AutoDrive® 4R100 and AutoDrive® 4R220

Powerful and Dependable Robotic Wire Feeders



Shown: AutoDrive® 4R100



Shown: AutoDrive® 4R220

INDUSTRY-PROVEN PERFORMANCE

The AutoDrive® 4R100 and 4R220 Robotic Wire Feeding Systems offer powerful, industry-proven wire feeding performance for robotic and hard automation applications. Engineered with the patented MAXTRAC® Wire Drive System, both the AutoDrive® 4R100 and 4R220 help deliver the wire feeding results you need for maximizing automated welding productivity and quality.

Processes (Power source controlled) »
MIG, Pulsed, STT®, Flux-Cored, Metal-Cored

Applications »
Robotic Fabrication,
Hard Automation,
Flexible Automation

Output »

Input »
40 VDC

Compatible Robotic Arms »
Fanuc®
Yaskawa®
ABB®
Kuka®
Kawasaki®

Universal Certificate »
CE, CSA (C/US), C-Tick, CCC

Publication E10.12 | Issue Date 07/26
© Lincoln Global Inc. All Rights Reserved
www.lincolnelectric.com

LINCOLN ELECTRIC

FEATURES

- » **Industry-Proven Performance –** Patented MAXTRAC® 4-roll wire drive system delivers powerful and dependable wire feeding.
- » **Best in Class Torque –** Reliable feeding in high-speed applications or long conduit runs.
- » **Precise Speed Control –** High-resolution tachometer for precise forward and reverse wire feed speed control.
- » **Optimized Design –** Compact, lightweight package maximizes robot performance and work envelope.
- » **Durable and Rugged –** Heavy-duty wire drive system engineered to withstand demanding robotic applications with hinged cover for extra protection.
- » **Hassle-Free Maintenance –** Toolless design for drive roll, wire guide or pressure arm adjustments.
- » **Quick Release Mounting –** Robot-specific mounting brackets allow for quick and easy wire drive servicing.

PERFORMANCE

AutoDrive® 4R100

- Small, lightweight design
- Ideal for general purpose applications or robotic applications that require fast robotic arm speeds and small work envelopes.



AutoDrive® 4R220

- Features a powerful 220 watt motor
- Ideal for feeding larger wire diameters, pulling wire through longer conduit runs and in applications requiring extra ruggedness.



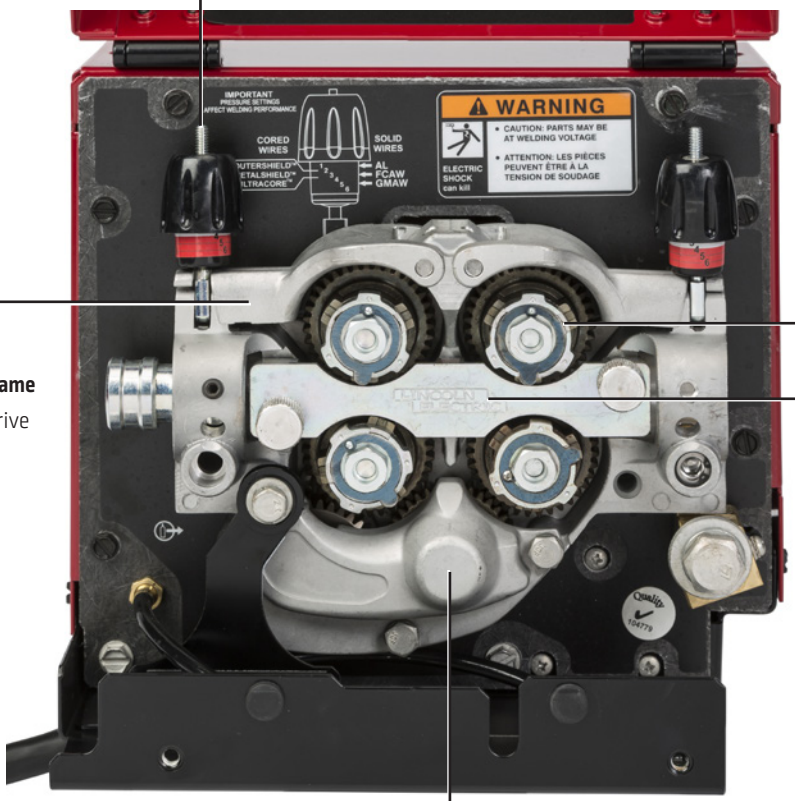
KEY CONTROLS

MAXTRAC® Wire Drive System

At the heart of the AutoDrive® 4R100 and 4R220 is the rugged and dependable MAXTRAC® 4-roll wire drive system that delivers industry-proven performance and reliability for even the most demanding robotic or hard automation applications.

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



Shown: AutoDrive® 4R220

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

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*
Solid Steel Wire, Smooth V Groove - Heavy Duty Heavy duty tool-steel drive rolls designed for maximum life. Recommended for automated and high WFS applications.	.035 (0.9) .040 (1.0) .045 (1.2) .052 (1.4)	KP1505-035R KP1505-040R KP1505-045R KP1505-052R*
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*

***NOTE:** Wire size requires selection of 4R220 model.

MOUNTING BRACKETS

Description	Product Number
MOTOMAN	
MA1440	K3572-1
MA2010	K3572-2
KUKA	
Kuka Thru-Arm	K3574-1
Kuka Over-Arm	K3574-2
FANUC	
100iD	K3562-1
120iD	K3562-4
100iC/120iC	K3562-2
4R100/4R220 Retrofit*	K3580-1
ABB	
IRB1520ID	K3573-1
IRB1660ID	K3573-2
IRB2600ID	K3573-3
IRB2600	K3573-5
IRB4600	K3573-6

*For existing installations on FANUC iC robots with K2685-3 or K3002-2 feeder. K2685-3 or K3002-2 are not compatible with FANUC iD series robots.

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

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	K3560-1	40V DC 4 amps	500 Amps @ 100%	50-800 (1.3-20.3))	0.023-0.052 (0.58-1.3)	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	K3561-1	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 for more details.

CUSTOMER ASSISTANCE POLICY

The business of Lincoln Electric is manufacturing and selling high quality welding equipment, automated welding systems, consumables, and cutting equipment. Our challenge is to meet the needs of our customers, who are experts in their fields, and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or technical information about their use of our products. Our employees respond to inquiries to the best of their ability based on information and specifications provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment, or to provide engineering advice in relation to a specific situation. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or communications. Moreover, the provision of such information or technical information does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or technical information, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose or any other equivalent or similar warranty is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but the definition of specifications, and the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com for any updated information.

The Lincoln Electric Company
22801 St. Clair Avenue · Cleveland, OH · 44117-1199 · U.S.A.
www.lincolnelectric.com