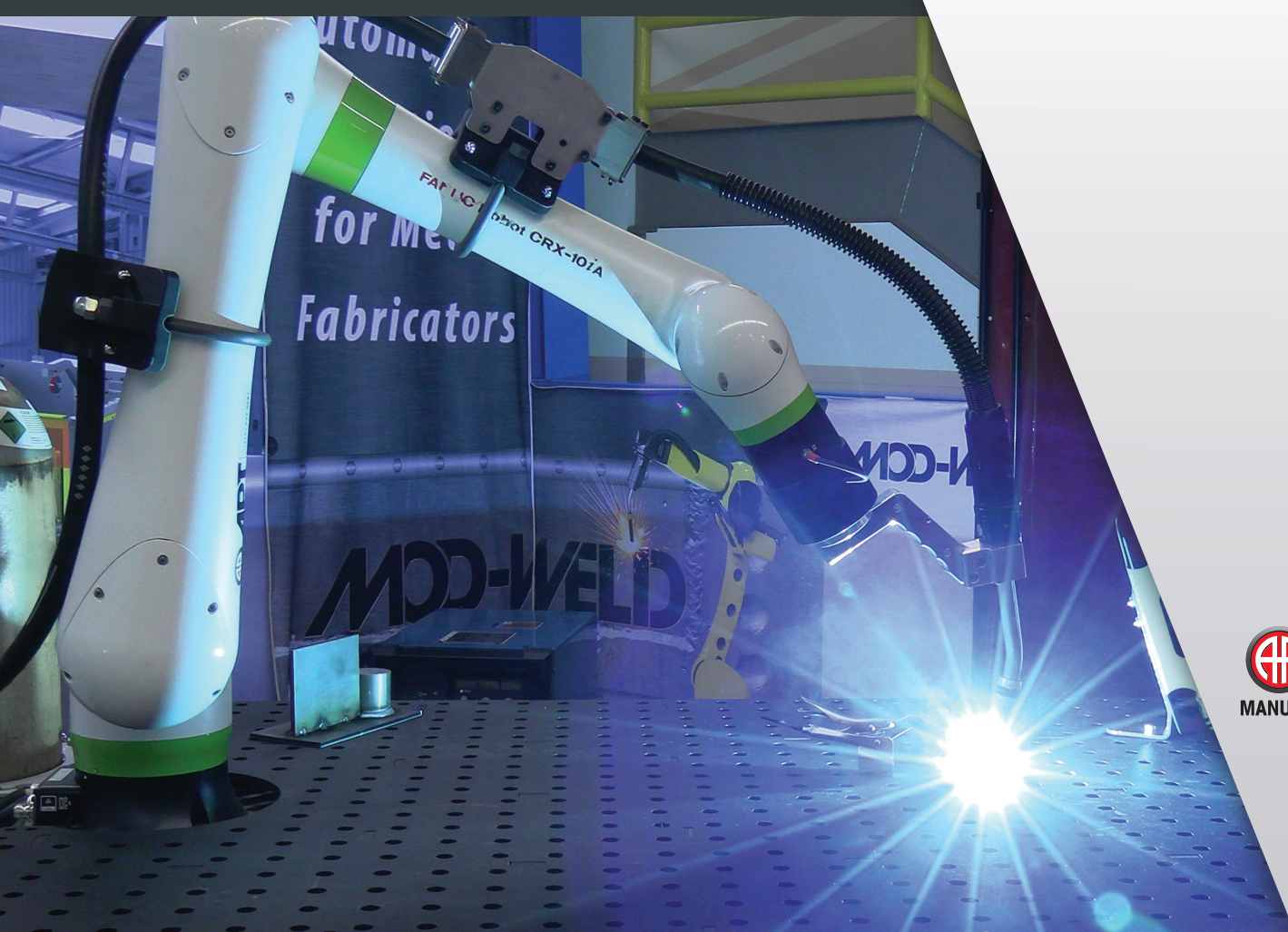


# REVOLUTIONIZE YOUR FABRICATION PROCESS

**WITH ROBOTICS**



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## Why choose robotics

- Produce more with the labor you have
- Double your throughput, quicker to market
- Accurate and consistent
- Higher productivity and quality
- FANUC “Service First” – Lifetime Support

### MAC Series

- FANUC CRX cobot
- Ease of programming with APT Clever Torch
- Miller or Fronius Power Supply (MOD-WELD)
- Hypertherm Power Supply (MOD-CUT)
- Quick to deploy and setup
- Safe for human collaborative interaction
- FANUC CRX “8 Years Zero Maintenance”



### MATE Series


- FANUC ARC Mate Series robot
- Rockwell controls
- Ease of use operator interface
- Miller or Fronius Power Supply
- High volume production
- Automated fixture ready
- Positioners available

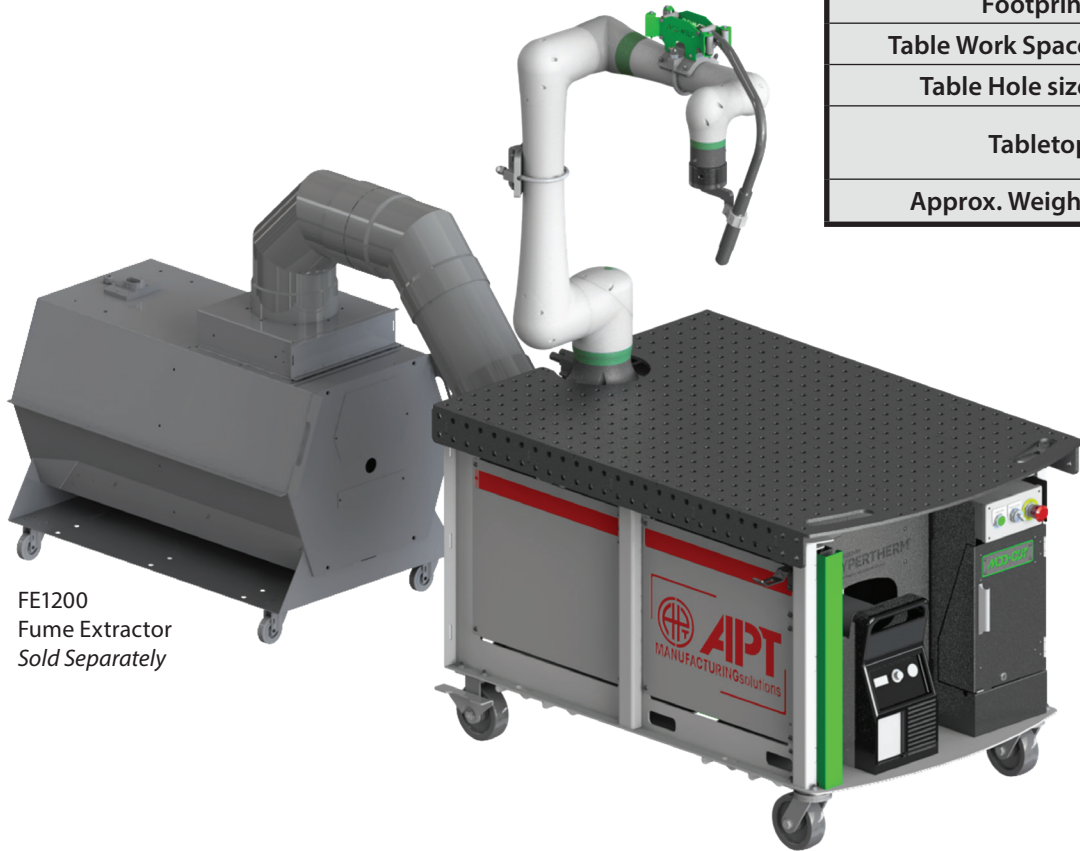
# COBOT MOD-CUT

## COLLABORATIVE ROBOT FOR PLASMA CUTTING

### Robot Cart Standard Features:

- APT Mobile Cart welded construction powder coat finish.
- 6" Casters for ease of movement
- Lockable box for FANUC Tablet
- Ready to accept accessories.

MAC CART Specs	
Exclusive with FANUC Cobot	
System Model	CART10L-85
 <b>HYPER THERM</b> A Hypertherm Associates Brand	Standard System w/ Powermax85 Sync Plasma Cutter, cuts up to 25 mm (1") (see page 26)
6-Axis Robot	FANUC CRX-10iA/L
Robot Reach	55"
Robot Power	110v 20 amp
Robot Programming	Tablet Only
Robot Torch Guidance	Clever Torch Teach Guidance
Torch Roller Dress-out	APT Custom Rollers
Footprint	40"W x 78" D
Table Work Space	40" W x 58-1/2" D
Table Hole size	16mm Dia, 2"x2" Hole Pattern
Tabletop	Downdraft Fume Extractor Tabletop w/ 6" duct (Fume Extractor Sold Separate)
Approx. Weight	1300 lbs



FE1200  
Fume Extractor  
Sold Separately


**FANUC CRX**  
**8 YEARS**  
**0 ZERO**  
**MAINTENANCE**

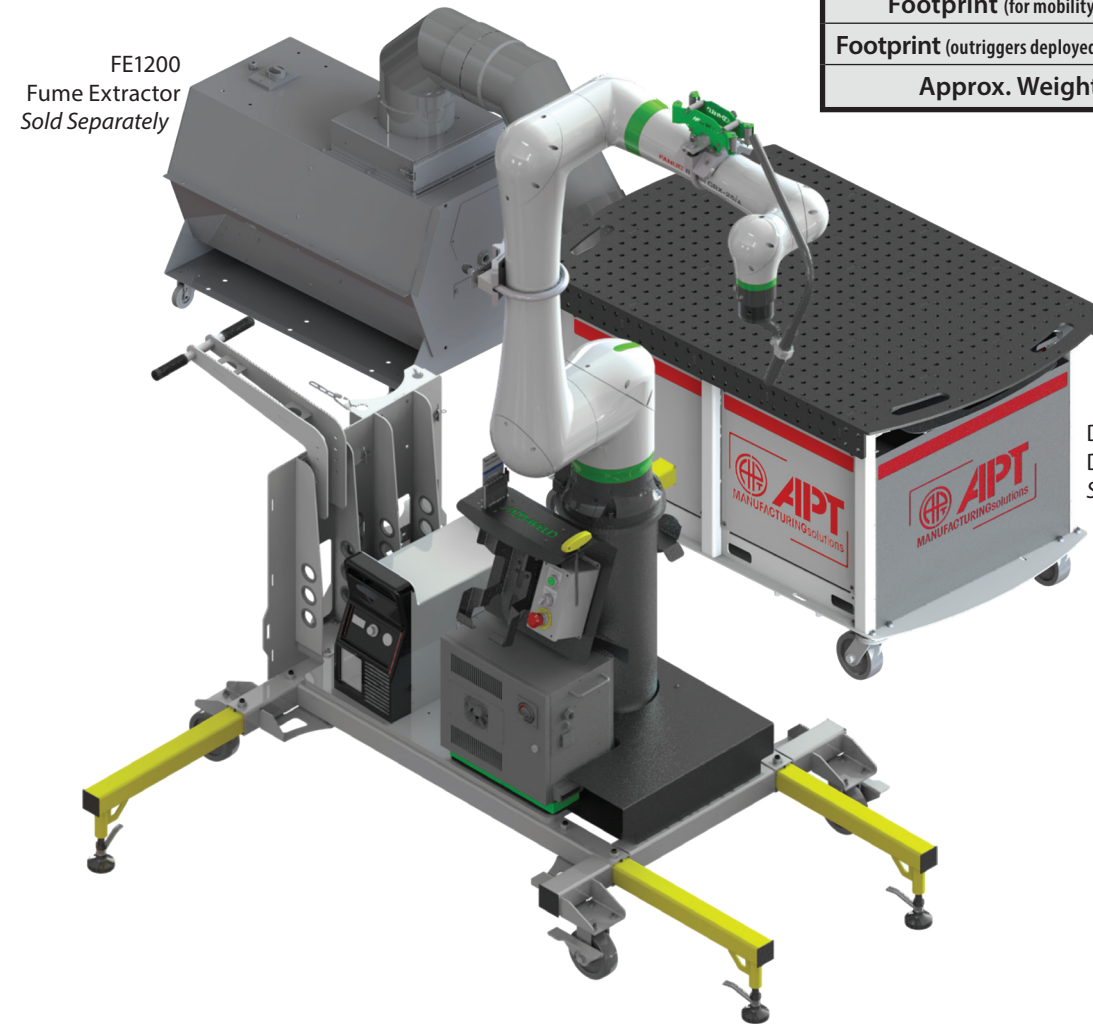
Equipment Options	
<b>FE1200</b>	1200 CFM Fume Extractor, sold separately, 8" to 6" duct
<b>RMS-3D</b>	Robotmaster Offline 3D Programming software sold separate to aid in 3D programming (see page 26 for details)
<b>Cart Accessories</b>	See page 8

# MOD-CUT

### Traveler Standard Features:

- Mobile Base welded construction, powder coat finish with Stabilizer Outriggers
- FANUC CRx Collaborative Robot
- APT Clever Torch for ease of movement and teaching the robot.
- 6" Casters for ease of movement

MAC Traveler Specs	
Exclusive with FANUC Cobot	
System Model	TRV25-85
 <b>HYPER THERM</b> A Hypertherm Associates Brand	Standard System w/ Powermax85 Sync Plasma Cutter, cuts up to 25 mm (1") (see page 26)
6-Axis Robot	FANUC CRX-25iA
Robot Reach	74"
Robot Power	110v 20 amp
Robot Programming	Tablet Only
Robot Torch Guidance	Clever Torch Teach Guidance
Torch Roller Dress-out	APT Custom Rollers
Footprint (for mobility)	44" W x 76-1/2" D
Footprint (outriggers deployed)	88-1/2" W x 93-3/4" D
Approx. Weight	1700 lbs



FE1200  
Fume Extractor  
Sold Separately

DDT4058  
Downdraft Table  
Sold Separately

**FANUC CRX**  
**8 YEARS**  
**0 ZERO**  
**MAINTENANCE**

Equipment Options	
<b>DDT4058</b>	Fume Extractor 40" x 58" Downdraft Table with 6" duct (Fume extractor sold separately)
<b>FE1200</b>	1200 CFM Fume Extractor, sold separately, 8" to 6" duct
<b>RMS-3D</b>	Robotmaster Offline 3D Programming software sold separate to aid in 3D programming (see page 26 for details)

# COBOT MAC CART

COLLABORATIVE ROBOT FOR ARC WELDING

## Robot Cart Standard Features:

- APT Mobile Cart welded construction powder coat finish.
- 6" Casters for ease of movement
- Lockable box for FANUC Tablet
- Ready to accept accessories.
- Wire feed accessibility
- Low lift for tank



FANUC CRX  
8 YEARS  
ZERO  
MAINTENANCE

# MOD-WELD

## FEATURES & SPECS

MAC Cart Specs	
Exclusive with FANUC Cobot	
System Model	CART10L
6-Axis Robot	FANUC CRX-10iA/L
Robot Reach	55"
Robot Power	110v 20 amp
Robot Programming	Tablet Only
Robot Torch Guidance	Clever Torch Teach Guidance
Torch Roller Dress-out	MOD-WELD Custom
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
Torch	22.5 degree torch angle

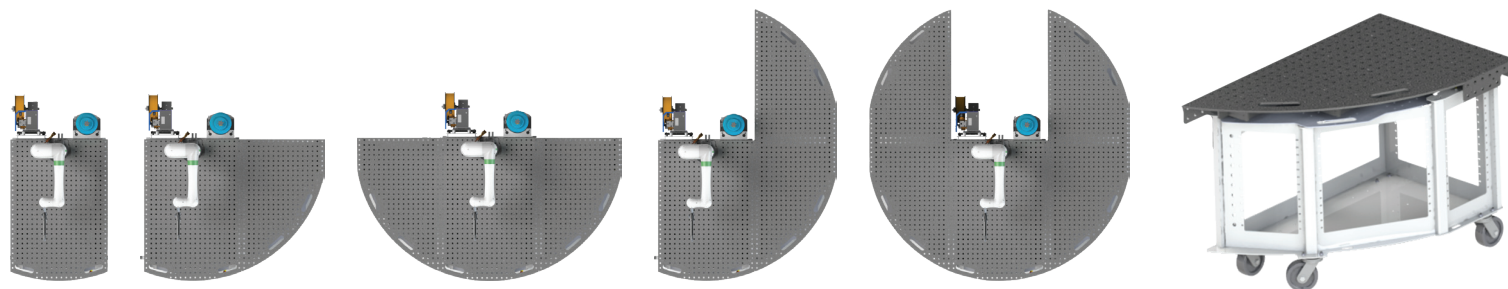


## Choose Your Power Supply

Fronius		Miller	
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	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
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	500C-C	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
500i-C		500D-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	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
500i-C-S			

## Customize to your needs

Add up to 4 side carts in different configurations for customizing your work space.



## Software Options

For additional information, see pages 26 & 27

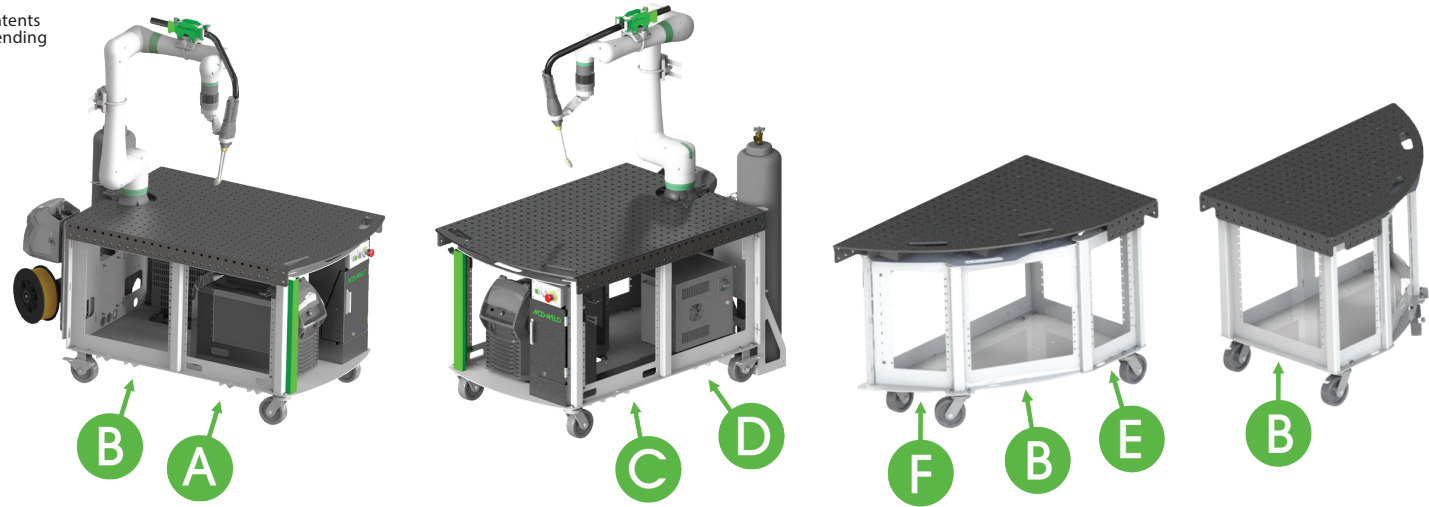
LSC	Fronius Low Spatter Control, achieves high-quality weld seams with minimal spattering and increased deposition rate, as the LSC principle is based on the short circuit occurring at a low current level. This leads to soft reignition and a stable welding process.
CMT	Fronius Cold Metal Transfer (CMT) welding, only available in CMT ready machines. Ideal for high performance welding in the areas of thin materials, brazing, visual aesthetics, cladding & WAAM welding consisting of all ranges of materials from Aluminums, Steels, Coppers, Titanium, & Nickel alloys
TPW	FANUC Thick Plate Weld Package is Touch Sensing & Through Arc Seam Track in one package. This robot/cobot software is available on both Fronius & Miller

## Equipment Options

SCLFRR	Side Cart Left Front or Right Rear. Work space 34 3/8" W x 54" D with 16mm holes
SCRFLR	Side Cart Right Front or Left Rear. Work space 34 3/8" W x 54" D with 16mm holes
TR	Tip Reamer, Nozzle Spray, & Wire Snip all in one system. Available with either power supply.

# MAC CART ACCESSORIES





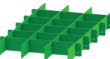
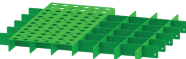




Patents Pending



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

## Drawers and Shelves

All drawers have ball bearing slides for smooth function.

DW1025		DW2025	
	Shallow drawer - Narrow Inner Dimensions: 8.8"W x 14.8"L x 2.4"H		Shallow drawer - Wide Inner Dimensions: 18.8"W x 14.8"L x 2.4"H
DW1040		DW2040	
	Medium drawer - Narrow Inner Dimensions: 8.8"W x 14.8"L x 3.9"H		Medium drawer - Wide Inner Dimensions: 18.8"W x 14.8"L x 3.9"H
DIVS10		DIVS20	
	Drawer divider set for narrow drawers Fits in: DW1025, DW1040		Drawer divider set for wide drawers Fits in: DW2025, DW2040
SH1025		SH2025	
	Storage shelf - Narrow 10"W x 15.75"L x 2.5"H		Storage shelf - Wide 20"W x 15.75"L x 2.5"H
SCSH10		SCSH20	
	Spray can storage shelf - Narrow 12"W x 3.625"D		Spray can storage shelf - Wide 22"W x 3.625"D

## Collaborative Positioners

Collaborative Manual Index Positioner for Collaborative Robot Welding

MIT40



Shown with WS 1826 Weld Screen

Shown on Mod-Weld Cart

Heavy Duty locking w/ hardened blocks

- 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.

## Safety

PCMC-8



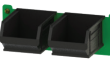
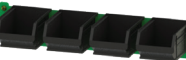




Pull curtain - #8 plastic curtain  
Magnets secure curtain seam together for added arc flash safety.  
This is not a safety shield from the robot

WS1826





Tabletop Magnet Screen - #8 Dark Shield  
Mounts in 2 directions, 18" x 26"


## Storage, Bin, Clamps and Pins

BINP10		BINP20	
	Bin box panel - Narrow, Includes 2 bins Bin size: 4 1/8"W x 5 3/8" L x 3" H		Bin box panel - Wide, Includes 4 bins Bin size: 4 1/8"W x 5 3/8" L x 3" H
CR1007		CR2013	
	Clamp Hanger - Narrow 7 clamp notches		Clamp Hanger - Wide 13 clamp notches
PB1006		PB2006	
	Pegboard Panel - Narrow Ø.25 holes, 1" spacing, Hole array 10 x 6		Pegboard Panel - Wide Ø.25 holes, 1" spacing, Hole array 20 x 6

## Blank Covers

BP1045		BP2045	
	Blank plate - Narrow 10" x 4-1/2" Tall		Blank plate - Wide 20" x 4-1/2" Tall

## Holder

AGHG45	
	Angle Grinder Holder with Cord Wrap Fits 4-1/2" Grinder

### Traveler Standard Features:

- Mobile Base welded construction, powder coat finish with Stabilizer Outriggers
- FANUC CRx Collaborative Robot
- APT Clever Torch for ease of movement and teaching the robot.
- Gas bottle storage on mobile base
- 6" Casters for ease of movement



MAC Traveler Specs	
Exclusive with FANUC Cobot	
System Model	TRV25
6-Axis Robot	FANUC CRX-25iA
Robot Reach	74"
Robot Power	110v 20 amp
Robot Programming	Tablet Only
Robot Torch Guidance	Clever Torch Teach Guidance
Torch Roller Dress-out	MOD-WELD Custom
Footprint (for mobility)	44" W x 76-1/2" L
Footprint (outriggers deployed)	88-1/2" W x 93-3/4" L
Approx Weight w/ Welder	1700 lbs



### Choose Your Power Supply

Fronius		Miller	
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	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
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	500C-C	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
500i-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	500D-C	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
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	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
500i-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		

### Software Options

For additional information, see pages 26 & 27

LSC	Fronius Low Spatter Control, achieves high-quality weld seams with minimal spattering and increased deposition rate, as the LSC principle is based on the short circuit occurring at a low current level. This leads to soft reignition and a stable welding process.
CMT	Fronius Cold Metal Transfer (CMT) welding, only available in CMT ready machines. Ideal for high performance welding in the areas of thin materials, brazing, visual aesthetics, cladding & WAAM welding consisting of all ranges of materials from Aluminums, Steels, Coppers, Titanium, & Nickel alloys
TPW	FANUC Thick Plate Weld Package is Touch Sensing & Through Arc Seam Track in one package. This robot/cobot software is available on both Fronius & Miller

### Equipment Options

TR	Tip Reamer, Nozzle Spray, & Wire Snip all in one system. Available with either power supply.
----	--

### Bundle Standard Features:

- FANUC CRX-10iA/L or FANUC CRX-25iA Collaborative Robot with APT Clever Torch teach button software package ready to teach and weld
- Operator pushbutton panel integrated to robot controller. Cycle start, teach enable
- End user responsible for installation of robot, controller, etc. to existing fixture table, base, or pedestal
- Base model is configured to weld steel (hard metal), soft metals require additional options

MAC Bundle Specs		
Exclusive with FANUC Cobot		
System Model	BUNDLE-10	BUNDLE-25
6-Axis Robot	FANUC CRX-10iA/L	FANUC CRX-25iA
Robot Reach	55"	74"
Robot Power	110v 20 amp	
Robot Programming	Tablet Only	
Robot Torch Guidance	Clever Torch Teach Guidance	
Torch Roller Dress-out	MOD-WELD Custom	



FANUC CRX  
**8 YEARS**  
**ZERO**  
MAINTENANCE



### Choose Your Power Supply

Fronius		Miller	
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	350C	Auto-Continuum™ 3PH or Auto-Deltaweld™ 1PH, air-cooled torch for welding steel. Comes with .035 wire feed rollers.
		350D	Optional consumable or replacement parts up to 1/16

### Software Options

*For additional information, see pages 24 & 25*

LSC	Fronius Low Spatter Control, achieves high-quality weld seams with minimal spattering and increased deposition rate, as the LSC principle is based on the short circuit occurring at a low current level. This leads to soft reignition and a stable welding process.
TPW	FANUC Thick Plate Weld Package is Touch Sensing & Through Arc Seam Track in one package. This robot/cobot software is available on both Fronius & Miller

### Equipment Options

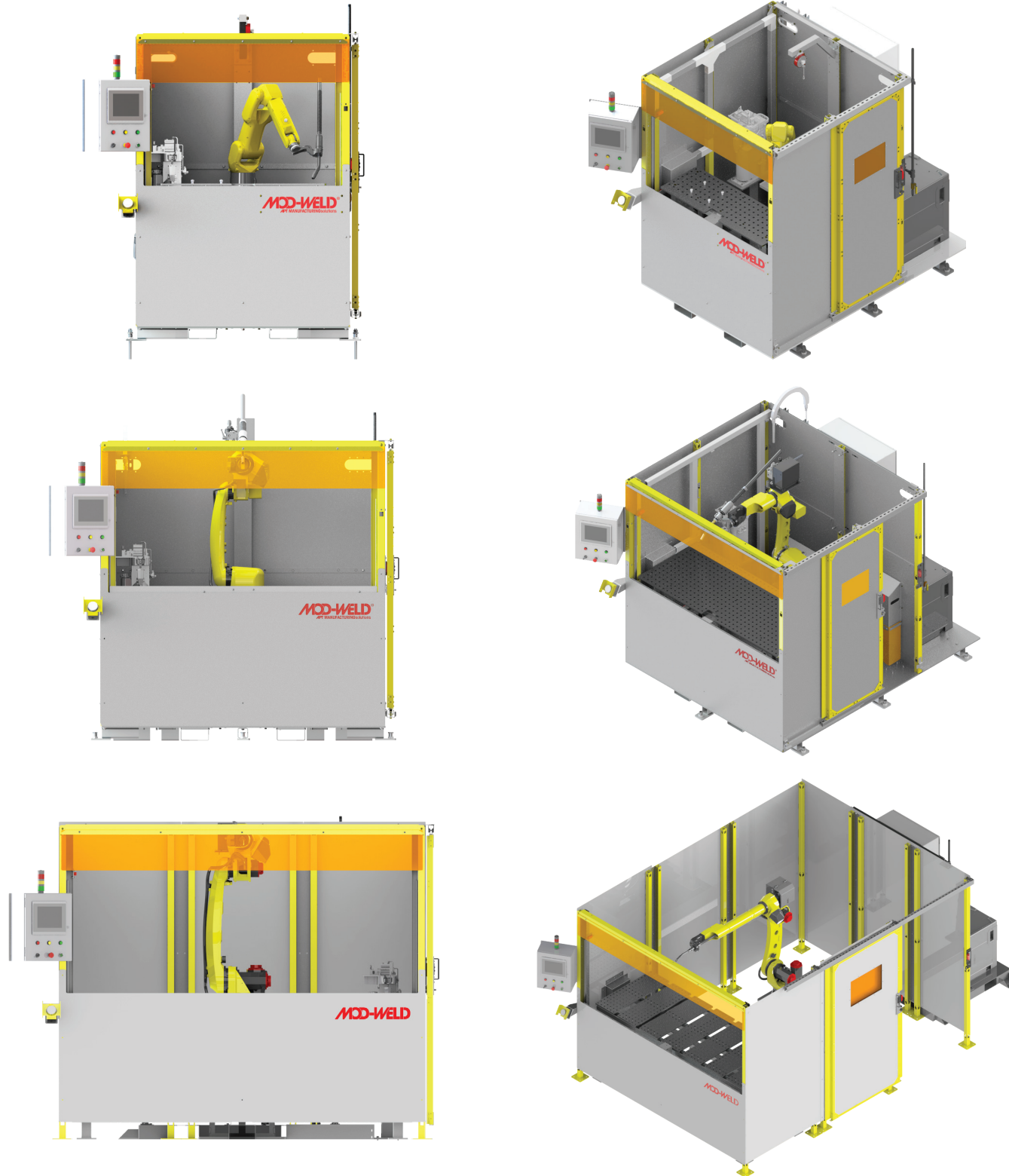
TR	Tip Reamer, Nozzle Spray, & Wire Snip all in one system. Available with either power supply.
----	--

# ROBOT ARC MATE CELL

## SINGLE STATION FIXED WIDE TABLE



## FEATURES & SPECS



Single Station Fixed Wide Table			
System Model	SSFWT-48-AM50	SSFWT-72-AM100	SSFWT-96-AM120
6-axis robot	ARC Mate 50iD	ARC Mate 100iD	ARC Mate 120iD
Robot Reach	36"	57"	72"
Cell Footprint	60" x 90"	84" x 102"	108" x 114"
Table Work Space	24" x 48"	36" x 72"	48" x 96"
Available I/O	8 in 8 out		
Available Valve Bank Space	(4) closed center / (4) Blanks		
Operator Interface/Recipe	Rockwell PLC/HMI Interface		
Table Hole size	16mm Dia 2" x 2" Hole Pattern		



Choose Your Power Supply			
Fronius		Miller	
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	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
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	500C-C	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
500i-C			
400i-CS	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	500C-CS	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
500i-CS			

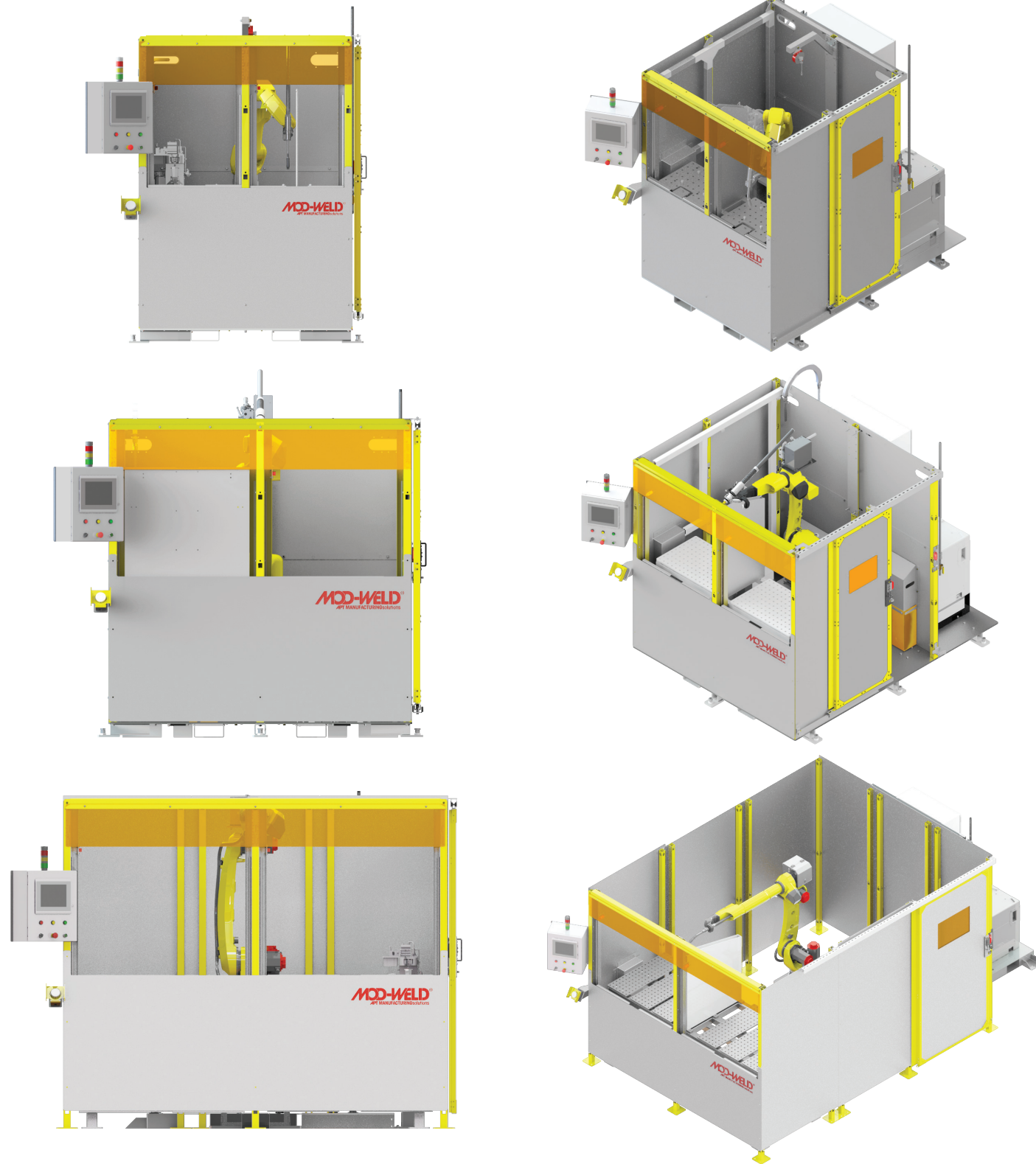
Software Options	
<i>For additional information, see pages 26 &amp; 27</i>	
LSC	Fronius Low Spatter Control, achieves high-quality weld seams with minimal spattering and increased deposition rate, as the LSC principle is based on the short circuit occurring at a low current level. This leads to soft reignition and a stable welding process.
CMT	Fronius Cold Metal Transfer (CMT) welding, only available in CMT ready machines. Ideal for high performance welding in the areas of thin materials, brazing, visual aesthetics, cladding & WAAM welding consisting of all ranges of materials from Aluminums, Steels, Coppers, Titanium, & Nickel alloys
TPW	FANUC Thick Plate Weld Package is Touch Sensing & Through Arc Seam Track in one package. This robot/cobot software is available on both Fronius & Miller

Equipment Options	
TR	Tip Reamer, Nozzle Spray, & Wire Snip all in one system. Available with either power supply.
ABIO-8	Additional Allen Bradley I/O, 8 in 8 out
SY7301-5U1-NA	Additional 3 position closed center valve
MW-(##)-EX-HOOD	Exhaust Hood with 8" Duct - Available in 48", 72" & 96"



# ROBOT ARC MATE CELL

## DUAL STATION FIXED TABLE



## FEATURES & SPECS

Dual Station Fixed Table			
System Model	DSFT-48-AM50	DSFT-72-AM100	DSFT-96-AM120
6-axis robot	ARC Mate 50iD	ARC Mate 100iD	ARC Mate 120iD
Robot Reach	36"	57"	72"
Cell Footprint	60" x 90"	84" x 102"	108" x 114"
Table Work Space	2 @ 20" x 16" each	2 @ 30" x 20" each	2 @ 40" x 36" each
Available I/O	8 in 8 out		
Available Valve Bank Space	(4) closed center / (4) Blanks		
Operator Interface/Recipe	Rockwell PLC/HMI Interface		
Table Hole size	16mm Dia 2" x 2" Hole Pattern		



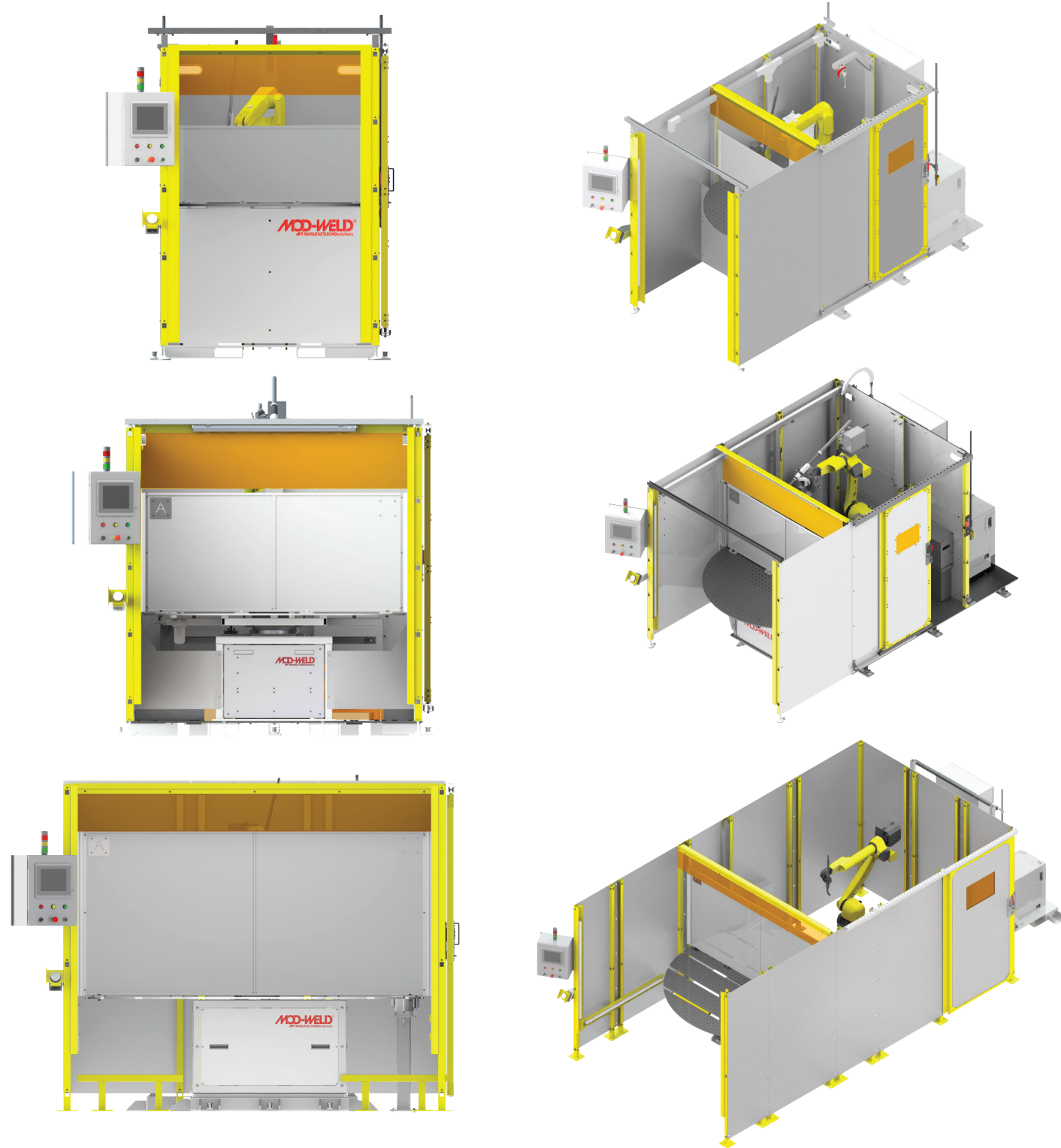
Choose Your Power Supply			
Fronius		Miller	
400i	TPSi, air-cooled torch for welding steel. Includes PMC software. Comes with .035 wire feed rollers 3PH Power. Optional consumable or replacement parts up to 1/16	350C	Auto-Continuum™ 3PH or Auto-Deltaweld™ 1PH, air-cooled torch for welding steel. Comes with .035 wire feed rollers.
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	350D	Optional consumable or replacement parts up to 1/16
500i-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	500C-C	Auto-Continuum™ or Auto-Deltaweld™, cooler & water-cooled torch Comes with .035 wire feed rollers. 3PH Power.
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	500D-C	Optional consumable or replacement parts up to 1/16
500i-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	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

Software Options	
For additional information, see pages 26 & 27	
LSC	Fronius Low Spatter Control, achieves high-quality weld seams with minimal spattering and increased deposition rate, as the LSC principle is based on the short circuit occurring at a low current level. This leads to soft reignition and a stable welding process.
CMT	Fronius Cold Metal Transfer (CMT) welding, only available in CMT ready machines. Ideal for high performance welding in the areas of thin materials, brazing, visual aesthetics, cladding & WAAM welding consisting of all ranges of materials from Aluminums, Steels, Coppers, Titanium, & Nickel alloys
TPW	FANUC Thick Plate Weld Package is Touch Sensing & Through Arc Seam Track in one package. This robot/cobot software is available on both Fronius & Miller

Equipment Options	
TR	Tip Reamer, Nozzle Spray, & Wire Snip all in one system. Available with either power supply.
ABIO-8	Additional Allen Bradley I/O, 8 in 8 out
SY7301-5U1-NA	Additional 3 position closed center valve
MW-(##)-EX-HOOD	Exhaust Hood with 8" Duct - Available in 48", 72" & 96"

# ROBOT ARC MATE CELL

## DUAL STATION ROTARY TABLE



## FEATURES & SPECS

Dual Station Rotary Table			
System Model	DSRT-48-AM50	DSRT-72-AM100	DSRT-96-AM120
6-axis robot	ARC Mate 50iD	ARC Mate 100iD	ARC Mate 120iD
Robot Reach	36"	57"	72"
Cell Footprint	60" x 90"	84" x 102"	108" x 114"
Table Work Space	15" x 42"	27" x 66"	39" x 90"
Available I/O	8 in 8 out		
Available Valve Bank Space	(4) closed center / (4) Blanks		
Operator Interface/Recipe	Rockwell PLC/HMI Interface		
Table Hole Size	16mm Dia 2" x 2" Hole Pattern		



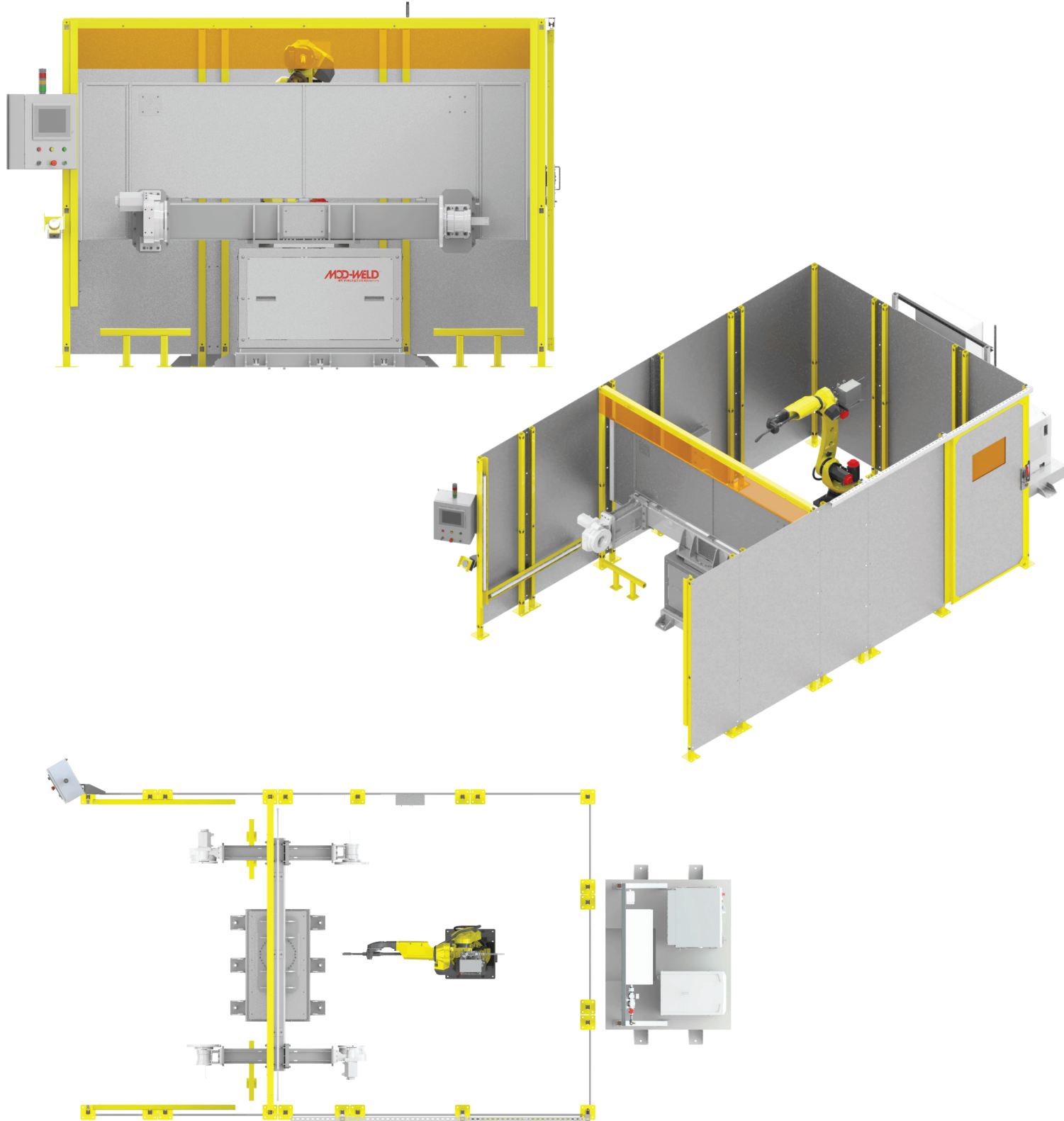
Choose Your Power Supply			
Fronius		Miller	
400i	TPSi, air-cooled torch for welding steel. Includes PMC software. Comes with .035 wire feed rollers 3PH Power. Optional consumable or replacement parts up to 1/16	350C	Auto-Continuum™ 3PH or Auto-Deltaweld™ 1PH, air-cooled torch for welding steel. Comes with .035 wire feed rollers. Optional consumable or replacement parts up to 1/16
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	500C-C	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
500i-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	500D-C	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
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	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
500i-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		

Software Options	
For additional information, see pages 26 & 27	
LSC	Fronius Low Spatter Control, achieves high-quality weld seams with minimal spattering and increased deposition rate, as the LSC principle is based on the short circuit occurring at a low current level. This leads to soft reignition and a stable welding process.
CMT	Fronius Cold Metal Transfer (CMT) welding, only available in CMT ready machines. Ideal for high performance welding in the areas of thin materials, brazing, visual aesthetics, cladding & WAAM welding consisting of all ranges of materials from Aluminums, Steels, Coppers, Titanium, & Nickel alloys
TPW	FANUC Thick Plate Weld Package is Touch Sensing & Through Arc Seam Track in one package. This robot/cobot software is available on both Fronius & Miller

Equipment Options	
TR	Tip Reamer, Nozzle Spray, & Wire Snip all in one system. Available with either power supply.
ABIO-8	Additional Allen Bradley I/O, 8 in 8 out
SY7301-5U1-NA	Additional 3 position closed center valve
MW-(##)-EX-HOOD	Exhaust Hood with 8" Duct - Available in 48", 72" & 96"

# ROBOT ARC MATE CELL

## DUAL STATION H-FRAME



## FEATURES & SPECS

Dual Station H-Frame		
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
Available I/O	8 in 8 out	
Available Valve Bank Space	(4) closed center / (4) Blanks	
Operator Interface/Recipe	Rockwell PLC/HMI Interface	
Max Servo Rotation Diameter	32"	
Floor to Center Outboard Servo	38.75"	



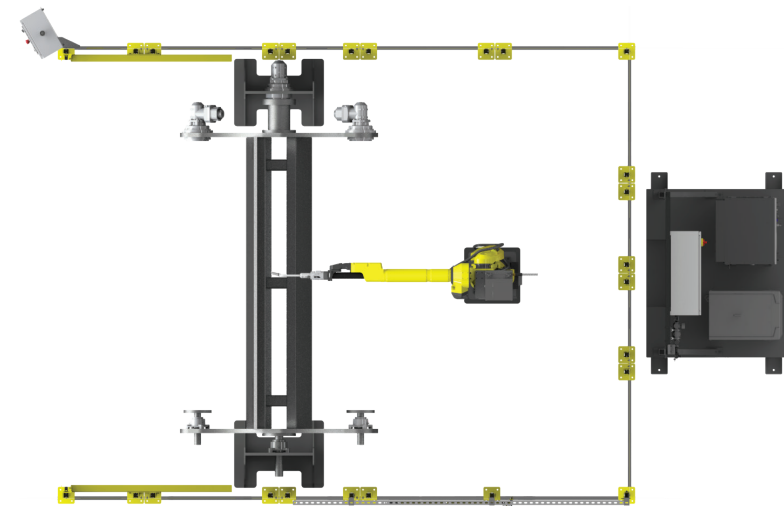
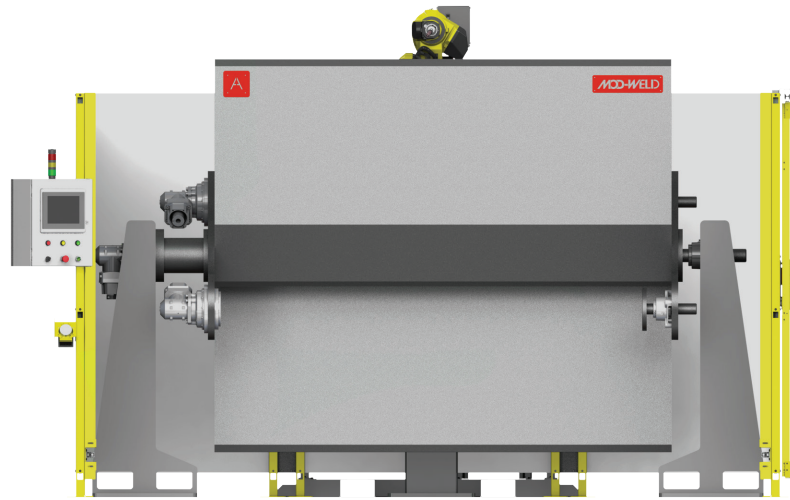
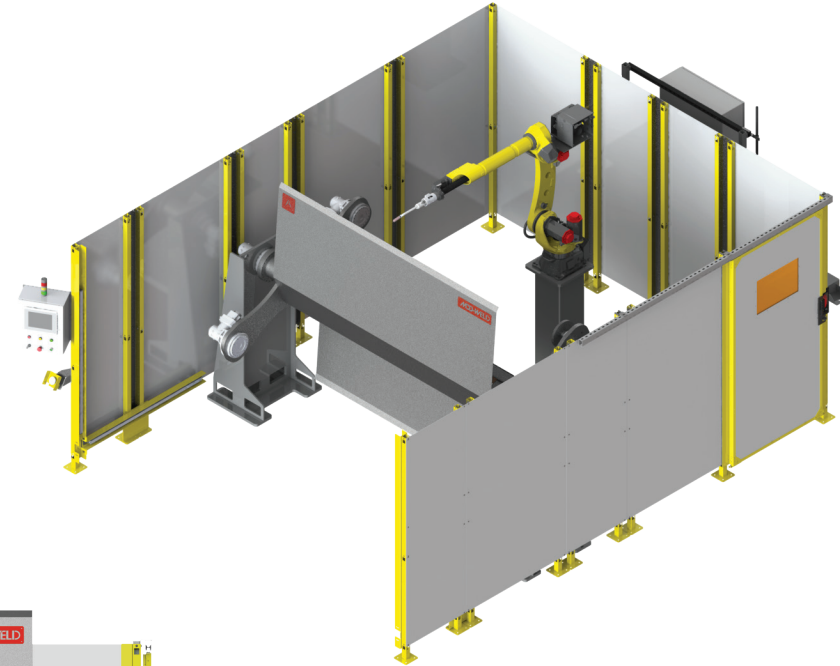
Choose Your Power Supply		
Fronius		Miller
400i	TPSi, air-cooled torch for welding steel. Includes PMC software. Comes with .035 wire feed rollers 3PH Power. Optional consumable or replacement parts up to 1/16	350C Auto-Continuum™ 3PH or Auto-Deltaweld™ 1PH, air-cooled torch for welding steel. Comes with .035 wire feed rollers. Optional consumable or replacement parts up to 1/16
400i-C 500i-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	500C-C 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
400i-C-S 500i-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	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

Software Options	
For additional information, see pages 26 & 27	
LSC	Fronius Low Spatter Control, achieves high-quality weld seams with minimal spattering and increased deposition rate, as the LSC principle is based on the short circuit occurring at a low current level. This leads to soft reignition and a stable welding process.
CMT	Fronius Cold Metal Transfer (CMT) welding, only available in CMT ready machines. Ideal for high performance welding in the areas of thin materials, brazing, visual aesthetics, cladding & WAAM welding consisting of all ranges of materials from Aluminums, Steels, Coppers, Titanium, & Nickel alloys
TPW	FANUC Thick Plate Weld Package is Touch Sensing & Through Arc Seam Track in one package. This robot/cobot software is available on both Fronius & Miller

Equipment Options	
TR	Tip Reamer, Nozzle Spray, & Wire Snip all in one system. Available with either power supply.
ABIO-8	Additional Allen Bradley I/O, 8 in 8 out
SY7301-5U1-NA	Additional 3 position closed center valve

# ROBOT ARC MATE CELL

## DUAL STATION FERRIS WHEEL



## FEATURES & SPECS

Dual Station Ferris Wheel		
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
Available I/O	8 in 8 out	
Available Valve Bank Space	(4) closed center / (4) Blanks	
Operator Interface/Recipe	Rockwell PLC/HMI Interface	
Main axis rotation diameter	105"	
Outboard Servo Rotation Diameter	42"	
Floor to Center Outboard Servo	40"	



### Choose Your Power Supply

Fronius		Miller	
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	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
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	500C-C	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
500i-C		500D-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	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
500i-C-S			

### Software Options

For additional information, see pages 26 & 27

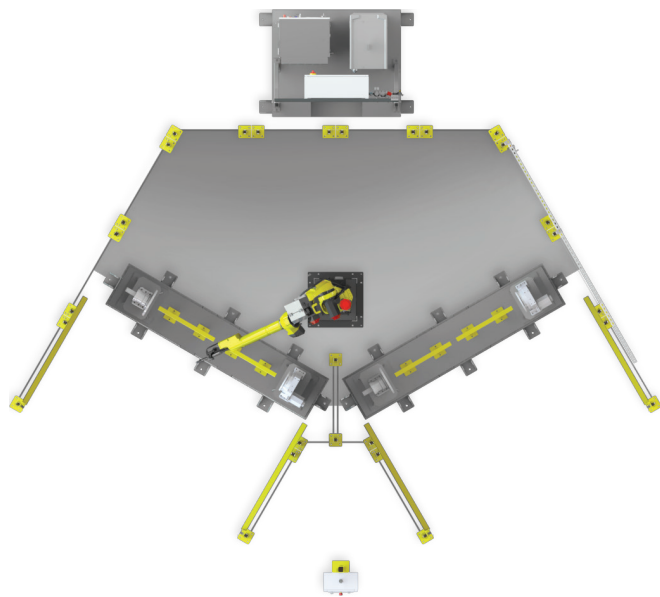
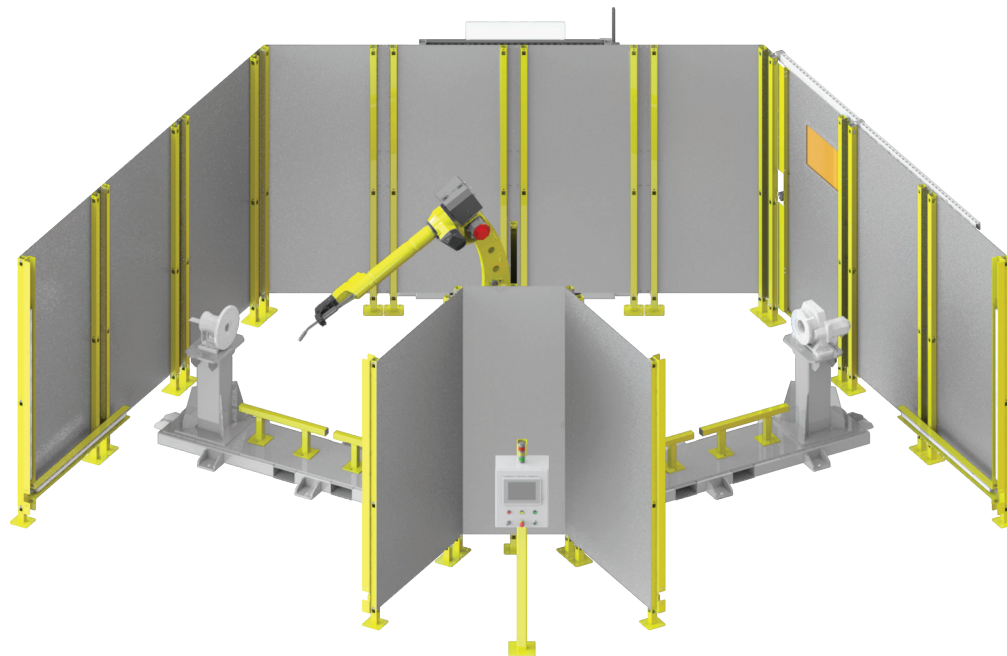
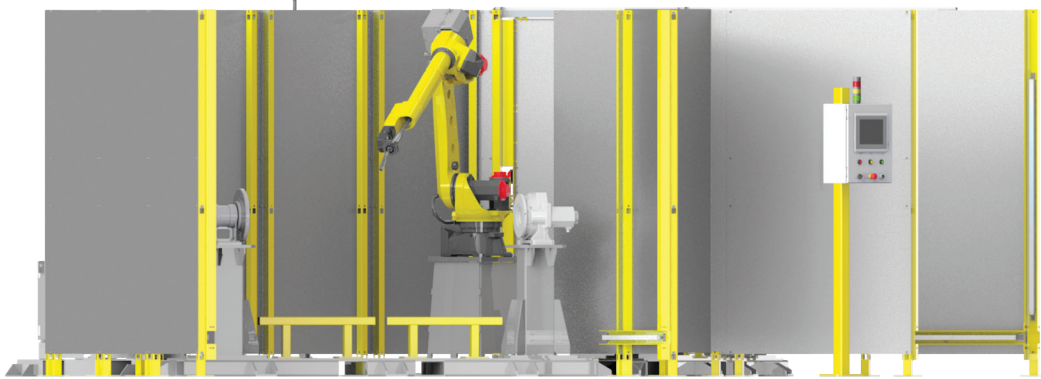
LSC	Fronius Low Spatter Control, achieves high-quality weld seams with minimal spattering and increased deposition rate, as the LSC principle is based on the short circuit occurring at a low current level. This leads to soft reignition and a stable welding process.
CMT	Fronius Cold Metal Transfer (CMT) welding, only available in CMT ready machines. Ideal for high performance welding in the areas of thin materials, brazing, visual aesthetics, cladding & WAAM welding consisting of all ranges of materials from Aluminums, Steels, Coppers, Titanium, & Nickel alloys
TPW	FANUC Thick Plate Weld Package is Touch Sensing & Through Arc Seam Track in one package. This robot/cobot software is available on both Fronius & Miller

### Equipment Options

TR	Tip Reamer, Nozzle Spray, & Wire Snip all in one system. Available with either power supply.
ABIO-8	Additional Allen Bradley I/O, 8 in 8 out
SY7301-5U1-NA	Additional 3 position closed center valve

# ROBOT ARC MATE CELL

## DUAL STATION HEADSTOCK/TAILSTOCK



## FEATURES & SPECS

Dual Station Headstock/Tailstock		
System Model	HSTS-96-AM100	HSTS-120-AM120
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.	
Available I/O	8 in 8 out	
Available Valve Bank Space	(4) closed center / (4) Blanks	
Operator Interface/Recipe	Rockwell PLC/HMI Interface	
Max Servo Rotation Diameter	40"	
Floor to Center Outboard Servo	40.25"	



Choose Your Power Supply		
Fronius		Miller
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	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
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	500C-C Auto-Continuum™ or Auto-Deltaweld™, cooler & water-cooled torch Comes with .035 wire feed rollers. 3PH Power.
500i-C		500D-C Optional consumable or replacement parts up to 1/16
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	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
500i-C-S		

Software Options	
For additional information, see pages 26 & 27	
LSC	Fronius Low Spatter Control, achieves high-quality weld seams with minimal spattering and increased deposition rate, as the LSC principle is based on the short circuit occurring at a low current level. This leads to soft reignition and a stable welding process.
CMT	Fronius Cold Metal Transfer (CMT) welding, only available in CMT ready machines. Ideal for high performance welding in the areas of thin materials, brazing, visual aesthetics, cladding & WAAM welding consisting of all ranges of materials from Aluminums, Steels, Coppers, Titanium, & Nickel alloys
TPW	FANUC Thick Plate Weld Package is Touch Sensing & Through Arc Seam Track in one package. This robot/cobot software is available on both Fronius & Miller

Equipment Options	
TR	Tip Reamer, Nozzle Spray, & Wire Snip all in one system. Available with either power supply.
ABIO-8	Additional Allen Bradley I/O, 8 in 8 out
SY7301-5U1-NA	Additional 3 position closed center valve



## ARC Control Software

### CMT - Cold Metal Transfer

CMT welding is only available in CMT ready machines and is ideal for joining steel and aluminum, as the galvanized steel plate is wetted by this braze-welded joint, while the aluminum melts. Furthermore, the CMT welding process is also suited to the virtually spatter-free brazing of hot-galvanized and electrolytically galvanized sheets with a welding wire made from a copper-silicon alloy. Minimal distortion of the galvanized sheet occurs, and the light-gauge welding of aluminum sheets (from 0.3 millimeters) is also possible, whereby the low heat input eliminates the need for pool support. Equally impressive results are achieved when welding stainless steel and magnesium.

### PMC - Pulse Multi-Control

The modified process is characterized by precisely regulated, low-spatter droplet detachment. At the same time, PMC generates a powerful and stable arc which results in perfect control of the weld pool. This enables our users to avoid imperfections.

### LSC - Low Spatter Control

The user can achieve high-quality weld seams with minimal spattering and an increased deposition rate, as the LSC principle is based on the short circuit occurring at a low current level. This leads to soft reignition and a stable welding process, a significant contrast to the standard dip transfer arc. Control over the arc has been improved significantly thanks to the development of the TPS/i power source platform. The TPS/i recognizes the process phases occurring during the short circuit extremely quickly and reacts to them. The user can therefore achieve outstanding results in conjunction with the new stabilizers.

## Robotmaster® Offline Robot Programming

OFFLINE PROGRAMMING SOFTWARE FOR ROBOTS

Robotmaster is an offline robot programming and robot simulation software that allows task experts to program their robot quickly and easily from simple to complex tasks while maximizing the robot's capabilities. This software dramatically reduces the robot offline programming and robot simulation time and effort.

### Features include:

- Accurate robot trajectories without teaching points
- Click-and-drag, interactive simulation/editing environment
- Automated robot motion optimization
- Multiple robot manufacturers compatibility

## HYPERTHERM® Powermax85 SYNC®

A Hypertherm Associates Brand

The Powermax85 SYNC® plasma cutter is a next-generation professional grade air plasma cutter that dramatically simplifies system operation for gouging and recommended cutting up to 25 mm (1"). Features automated system process set-up via advanced RFID-enabled SmartSYNC® torches and a revolutionary single-piece cartridge consumable that provides trackable utilization data.

## FANUC Thick Plate Weld Package

### ARC Welding Option

### Feature

The Thick Plate Weld Package combines the options of Touch Sensing and Through Arc Seam Tracking into one convenient option.

### Function

Quickly performs search motions to find the part by receiving an input signal from a sensor.

- Accurately locates the part with pre-defined motion, speed, and direction, then calculates the offset and applies it directly to the original weld path. No need to pick up a teach pendant or even enter the cell to modify a program.
- Automatically adjusts the robot path for optimal welding conditions.
- TAST independently controls lateral and vertical compensation.

### Benefit

- Reduces weld defects and increases system productivity by automatically adjusting for part displacement.
- Compatible with all welding power supplies and welding processes.
- Provides for Non-Contact part location allowing for searches in tighter conditions.
- TAST can be used on many different joint configurations and material thicknesses.
- It is a reliable and cost effective way to overcome part variations and produce high quality welds.
- No additional sensing hardware (laser, vision, or PC controllers) required.

### Includes:

J536 Touch Sensing  
R794 TAST with MP /RPM

### Other Important Notes:

J536 Touch Sensing  
Requires R663

Thick Plate Weld Package can be added to any of the robots (ArcMate Robots or Arc CRX Cobots). If being used for Thick Plate Welding, we recommend going up to the 500 amp power source and a water-cooled weld gun.

Touch Sensing is used to find the position of the parts prior to the initiation of the weld arc. We can use touch sensing to find a joint and weld a stringer joint for the found path. For touch sensing we recommend the TR wire clipper so we have a clean wire to touch sense.

Through Arc Seam Tracking is used to "follow" the weld path. It is for larger weld beads and requires weaving. This is used for large parts where it is difficult to accurately prepare the pieces and thus the joint position and path can vary. Touch Sensing would usually be used to find the arc start position and then TAST would be used to follow the joint.

This package includes multi-pass weld software. When using it, you use Root Pass Memorization and successive beads are deposited upon the top of the prior beads.



# MATE OPERATOR INTERFACE



The Rockwell controls integration on the MOD-WELD MATE series was designed with the end user in mind. The operator interface is easy-to-use, has fewer HMI control touch points, visual factory concepts & simplified maintenance and troubleshooting.

**SYSTEM** tab is used for general machine setup. A majority of the functions available have security requirements to access them. Some functions on the System HMI screens include: VFD frequency setup, Recipe Management System, Inspection Limits, I/O Link Setup, Login, and System Security Settings.

**OPERATION** tab is used for general machine operation and functionality. 3D model images are shown on the screen for ease of use. Status Indicators, Mode Control, and Manual Operations, along with Operational and Fault Messages, are displayed.

**ROBOT** tab displays all communication and I/O interface between the system PLC and robot. Users may also manually control the functions of the robot and call a specific robot program to run from this screen.

**I/O** tab shows all I/O within the system. It displays the on/off status, and has the option to run diagnostics for aid in troubleshooting.

**PRODUCTION** tab allows the user to view and capture production data to be used for business analytics. Users are able to edit the parameters and schedule system runs with recipe management and the production scheduler

## CONTROLS MADE SIMPLE WITH VISUAL FACTORY CONCEPTS

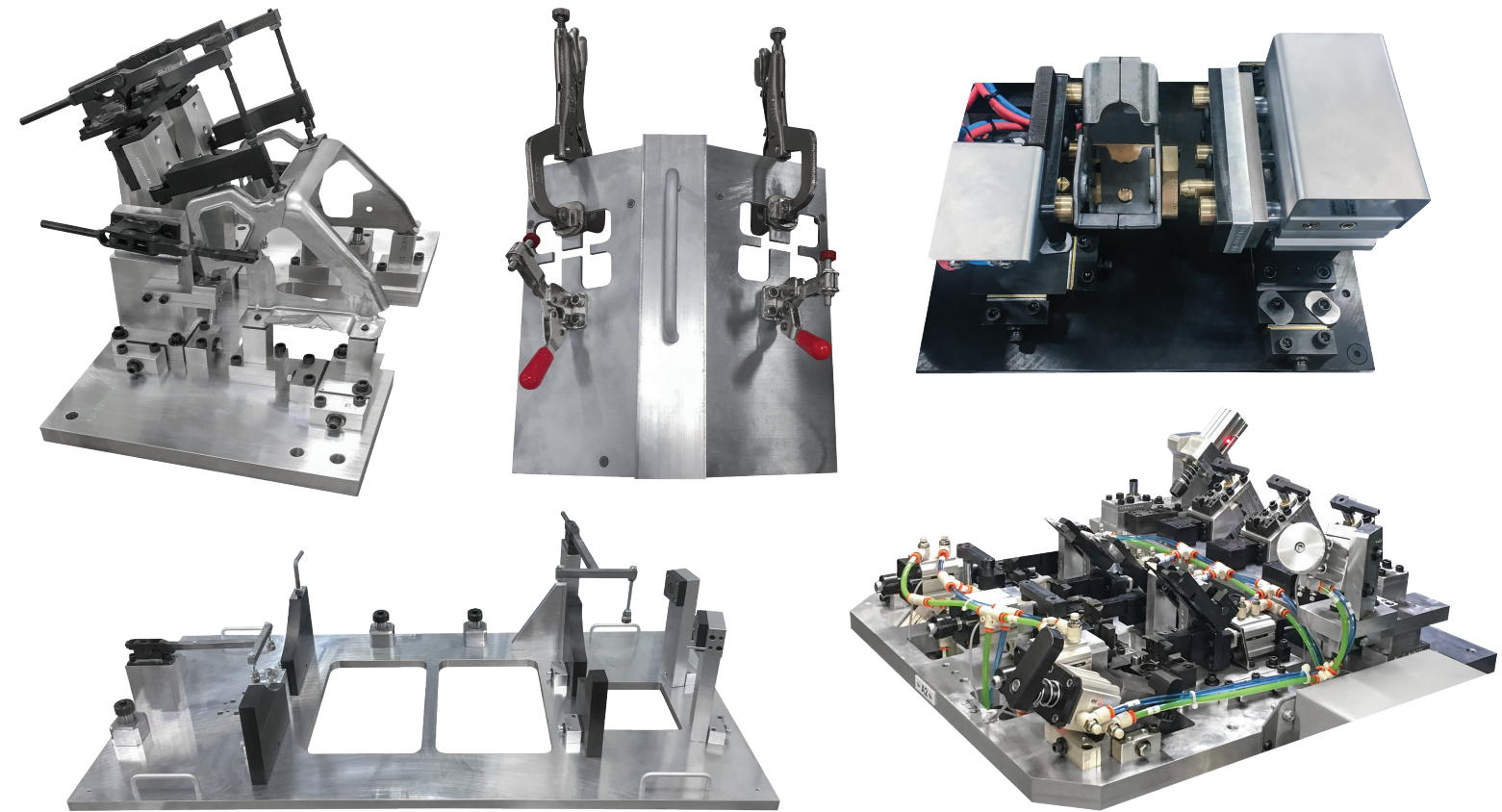
- The most accurate and efficient information conveyance
- 5 standard HMI screens with enhanced diagnostics
- Quick changeovers
- Simple recipe storage; easily selectable and expandable
- Password-protected levels
- Engineered with perfection

# MOD-WELD WELDING FIXTURES

## HAND CLAMP & AUTOMATED

APT offers a select design service with our in-house engineering team. Their many years of experience will provide specific fixture solutions for accuracy and repeatability.

Please contact your distributor for pricing of welding fixture solutions.



- Hardened Contact Points
- Adjustability of Locating Materials
- Veteran Design Team
- MIC 6 aluminum baseplates for light weight.
- Aluminum bronze wear details to prevent spatter from sticking.
- NAAMS style shims for adjustability of locating details.
- Part presence sensors (as required per application)
- Concept approval drawing and 3D pdf provided upon purchase and your CAD data

NOTES: \_\_\_\_\_

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October 2024

For more information visit:  
**[aptmfg.com](http://aptmfg.com)**