

Power Feed™ 10R



Power Feed 10R mounted on FANUC Robot Arm.

Compact Wire Drive System for Automation

The Power Feed 10R is a high performance, digitally controlled wire feeder designed to be a part of a modular, multi-process welding system. It is specifically designed to mount to a robot arm or to use in hard automation applications. Modular systems can be arranged in a variety of ways for optimum, customized performance and easy maintenance. This four drive roll feeder operates on 40VDC input power and is designed to be used with ArcLink™ Robotic Power Wave™ power sources. Close integration of the feeder, power source and existing equipment creates the foundation for a system with superior welding performance and reliability.

Processes

MIG Pulsed STT Flux-Cored

Advantage Lincoln

- Digitally controlled by the Power Wave power source, yielding the best performance in the industry.
- Use with Lincoln power sources featuring ArcLink, the leading digital communications protocol for welding, making it the best choice for seamless integration with the power source and networked equipment.
- Tachometer feedback provides calibration and precise control of wire feed speed.
- Feeder brakes from maximum speed to zero in milliseconds, minimizing the chance of wire sticking in the puddle.
- Select standard or high speed gears for wide wire feed speed range.
- Split wire guides provide trouble-free feeding and offer fast, tool-less wire installation, changeover and maintenance.
- Easy-to-read gauge for accurate drive roll tension.
- Brass-to-brass connections for good connectivity between feeder and gun.
- Modular construction for easy servicing.
- Self loading wire feature for easy set-up.

Description

Output  Input 

Recommended General Options

Water Connection Kit, 14-Pin to 14-Pin Control Cable, 4 Drive Rolls and Split Wire Guide, Torch Bushings, Incoming Conduit Bushings, Wire Straightener, Magnum Low Drag Wire Conduit, Accu-Trak™ Drum Payoff Kit

Recommended Power Sources

Power Wave F355i, Power Wave 455M Robotic, Power Wave 455M/STT Robotic, Power Wave 655R

Order

K1780-2 Power Feed 10R

Call the Lincoln Electric Automation Division at 216.383.2667 for more information.

TECHNICAL SPECIFICATIONS

Product Name	Product Number	Wire Feed Speed Range inches/min (m/min)	Wire Size Range Solid inches (mm)	Wire Size Range Cored inches (mm)	Dimensions H x W x D inches (mm)	Net Weight lbs (kg)
Power Feed 10R	K1780-2	50-800 in/min (1.3-20.3m/min) 75-1200 in/min (2.0-30.5 m/min)	.025-3/32 in (0.6-2.4mm) .025-1/16 in (0.6-1.6mm)	.035-.120 in. (0.9-3.0mm) .035-5/64 in (0.9-2.0mm)	8.9 x 10.3 x 8.1 (226 x 261 x 206)	22.4 lbs (10.2 kg)



Power Wave F355i shown integrated with FANUC Arc-Mate RJ3iB controller.



Power Wave 455M Robotic.

PERFORMANCE

- Designed for robotic and hard automation for the automotive, transportation, fabrication, furniture, lawn and garden, and agricultural industries, among others.
- Digital communication between the power source and the wire feeder for demanding robotic applications.

- Braking system minimizes wire sticking in the puddle for smooth finishes.

ArcLink™ and FANUC Robotics

ArcLink is a digital communications protocol for sharing information between intelligent components in an arc welding system. Power Wave products and FANUC robotic systems interfaced with ArcLink™ provide the following benefits over Analog-Digital Interface:

- Common user interface on Teach Pendant eliminates the requirement for any user panel on the power source.
- Teach Pendant can display actual volts, wire feed speed, etc. in process specific units.
- No setup function is required. The Robot is an ArcLink device and recognizes which power source is connected.
- Process procedures reside in the power source database and can be searched by process and material type directly on the Teach Pendant.
- High speed CAN 2.0B interface provides robust industrial network with collision detection and active/general connection states.
- Switch among eight modes (CV, Pulse, Pulse-On-Pulse, etc.) dynamically on the fly based on weld requirements.
- Arc start response time of 5/10 msec or less.
- FANUC's FASstart provides 300 msec arc start improvement over other systems, 100 msec arc end improvement resulting in time savings of 400 msec per weld.

WHAT IS NEXTWELD™?

Nextweld incorporates Lincoln's technologies, processes and products to create a technologically advanced arc welding platform. Waveform Control Technology™, power electronics and digital communications provide the foundation for Nextweld innovations, including Surface Tension Transfer®, Pulse-On-Pulse™,  Chopper Technology™, ArcLink™ and many more. Try Nextweld products for ultimate arc control, high efficiency/reliability, and seamless system integration.

- Touch Sensing Performance of 100 mm/sec search speed with .045 steel wire.
- Touch Sensing does not require additional hardware.
- ArcTool Control software enables true weld sequencer commands motion and weld procedures.
- Detailed power source Fault & Alarm information available on the Teach Pendant.
- Ability to monitor and download software to the power source through the Ethernet connection on FANUC's R-J3iB controller. New procedures can be sent to any and all machines over the network.
- Full support of Lincoln diagnostic packages through R-J3iB Ethernet port.
- FANUC TAST performance is available with no additional hardware to provide updates of actual weld current and voltage at 250 Hz for improved seam tracking performance.
- Calibration between robot and power source is not required.

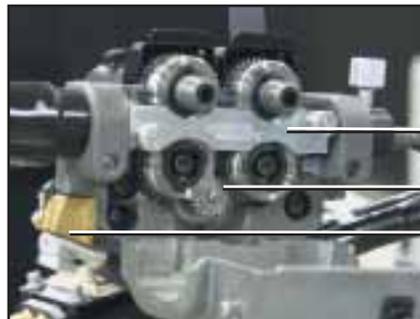
DESIGN

- Easy-to-read gauge for accurate drive roll tension producing a reference point for the operator to set tension on the wire more accurately.

- Brass-to-brass electrode pairing connections for good connectivity between welding torch and torch bushing.
- The feeder is self-threading for easy wire loading enabling operator to feed wire without the need to remove drive rolls.

Patented Drive Roll System

- The Power Feed 10R is a basic wire feeder with an optimized design, which consists of an industrial motor driving the feeder mechanism in a sheet metal frame. The logic for controlling the wire feeder resides in a PC board inside the robotic power source.
- Lower section contains gas solenoid and differential tachometer amplifier allowing accurate motor speed control up to 100 ft. from power source.
- Split wire guide provides easy wire loading and accessibility for maintenance.
- Variety of drive rolls for any application.
- Tool-less access to routine maintenance points.
- High speed gear for most fine wire applications. Low speed gear for applications requiring higher torque such as welding with Innershield® electrode.



Split Wire Guide
4-Drive Roll
Brass Connector

4-Drive Roll and Split Wire Guide System

Key Controls



1. Drive Roll Tension Gauge
2. Drive Roll Tension Adjustment Knob
3. 14-Pin Receptacle for Control Cable (Amphenol)
4. CGA Gas Connection
5. Wire Inlet Guide
6. Optional Water Kit (Not Shown)
7. Drive Roll Cover
8. Gun Bushings (K1500-1)

QUALITY AND RELIABILITY

- Electronically protected from overloads.
- Feeder can be easily disassembled for servicing.
- Modular construction for easy servicing of individual units.
- Rugged steel and cast aluminum construction.
- Storage temperature for the Power Feed 10R is -40°C to +40°C.

- Operating temperature for the Power Feed 10R is -20°C to +40°C.
- Three year warranty on parts and labor.
- Manufactured under a quality system certified to ISO 9001 requirements.

RECOMMENDED OPTIONS

4 DRIVE ROLLS AND SPLIT WIRE GUIDE

Description		Order Number
Solid Steel Wire, Smooth V Groove	.023-.030 (0.6-0.8mm) Solid	KP1505-030S
	.035 (0.9mm) Solid	KP1505-035S
	.040-.045 (1.0-1.2mm) Solid	KP1505-045S
	.052 (1.4mm) Solid	KP1505-052S
Cored Steel Wire, Knurled V Groove	.030-.035 (0.8-0.9mm) Cored	KP1505-035C
	.040-.045 (1.0-1.2mm) Cored	KP1505-045C
	.052 (1.4mm) Cored	KP1505-052C
	1/16" (1.6mm) Cored	KP1505-1/16C
	7/64" (2.8mm) Hardfacing (Smooth U Groove)	KP1505-7/64H
Cored or Solid Steel Wire, Knurled V Groove	.068-.072 (1.8mm)	KP1505-068
	5/64" (2.0mm)	KP1505-5/64
	3/32" (2.4mm)	KP1505-3/32
	7/64" (2.8mm) Cored only	KP1505-7/64
	Aluminum Wire, Smooth U Groove	.035 (0.9mm)
	.040 (1.0mm)	KP1507-040A
	3/64" (1.2mm)	KP1507-3/64A
	1/16" (1.6mm)	KP1507-1/16A
	3/32" (2.4mm)	KP1507-3/32A



KP1505-XX
Drive Rolls for Solid and Cored Wires



KP1507-XX
Drive Rolls for Aluminum Wires

14-PIN TO 14-PIN CONTROL CABLES

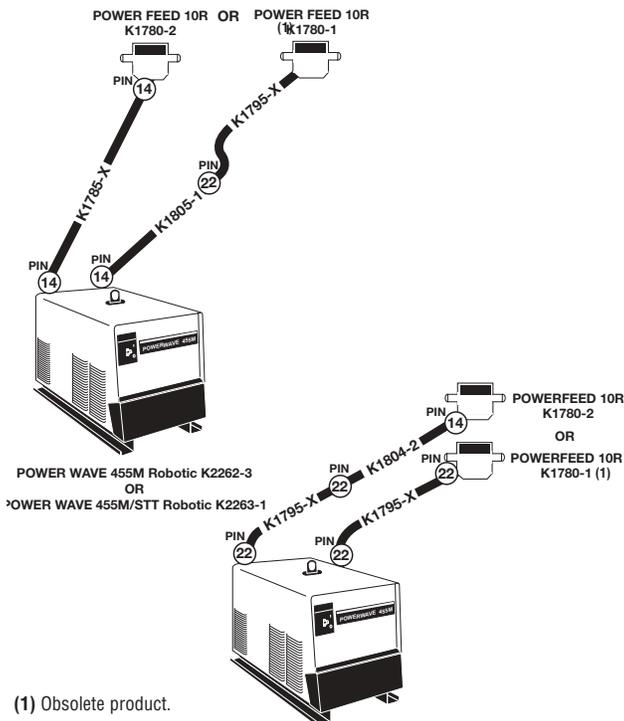
Description	Product Number
18 in. (0.45m)	K1785-2
12 ft. (3.6m)	K1785-12
16 ft. (4.8m)	K1785-16
25 ft. (7.6m)	K1785-25
50 ft. (15.2m)	K1785-50
100 ft. (30.4m)	K1785-100

CABLE ADAPTERS

Cable Adapter	Cable Length	Product Number
22-pin to 14-pin	10 ft. (3m)	K1804-1
	18 in. (0.45m)	K1804-2
14-pin to 22-pin	18 in. (0.45m)	K1805-1

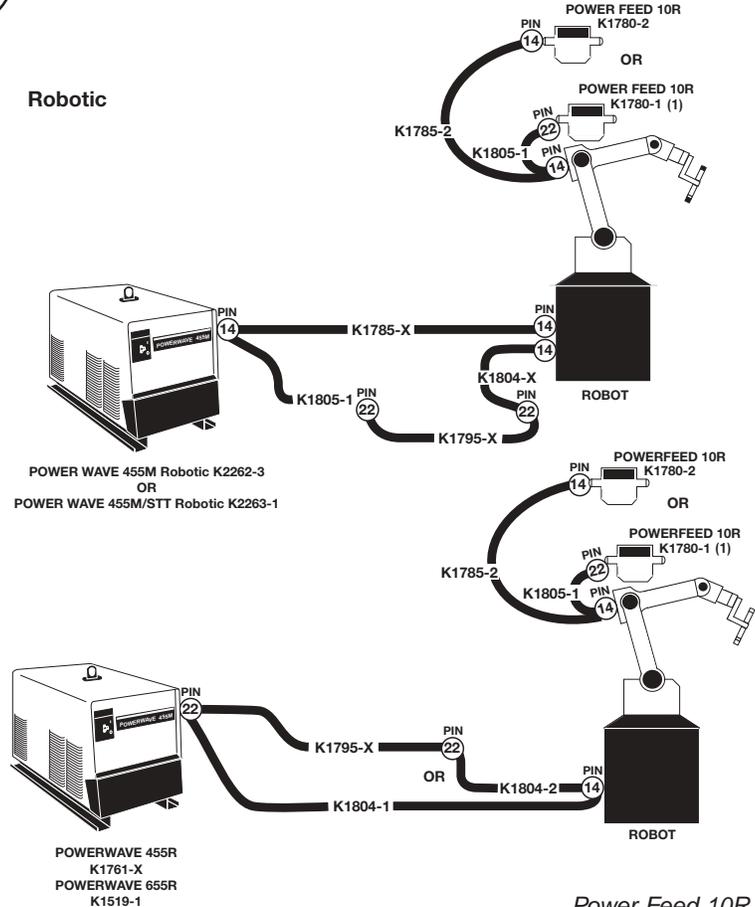
CABLE SELECTION

Hard Automation



(1) Obsolete product.

Robotic



LINCOLN[®]
ELECTRIC
THE WELDING EXPERTS

POWERWAVE 455R
K1761-X
POWERWAVE 655R
K1519-1

POWERWAVE 455R
K1761-X
POWERWAVE 655R
K1519-1

Power Feed 10R

GENERAL OPTIONS



Water Connection Kit

Consists of quick disconnect inlet and outlet fittings with water hose and clamps to be mounted on Power Feed 10R.

Order K590-7



Gun Bushings

Convert feedplate on Power Feed 10R to accommodate specific torches.

Order:

K1500-2 (Optional) Tweco® or Tregaskiss® Torches (standard on PowerFeed 10R)

K1500-1 Lincoln or D&F® Torches

K489-7 Binzel® or Lincoln Fast-Mate Torches



Incoming Conduit Bushings

Bushings connect directly to wire conduit for use in boom system, long distances or large payoff packages. Fits Lincoln Electric K515 conduit.

Order:

K1546-1 for .025-1/16" (0.6-1.6mm)

K1546-2 for 1/16-3/32" (1.6-2.4mm)

GENERAL OPTIONS CONT.



Wire Straightener

For Lincoln Electric 10 series wire feeders.

Order K1733-1

Magnum Low Drag Wire Conduit

Plastic wire conduits are for use with the Accu-Trak Drum Payoff Kit.

Order:

K515-15 for 15ft. (5m)

K515-25 for 25ft. (7.6m)

K515-50 for 50ft. (15m)



Accu-Trak Drum Payoff Kit

A payoff kit must be used with Accu-Trak drums to insure precise feeding.

Order:

K884-5 (20 in. drum)

K884-6 (23 in. drum)

POWER FEED 10R ORDER FORM

PRODUCT DESCRIPTION	ORDER NUMBER	QUANTITY	PRICE
POWER FEED 10R	K1780-2		
RECOMMENDED EQUIPMENT			
Power Wave F355i	Contact Lincoln Automation at 216.383.2667 for information		
Power Wave 455M Robotic	K2262-3		
Power Wave 455M/STT Robotic	K2263-1		
Power Wave 655R	K1519-1		
RECOMMENDED GENERAL OPTIONS			
Water Connection Kit	K590-7		
4 Drive Rolls and Split Wire Guide	See Chart on Page 4		
14-Pin to 14-Pin Control Cables	See Chart on Page 4		
Cable Adapters	See Chart on Page 4		
Gun Bushings			
Tweco® or Tregaskiss®	K1500-2 (Optional)		
Lincoln or D&F®	K1500-1		
Binzel or Lincoln Fast-Mate	K489-7		
Incoming Conduit Bushings			
.025-1/16 in. (0.6-1.6mm)	K1546-1		
1/16-3/32 in. (1.6-2.4mm)	K1546-2		
Wire Straightener	K1733-1		
Magnum Low Drag Wire Conduit			
15 ft. (5m)	K515-15		
25 ft. (7.6m)	K515-25		
50 ft. (15m)	K515-50		
Accu-Trak™ Drum Payoff Kit			
20 in. drum	K884-5		
23 in. drum	K884-6		
	TOTAL:		

CUSTOMER ASSISTANCE POLICY

The business of The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for advice or information about their use of our products. We respond to our customers based on the best information in our possession at that time. Lincoln Electric is not in a position to warrant or guarantee such advice, and assumes no liability, with respect to such information or advice. We expressly disclaim any warranty of any kind, including any warranty of fitness for any customer's particular purpose, with respect to such information or advice. As a matter of practical consideration, we also cannot assume any responsibility for updating or correcting any such information or advice once it has been given, nor does the provision of information or advice create, expand or alter any warranty with respect to the sale of our products.

Lincoln Electric is a responsible manufacturer, but 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 WELDING EXPERTS

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