

AutoDrive® 4R100 & 4R220

Processes

(Power source controlled)

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

Product Number

K3002-1 AutoDrive® 4R100

K2685-1 AutoDrive® 4R220

Universal Certification

CE, CSA_{C/US}. C-Tick

Wire Size Range

AutoDrive® 4R100

Solid: .023 - .045 in. (0.6 - 1.2 mm)

Cored: .035 - .045 in. (0.9 - 1.2 mm)

AutoDrive® 4R220

Solid: .023 - 1/16 in. (0.6 - 1.6 mm)

Cored: .035 - 5/64 in. (0.9 - 2.0 mm)

Wire Feed Speed Range

AutoDrive® 4R100

50 - 800 in/min (1.3 - 20.3 m/min)

AutoDrive® 4R220

30 - 1200 in/min (0.8 - 30.5 m/min)

Weight/Dimensions (H x W x D)

(See page 4)

See Page 4 for complete specs

Industry Leading 4-Roll Wire Drive Design.

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.

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.



Shown: AutoDrive® 4R100



Shown: AutoDrive® 4R220

APPLICATIONS

- ▶ Robotic Fabrication
- ▶ Hard Automation
- ▶ Flexible Automation

INPUT



OUTPUT



RECOMMENDED LINCOLN ELECTRIC POWER SOURCES

- ▶ Power Wave® i400
- ▶ Power Wave® 455M Robotic
- ▶ Power Wave® 455M/STT® Robotic
- ▶ Power Wave® 655 Robotic



Two Year Extended
Warranty Available
in the U.S.A. and
Canada



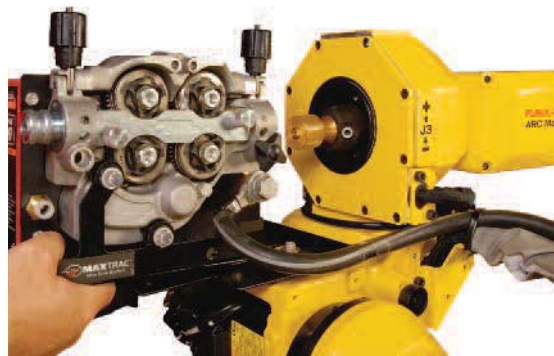
PERFORMANCE

The AutoDrive® 4R100 was 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.

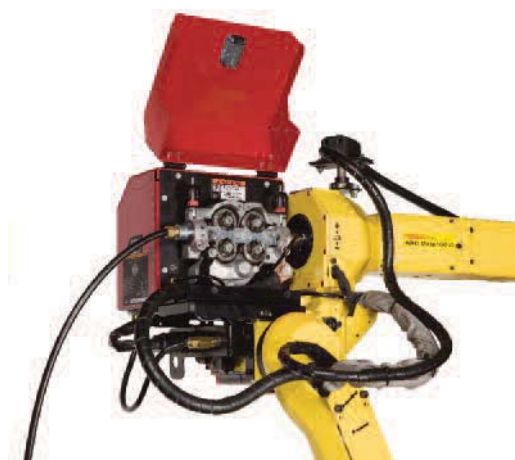


The AutoDrive® series maximizes robot arm speed and work envelope.

The 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.



Hinged cover on the AutoDrive® 4R220 protects wire drive from dust. Cover can be removed if desired.

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.

MAXTRAC®

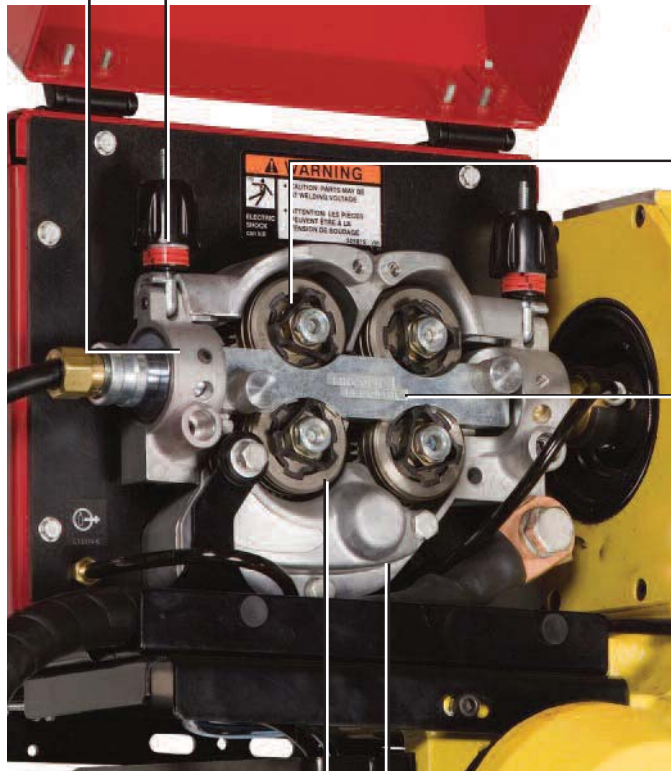
Wire Drive System

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



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

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

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)	KP1505-030S
	.035 (0.9)	KP1505-035S
	.040 (1.0)	KP1505-040S
	.040 - .045 (1.0 - 1.2)	KP1505-045S
	.052 (1.4)	KP1505-052S*
	1/16 (1.6)	KP1505-1/16S*
Cored Steel Wire, Knurled V Groove	.030 - .035 (0.8 - 0.9)	KP1505-035C
	.040 - .045 (1.0 - 1.2)	KP1505-045C
	.052 (1.4)	KP1505-052C*
	1/16 (1.6)	KP1505-1/16C*
Cored or Solid Steel Wire, Knurled V Groove	.068 - .072 (1.8)	KP1505-068*
	5/64 (2.0)	KP1505-5/64*
Aluminum Wire, Smooth U Groove	.035 (0.9)	KP1507-035A
	.040 (1.0)	KP1507-040A
	3/64 (1.2)	KP1507-3/64A
	1/16 (1.6)	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	K1785-4
	16 (4.8) heavy duty	K1785-16
	25 (7.6) heavy duty	K1785-25
	50 (15.2)	K1785-50
	100 (30.4)	K1785-100
For external dress of FANUC arm or hard automation	25 (7.6)	K2709-25
	50 (15.2)	K2709-50

*AutoDrive® 4R220 only.

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	K3002-1	40 VDC 4 Amps	500 Amps @ 100%	50 - 800 (1.3 - 20.3)	.023 - .045 (0.6 - 1.2)	.035 - .045 (0.9 - 1.2)	8.4 x 7.5 x 9.1 (213 x 191 x 231)	13.2 (6.0)
AutoDrive® 4R220	K2685-1	40 VDC 8 Amps	500 Amps @ 100%	30 - 1200 (0.8 - 30.5)	.023 - 1/16 (0.6 - 1.6)	.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 for more details.

CUSTOMER ASSISTANCE POLICY

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ELECTRIC
THE WELDING EXPERTS®