

# INDUSTRY LEADING 4-ROLL WIRE DRIVE DESIGN.

AutoDrive® 4R100 and AutoDrive® 4R220



Shown: AutoDrive® 4R100



Shown:  
AutoDrive® 4R220

## KEY FEATURES

The AutoDrive® 4R100 and 4R220 are powerful yet compact 4-roll wire drives for robotic and hard automation applications. Both models feature the MAXTRAC® Wire Drive System. Select the 4R220 for feeding larger diameter wires, pulling wire through long conduits and in applications requiring extra ruggedness.

### Processes

**(Power source controlled) »**

MIG, Pulsed, STT®, Flux-Cored, Metal-Cored

### Applications »

Robotic Fabrication, Hard Automation, Flexible Automation

### Output »



### Input »



### Product Number »

K3002-2 AutoDrive® 4R100

K2685-3 AutoDrive® 4R220

### Universal Certificate »

CE, CSA (C/US), C-Tick, CCC

## FEATURES

- **Integrated Design** – Designed to “nest” in the upper arm of the FANUC® Robotics ARC Mate® iC family of arms.
- **Best in Class Torque** – Results in faster acceleration and reliably pulls wire through conduit.
- **Welding Results** – High resolution tachometer for accurate wire feed speed control.
- **Durable and Rugged** – Patented MAXTRAC® heavy-duty cast aluminum wire drive system provides reliable feeding and durability.
- **Ease of Use** – Unlike competitive models, no tools are required for drive roll, wire guide or pressure arm adjustment.
- **Optimized Robotic Solution** – Compact, light weight package maximizes robot acceleration performance and throughput.
- **Replaceable Brushes** – Drive motors in both units feature replaceable brushes to extend service life. Brush life in the AutoDrive® 4R100 is more than 300% longer than the previous AutoDrive® model.

## PERFORMANCE

### AutoDrive® 4R100

- Custom engineered for the FANUC ARC Mate® iC family of robot arms. The small, light weight package maximizes robot arm speed and working envelope. Quick release mounting makes for fast servicing of the wire drive.



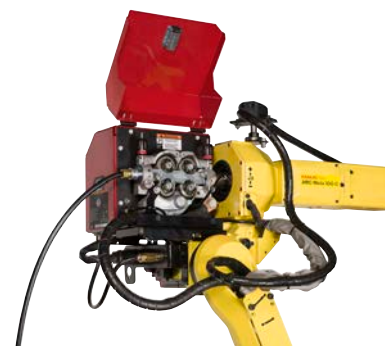
The AutoDrive® series maximizes robot arm speed and work envelope.

### AutoDrive® 4R220

- Features a powerful 220 watt motor. This wire drive is best for feeding larger diameter wires, pulling wire through longer conduits and in applications requiring extra ruggedness. A hinged cover protects the wire drive components from dust.



The AutoDrive® series was built to nest in the upper arm of the ARC Mate® 100iC.

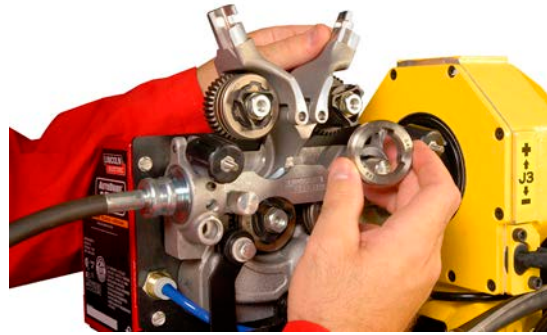


The AutoDrive® series was built to nest in the upper arm of the ARC Mate® 100iC.

## FEATURES

At the heart of the AutoDrive® 4R100 and 4R220 is the rugged and dependable MAXTRAC® wire drive system for premium feeding performance. The drive features split wire guides, tool-less drive roll changing and dual spring pressure arms. A right angle gear box efficiently transfers motor power for both high torque and high speed.

Both wire drives include a high resolution tachometer for precise wire feed speed control in forward and reverse directions.



Fast, tool-less changeover of drive rolls.

## KEY CONTROLS

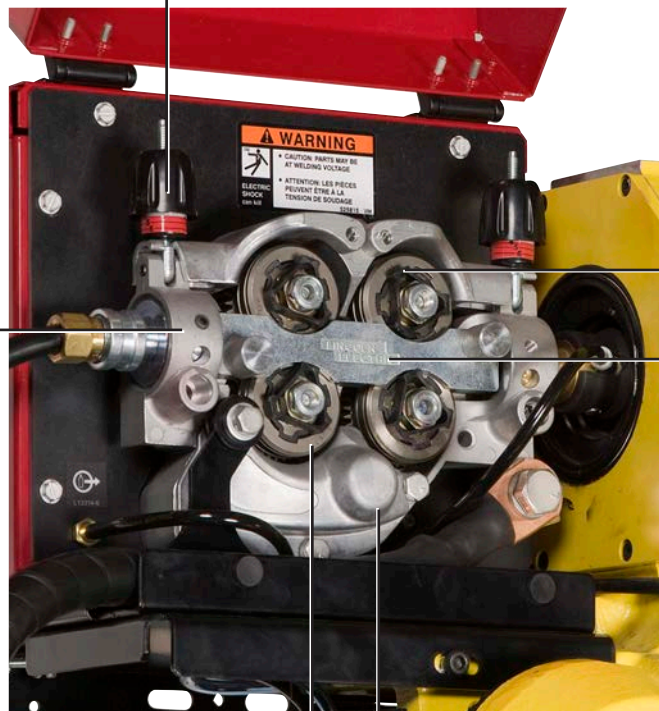


### Patented Dual Spring Pressure Arm

- Easy turn numeric tension indicator
- Set heavy tension for solid steel and stainless steel wire
- Set moderate tension for cored wires
- Set soft tension for aluminum wire
- Wide idler arm hinge delivers improved drive roll clamping pressure

### Rigid Cast Aluminum Frame

- Enhances precise drive roll alignment



AutoDrive® 4R220 installed on FANUC ARC Mate® robotic arm.

### Twist-Lock Drive Roll Hubs

- Four gear driven rolls
- Fast, tool-less changeovers

### Patented Split Wire Guides

- Full support for wire throughout the drive path
- Minimizes feeding problems
- Removable outer wire guide for easy access
- No tools required

### Patented Drive Rolls

- For steel - new design delivers 20% more feeding force
- For aluminum - chrome plated to resist build-up

### Separate Drive Gear

- Reduces pressure on motor for extended service life

## OPTIONS

### DRIVE ROLL AND WIRE GUIDE KITS

Description	Wire Size in. (mm)	Product Number
Solid Steel Wire, Smooth V Groove	.023-.030 (0.6 - 0.8) .035 (0.9) .040 (1.0) .040-.045 (1.0 - 1.2) .052 (1.4) 1/16 (1.6)	KP1505-030S KP1505-035S KP1505-040S KP1505-045S KP1505-052S* KP1505-1/16S*
Cored Steel Wire, Knurled V Groove	.030-.035 (0.8 - 0.9) .040-.045 (1.0 - 1.2) .052 (1.4) 1/16 (1.6)	KP1505-035C KP1505-045C KP1505-052C* KP1505-1/16C*
Cored or Solid Steel Wire, Knurled V Groove	.068-.072 (1.8) 5/64 (2.0)	KP1505-068* KP1505-5/64*
Aluminum Wire, Smooth U Groove	.035 (0.9) .040 (1.0) 3/64 (1.2) 1/16 (1.6)	KP1507-035A KP1507-040A KP1507-3/64A KP1507-1/16A*



### WIRE DRIVE CONTROL CABLE (14-PIN TO 14-PIN)

Description	Cable Length ft. (m)	Product Number
For use with FANUC arms having integrated cable	4 (1.2) heavy duty 16 (4.8) heavy duty 25 (7.6) heavy duty 50 (15.2) 100 (30.4)	K1785-4 K1785-16 K1785-25 K1785-50 K1785-100
For external dress of FANUC arm or hard automation	25 (7.6) 50 (15.2)	K2709-25 K2709-50

## RECOMMENDED ACCESSORIES TO EXPAND MACHINE CAPABILITIES

### GENERAL OPTIONS



Wire Straightener  
Straightens wire for better, smoother feeding.  
**Order K1733-1**



### Incoming Bushing for Lincoln Conduit

Feed Plate Incoming Bushings connect directly to wire conduit (sold separately) for use in boom system, long distances or large payoff packages. Bushings can be used with K515-L or K565-L wire conduit.

**Order K1546-1 for .025-1/16 in. wire**

**Order K1546-2 for 1/16-1/8 in. wire**



### Water Connection Kit

Kit includes quick disconnect inlet and outlet fittings with water hose and clamps.

**Order K590-7**

### PRODUCT SPECIFICATIONS

Product Name	Product Number	Input Power	Output Capacity Current @ Duty Cycle	Wire Feed Speed Range in/min (m/min)	Wire Size Range: in (mm)		H x W x D inches (mm)	Net Weight lbs. (kg)
					Solid	Cored		
AutoDrive® 4R100	K3002-2	40V DC 4 amps	500 Amps @ 100%	50-800 (1.3-20.3)	0.023-0.045 (0.6-1.2)	0.035-0.045 (0.9-1.2)	8.4 x 7.5 x 9.1 (213 x 191 x 231)	13.2 (6.0)
AutoDrive® 4R220	K2685-3	40V DC 8 amps	500 Amps @ 100%	30-1200 (0.8-30.5)	0.023-1/16 (0.6-1.6)	0.035-5/64 (0.9-2.0)	10.43 x 10.07 x 9.92 (265 x 256 x 252)	20.9 (9.5)

For best welding results with Lincoln Electric® equipment, always use Lincoln Electric consumables. Visit [www.lincolnelectric.com](http://www.lincolnelectric.com) for more details.

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