

# LN-10 & DH-10 WIRE FEEDERS



Single & Double Header Wire Feeders

**LINCOLN**<sup>®</sup>  
**ELECTRIC**

THE WELDING EXPERTS

# LN-10 & DH-10 WIRE FEEDERS



The LN-10 and the Double Header DH-10 wire feeders are available in both bench and boom mounted versions. The unique and creative modular designs of the LN-10 and DH-10 give the system maximum versatility in today's demanding industrial welding environment.

The LN-10 and DH-10 bench models are ideal for mounting on top of the power source, onto a portable undercarriage, or hung from a jib crane or boom. The modular design of both wire feeders easily allows the user to remove the welding controls from the wire drive and wire reel stand. This permits mounting the welding controls onto a boom or welding fixture, next to or in the welding station, or placed securely by the power source. In addition, the wire reel stand can be separated from the

wire drive, allowing the customer to select any welding equipment configuration that best fits their manufacturing needs...today and in the future.

The LN-10 and DH-10 boom models are designed specifically for boom or fixture mounting directly from the factory.

## **ADVANTAGE LINCOLN**

- Designed for feeding solid steel, flux-cored, metal-cored, stainless steel, low alloy, high alloy, aluminum and hardfacing wires.
- Rugged 4 driven roll design for positive wire feeding.

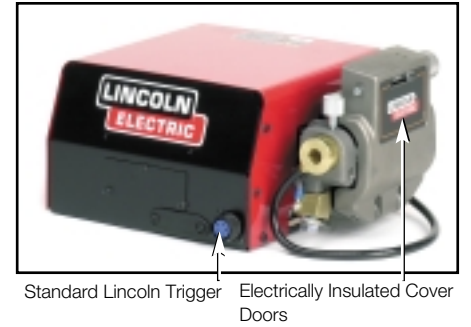
- 35-750 ipm wire feed speed range on standard speed models. 50-1250 ipm range on high speed models.
- Presettable voltage and wire feed speed using large control knobs allows easy adjustment with a gloved hand.
- Two large, easy to read digital meters allow operators and welding supervisors to monitor the welding process from a distance.
- Voltmeter "holds" reading of actual welding voltage for 5 seconds after welding has stopped. Lets operator verify true procedures without added helper.
- Standard dual procedure for both wire drives. Selectable at the control box unit, with the optional dual procedure switch, dual schedule Magnum gun, or with the optional dual procedure remote control.
- Cold feed forward and reverse controls for safe wire loading/unloading.
- Selectable trigger control for standard 2 step, interlocking 4 step, spot weld and cold feed trigger control (ideal for booms where cold wire feeding can be done at the gun trigger.)
- Five welding process control and timer functions:
  - preflow gas timer
  - run-in wfs/voltage control
  - spot weld timer
  - burnback control
  - postflow gas timer
- Low 42 volt AC power system meets worldwide IEC safety standards.
- Security features are available to lock or limit welding procedures.
- 3 year warranty on parts and labor.
- Manufactured under a quality system certified to ISO9001 requirements.

# A CLOSER LOOK

## Control Box (DH-10 shown)



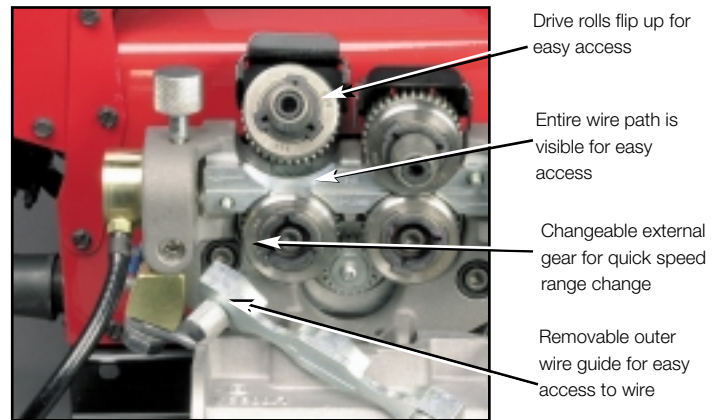
## LN-10 Wire Drive System



# NEW WIRE DRIVE

## ADVANTAGES & BENEFITS

- Four gear driven rolls on each wire drive. No tools needed to snap rolls on or off. Each roll has two grooves of the same size to double feed life. Saves time!
- Revolutionary split wire guide precisely aligns and supports wire through the entire system. Maximizes support and minimizes feeding problems.
- Two piece split wire guide construction provides easy access for inspection, cleaning or changing to different wire sizes.
- User can change external speed range gear quickly on the two different available gear boxes. Feeder can be low speed/high torque or high speed/fast acceleration.
- The standard speed model goes from 35-500 ipm with small pinion gear and 50-750 ipm with large pinion gear. The high speed model goes from 50-825 ipm with small pinion gear and 75-1250 ipm with the large pinion gear.
- Entire feed head can be removed for fast, easy servicing. Ideal for production shops where downtime must be minimized.
- Feed head assembly can rotate to minimize gun cable kinks and bends. Reduces gun stresses and liner wear while improving feedability.
- Each side of the DH-10 wire drive system is driven by its own motor and gear box.
- Incoming guide bushing system is designed to accept wire guides, straighteners or conduits used with larger pay off wire packages.
- Simple drive roll pressure knob with indicator bar.
- Rugged electrically insulated door protects drive system with simple positive locking.
- Gun receiver bushings provide lower cost adapters for Magnum or competitive guns. Easier interchangeability, better mechanical support and electrical current transfer.



### 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 responsive 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.

# TECHNICAL SPECIFICATIONS

Description (Head 1/Head 2)	Ordering Information	Wire Speed Range IPM (m/min)	Suggested Wire Size Range in. (mm)		Input	Net Weight	Dimensions H x W x D in. (mm)
			Solid	Cored			
LN-10 BENCH (Standard Speed)	K1559-3	<b>STANDARD SPEED</b> Low Gear 35-500 ipm	.023-3/32 <sup>(4)</sup> (0.6-2.4)	.035-.120 (0.9-3.0)	42 VAC 50/60 Hz	74 lbs. (33.6 kg)	16 x 15 x 31 <sup>(1)</sup> (406 x 381 x 787)
LN-10 BENCH (High Speed)	K1559-4						
DH-10 BENCH (Standard/Standard Speed)	K1499-3	<b>HIGH SPEED</b> Low Gear 50-825 ipm	.023-1/16 (0.6-1.6)	.035-5/64 (0.9-2.0)	42 VAC 50/60 Hz	116 lbs. (52.6 kg)	21 x 20 x 32 <sup>(1)</sup> (533 x 508 x 813)
DH-10 BENCH (Standard/High Speed)	K1499-4						

Description (Head 1/Head 2)	Ordering Information	Wire Speed Range IPM (m/min)	Suggested Wire Size Range in. (mm)		Input	Net Weight	Dimensions H x W x D in. (mm)			
			Solid	Cored						
<b>LN-10 BOOM MODELS:</b> 16 ft. Generic Boom (Standard Speed)	K1564-4	<b>STANDARD SPEED</b> Low Gear 35-500 ipm	.023-3/32 <sup>(4)</sup> (0.6-2.4)	.035-.120 (0.9-3.0)	42 VAC 50/60 Hz	68 lbs. (30.8 kg)	16 x 15 x 31 <sup>(2)</sup> (406 x 381 x 787)			
12 ft. Zipline Ready (Standard Speed)	K1564-5							High Gear 50-750 ipm	.023-1/16 (0.6-1.6)	.035-5/64 (0.9-2.0)
Control Box Only <sup>(3)</sup>	K1562-2	<b>HIGH SPEED</b> Low Gear 50-825 ipm	.023-1/16 (0.6-1.6)	.035-5/64 (0.9-2.0)	42 VAC 50/60 Hz	18 lbs. (8 kg)	15 x 14 x 4 (381 x 356 x 101)			
Wire Drive Only <sup>(3)</sup> (Standard Speed)	K1563-3					High Gear 75-1250 ipm	.023-.045 (0.6-1.2)	.035-.045 (0.9-1.2)	34 lbs. (15.4 kg)	8 x 15 x 13 (203 x 381 x 330)
Wire Drive Only <sup>(3)</sup> (High Speed)	K1563-4									
<b>DH-10 BOOM MODELS:</b> 16 ft. Boom Pkg. <sup>(2)</sup> (Standard/Standard Speed)	K1521-7	<b>STANDARD SPEED</b> Low Gear 35-500 ipm	.023-3/32 <sup>(4)</sup> (0.6-2.4)	.035-.120 (0.9-3.0)	42 VAC 50/60 Hz	68 lbs. (30.8 kg)	16 x 15 x 31 <sup>(2)</sup> (406 x 381 x 787)			
12 ft. Zipline Ready (Standard/Standard Speed)	K1521-8							High Gear 50-750 ipm	.023-1/16 (0.6-1.6)	.035-5/64 (0.9-2.0)
Control Box Only <sup>(3)</sup>	K1496-2	<b>HIGH SPEED</b> Low Gear 50-825 ipm	.023-1/16 (0.6-1.6)	.035-5/64 (0.9-2.0)	42 VAC 50/60 Hz	18 lbs. (8 kg)	15 x 14 x 4 (381 x 356 x 101)			
Wire Drive Only <sup>(3)</sup> (Standard/Standard Speed)	K1497-3					High Gear 75-1250 ipm	.023-.045 (0.6-1.2)	.035-.045 (0.9-1.2)	79 lbs. (35.83 kg)	8 x 18 x 11 (203 x 457 x 279)
Wire Drive Only <sup>(3)</sup> (Standard/High Speed)	K1497-4									

(1) Includes wire drive, control unit and wire reel stand.

(2) Includes wire drive, control unit, weld and control cables.

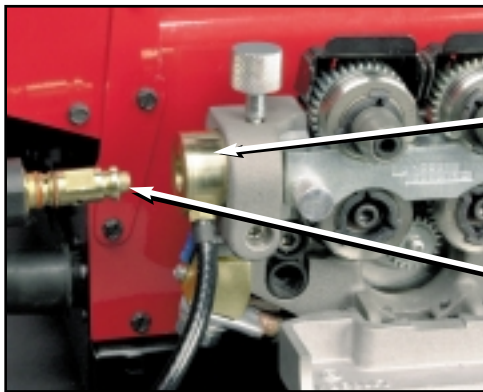
(3) Requires control cable for connection between control box and wire drive (See page 6 for details).

(4) Hand held submerged arc applications to 1/16" only

# FEED PLATE GUN RECEIVER BUSHINGS

One of the following Gun Receiver Bushings is required for connecting gun and cable assemblies to the feed plate.

K1500-1 Gun Receiver Bushing (Optional)	K1500-2 Gun Receiver Bushing <sup>(1)</sup> (Standard)	K1500-3 Gun Receiver Bushing (Optional)	K1500-4 Gun Receiver Bushing (Optional)	K489-7 Fast Mate Gun Receiver Bushing
<ul style="list-style-type: none"> <li>Magnum 200, 300 and 400 gun and cable assemblies with K466-1 connector kit.</li> <li>Lincoln Innershield® gun and cable assembly.</li> <li>Fast-Mate™ gun and cable assembly with K489-2 Fast-Mate Adapter Kit.</li> <li>Magnum 550 gun and cable assembly with K613-1.</li> </ul> 	<ul style="list-style-type: none"> <li>Magnum 200 and 400 fully assembled guns (K497-2X and K471-2X). See below.</li> <li>Magnum 200, 300 and 400 gun and cable assemblies with K466-10 connector kit.</li> <li>Guns with Tweco® #2, #3 and #4 connectors.</li> </ul> <p><sup>(1)</sup> This gun receiver bushing comes standard with each feed head.</p> 	<ul style="list-style-type: none"> <li>Magnum 550 gun and cable assembly with K613-7 connection.</li> <li>Guns with Tweco #5 connectors.</li> </ul> 	<ul style="list-style-type: none"> <li>Magnum 200, 300 and 400 gun and cable assemblies with K466-3 connector kit.</li> <li>Guns with Miller® connectors (for new, longer connectors).</li> </ul> 	<ul style="list-style-type: none"> <li>Magnum gun and cable assemblies with Fast Mate connectors.</li> <li>Handles both single and dual procedure guns.</li> </ul> 



Feed Plate Gun Receiver Bushing K1500-X.

K1500-2 comes standard with feed head (as shown).

Connector Kit for Magnum Guns (K466-2 or K613-7)

## MAGNUM® GUNS

The following guns come pre-assembled with liner and gun connector that is compatible with the Tweco #2-#4 gun receiver bushing (K1500-2). They connect directly to 10 Series Feeders. Gun cables are 15 ft. length:

K471-21	Magnum 400	.035-.045"
K471-22	Magnum 400	.052-1/16"
K471-23	Magnum 400	1/16-5/64"
K497-20	Magnum 200	.025-.030"
K497-21	Magnum 200	.035-.045"

# DRIVE ROLLS AND WIRE GUIDE KITS

Description	Ordering Information
<b>Solid Steel Wire, Smooth V Groove</b> .023-.030" (0.6-0.8mm) Solid .035" (0.9mm) Solid .040-.045" (1.0-1.2mm) Solid .052" (1.4mm) Solid 1/16" (1.6mm) Solid	KP1505-030S KP1505-035S KP1505-045S KP1505-052S KP1505-1/16S
<b>Cored Steel Wire, Knurled V Groove</b> .030-.035" (0.8-0.9mm) Cored .040-.045" (1.0-1.2mm) Cored .052" (1.4mm) Cored 1/16" (1.6mm) Cored 7/64" Hardfacing, (Knurled V Groove with Matching Smooth U Groove)	KP1505-035C KP1505-045C KP1505-052C KP1505-1/16C KP1505-7/64H

Description	Ordering Information
<b>Cored or Solid Steel Wire, Knurled V Groove</b> .068-.072" (1.8mm) 5/64" (2.0mm) 3/32" (2.4mm) 7/64" (2.8mm) cored .120" (3.2mm) cored	KP1505-068 KP1505-5/64 KP1505-3/32 KP1505-7/64 KP1505-120
<b>Aluminum Wire, Smooth U Groove</b> .035" (0.9mm) .040" (1.0mm) 3/64" (1.2mm) 1/16" (1.6mm) 3/32" (2.4mm)	Aluminum Aluminum Aluminum Aluminum Aluminum KP1507-035A KP1507-040A KP1507-3/64A KP1507-1/16A KP1507-3/32A



DH-10 AND LN-10 Double Groove Drive Rolls and Wire Guide

# CONTROL AND ELECTRODE POWER CABLES

## FOR CONNECTION BETWEEN POWER SOURCE AND WIRE FEEDER (Only one cable needed)

### 14 Pin Control Cable

14 pin MS-type connector. 10 (3.0m) length. **Order K1501-10**

### Control Cable Extensions (Do not extend LN-10 and DH-10 control cables over 110 ft.)

14-pin to 14-pin extension. For 25 ft. **Order K1797-25.**  
For 50 ft. **Order K1797-50.**

### Control Cable to Terminal Strip Adapter

Connects 14-pin control cable to power sources with terminal strip.  
**Order K1798.**

## FOR CONNECTION BETWEEN CONTROL BOX AND WIRE DRIVE - BOOM MODELS ONLY

### 14 Pin Control Cable/Stud Welding Cable

Rated 600 amps 60% duty cycle: 3/0 (85mm<sup>2</sup>) cable with lugs and 14 pin MS-type connector. 16 and 25 ft. (4.9 and 7.6m) lengths. **Order K1498-16 or -25.**

### 14 Pin Control Cable

14 pin MS-type connector. 12, 16 and 25 ft. (3.6, 4.9 and 7.6m) lengths.  
**Order K681-12,-16 or -25**

(Two control cables required for DH-10)

### Conversion of LN/DH-10 from bench to boom version.

MS-type connector for wire drive to allow use of K1498 or K681 control cable between control box and wire drive. **Order S13100-197.**

(Two control cables required for DH-10)

Not Required when wire drive and control box are ordered separately.

### Electrode and Work Weld Cables

Twist-Mate to Lug, 1/0, 350A, 60% duty cycle, 10 ft. **Order K1840-10.**

Twist-Mate to Twist-Mate Power Cable Extensions, 1/0, 350A, 60% duty cycle, 25 ft. **Order K1841-25.**

Twist-Mate to Twist-Mate Power Cable Extensions, 2/0, 350A, 60% duty cycle, 50 ft. **Order K1841-50.**

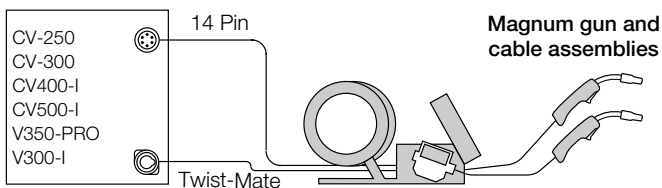
Lug to Lug, 3/0, 600A, 60% duty cycle, 10 ft. **Order K1842-10.**

Lug to Lug, 3/0, 600A, 60% duty cycle, 35 ft. **Order K1842-35.**

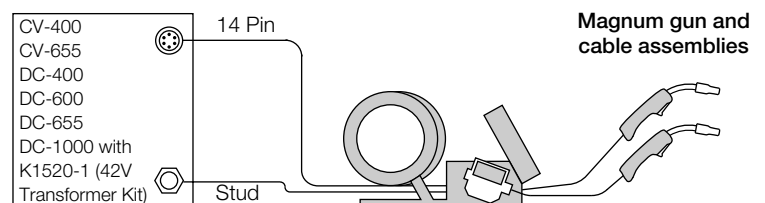
Lug to Lug, 3/0, 600A, 60% duty cycle, 60 ft. **Order K1842-60.**

Lug to Lug, 4/0, 600A, 60% duty cycle, 110 ft. **Order K1842-110.**

## SYSTEM SET-UP



**14 Pin Control Cable K1501-10**  
**Twist-Mate to Lug Power Cables, 2 Each, K1840-10**



**14 Pin Control Cable K1501-10**  
**Lug to Lug Power Cables, 2 Each, K1842-10**

# RECOMMENDED OPTIONS

## COIL ADAPTER

**60 lb. Coil Adapter**  
Adapts 60 lb. Lincoln coils of electrode to 2" (51mm) spindle.  
**Order K1504-1.**



## READI-REEL® ADAPTERS

**30 lb. (14 kg) Adapter**  
Adapts 22-30 lb. (10-14 kg) Lincoln Readi-Reel coils of electrode to 2" (51mm) spindle.  
**Order K363P.**



**60 lb. (27.2 kg) Adapter**  
Adapts 50-60 lb. (22.7-27.2 kg) Lincoln Readi-Reel coils of electrode to 2" (51mm) spindle.  
**Order K438.**

## SPINDLE ADAPTERS

**For 14 lb. (6 kg) Innershield® Coils**  
Permits 14 lb. (6 kg) Innershield electrode coils to be mounted on 2" (51mm) O.D. spindles.  
**Order K435.**

## Plastic Wire Cover

For 30-44 lb. (14 - 20 kg) wire packages. Protects wire from dust and dirt. **Order K1634-1.** For up to 60lb. packages **Order K1634-2.**

## 115V/42V Transformer Kit

Provides a way to use the LN-10 or DH-10 on power sources that have 115V AC available on terminal strip.  
**Order K1520-1.**



K1520-1

## Water Connection Kit

Includes fittings for use with water-cooled guns and Magnum Coolers. Kit provides for one gun.  
**Order K590-6.**

## Gas Guard Regulator

For CO<sub>2</sub> and Argon blend gases. Reduces surge caused by excess pressure in supply hose. Includes adjustable flow regulator with removable adjustor key. Kit provides for one gun. **Order K659-1.**

## Dual Procedure Switch

Allows the use of two welding procedures with one Lincoln Magnum gun connected to a LN-10 or DH-10. 15 ft. (7.6m). **Order K683-3.**



## Dual Procedure Remote Control Pendant

Contains voltage and wire feed speed control knobs for remote setting of procedures, and a switch to select between two procedures. **Order K1449-1.**



## Extension Cable for Pendant

For use with K1449-1.  
**12 ft., Order K1450-12.**  
**16 ft., Order K1450-16.**  
**20 ft., Order K1450-20.**  
**25 ft., Order K1450-25.**

## Remote Switch Interface Module

Single input/output switch module for each LN-10 and DH-10 wire drive. Allows for control of wire feeder and external devices. **Order K1558-1.**

## Feed Plate Incoming Bushing

Connects directly to Magnum plastic conduit (not included), for use in boom systems, long distances, or large pay-off packages.

**For .025-1/16" wire**

**Order K1546-1.**

**For 1/16-1/8" wire**

**Order K1546-2.**



## Caster Kit - Light Duty

Mounts to the wire reel stand on the LN-10. Allows for easy movement of the wire feeder. (For LN-10 only.)  
**Order K1556-1.**



## Insulated Lift Bail

Allows the entire wire feeder to be hung from a crane or hook. (For LN-10 only.)  
**Order 1555-1.**



K1555-1

## Swivel Platform

Mounts to the lift bail on the power source and bottom of the LN-10. Wire feeder may be lifted off if needed. Compatible with Light Duty Caster Kit. Includes "lazy susan" parts tray. (For LN-10 only.) **Order K1557-1.**



K1557-1

## Undercarriage

Includes mounting frame, front casters, rear wheels and handle for hand towing. (For LN-10 Only.) **Order K163.**



K163

## Inverter and Wire Feeder Cart

Rear-wheeled cart includes front casters and no-lift gas bottle platform. Convenient handles allow for easy cable storage while full length side trays store parts and tools. Shipped fully assembled. **Order K1764-1**  
**Dual Cylinder Kit Order K1702-1**



# LN-10 & DH-10 WIRE FEEDERS ORDER FORM

PRODUCT DESCRIPTION	ORDER NUMBER	QUANTITY	PRICE
LN-10 BENCH (Standard Speed)	K1559-3		
LN-10 BENCH (High Speed)	K1559-4		
DH-10 BENCH (Standard/Standard Speed)	K1499-3		
DH-10 BENCH (Standard/High Speed)	K1499-4		
<b>Power Sources</b>			
CV-250, CV-300, CV-400, CV-655, V350-PRO, DC-400, DC-600, DC-655	See corresponding literature		
Control Cable, 25' or 50'	K1501-10		
Control Cable Extensions	K1797-25, -50		
<b>Optional Features</b>			
Dual Procedure Remote Control Pendant	K1449-1		
Dual Procedure Switch	K683-3		
Remote Switch Interface Module	K1558-1		
Swivel Platform (For LN-10 only)	K1557-1		
Insulated Lift Bail (For LN-10 only)	K1555-1		
Caster Kit (For LN-10 only)	K1556-1		
Undercarriage (For LN-10 only)	K163		
Inverter and Wire Feeder Cart	K1764-1		
30 lb. (14 kg) Readi-Reel Adapter	K363P		
60 lb. (27.2 kg) Readi-Reel Adapter	K438		
60 lb. Coil Adapter - up to 2" (51 mm) spindle	K1504-1		
Spindle Adapter			
for 14 lb. (6 kg) Innershield coils	K435		
for small spools (10-12.5 lbs.)	K468		
Water Connection Kit	K590-6		
Gas Guard Regulator	K659-1		
115V/42V Transformer Kit	K1520-1		
Feedplate Incoming Bushing for conduit			
for .025 - 1/16" wire	K1546-1		
for 1/16" - 1/8" wire	K1546-2		
Plastic Wire Cover	K1634-1		
TOTAL:			

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THE LINCOLN ELECTRIC COMPANY

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**E8.200 6/01**

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