "wide" and "narrow" accessories
Accessories are built with 14 ga steel, powder coated for durability.

Shallow Drawer - Narrow DW1025	Inner Dimensions: 8.8"W x 14.8"L x 2.4"H	E
Shallow Drawer - Wide DW2025	Inner Dimensions: 18.8"W x 14.8"L x 2.4"H	B D
Medium Drawer - Narrow DW1040	Inner Dimensions: 8.8"W x 14.8"L x 3.9"H	E
Medium Drawer - Wide DW2040	Inner Dimensions: 18.8"W x 14.8"L x 3.9"H	B D
Drawer Divider Set - Narrow DIVS10	Fits in: DW1025, DW1040	
Drawer Divider Set - Wide DIVS20	Fits in: DW2025, DW2040	
Storage Shelf - Narrow SH1025	10"W x 15.75"L x 2.5"H	E
Storage Shelf - Wide SH2025	20"W x 15.75"L x 2.5"H	B D
Spray Can Storage Shelf - Narrow SCSH10	12"W x 3.625"D	E F
Spray Can Storage Shelf - Wide SCSH20	22"W x 3.625"D	A B C D
Bin Box Panel - Narrow BINP10	Includes 4 1/8"W x 5 3/8" L x 3" H Bins x2	E F
Bin Box Panel - Wide BINP20	Includes 4 1/8"W x 5 3/8" L x 3" H Bins x4	A B C D
Clamp Hanger - Narrow CR1007	7 clamp notches	E F
Clamp Hanger - Wide CR2013	13 clamp notches	A B C D
Pegboard Panel - Narrow PB1006	Ø.25 holes, 1" spacing, Hole array 10 x 6	E F
Pegboard Panel - Wide PB2006	Ø.25 holes, 1" spacing, Hole array 20 x 6	A B C D
Blank plate - Narrow BP1045	10" x 4-1/2" Tall	E F
Blank plate - Wide BP2045	20" x 4-1/2" Tall	A B C D
Angle Grinder Holder with Cord Wrap AGHG45	Fits 4-1/2" Grinder	

MOD-WELD TRAVELER

Cobot Welding

Features

- Easily travel along the work area to weld larger components and longer seams
- Extended weld reach with larger model
- Provides a complete cobot welding solution without requiring a large, dedicated cell.
- Gas bottle storage on mobile base (TRV25 only)
- APT Clever Torch for ease of movement & teaching the robot
- Powder coat finish
- Exclusive with FANUC CRX Cobot
  - FANUC CRX 8-Year Zero Maintenance

Options

- Power supply options:
  - Miller
  - Fronius
  - Lincoln
  - For additional information, see page 26
- Software options:
  - FANUC
    - TPW (Touch Sensing, Through ARC Seam Track, Root Memorization)
  - Fronius
    - PMC (Pulse Multi Control) - included in purchase
    - LSC (Low Spatter Control)
    - CMT (Cold Metal Transfer)
  - For additional information, see page 27
- Additional equipment options available, see page 11





System Model	TRV25	TRV10L
6-Axis Robot	FANUC CRX-30iA	FANUC CRX-10iA/L
Robot Reach	74"	55"
Robot Power	120v 20 amp	
Footprint (for mobility)	44"W x 76-½"D	38" Dia 77" T
Footprint (outriggers deployed)	88-½"W x 93-¾"D	N/A
Approx. Weight	1700 lbs	550 lbs
Robot Programming	Tablet Only	
Robot Torch Guidance	Clever Torch Teach Guidance	
Torch Dress-out	APT Custom Rollers	

MOD-WELD NAVIGATOR

Cobot Welding

Features

- Depoy the cobot to the work area, ideal for large or difficult-to-move workpieces
- Increase production flexibility by delivering welding wherever production demands it, up to 100 ft.
- Portable, modular platform reduces material handling, minimizes set up time.
- Designed to be magnetically mounted to floors, walls, or ceilings
- Multiple platforms available to best fit your application
- Industries served: Shipbuilding, heavy fabrication, structural steel, rail, energy & offshore
- Powder coat finish for corrosive environments
- Exclusive with FANUC CRX Cobot
  - FANUC CRX 8-Year Zero Maintenance

Options

- Power supply options:
  - Miller
  - For additional information, see page 26
- Software options:
  - FANUC
    - TPW (Touch Sensing, Through ARC Seam Track, Root Memorization)
  - For additional information, see page 27
- Additional equipment options available, see page 11
- Available in single or dual platforms.
  - Dual platform can be configured for either 2 welding cobots or 1 welding cobot & 1 cutting cobot





System Model	NAV3-#-#	NAV3-#-#-3-#-#
6-Axis Robot	FANUC CRX-3iA/L	FANUC CRX-3iA/L
Cobot Reach	692 mm	692 mm
Cobot Payload	3 kg	3 kg
Cobot Weight	11 kg (24 lbs)	11 kg (24 lbs)
Cobot Power	120v 20 amp	120v 20 amp
Cobot Repeatability	"+/- 0.02 mm"	"+/- 0.02 mm"
Cobot Programming	Tablet only	Tablet only
Torch Dressout	Quick Change	Quick Change
Cart Footprint	67"W x 44"D x 63"T	67"W x 44"D x 67-¼"T
Approx Weight w/ Power Supply	1700 lbs	2100 lbs
Power Supply	Welding or Cutting	2 Welders, 2 Cutters, or 1 each

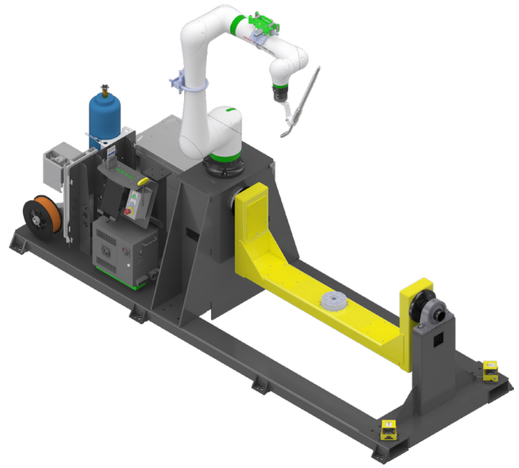
MOD-WELD DROP CENTER
Cobot Welding

Features

- Enhanced welding accessibility to position and rotate the workpiece to reach areas that are difficult with a fixed part.
- Multi-axis part positioning with two FANUC auxiliary axis to allow the workpiece to spin and rotate for greater positioning and flexibility
- Powder coat finish
- Exclusive with FANUC CRX Cobot
  - FANUC CRX 8-Year Zero Maintenance

Options

- Power supply options:
  - Miller
  - Fronius
  - Lincoln
  - For additional information, see page 26
- Software options:
  - FANUC
    - TPW (Touch Sensing, Through ARC Seam Track, Root Memorization)
  - Fronius
    - PMC (Pulse Multi Control) - included in purchase
    - LSC (Low Spatter Control)
    - CMT (Cold Metal Transfer)
  - For additional information, see page 27
- Additional equipment options, see page 11



System Model	DCDA-30
6-Axis Robot	FANUC CRX-30iA
Robot Reach	74"
Robot Power	120v 20 amp
Robot Programming	Tablet only
Robot Torch Guidance	Clever Torch Teach Guidance
Torch Dress-out	APT Custom Rollers
Torch Angle	22.5 degree torch angle
Auxillary Axis	FANUC Servo motor w/ Nabtesco Gearbox
Safety	Area Scans included
Equipment Footprint	150"L x 52"W x 104"H
Minor Axis Swing Diameter	Consult Distributor
Max Allowed Payload	1000 lbs
Approx Weight w/ Welder	2900lbs
Frame	Steel Construction, Powdercoat finish

CUSTOM RAIL WELDING SOLUTIONS



In addition to our standard product capabilities, we offer custom robotic rail welding solutions that allow a cobot to travel along the workpiece while welding. Depending on your application, rail systems can be configured for top, side, or bottom mounting to provide the reach & flexibility your production process requires.

EQUIPMENT OPTIONS
Cobot Welding

Positioners

Headstock/Tailstock — A
HSTS-C-60



The Headstock/Tailstock works with both the Cobot Cart and the Traveler. It features a Nabtesco gearbox, a FANUC servo motor, and area scanners for safety.

Tabletop Aux Axis — B
TT6



The Table Top Auxiliary Axis can be used on your existing worktable or added to a MOD-WELD® cart or fixture table. It features a FANUC servo motor and Nabtesco precision gearbox, with mounting positions at 30°, 45°, 60°, or 90°. Integrated guards help protect operators from the rotating chuck.

Manual Index Positioner — C
MIT-40



- Manual index positioning table with locking slide in 4 locations.
- Built with a 5/8 steel plate with fixture holes on 2" centers.
- Industrial heavy duty bearing for ease of rotation with a load.
- Grounding block engaged at all time includes a 6' grounding cable.

Accessories

Laser Seam Tracking & Finding — D
ST-##-#



Laser seam sensing helps robots compensate for part variation, improving weld accuracy & reducing manual touchups. See page 18 for more details

2D & 3D iRVision — E
iRV-##-###



FANUC iRVision provides 2D and 3D vision for accurate part location, weld seam tracking, and weld tip monitoring. See page 18 for more details

Tip Reamer, Nozzle Spray, & Wire Snip — F
TR-A1-4-C-B-C1



Automatic Robotic Nozzle Cleaning Stations assist in maintaining quality & productivity in MIG welding cells by quickly & efficiently removing spatter build-up in the gas nozzle. (anti-spatter feature excluded on models for aluminum welding)

Wire Cutter Kit — G
WC-B1-KIT-C1



Wire cutter removes the ball at the end of the welding wire to provide smooth arc starts and consistent wire stick-out (ideal for Touch Sensing).
Kit includes a Tregaskiss WC-400, cable, FRL, mounting bracket, and ¼" air tubing.

Pull Curtain — H
PCMC-8



The Pull Curtain accessory allows you to add a #8 arc flash curtain to your MOD-WELD cart. It includes all necessary framework and hardware for secure installation and support of the curtain.
This screen provides protection from arc flash only. It is not intended to serve as a safety barrier against robotic movement.

Tabletop Magnet Screen — I
WS1826



#8 arc flash screen to mount directly onto your MOD-WELD cart. This self-contained screen features magnets along two edges, enabling quick and flexible placement anywhere on the cart's work surface.
This screen provides protection from arc flash only. It is not intended to serve as a safety barrier against robotic movement.

Gas Cylinder Cart — J
WT-CC-2



With a low-profile platform positioned ½-inch above the floor, this cart is engineered to simplify the transport and handling of compressed gas cylinders in fabrication shops, manufacturing facilities, maintenance departments, & other industrial environments.
Overall footprint of 24 ½" x 24 ½" & height of 37 ¼"

Weld Setup & Clamp Kit — K
PBL-WF-LFK-KIT-66



Setup and clamping kit designed for weld tables with 16mm holes.
This tool kit features components for quick assembly to secure materials during welding.

Equipment Option Compatibility Chart

	A	B	C	D	E	F	G	H	I	J	K
MOD-WELD Cart	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MOD-WELD Traveler	✓	✓		✓	✓	✓	✓		✓	✓	✓
MOD-WELD Navigator				✓	✓	✓	✓			✓	
MOD-WELD Drop Center				✓	✓	✓	✓			✓	

MOD-WELD FIXED TABLE

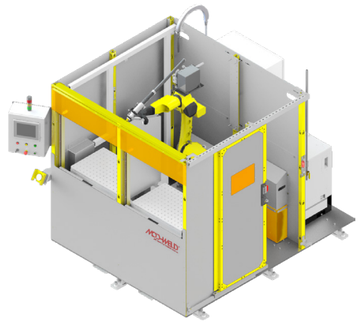
Robot Welding

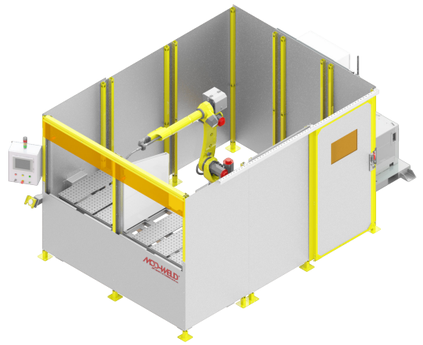
Features

- Dual station productivity to load and unload one station while the robot welds on the other
- Operator loads parts directly into the fixture while robot waits until safety door is closed before welding
- Dedicated robotic welding solution for repeatable production
- Maintain consistent part position and weld path
- Automate repetitive welding operations
- 2 different robot cell options available

Options

- Power supply options:
  - Miller
  - Fronius
  - Lincoln
  - For additional information, see page 26
- Software options:
  - FANUC
    - TPW (Touch Sensing, Through ARC Seam Track, Root Memorization)
  - Fronius
    - PMC (Pulse Multi Control) - included in purchase
    - LSC (Low Spatter Control)
    - CMT (Cold Metal Transfer)
  - For additional information, see page 27
- Additional equipment options, see page 17





System Model	DSFT-72-AM100	DSFT-96-AM120
6-axis robot	ARC Mate 100iD	ARC Mate 120iD
Robot Reach	57″	72″
Cell Footprint	84" x 102"	108" x 114"
Table Work Space	2 @ 30" x 20" each	2 @ 40" x 36" each
Table Hole size	16mm Dia 2" x 2" Hole Pattern	
Available I/O	8 in 8 out	
Valve Bank Space	(4) closed center / (4) Blanks	
Operator Interface	Rockwell PLC/HMI Interface	

MOD-WELD ROTARY TABLE

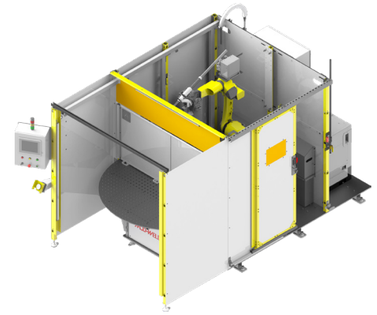
Robot Welding

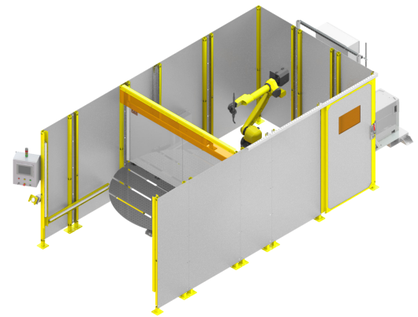
Features

- Dual station productivity to load and unload one station while the robot welds on the other station
- Rotary table brings the product into the cell for welding
- When robot completes the welds on side "A", it will rotate table and begin welding side "B"
- Dedicated robotic welding solution for repeatable production
- Continuous operation to minimize downtime between parts and keep production moving
- Robot welds while the operator prepares the next part
- Maintain consistent part position and welds path
- Automate repetitive welding operations
- 2 different robot cell options available

Options

- Power supply options:
  - Miller
  - Fronius
  - Lincoln
  - For additional information, see page 26
- Software options:
  - FANUC
    - TPW (Touch Sensing, Through ARC Seam Track, Root Memorization)
  - Fronius
    - PMC (Pulse Multi Control) - included in purchase
    - LSC (Low Spatter Control)
    - CMT (Cold Metal Transfer)
  - For additional information, see page 27
- Additional equipment options, see page 17





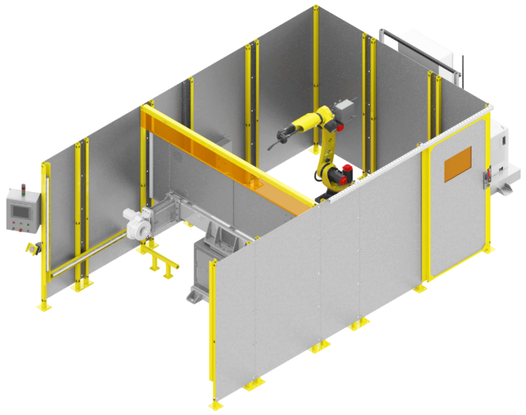
System Model	DSRT-72-AM100	DSRT-96-AM120
6-axis robot	ARC Mate 100iD	ARC Mate 120iD
Robot Reach	57″	72″
Cell Footprint	84" x 144"	108" x 168"
Table Work Space	Auto Index 72" Dia	Auto Index 96" Dia
Table Hole size	16mm Dia 2" x 2" Hole Pattern	
Available I/O	8 in 8 out	
Valve Bank Space	(4) closed center / (4) Blanks	
Operator Interface	Rockwell PLC/HMI Interface	

MOD-WELD H-FRAME

Robot Welding

Features

- Dual station productivity to load and unload one station while the robot welds on the other station
- H-Frame rotates parts while robot welds
- Efficient and high payload platform
- Ideal for welding a wide array of high-volume components
- Dedicated robotic welding solution for repeatable production
- Maintain consistent part position and welds path
- Automate repetitive welding operations
- 2 different robot cell options available



Options

- Power supply options:
  - Miller
  - Fronius
  - Lincoln
  - For additional information, see page 26
- Software options:
  - FANUC
    - TPW (Touch Sensing, Through ARC Seam Track, Root Memorization)
  - Fronius
    - PMC (Pulse Multi Control) - included in purchase
    - LSC (Low Spatter Control)
    - CMT (Cold Metal Transfer)
  - For additional information, see page 27
- Additional equipment options, see page 17

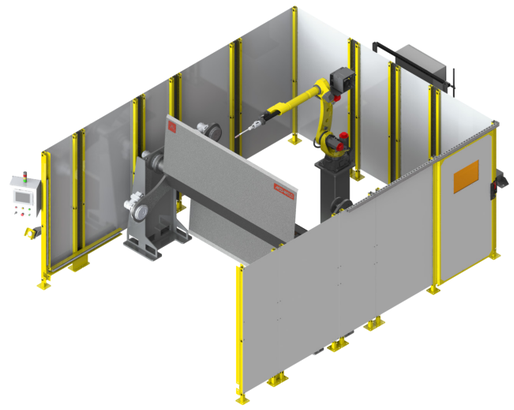
System Model	DSHF-72-AM120	DSHF-96-ASM120
6-axis robot	ARC Mate 120iD	ARC Mate 120iD/12L
Robot Reach	72"	89"
Cell Footprint	134" x 260"	158" x 260"
Headstock/Tailstock Span	72"	96"
Max Payload	1,000lbs Each Station	900lbs Each Station
Max Servo Rotation Diameter	32"	
Floor to Center Outboard Servo	38.75"	
Available I/O	8 in 8 out	
Valve Bank Space	(4) closed center / (4) Blanks	
Operator Interface	Rockwell PLC/HMI Interface	

MOD-WELD FERRIS WHEEL

Robot Welding

Features

- Dual station productivity to load and unload one station while the robot welds on the other station
- Dual Headstock/Tailstock using longer parts and flipping the part over the top to the robot
- Enables a more ergonomic method for the operator to load and unload
- Dedicated robotic welding solution for repeatable production
- Maintain consistent part position and welds path
- Automate repetitive welding operations
- 2 different robot cell options available



Options

- Power supply options:
  - Miller
  - Fronius
  - Lincoln
  - For additional information, see page 26
- Software options:
  - FANUC
    - TPW (Touch Sensing, Through ARC Seam Track, Root Memorization)
  - Fronius
    - PMC (Pulse Multi Control) - included in purchase
    - LSC (Low Spatter Control)
    - CMT (Cold Metal Transfer)
  - For additional information, see page 27
- Additional equipment options, see page 17

System Model	DSFW-96-120	DSFW-120-120L
6-axis robot	ARC Mate 120iD	ARC Mate 120iD/12L
Robot Reach	72"	89"
Cell Footprint	177" x 273"	222" x 273"
Headstock/Tailstock Span	96"	120"
Max Payload	900lbs	750lbs
Main axis rotation diameter	105"	
Outboard Servo Rotation Diameter	42"	
Floor to Center Outboard Servo	40"	
Available I/O	8 in 8 out	
Valve Bank Space	(4) closed center / (4) Blanks	
Operator Interface	Rockwell PLC/HMI Interface	

MOD-WELD HEADSTOCK/TAILSTOCK

Robot Welding

Features

- Dual station productivity to load and unload one station while the robot welds on the other station
- Support long & large components for robotic welding
- Rotate workpieces for optimal weld positioning
- Dedicated robotic welding solution for repeatable production
- Maintain consistent part position and welds path
- Automate repetitive welding operations
- 2 different robot cell options available

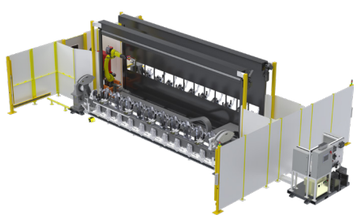
Options

- Power supply options:
  - Miller
  - Fronius
  - Lincoln
  - For additional information, see page 26
- Software options:
  - FANUC
    - TPW (Touch Sensing, Through ARC Seam Track, Root Memorization)
  - Fronius
    - PMC (Pulse Multi Control) - included in purchase
    - LSC (Low Spatter Control)
    - CMT (Cold Metal Transfer)
  - For additional information, see page 27
- Additional equipment options, see page 17



System Model	HSTS-72-AM120	HSTS-96-ASM120
6-axis robot	ARC Mate 100iD/8L	ARC Mate 120iD/12L
Robot Reach	80"	89"
Cell Footprint	254" X 218"	254" X 242"
Headstock/Tailstock Span	96"	120"
Max Payload	1,000lbs.	
Max Servo Rotation Diameter	40"	
Floor to Center Outboard Servo	40.25"	
Available I/O	8 in 8 out	
Available Valve Bank Space	(4) closed center / (4) Blanks	
Operator Interface	Rockwell PLC/HMI Interface	

CUSTOM RAIL WELDING SOLUTIONS



In addition to our standard product capabilities, we offer custom robotic rail welding solutions that allow a cobot to travel along the workpiece while welding. Depending on your application, rail systems can be configured for top, side, or bottom mounting to provide the reach & flexibility your production process requires.

EQUIPMENT OPTIONS

Robot Welding

Accessories

Laser Seam Tracking & Finding — A
ST-##-#



Laser seam sensing helps robots compensate for part variation, improving weld accuracy & reducing manual touchups. See page 18 for more details

2D & 3D iRVision — B
iRV-##-###



FANUC iRVision provides 2D and 3D vision for accurate part location, weld seam tracking, and weld tip monitoring. See page 18 for more details

Tip Reamer, Nozzle Spray, & Wire Snip — C
TR-A1-4-C-B-C1



Automatic Robotic Nozzle Cleaning Stations assist in maintaining quality & productivity in MIG welding cells by quickly & efficiently removing spatter build-up in the gas nozzle. (anti-spatter feature excluded on models for aluminum welding)

Wire Cutter Kit — D
WC-B1-KIT-C1



Wire cutter removes the ball at the end of the welding wire to provide smooth arc starts and consistent wire stick-out (ideal for Touch Sensing).
Kit includes a Tregaskiss WC-400, cable, FRL, mounting bracket, and ¼" air tubing.

Closed Center Valve — E
SY7301-5U1-NA



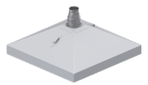
Additional 3 position closed center valve

Allen Bradley I/O — F
ABIO-8



Additional Allen Bradley I/O, 8 in 8 out

Exhaust Hood — G
MW-(##)-EX-HOOD



Exhaust Hood with 8" Duct
Available in 48", 72" & 96"

Weld Setup & Clamp Kit — H
PBL-WF-LFK-KIT-66



Setup and clamping kit designed for weld tables with 16mm holes.
This tool kit features components for quick assembly to secure materials during welding.

Gas Cylinder Cart — I
WT-CC-2



With a low-profile platform positioned ½-inch above the floor, this cart is engineered to simplify the transport and handling of compressed gas cylinders in fabrication shops, manufacturing facilities, maintenance departments, & other industrial environments. Overall footprint of 24 ½" x 24 ½" & height of 37 ¼"

Equipment Option Compatibility Chart

	A	B	C	D	E	F	G	H	I
MOD-WELD Fixed Table	✓	✓	✓	✓	✓	✓	✓	✓	✓
MOD-WELD Rotary Table	✓	✓	✓	✓	✓	✓	✓	✓	✓
MOD-WELD H-Frame	✓	✓	✓	✓	✓	✓		✓	✓
MOD-WELD Ferris Wheel	✓	✓	✓	✓	✓	✓		✓	✓
MOD-WELD Headstock/Tailstock	✓	✓	✓	✓	✓	✓		✓	✓

LASER & VISION OPTIONS

Improve robotic welding accuracy, consistency, and flexibility with laser & vision technology

Laser

SERVO-ROBOT 3D ROBOT-VISION

wenglor the innovative family

1D Laser Seam Touch

A single-point, non-contact method for detecting seam locations before welding. Ideal for joints where part-to-part variation can cause weld inaccuracies.

Best for: Basic joint location & offset correction

Benefits: Non-contact sensing, fast setup, material flexibility, fewer manual touchups

2D Laser Seam Find

Captures a complete seam cross-section as the robot scans, providing detailed joint location & geometry information before welding. Eliminates additional joint-search movements to help reduce cycle time.

Best for: Complex geometries & faster cycles

Benefits: Detailed joint geometry, faster cycles, versatile joint handling, fewer manual touchups

3D Laser Seam Track

Continuously scans the joint during welding & automatically compensates for movement, distortion, and fixture variation. Provides live joint data for control or verification.

Best for: Joint shifts, distortion, ovality, & applications requiring live joint data

Benefits: Consistent quality, higher speeds, automatic compensation, fewer manual touchups

Laser Applications



Vision

FANUC

2D & 3D iRVision

Integrated vision technology for improved robotic welding precision and efficiency.
FANUC iRVision provides 2D and 3D vision capabilities that allow robots to locate parts, track weld seams, and perform inspections while reducing the need for costly fixtures and manual intervention.

Key Capabilities

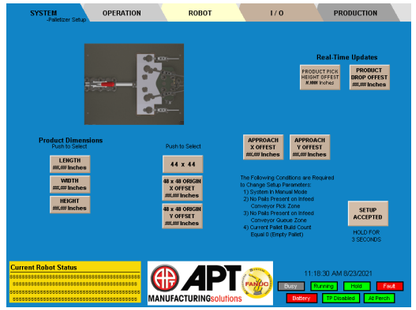
- Part position detection
- Weld tip inspection
- Improved precision and efficiency



ROBOT OPERATOR INTERFACE

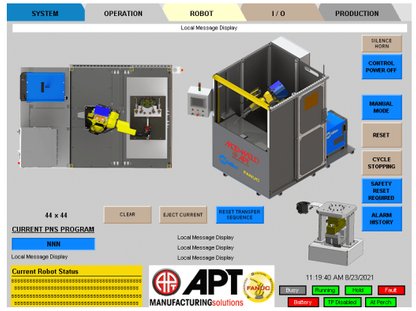
Controls Made Simple with Visual Factory Concepts

SYSTEM



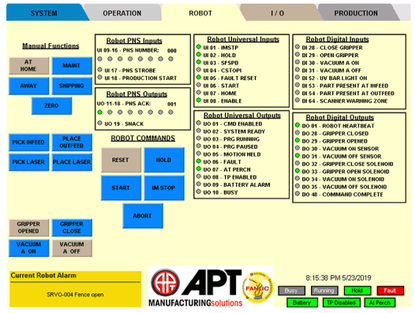
For general machine setup.

OPERATION



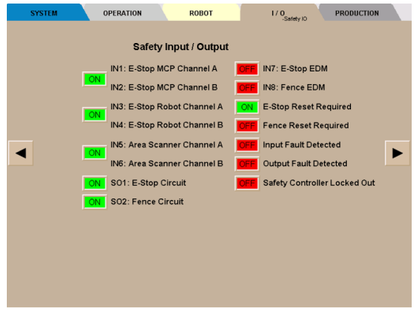
For general machine operation and functionality.

ROBOT



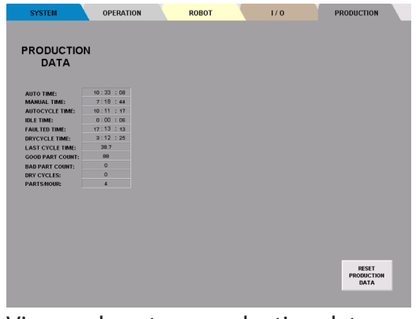
Displays all communication and I/O interface between the system PLC & robot.

I/O



Displays the on/off status, and run diagnostics for troubleshooting.

PRODUCTION



View and capture production data for analytics, production schedules, & recipe management.

Powered By

Rockwell Automation

MOD-CUT CART

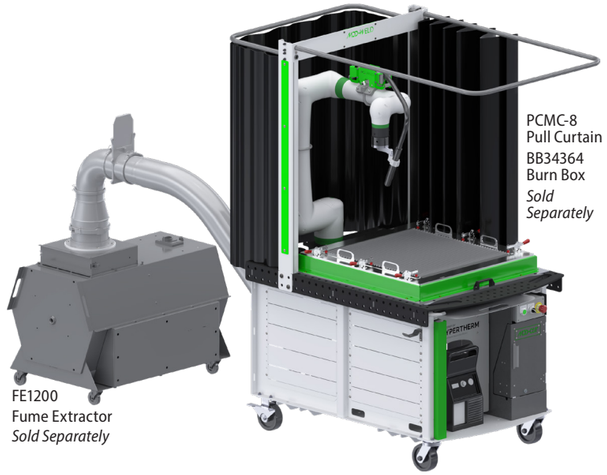
Cobot Plasma Cutting

Features

- Easily move the cobot between work areas & production environments.
- Quickly adapt the cart to different cutting applications, parts, and workspaces.
- Provides a complete cobot cutting solution without requiring a large, dedicated cell.
- 6" Casters for ease of movement, lockable box for FANUC Tablet, powder coat finish
- Exclusive with FANUC CRX Cobot
  - FANUC CRX 8-Year Zero Maintenance
- Exclusive with Hypertherm plasma cut models

Options

- Power supply options:
  - Hypertherm
    For additional information, see page 26
- Software options:
  - FANUC Shape Gen, Robotmaster
    For additional information, see page 27
- Additional equipment options, see page 24



PCMC-8
Pull Curtain
BB34364
Burn Box
Sold Separately

FE1200
Fume Extractor
Sold Separately

System Model	CART10L
6-Axis Robot	FANUC CRX-10iA/L
Robot Reach	55"
Robot Power	120v 20 amp
Robot Programming	Tablet Only
Robot Torch Guidance	Clever Torch Teach Guidance
Torch Dress-out	APT Custom Rollers
Cart Footprint	40"W x 78" D
Cart Table Work Space	40" W x 58-1/2" D
Cart Table Hole Size	16mm Dia, 2"x2" Hole Pattern
Tabletop	Downdraft Fume Extractor Tabletop w/ 6" duct (Fume Extractor Sold Separate)
Approx Weight w/ Welder	1300 lbs

MOD-CUT TRAVELER

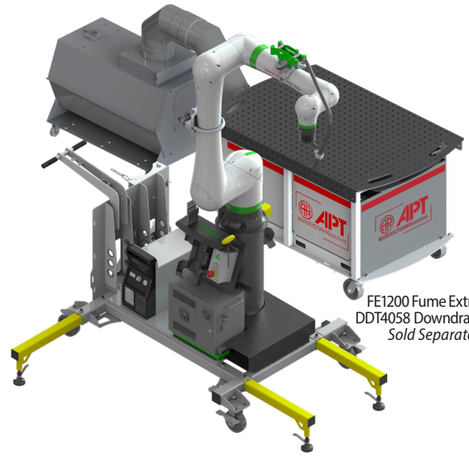
Cobot Plasma Cutting

Features

- Easily travel along the work area to cut larger components and longer seams
- Extended weld reach with larger model
- Provides a complete cobot cutting solution without requiring a large, dedicated cell.
- Work off your existing table or production line
- APT Clever Torch for ease of movement & teaching the robot
- Powder coat finish
- Exclusive with FANUC CRX Cobot
  - FANUC CRX 8-Year Zero Maintenance
- Exclusive with Hypertherm plasma cut models

Options

- Power supply options:
  - Hypertherm
    For additional information, see page 26
- Software options:
  - FANUC Shape Gen, Robotmaster
    For additional information, see page 27
- Additional equipment options, see page 24



FE1200 Fume Extractor
DDT4058 Downdraft Table
Sold Separately



System Model	TRV25	TRV10L
6-Axis Robot	FANUC CRX-30iA	FANUC CRX-10iA/L
Robot Reach	74"	55"
Robot Power	120v 20 amp	
Footprint (for mobility)	44"W x 76-1/2"D	38" Dia 77" T
Footprint (outriggers deployed)	88-1/2"W x 93-3/4"D	N/A
Approx. Weight	1700 lbs	550 lbs
Robot Programming	Tablet Only	
Robot Torch Guidance	Clever Torch Teach Guidance	
Torch Dress-out	APT Custom Rollers	

MOD-CUT NAVIGATOR

Cobot Plasma Cutting

Features

- Depoy the cobot to the work area, ideal for large or difficult-to-move workpieces
- Increase production flexibility by delivering cutting wherever production demands it, up to 100 ft.
- Portable, modular platform reduces material handling, minimizes set up time.
- Designed to be magnetically mounted to floors, walls, or ceilings
- Multiple platforms available to best fit your application
- Industries served: Shipbuilding, heavy fabrication, structural steel, rail, energy & offshore
- Powder coat finish for corrosive environments
- Exclusive with FANUC CRX Cobot
  - FANUC CRX 8-Year Zero Maintenance
- Exclusive with Hypertherm plasma cut models

Options

- Power supply options:
  - Hypertherm
    For additional information, see page 26
- Software options:
  - FANUC Shape Gen, Robotmaster
    For additional information, see page 27
- Additional equipment options, see page 24
- Available in single or dual platforms
  - Dual platform can be configured for either 2 welding cobots or 1 welding cobot & 1 cutting cobot





System Model	NAV3-#-#	NAV3-#-#-3-#-#
6-Axis Robot	FANUC CRX-3iA/L	FANUC CRX-3iA/L
Cobot Reach	692 mm	692 mm
Cobot Payload	3 kg	3 kg
Cobot Weight	11 kg (24 lbs)	11 kg (24 lbs)
Cobot Power	120v 20 amp	120v 20 amp
Cobot Repeatability	"+/- 0.02 mm"	"+/- 0.02 mm"
Cobot Programming	Tablet only	Tablet only
Torch Dressout	Quick Change	Quick Change
Cart Footprint	67"W x 44"D x 63"T	67"W x 44"D x 67-¼"T
Approx Weight w/ Power Supply	1700 lbs	2100 lbs
Power Supply	Welding or Cutting	(2) Welders, (2) Cutters, or 1 each

MOD-CUT DROP CENTER

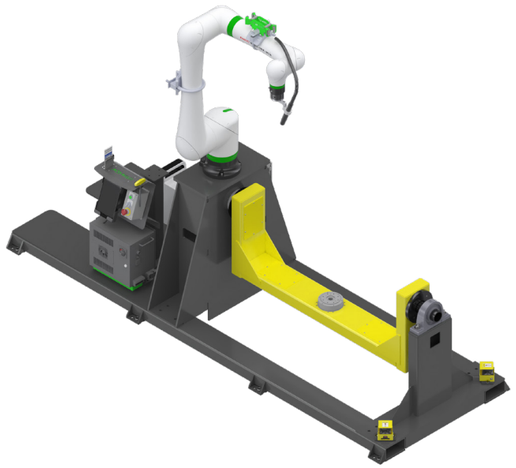
Cobot Plasma Cutting

Features

- Enhanced cutting accessibility to position & rotate the workpiece to reach areas that are difficult with a fixed part.
- Multi-axis part positioning with two FANUC auxiliary axis to allow the workpiece to spin and rotate for greater positioning and flexibility
- Powder coat finish
- Exclusive with FANUC CRX Cobot
  - FANUC CRX 8-Year Zero Maintenance
- Exclusive with Hypertherm plasma cut models

Options

- Power supply options:
  - Hypertherm
    For additional information, see page 26
- Software options:
  - FANUC Shape Gen, Robotmaster
    For additional information, see page 27
- Additional equipment options, see page 24



System Model	DCDA-30
6-Axis Robot	FANUC CRX-30iA
Robot Reach	74"
Robot Power	120v 20 amp
Robot Programming	Tablet only
Robot Torch Guidance	Clever Torch Teach Guidance
Torch Dress-out	APT Custom Rollers
Torch Angle	22.5 degree torch angle
Auxillary Axis	FANUC Servo motor w/ Nabtesco Gearbox
Safety	Area Scans included
Equipment Footprint	150"L x 52"W x 104"H
Minor Axis Swing Diameter	Consult Distributor
Max Allowed Payload	1000 lbs
Approx Weight w/ Welder	2900lbs
Frame	Steel Construction, Powdercoat finish

EQUIPMENT OPTIONS

Cobot Plasma Cutting

Positioners

Headstock/Tailstock — A
HSTS-C-60



The Headstock/Tailstock works with both the Cobot Cart and the Traveler. It features a Nabtesco gearbox, a FANUC servo motor, and area scanners for safety.

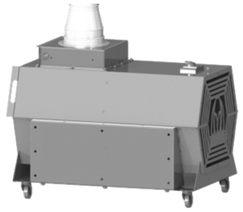
Tabletop Aux Axis — B
TT6



The Table Top Auxiliary Axis can be used on your existing worktable or added to a MOD-WELD® cart or fixture table. It features a FANUC servo motor and Nabtesco precision gearbox, with mounting positions at 30°, 45°, 60°, or 90°. Integrated guards help protect operators from the rotating chuck.

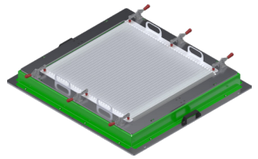
Accessories

Fume Extractor for Downdraft Table — C
FE-1200-C1



Prioritizing safety, add this portable fume extraction system to your downdraft table for an effective and efficient method of removing airborne contaminants before they spread in the air. It provides a robotic airflow capacity of 1200 CFM and operates at a noise level of just 69 dB(A)

Burn Box — D
BB34364



Burn Box exclusively for plasma cutting, 34" W x 36" L x 4" H, with steel slat supports every ¾", includes (6) work holding toggle clamps. Can be used with MOD-CUT Cart or Down Draft Table.

Weld Setup & Clamp Kit — E
PBL-WF-LFK-KIT-66



Setup and clamping kit designed for weld tables with 16mm holes. This tool kit features components for quick assembly to secure materials during welding.

Manual Plasma Cut Torch Kit — F
TORCH-H-1



25' Hypertherm manual plasma cut torch kit. Includes SmartSYNC hand torch, leather torch wrap, clamp cable, and 5 pcs of drag-cutting consumable cartridges.

Pull Curtain — G
PCMC-8



The Pull Curtain accessory allows you to add a #8 arc flash curtain to your MOD-CUT cart. It includes all necessary framework and hardware for secure installation and support of the curtain.
This screen provides protection from arc flash only. It is not intended to serve as a safety barrier against robotic movement.

Equipment Option Compatibility Chart

	A	B	C	D	E	F	G
Cart	✓	✓	✓	✓	✓	✓	✓
Traveler	✓	✓	✓	✓	✓	✓	
Navigator							
Drop Center						✓	

PRODUCT TRAINING

Your success starts with confidence in using your products and equipment



Gain the knowledge and hands-on experience you need to operate and maintain your equipment with confidence.

Training covers:

- Daily operation and equipment functionality
- Programming and setup
- Troubleshooting and diagnostics
- Preventative maintenance
- Best practices for safe, effective operation
- Q&A with experienced technical experts
- Hands-on exercises to build confidence

Sign up Today:
aptmfg.com/product-training

WELDING OPTIONS

Fronius

Options	
400i	TPSi, air-cooled torch for welding steel. Includes PMC software. Comes with .035 wire feed rollers 3PH Power. Optional consumable or replacement parts up to 1/16
400i-C	TPSi, cooler & water cooled torch.Includes PMC software. Comes with .035 wire feed rollers 3PH Power. Optional consumable or replacement parts up to 1/16
500i-C	
400i-C-S	TPSi, cooler, water-cooled torch, push/pull CMT ready package for both steel (hard wire) & aluminum (soft wire). Includes PMC software. Equipped with 3/64 start-up consumables & drive wheels for aluminum welding. 3PH Power
500i-C-S	



Miller

Options	
350C	Auto-Continuum™ 3PH or Auto-Deltaweld™ 1PH, air-cooled torch for welding steel. Comes with .035 wire feed rollers. Optional consumable or replacement parts up to 1/16
350D	
500C-CM	Auto-Continuum™ or Auto-Deltaweld™, cooler & water-cooled torch Comes with .035 wire feed rollers. 3PH Power. Optional consumable or replacement parts up to 1/16
500D-CM	
500C-C-S	Auto-Continuum™ 500, cooler, water-cooled FANUC Servo Torch to pull the wire. Equipped with 3/64 start-up consumables & drive wheels for aluminum welding. 3PH Power



LINCOLN ELECTRIC

Options	
R450	Power Wave® R450 3PH, air-cooled torch for welding steel. Comes with .035 wire feed rollers. Optional consumable or replacement parts up to 1/16
R450-C	Power Wave® R450 3PH 3PH, cooler and water cooled torch. Comes with .035 wire feed rollers. Optional consumable or replacement parts up to 1/16



PLASMA CUTTING OPTIONS

HYPERTHERM
A Hypertherm Associates Brand

Options	
-65	Powermax Sync 65 will pierce 5/8 thick material; max cut is 3/4 thick with a severance of 1-1/4". It has an output range of 20-65 and can accept single or three-phase power
-86	Powermax Sync 85 will pierce 3/4-thick material; the max cut is 1" thick with a severance of 1-1/2". It has an output range of 25-85 and can accept single or three-phase power
-105	Powermax Sync 105 will pierce 7/8-thick material; max cut is 1-1/4" thick with a severance of 2". It has an output range of 30-105 and can accept single or three-phase power



Fronius

ARC Control Software

Advanced Fronius welding processes provide precise arc control, reduced spatter, & improved weld quality across a range of materials & applications.

CMT - Cold Metal Transfer

Provides low-heat-input welding and brazing with minimal distortion and spatter. Ideal for joining steel and aluminum, galvanized sheet, and light-gauge aluminum. Suitable for stainless steel and magnesium.

PMC - Pulse Multi-Control

Delivers a powerful, stable arc with controlled droplet transfer for excellent weld-pool control, reduced spatter, and consistent weld quality.

LSC - Low Spatter Control

Provides stable short-circuit welding with low spatter, increased deposition rates, and improved arc control.

Robotmaster®
OFFLINE PROGRAMMING SOFTWARE FOR ROBOTS

Offline Robot Programming

Robotmaster simplifies robot programming and simulation, allowing users to create and optimize programs offline. An intuitive click-and-drag interface, automated motion optimization, & multi-manufacturer compatibility help reduce programming time and maximize robot capabilities.

FANUC

Shape Generation Software

Cutting option that simplifies the programming for 2D laser, plasma, and waterjet cutting. The easy-to-use interface reduces programming time and creates independent shape programs.

TPW - Thick Plate Weld Package

Combines Touch Sensing, Through Arc Seam Tracking (TAST), and Root Memorization to locate and follow weld joints while automatically compensating for part variation. The package helps reduce weld defects and improve productivity without additional laser, vision, or PC-based sensing hardware.

	Fronius		FANUC		Robotmaster
Product Model	Low Splatter Control (LSC)	Cold Metal Transfer (CMT)	Shape Gen	Thick Plate Weld (TPW)	RMS-3D
MOD-WELD Cobot Series	✓	✓		✓	✓
MOD-WELD Robot Series	✓	✓		✓	✓
MOD-CUT Cobot Series			✓		✓

For more information, visit our website: aptmfg.com/weld-software

WELDING TABLES

Industrial-grade tables designed for accuracy, ergonomics, & stability. Features 6” heavy duty casters, powdercoated steel frame, 3/8” thick steel top plate with black oxide surface finish, and 16mm fixture holes for standard tooling & repeatability.

Downdraft Weld Table

DDT4058-C1



40" x 58" Tabletop

Includes 3 drawers, 1 fixture pin storage, 4 bin box storage, 1 clamp hanger rail, & 1 drawer divider set, downdraft tray with 6" diameter connector

Mobile & comes equipped to connect to a 1200 CFM fume extractor (sold separately)

Weld Fixture Tables

WT-TBL-3642-C1



36” x 42” Tabletop

Includes 4 drawers, 2 pegboard panels, 1 fixture pin storage, 4 bin box storage, 1 clamp hanger rail, 1 angle grinder holder, & 1 drawer divider set

WT-TBL-2030-C1



20” x 30” Tabletop

Includes 2 narrow drawers, 1 narrow pegboard panel, 1 wide shelf, & 1 wide clamp hanger rail

WT-TBL-2030-C2



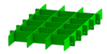
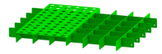
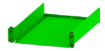
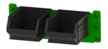
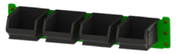
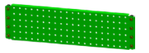
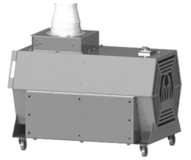
20” x 30” Tabletop

Includes 2 wide drawers, 1 wide pegboard panel, 1 narrow shelf, & 1 narrow clamp hanger rail

TABLE ACCESSORIES

Welding Tables

Tables have locations for “wide” and “narrow” accessories
Accessories are built with 14 ga steel, powder coated for durability.

Shallow Drawer - Narrow DW1025	**Shallow Drawer - Wide** DW2025
 Inner Dimensions: 8.8"W x 14.8"L x 2.4"H	 Inner Dimensions: 18.8"W x 14.8"L x 2.4"H
Medium Drawer - Narrow DW1040	**Medium Drawer - Wide** DW2040
 Inner Dimensions: 8.8"W x 14.8"L x 3.9"H	 Inner Dimensions: 18.8"W x 14.8"L x 3.9"H
Drawer Divider Set - Narrow DIVS10	**Drawer Divider Set - Wide** DIVS20
 Fits in: DW1025, DW1040	 Fits in: DW2025, DW2040
Storage Shelf - Narrow SH1025	**Storage Shelf - Wide** SH2025
 10"W x 15.75"L x 2.5"H	 20"W x 15.75"L x 2.5"H
Spray Can Storage Shelf - Narrow SCSH10	**Spray Can Storage Shelf - Wide** SCSH20
 12"W x 3.625"D	 22"W x 3.625"D
Bin Box Panel - Narrow BINP10	**Bin Box Panel - Wide** BINP20
 Includes 4 1/8”W x 5 3/8” L x 3” H Bins x2	 Includes 4 1/8”W x 5 3/8” L x 3” H Bins x4
Clamp Hanger - Narrow CR1007	**Clamp Hanger - Wide** CR2013
 7 clamp notches	 13 clamp notches
Pegboard Panel - Narrow PB1006	**Pegboard Panel - Wide** PB2006
 Ø.25 holes, 1” spacing, Hole array 10 x 6	 Ø.25 holes, 1” spacing, Hole array 20 x 6
Blank plate - Narrow BP1045	**Blank plate - Wide** BP2045
 10" x 4-1/2" Tall	 20" x 4-1/2" Tall
Angle Grinder Holder with Cord Wrap AGHG45	**Weld Setup & Clamp Kit** PBL-WF-LFK-KIT-66
 Fits 4-1/2" Grinder	 Setup and clamping kit designed for weld tables with 16mm holes. This tool kit features components for quick assembly to secure materials during welding.
Gas Cylinder Cart WT-CC-2	**Fume Extractor for Downdraft Table** FE-1200-C1
 With a low-profile platform positioned ½-inch above the floor, this cart is engineered to simplify the transport and handling of compressed gas cylinders in fabrication shops, manufacturing facilities, maintenance departments, & other industrial environments. Overall footprint of 24 ½" x 24 ½" & height of 37 ¼"	 Prioritizing safety, add this portable fume extraction system to your downdraft table for an effective and efficient method of removing airborne contaminants before they spread in the air. It provides a robotic airflow capacity of 1200 CFM & operates at a noise level of just 69 dB(A)

APT MANUFACTURINGsolutions

MOD-WELD

MOD-CUT

A3 ROBOTICS | CERTIFIED Robot Integrator

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