

INSTALLATION INSTRUCTIONS

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Date of Purchase:_____

Serial Number:_____

Code Number:_____

Model:_____

Where Purchased:_____

SAFETY

Follow all safety guidelines in your power source and feeder operators manuals and any additional guidelines covered in this manual.

GENERAL DESCRIPTION

The KP1682 series of drive roll kits are optimized to feed aluminum MIG wires with the following wire feeders:

<u>2-Roll Feeders</u>	<u>4-Roll Feeders</u>
LN-25	Synergic 7
LN-7	LN-7
LN-742	LN-742

The drive rolls are specifically designed to minimize any wire deformation while the mechanical clutch is specifically designed to prevent wire birdnesting by limiting the amount of feeding force on the wire.

The guide tubes are constructed of a high density plastic that supports the wire directly from the drive rolls yet does not scrape the wire.

Design features of the clutched drive roll system:

- The drive roll pressure is preset to obtain the correct feeding force without deforming the wire. Readjusting the idle roll tension may place too much force on the wire, thus deforming it. However, too little tension may allow the wire to slip at the drive rolls. We have preset the tension at the factory. No further adjustment should be necessary. (2-roll feeders ONLY)
- The clutch is designed to disengage before the wire can birdnest. The slip force is set according to the wire size. The spring tension is preset at the factory. No further adjustment should be necessary.
- The drive roll and idle roll are manufactured with a groove design that supports the wire without crushing it. We recommend that for every spool of wire, the rolls be removed and the grooves cleaned of any residual aluminum build up. An abrasive string works well. As residual aluminum builds up, the drive rolls will deform the wire and feeding performance will degrade.



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KIT SIZES & CONTENTS

The table and figures below list and illustrates the various K1682 series clutched aluminum drive roll kits for the various wire sizes. Included with each KP1682 series kit are the components needed for 2-roll and 4-roll feeders. Each kit includes the following items:

Drive Roll Kit		KP1682-035A	KP1682-1.0A	KP1682-3/64A	KP1682-1/16A
Metric Wire Size		0.9 mm	1.0 mm	1.2 mm	1.6 mm
English Wire Size		.035 in	.040 in	3/64 in (.047)	1/16 in (.063)
Included Items					
1	Clutch Bolt	S24474	S24474	S24474	S24474
2	Spring	T11862-59	T11862-59	T11862-59	T11862-59
3	Clutch Pad (Qty. 2)	S24475	S24475	S24475	S24475
4	Drive Roll	S24480-035A	S24480-1.0A	S24480-3/64A	S24480-1/16A
5	Outgoing Guide Tube	S24479-035A	S24479-3/64A	S24479-3/64A	S24479-1/16A
The following items are to be used for 2-roll operation only:					
6	Incoming Guide Tube	S21273-3/64	S21273-3/64	S21273-3/64	S21273-1/16
7	Idle Roll Arm Assembly	S16666-035A	S16666-1.0A	S16666-3/64A	S16666-1/16A
8	Quick Release Arm	M19287	M19287	M19287	M19287
9	Latch	S24299	S24299	S24299	S24299
10	Torsion Spring	S24300	S24300	S24300	S24300
11	Speed Clip	T10982-7	T10982-7	T10982-7	T10982-7
The following items are to be used for 4-roll operation only:					
12	Incoming Guide Tube	S21273-3/64F	S21273-3/64F	S21273-3/64F	S21273-1/16F
13	Idle Roll and Shaft Assembly	S24472-035A	S24472-1.0A	S24472-3/64A	S24472-1/16A
14	Middle Guide Tube	M17509-3/64	M17509-3/64	M17509-3/64	M17509-1/16

INSTALLATION INSTRUCTIONS (2-ROLL FEEDERS)

⚠ WARNING



ELECTRIC SHOCK Can Kill

- Only qualified persons should perform this installation.

- When inching the electrode, the drive mechanism and the electrode may be electrically "hot".
- The electrode cable that feeds the LN-25 may be electrically "hot" even when the system is not being used. Be sure to turn off the welding power source before changing drive rolls or guides.
- Cabinet feeders like the LN-25 are recommended to protect the wire from airborne dust. Dirt that accumulates on the wire can be forced into the feeder and welding gun creating feeding resistance. Maintaining a clean feeder and a clean wire supply will minimize feeding problems.

1. Turn off input power to the welding power source using the disconnect switch at the fuse box before installing the clutch drive system.
2. Remove the gun and cable, drive roll, and guide tubes from the feeder.
3. Remove the hex head screw, clamping collar, and key from the drive shaft. Save these parts as they will be required if this feeder is used for normal operation.
4. Clean and polish the feeder's drive shaft using a fine abrasive cloth (400 grit). The drive roll must be able to spin freely.
5. Remove the pressure arm by removing the hex head bolt from the gearbox. The bolt, pivot tube, and thin spacer will be required for the new tension arm. Remove these parts from the original tension arm. (See Figure 1).

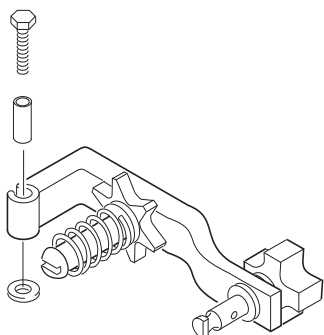


Figure 1

6. Remove the idle roll arm assembly by removing the retainer. Store for possible reuse. (See Figure 2).

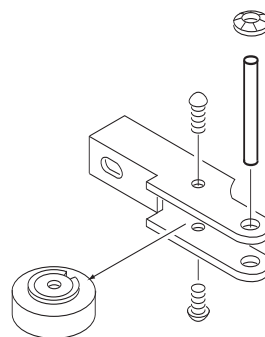


Figure 2

Note: All the parts that were removed from the feeder should be saved. These parts are required for normal operation. Now the system is ready to install all parts of the clutched drive roll system.

7. As shown in Figure 3, install the bottom clutch pad, the drive roll, the top clutch pad, and the spring & bolt to the feeder's drive shaft. **DO NOT OVERTIGHTEN THE BOLT.** Only snug it to secure the assembly. The proper tension is preset for the wire size and does not need adjustment. Make sure that the clutch material faces the drive roll.

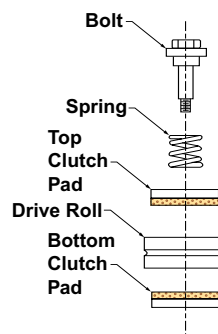


Figure 3

8. Install the short incoming guide tube and outgoing guide tube into their respective locations. Do not overtighten the thumb screws as they may damage the guide tubes.
9. Install the new idle roll assembly on the hinge pin. A retainer can be used but is not necessary.
10. Assemble the new quick release pressure arm to the gearbox using the bolt, pivot tube, and washer removed in Step 5. The idle roll tension is preset for optimum feeding of aluminum wires. No adjustment is necessary.
11. Install a new Magnum gun and cable with a fresh liner designed specifically for aluminum. Page 5 contains recommended liners and tips for standard Magnum guns.
12. Be certain that the guide tubes do not touch the drive roll or idle roll. If they do touch, readjust them and tighten in place.

INSTALLATION INSTRUCTIONS (4-ROLL FEEDERS)

⚠ WARNING



ELECTRIC SHOCK Can Kill

- Only qualified persons should perform this installation.

- When inching the electrode, the drive mechanism and the electrode may be electrically "hot".
- Dirt that accumulates on the wire can be forced into the feeder and welding gun creating feeding resistance. Maintaining a clean feeder and a clean wire supply will minimize feeding problems.

1. Turn off input power to the welding power source using the disconnect switch at the fuse box before installing the clutch drive system.
2. Remove the gun and cable, drive rolls, and guide tubes from the feeder.
3. Remove the hex head screw, clamping collar, and key from the drive shafts. Save these parts as they will be required if this feeder is used for normal operation.
4. Clean and polish the drive shaft on the outgoing side of the gearbox using a fine abrasive cloth (400 grit). The drive roll must be able to spin freely.
5. Remove both idle rolls from the swing arms by removing the pins and the socket head cap screws and washers on the top and bottom of the swing arms. Save the pins and hardware for later reuse. (See Figure 4).

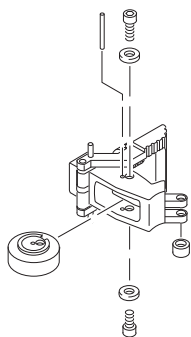


Figure 4

Note: All the parts that were removed from the feeder should be saved. These parts are required for normal operation. Now the system is ready to mount all parts of the clutched drive roll system.

6. As shown in Figure 5, mount the bottom clutch pad, the drive roll, the top clutch pad, and the spring/bolt assembly to the feeder's outgoing side drive shaft. **DO NOT OVERTIGHTEN THE BOLT.** Only snug it to secure the assembly. The proper tension is preset for the wire size and does not need adjustment. Make sure that the clutch material faces the drive roll.

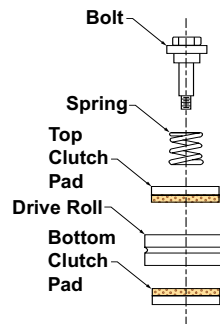


Figure 5

7. Mount the long incoming guide tube and the outgoing guide tube into their respective mounts. Do not overtighten the thumb screw as it may damage the guide tubes.
8. Install the grooved idle roll in the outgoing side swing arm using the pins and hardware from Step 5.
9. Mount a new Magnum gun and cable with a fresh liner designed specifically for aluminum. Page 5 contains recommended liners and tips for standard Magnum guns.
10. Be certain that the guide tube do not touch the drive roll or the idle roll. If they do touch, readjust them and tighten in place.

RECOMMENDED GUNS, LINERS and TIPS

The following are the various Magnum guns recommended for feeding aluminum when the appropriate liners and contact tips are installed .

MAGNUM 450WC WATER COOLED GUN

Complete guns set up for aluminum feeding:

K684-7 10 ft (3.0 meter) length, .035-3/64 (.9mm - 1.2mm) wire

K684-8 10 ft (3.0 meter) length, 1/16in (1.6 mm) wire

Aluminum Liners for 10 ft (3.0 meter) guns:

KP1958-1 (.030-.035 in, .8mm-.9mm) Black

KP1958-5 (.035-3/64 in, .9mm-1.2mm) Blue

KP1958-3 (1/16 in, 1.6mm) Red

Aluminum Liners for 15 ft (4.5 meter) and shorter guns:

KP1958-2 (.030-.035 in, .8mm-.9mm) Black

KP1958-6 (.035-3/64 in, .9mm-1.2mm) Blue

KP1958-4 (1/16 in, 1.6mm) Red

Aluminum Contact Tips:

KP2067-1B1 (.035 in, .9 mm)

KP2067-3B1 (.040 in, 1.0 mm)

KP2067-9B1 (3/64 in, 1.2 mm)

KP2067-7B1 (1/16 in, 1.6 mm)

MAGNUM 300, MAGNUM 300FM, MAGNUM 400, MAGNUM 400FM, MAGNUM 400DSFM GUNS

Aluminum Liners for 10 ft (3.0 meter) guns:

KP1958-1 (.030-.035 in, .8mm-.9mm) Black

KP1958-5 (.035-3/64 in, .9mm-1.2mm) Blue

KP1958-3 (1/16 in, 1.6mm) Red

Note: KP1955-1 and -2 liners can be used, but the KP1958 series is recommended.

Aluminum Liners for 15 ft (4.5 meter) and shorter guns:

KP1958-2 (.030-.035 in, .8mm-.9mm) Black

KP1958-6 (.035-3/64 in, .9mm-1.2mm) Blue

KP1958-4 (1/16 in, 1.6mm) Red

Note: KP1955-1 and -2 liners can be used, but the M18732 series is recommended.

Aluminum Contact Tips:

KP2010-4B1 (.035 in, .9 mm) Notched

KP2010-5B1 (3/64 in, 1.2 mm) Notched

KP2020-9B1 (3/64 in, 1.2 mm)

KP2021-7B1 (3/64 in, 1.2 mm) Heavy Duty

KP2021-8B1 (1/16 in, 1.6 mm) Heavy Duty

MAGNUM 200 AND MAGNUM 200FM GUNS

Aluminum Liners:

KP1955-1 (.035-3/64, .9mm-1.2mm)

Aluminum Contact Tips:

KP2010-4B1 (.035 in, .9 mm) Notched

KP2010-5B1 (3/64 in, 1.2 mm) Notched

KP2020-9B1 (3/64 in, 1.2 mm)

KP2021-7B1 (3/64 in, 1.2 mm) Heavy Duty



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