

DH-10 / ZIPLINE[®] BOOM PACKAGE

IM596-4

June, 1999

For use with "K" Sales Spec Numbers: **K1521-2**

K1521-3

K1521-5

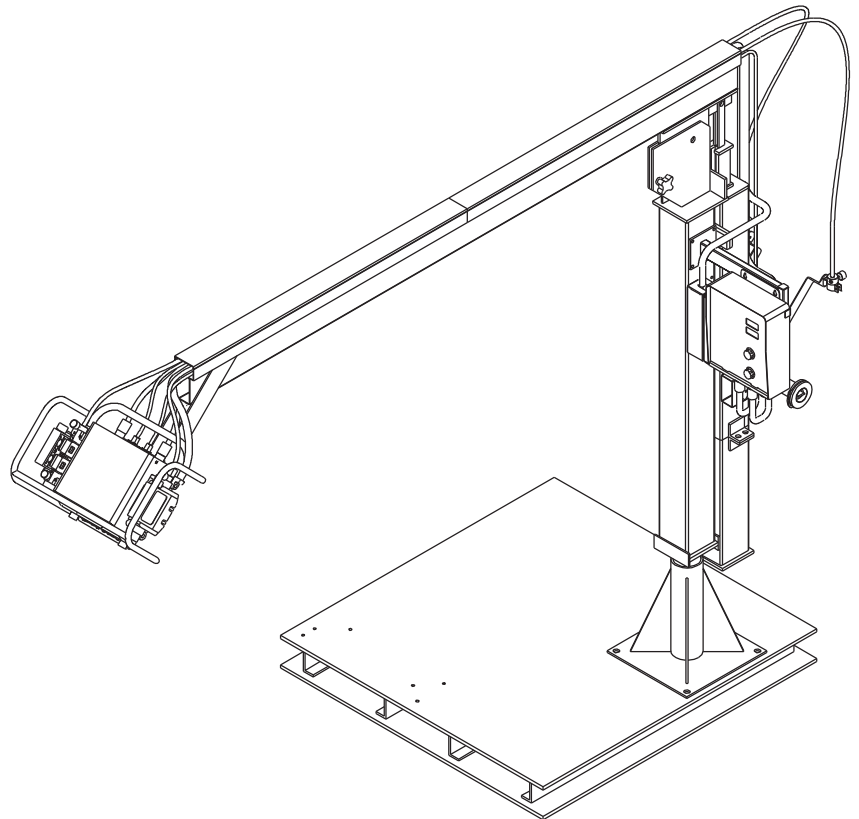
K1521-6



This manual covers equipment which is no longer in production by The Lincoln Electric Co. Specifications and availability of optional features may have changed.

Safety Depends on You

Lincoln arc welding and cutting equipment is designed and built with safety in mind. However, your overall safety can be increased by proper installation ... and thoughtful operation on your part. **DO NOT INSTALL, OPERATE OR REPAIR THIS EQUIPMENT WITHOUT READING THIS MANUAL AND THE SAFETY PRECAUTIONS CONTAINED THROUGHOUT.** And, most importantly, think before you act and be careful.



OPERATOR'S MANUAL

World's Leader in Welding and Cutting Products



Premier Manufacturer of Industrial Motors

• Sales and Service through Subsidiaries and Distributors Worldwide •

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⚠ WARNING

⚠ READ AND FOLLOW ALL WARNING INFORMATION IN THIS AND ALL OTHER MANUALS ⚠

⚠ WARNING**SPRING UNDER PRESSURE**

Release of spring pressure can cause serious personal injury and equipment damage.

- Do not remove spring rod shipping support until boom is completely assembled and all components are installed.
- Do not service or adjust spring pressure on boom without the spring rod shipping support securely installed.

⚠ WARNING**MOVING BOOM PARTS CAN CAUSE SERIOUS PERSONAL INJURY.**

- Keep hands away from spring rod clevis and swivel plates.

⚠ WARNING**FALLING BOOM CAN CAUSE SERIOUS PERSONAL INJURY AND EQUIPMENT DAMAGE.**

- Securely attach pallet base or pedestal to floor before operating boom arm.

⚠ WARNING**UNBALANCED BOOM CAN CAUSE SERIOUS PERSONAL INJURY AND EQUIPMENT DAMAGE.**

- Do not remove wire drive unit without the spring rod shipping support securely installed.

⚠ CAUTION

ONLY QUALIFIED PERSONNEL SHOULD INSTALL, USE OR SERVICE THIS EQUIPMENT.

READ AND FOLLOW THE MANUFACTURER'S INSTRUCTIONS AND YOUR EMPLOYER'S SAFETY PRACTICES.

Thank You — for selecting a **QUALITY** product by Lincoln Electric. We want you to take pride in operating this Lincoln Electric Company product •• as much pride as we have in bringing this product to you!

Please Examine Carton and Equipment For Damage Immediately

When this equipment is shipped, title passes to the purchaser upon receipt by the carrier. Consequently, Claims for material damaged in shipment must be made by the purchaser against the transportation company at the time the shipment is received.

Please record your equipment identification information below for future reference. This information can be found on your sales information.

Model Name and Sales SpecNumber (K-xxx) _____

Date of Purchase _____

Whenever you request replacement parts for or information on this equipment always supply the information you have recorded above.

Read this Operators Manual completely before attempting to use this equipment. Save this manual and keep it handy for quick reference. Pay particular attention to the safety instructions we have provided for your protection. The level of seriousness to be applied to each is explained below:

⚠ WARNING

This statement appears where the information **must** be followed **exactly** to avoid **serious personal injury** or **loss of life**.

⚠ CAUTION

This statement appears where the information **must** be followed to avoid **minor personal injury** or **damage to this equipment**.

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PRODUCT DESCRIPTION

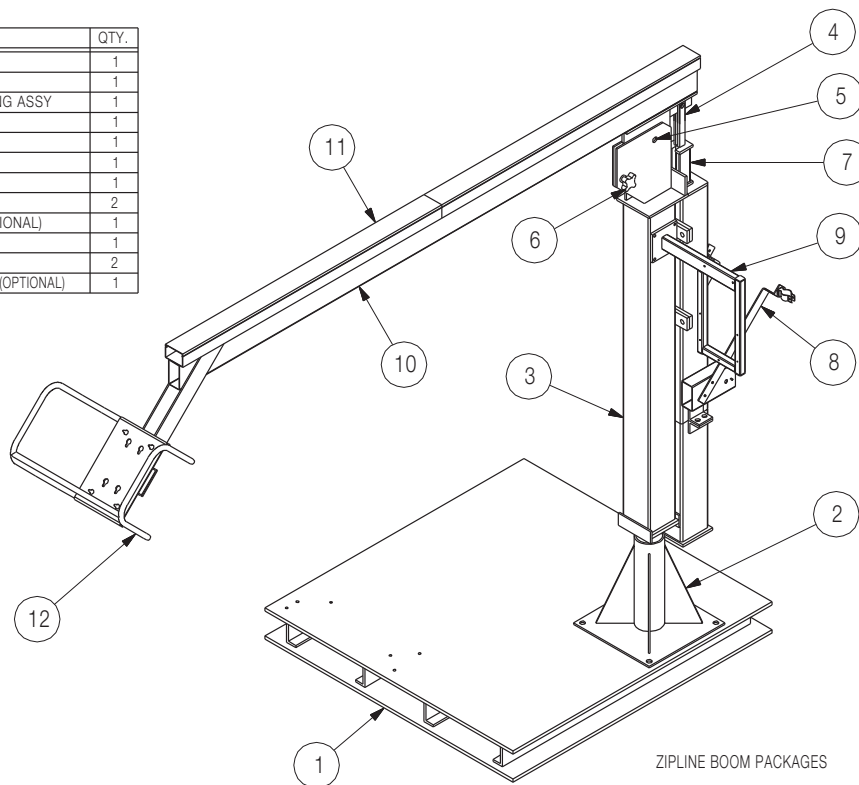
This wire feeder boom package comprised of Lincoln equipment will allow you to setup a boom welding system when used in conjunction with Zipline® boom products. This boom package includes everything you need from Lincoln to easily setup a standard 12 or 16 foot welding station using the Zipline boom product line.

You will need to purchase the boom and related products from Bird Machine and Repair, Inc., 100 Station St., Johnstown, PA. 15905, (814)288-3641, the manufacturer of the Zipline® boom product line.

The Lincoln boom package will include the following items:

- Wire Drive Assembly
- Control Box Assembly
- Electrode Weld Cables
- Control or Linc-Net Cables
- Gas Hoses
- Electrode Conduits
- 2" Spindle Assemblies
- Hardware Kit
- Conduit Bushing Kit
- Gun Control Plug Cable Assembly (1 per Head)
- Wire Feeder Instruction Manual
- Boom Package Instruction Manual

ITEM	DESCRIPTION	QTY.
1	PALLET BASE ASSEMBLY (OPTIONAL)	1
2	PEDESTAL ASSEMBLY	1
3	BOOM MAST & SPRING RETAINER HOUSING ASSY	1
4	SPRING ROD CLEVIS	1
5	MAIN SWIVEL PIN	1
6	FRICTION CONTROL KNOB	1
7	SPRING ROD SHIPPING SUPPORT	1
8	CONDUIT BUSHING BRACKET	2
9	CONTROL BOX SUPPORT ASSEMBLY (OPTIONAL)	1
10	BOOM ARM ASSEMBLY	1
11	CABLE & HOSE TROUGH	2
12	FEEDER MOUNT BRACKET & CAGE ASSEMBLY (OPTIONAL)	1



ZIPLINE BOOM PACKAGES

A

S24078

ZIPLINE BOOM MODELS

Both 12 and 16 foot boom length models are available from Zipline. Two different boom balancing designs are also available; a spring balanced boom model and a hydraulic boom model. The standard Zipline boom configurations are as follows:

- 12' Spring Balanced Zipline Boom
- 16' Spring Balanced Zipline Boom
- 12' Hydraulic Zipline Boom
- 16' Hydraulic Zipline Boom

The following items will be provided by Bird Machine and Repair Inc., the manufacturer of the Zipline boom product line:

- Pallet Base Assembly (optional)
- Pedestal Base Assembly
- Boom Mast
- Spring Retainer Housing or Hydraulic Device
- Boom Arm
- Cable and Hose Trough
- Conduit Bushing Bracket
- Provisions to Mount 2" Spindle Assembly
- Control Box Support Assembly (optional)
- Feeder Mount Bracket and Cage Assembly (optional)

See Figure A.1 for illustration of the Zipline products. See the following pages for illustrations of the Lincoln Products.

FIGURE A.1

DH-10 / ZIPLINE BOOM PACKAGE



RECOMMENDED WIRE FEEDER - POWER SOURCE COMBINATIONS

See the appropriate Dimension Print in Section B of this manual for details on the physical size of the equipment.

The Zipline booms have been designed to integrate with newer wire feeders and power sources. The following is a list of wire feeders and power sources that are compatible with the Zipline boom's pallet base, control box support and feeder mount bracket/cage assembly.

Wire Feeders	Power Sources
LN-10 DH-10	CV-250 CV-300-I CV-300 CV-400-I CV-400 CV-500-I CV-655 ** DC-250 DC-400 ** PP-500 ** DC-600 DC-655 ** DC-1000
PF-10	PW-455
STT-10	STT-II

** A K1520-1 115V/42V Transformer Kit is required with these power sources.

PRODUCT SPECIFICATIONS

Product Number	Product Description	Net Weight (lbs.)
K1521-2 or -5	DH-10 Boom Package - 12' Zipline Boom	105
K1521-3 or -6	DH-10 Boom Package - 16' Zipline Boom	118

K1521-2 DH-10 BOOM PACKAGE - 12' ZIPLINE BOOM
K1521-3 DH-10 BOOM PACKAGE - 16' ZIPLINE BOOM
K1521-5 DH-10 BOOM PACKAGE - 12' ZIPLINE BOOM (STANDARD/HIGH SPEED)
K1521-6 DH-10 BOOM PACKAGE - 16' ZIPLINE BOOM (STANDARD/HIGH SPEED)
INSTRUCTION MANUAL

REQUIRED TOOLS

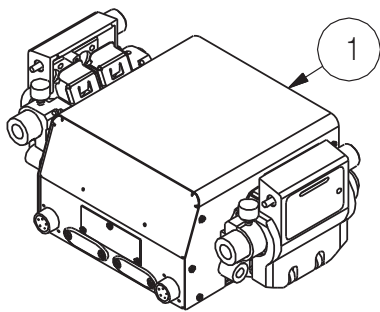
7/16" WRENCH
PHILLIPS HEAD SCREWDRIVER

11/16" WRENCH
1/2" WRENCH

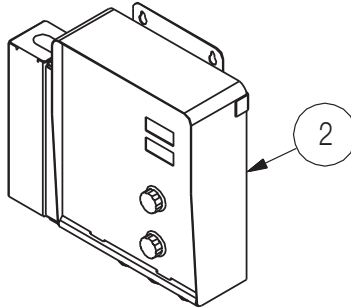
3/4" WRENCH
FLAT HEAD SCREWDRIVER

UNPACK THE BOOM PACKAGE
CHECK YOUR BOOM PACKAGE
FOR THE FOLLOWING:

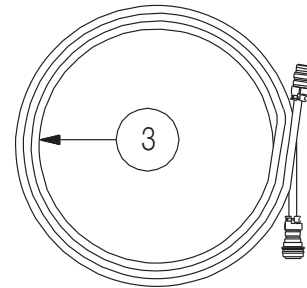
ITEM	K1521-2	K1521-3	K1521-5	K1521-6	DESCRIPTION	REQ'D
	PART NO.	PART NO.	PART NO.	PART NO.		
1	M17768-1		M17768-3		WIRE DRIVE ASSEMBLY	1
2	M17869-1				CONTROL BOX ASSEMBLY	1
3	L9776-C-18	L9776-C-22	L9776-C-18	L9776-C-22	CONTROL CABLE ASSEMBLY	2
4	M18298-2-10				POWER INPUT CABLE ASSEMBLY	1
5	CL012325	CL012326	CL012325	CL012326	ELECTRODE WELD CABLE	1
6	S18453-3				GAS HOSE	2
7	S20023-A-17	S20023-A-21	S20023-A-17	S20023-A-21	ELECTRODE CONDUIT	2
8	M14935-1				2" SPINDLE ASSEMBLY	2
9	S23858-5				HARDWARE KIT	1
10	S23859				CONDUIT BUSHING KIT	2
11	M15608				GUN CONTROL ASSEMBLY	2
12	L3326-171				BOOM PACKAGE INSTRUCTION MANUAL	1
13	L2213-507				WIRE FEEDER INSTRUCTION MANUAL	1



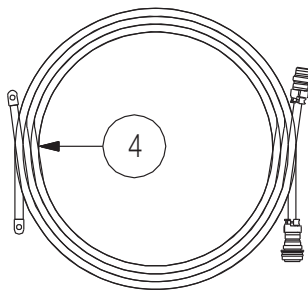
(1) WIRE DRIVE ASSEMBLY



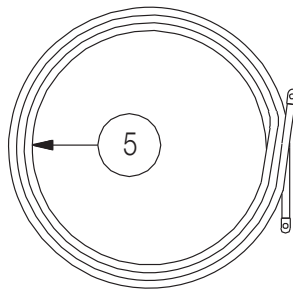
(1) CONTROL BOX ASSEMBLY



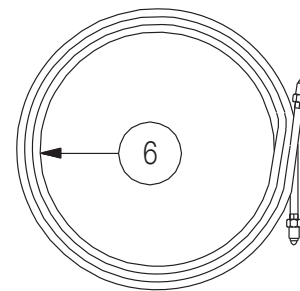
(2) CONTROL CABLE ASSEMBLY



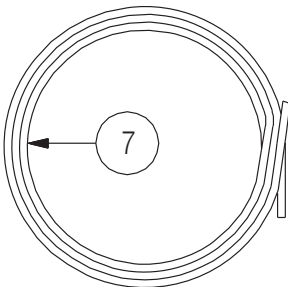
(1) POWER INPUT CABLE ASSEMBLY



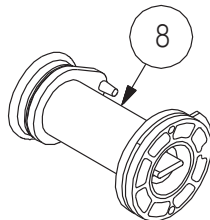
(1) ELECTRODE WELD CABLE



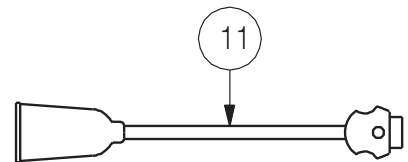
(2) GAS HOSE



(2) ELECTRODE CONDUIT



(2) 2" SPINDLE ASSEMBLY

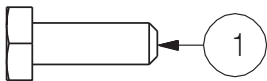


(2) GUN CONTROL ASSEMBLY

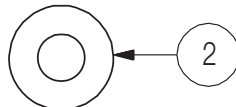
K1521-2 DH-10 BOOM PACKAGE - 12' ZIPLINE BOOM
K1521-3 DH-10 BOOM PACKAGE - 16' ZIPLINE BOOM
K1521-5 DH-10 BOOM PACKAGE - 12' ZIPLINE BOOM (STANDARD/HIGH SPEED)
K1521-6 DH-10 BOOM PACKAGE - 16' ZIPLINE BOOM (STANDARD/HIGH SPEED)
INSTRUCTION MANUAL

ITEM 9 S23858-5

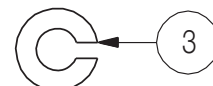
HARDWARE KIT				
ITEM	PART No.	DESCRIPTION	QTY.	
	1	CF000014	1/4-20X.75 HHCS-GR2	3
	2	S9262-98	PLAIN WASHER	3
	3	E106A-2	LOCKWASHER	3
	4	CF000040	5/16-18X.75HHCS-GR2	4
	5	S9262-30	PLAIN WASHER	4
	6	E106A-14	LOCKWASHER	4
	7	S9262-14	PLAIN WASHER	2
	8	T8833-64	1/2-13X3.00HHCS-GR8	2
	9	S9262-1	PLAIN WASHER	2
	10	E106A-15	LOCKWASHER	2
	11	T11563-2	1/8 ALLEN WRENCH	1
	12	T11563-3	3/16 ALLEN WRENCH	1
	13	M18223-1	LOW SPEED PINION	2



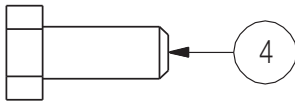
(3) 1/4-20X.75 HHCS-GR2



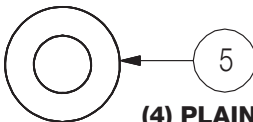
(3) PLAIN WASHER



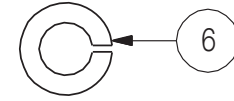
(3) LOCK WASHER



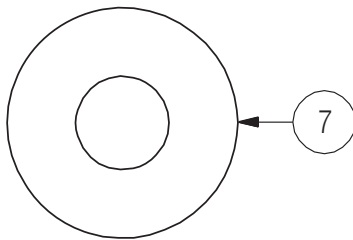
(4) 5/16-18X.75 HHCS-GR2



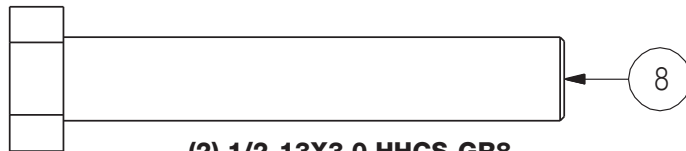
(4) PLAIN WASHER



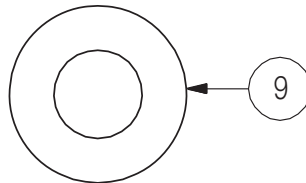
(4) LOCK WASHER



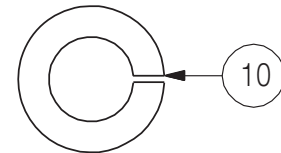
(2) PLAIN WASHER



(2) 1/2-13X3.0 HHCS-GR8



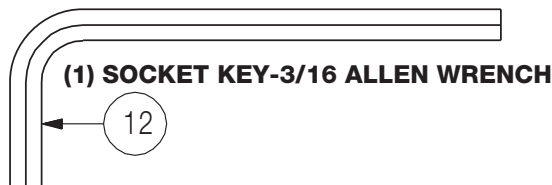
(2) PLAIN WASHER



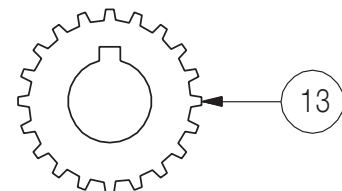
(2) LOCK WASHER



(1) SOCKET KEY-1/8 ALLEN WRENCH



(1) SOCKET KEY-3/16 ALLEN WRENCH



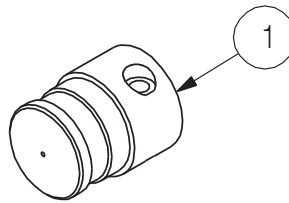
(2) LOW SPEED PINION

**K1521-2 DH-10 BOOM PACKAGE - 12' ZIPLINE BOOM
 K1521-3 DH-10 BOOM PACKAGE - 16' ZIPLINE BOOM
 K1521-5 DH-10 BOOM PACKAGE - 12' ZIPLINE BOOM (STANDARD/HIGH SPEED)
 K1521-6 DH-10 BOOM PACKAGE - 16' ZIPLINE BOOM (STANDARD/HIGH SPEED)
 INSTRUCTION MANUAL**

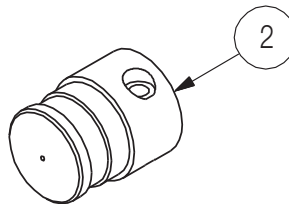
ITEM 10 S23859 (2 REQUIRED)

CONDUIT BUSHING KIT			
ITEM	PART No.	DESCRIPTION	QTY.
1	S23750-1	CONDUIT BUSHING (.025-.063)	2
2	S23750-2	CONDUIT BUSHING (.063-.125)	2
3	S22933	KNURLED KNOB ASSEMBLY	2

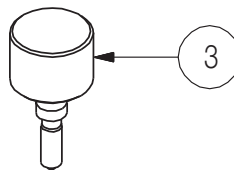
B-RW
S23859



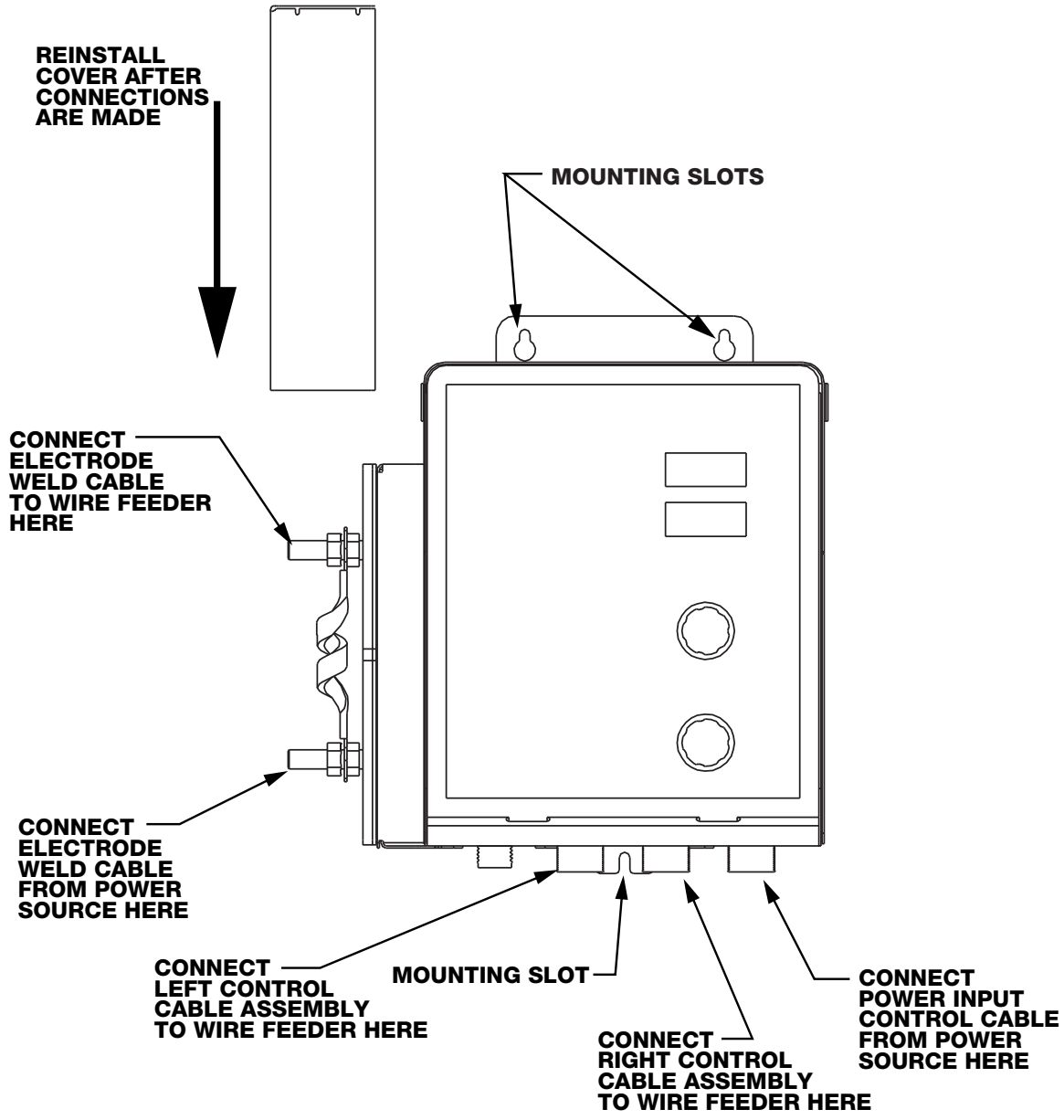
CONDUIT BUSHING (.025-.063)



CONDUIT BUSHING (.063-.125)



KNURLED KNOB ASSEMBLY



DH-10 CONTROL BOX ASSEMBLY

FRONT VIEW

INSTALLATION PROCEDURE

Assemble the Zipline boom according to the installation instructions provided with the boom. Next, install and assemble the wire feeder boom package as follows:

TOOLS REQUIRED

- 7/16" wrench
- 1/2" wrench
- 11/16" wrench
- 3/4" wrench
- Phillips head screwdriver
- Flat head screwdriver

INSTALL THE WIRE DRIVE ASSEMBLY

With a 1/2" wrench, install the wire drive assembly using the (4) 5/16-18 X .75 bolts and washers provided. Screw the bolts and washers partially into the bottom of the wire drive assembly before placing the wire drive assembly onto the feeder mount bracket & cage assembly. After the wire drive assembly is in place, completely tighten the bolts.

INSTALL THE CONTROL BOX ASSEMBLY

With a 7/16" wrench, install the control box assembly using the (3) 1/4-20 X.75 bolts and washers provided. Screw the bolts and washers partially into the control box support before placing the control box assembly onto the control box support. After the control box assembly is in place, completely tighten the bolts.

INSTALL THE POWER INPUT CABLE ASSEMBLY

With a 3/4" wrench, install the 10' power input cable assembly between the control box and the power source. This assembly includes a control cable fastened to a 3/0 weld cable. The pin end of the control cable assembly connects to the power source. The socket end of the control cable assembly connects to the control box assembly. Install the user provided electrode work cable between the power source and work piece. Tighten all connections completely to ensure a good electrical connection.

NOTE: The electrode weld cable provided with the power input cable assembly is rated for **600 amps @ 60 % duty cycle**. If operating above this rating, an additional cable should be used in parallel with the cable provided.

INSTALL THE ELECTRODE WELD CABLE

With a 3/4" wrench, install the single 3/0 electrode weld cable between the wire drive assembly and the control box assembly. The cable **MUST** be routed through the center of the boom arm steel tube. Tighten all connections completely to ensure a good electrical connection.

NOTE: The electrode weld cables provided with the wire feeder boom package is rated for **600 amps @ 60 % duty cycle**. If operating above this rating, an additional cable should be used in parallel with the cable provided.

INSTALL THE CONTROL CABLE ASSEMBLIES

Remove the trough cover on the top of the boom arm assembly. Install the cable assembly between the wire drive assembly and the control box assembly. The pin end of the cable assembly connects to the control box assembly. The socket end of the cable assembly connects to the wire drive assembly. Neatly place the cable in the trough and attach the cable to the control box support using the supplied cable hangers. Tighten all connections completely to ensure a good electrical connection. Repeat this step for the opposite side of your wire feeder.

INSTALL THE GAS HOSES

With an 11/16" wrench, install the (2) 25' gas hoses between the wire drive assembly and a gas supply connection. Neatly place the hoses in the trough. Tighten connections completely to ensure a good gas connection.

INSTALL THE CONDUIT BUSHINGS and ELECTRODE CONDUIT

With the provided 1/8" allen wrench, remove the incoming guide on the wire drive assembly. Two different size conduit bushings are provided in the conduit bushing kit, .025 to .063 and .063 to .125. Based on the wire used for your application, find two appropriate wire size conduit bushings. Install one of the conduit bushings where the incoming guide was. Install the second conduit bushing in the clamp on the conduit bushing bracket, located on the boom mast above the spindle mounting bracket. Install the electrode conduit between the two conduit bushings. Push the electrode conduit into the bushing until it stops. Screw the knurled knob assembly into each conduit bushing to securely hold the electrode conduit in place. Neatly place the conduit in the trough. Repeat this step for the opposite side wire feeder head. Re-install the trough cover.

INSTALL THE 2" SPINDLE ASSEMBLY

With a 3/4" wrench, install the 2" spindle assembly using the 1/2-13 x 3.00 bolt and washers provided. Place the larger washer into the spindle assembly before installation to the boom mast spindle bracket. Line up the small hole on the spindle assembly with the roll pin on the mast. After the 2" spindle assembly is in place, completely tighten the bolt. Repeat this step for the second spindle.

INSTALL THE GUN CONTROL PLUG CABLE ASSEMBLIES and THE GUN AND CABLE ASSEMBLIES

Install the provided gun control plug cable assemblies to the front of the wire drive assembly. Install the gun and cable assemblies per the instruction manual provided with the gun. Gun adapters may be required if using a Non-Lincoln gun.

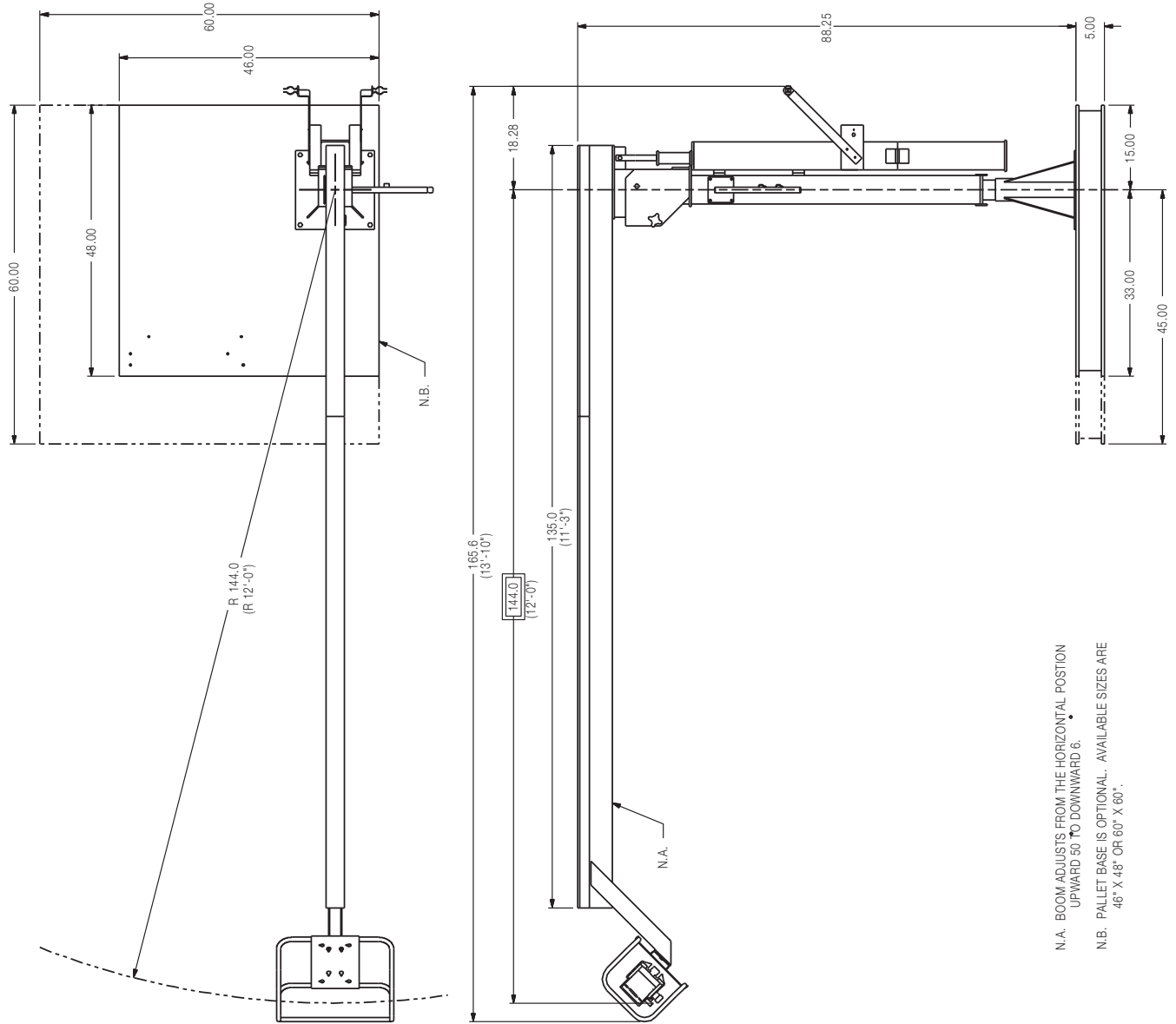
INSTALL THE WELDING POWER SOURCE

Install the welding power source per the instruction manual provided with the power source.

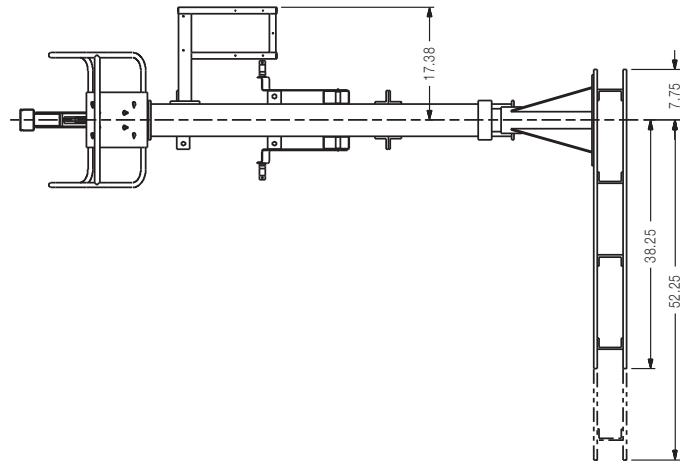
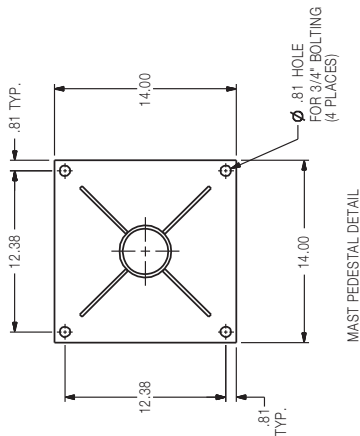
INSTALL THE WIRE REEL, DRIVE ROLLS AND GUIDES

Load the wire reel with a coil of wire so as to dereel off the side of the coil closest to the conduit bushing. Install the appropriate drive rolls and guides for your specific wire size application per the instruction manual provided with the wire feeder. Thread the wire through the entire length of conduit to the drive rolls to feed through the gun cable. Repeat this step for the opposite side of your wire feeder.

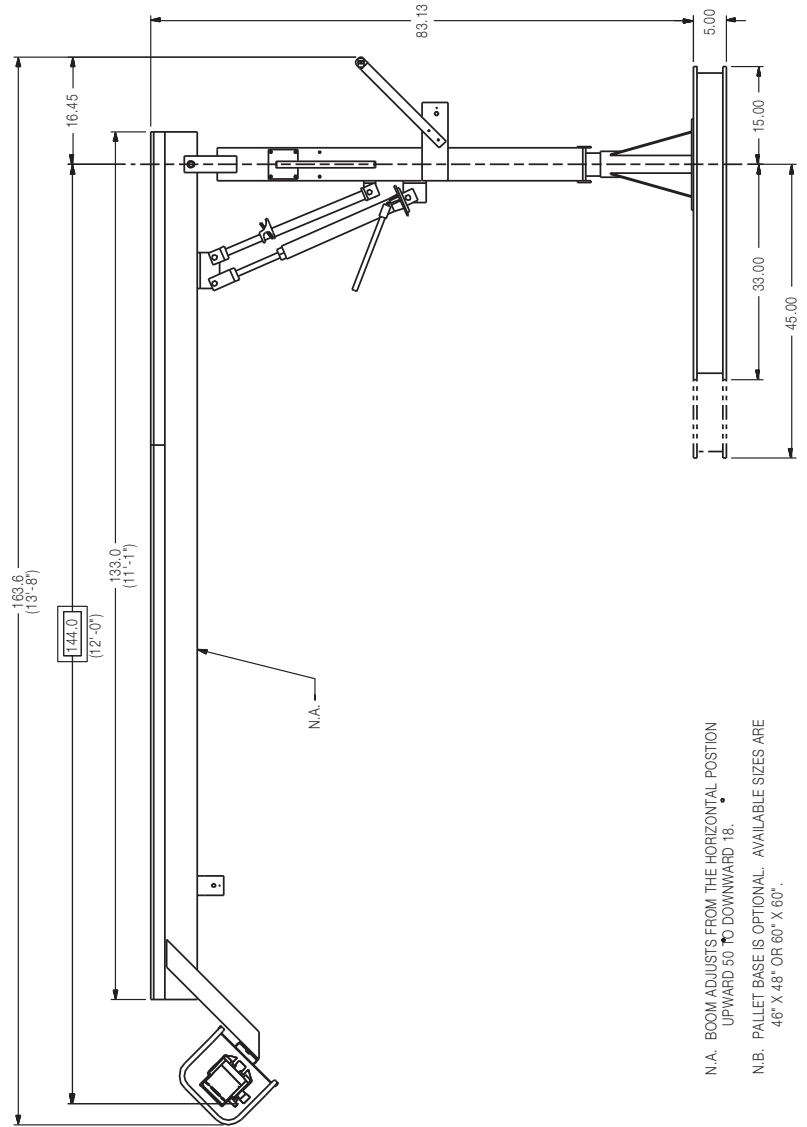
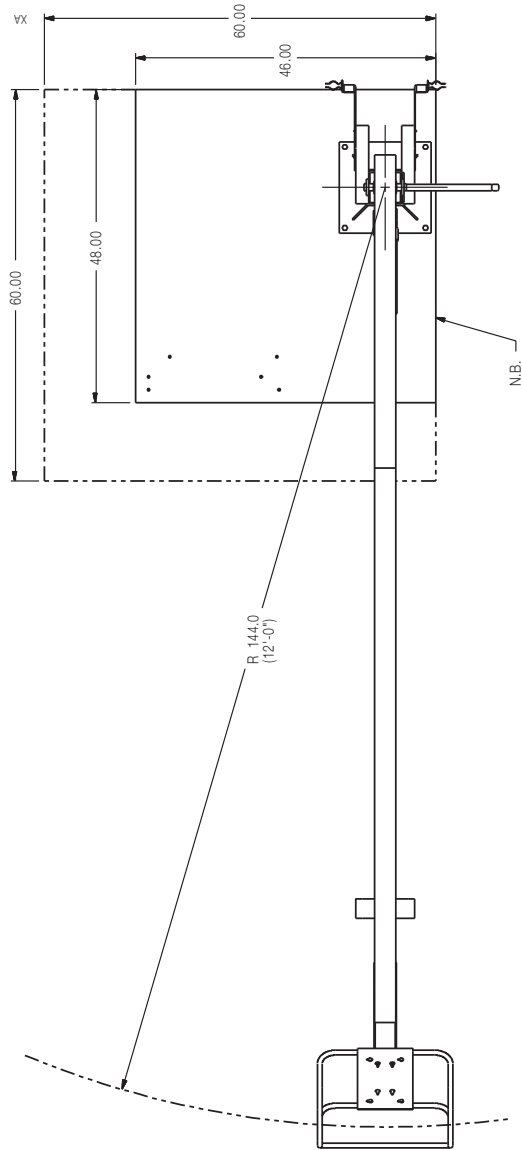
12 FT. SPRING BALANCED ZIPLINE BOOM ASSEMBLY



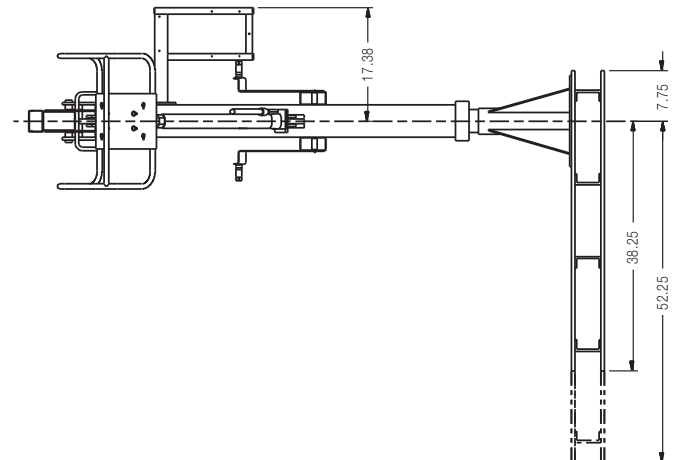
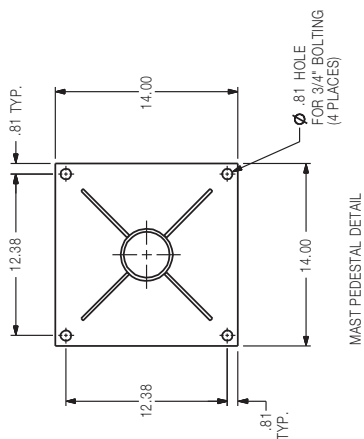
N.A. BOOM ADJUSTS FROM THE HORIZONTAL POSITION
UPWARD 50 TO DOWNWARD 6.
N.B. PALLET BASE IS OPTIONAL. AVAILABLE SIZES ARE
46" X 48" OR 60" X 60".



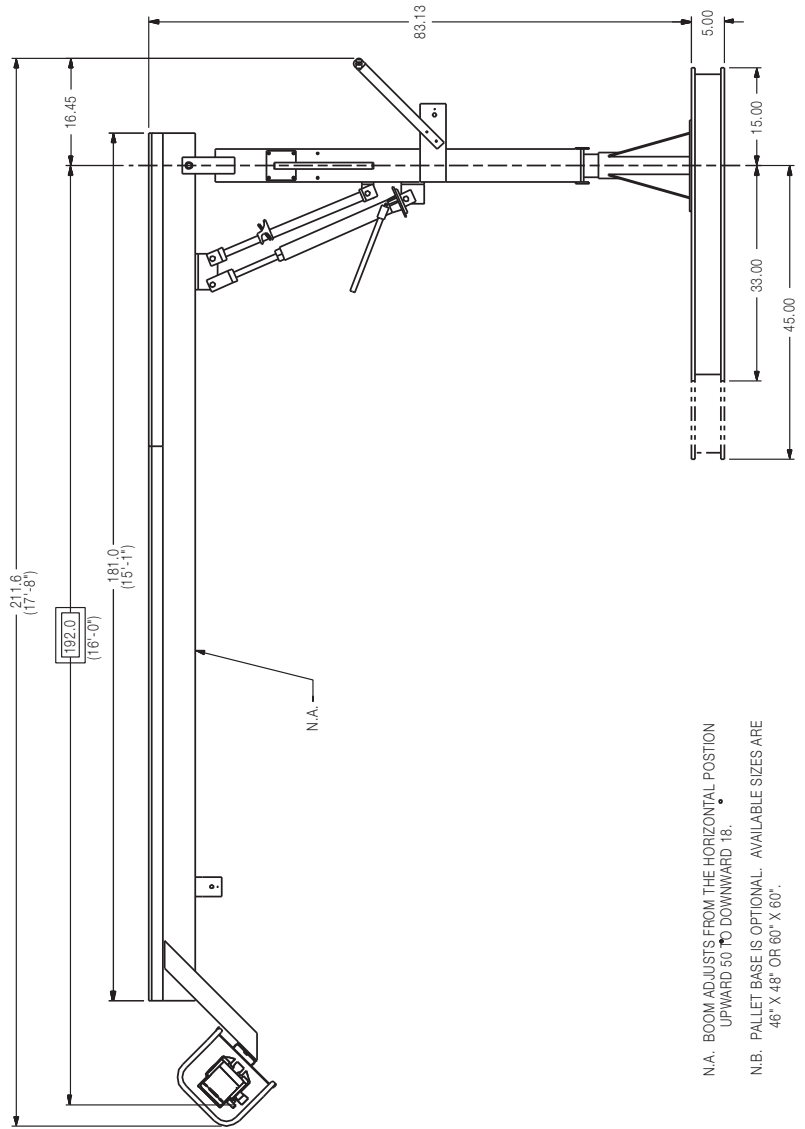
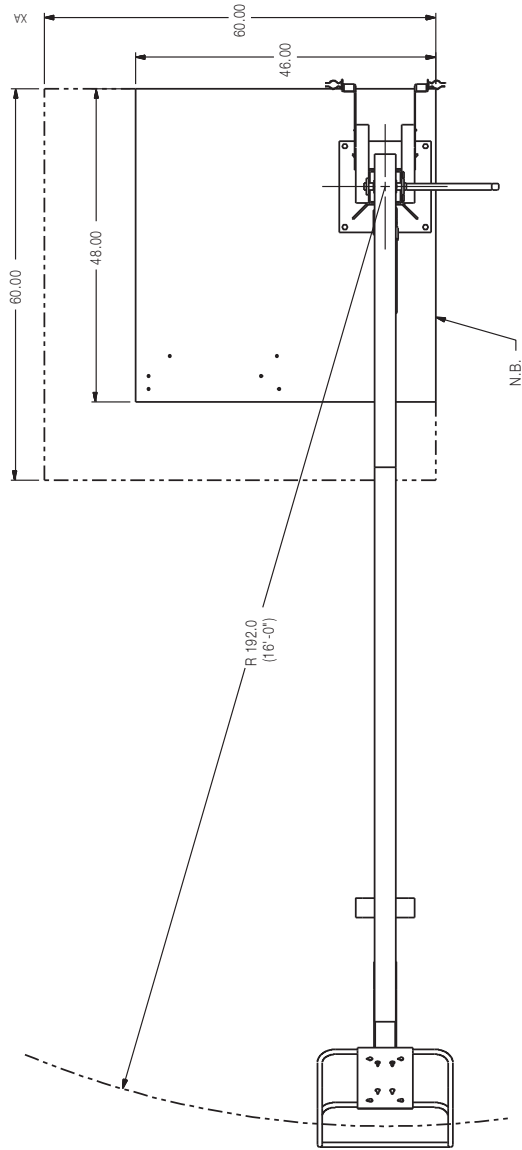
12 FT. HYDRAULIC ZIPLINE BOOM ASSEMBLY



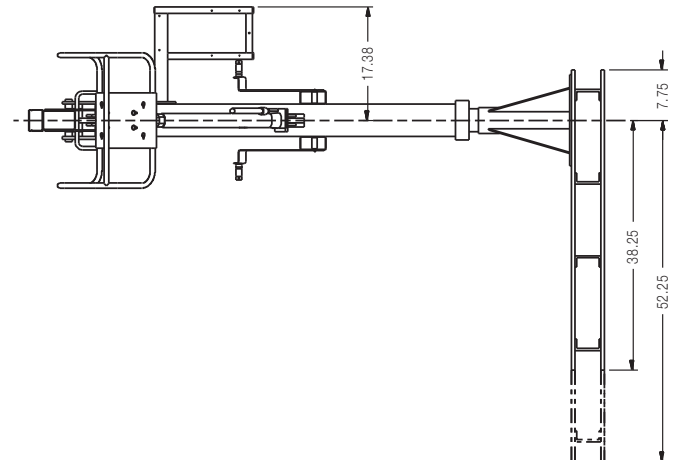
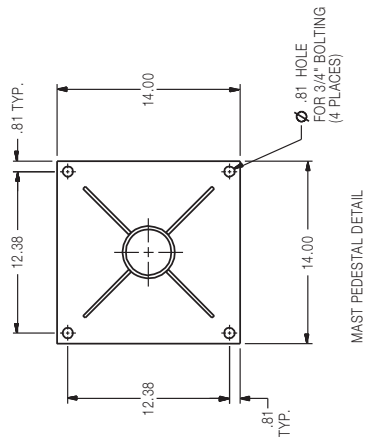
N.A. BOOM ADJUSTS FROM THE HORIZONTAL POSITION UPWARD 50 TO DOWNWARD 18.
 N.B. PALLET BASE IS OPTIONAL. AVAILABLE SIZES ARE 46" X 48" OR 60" X 60".



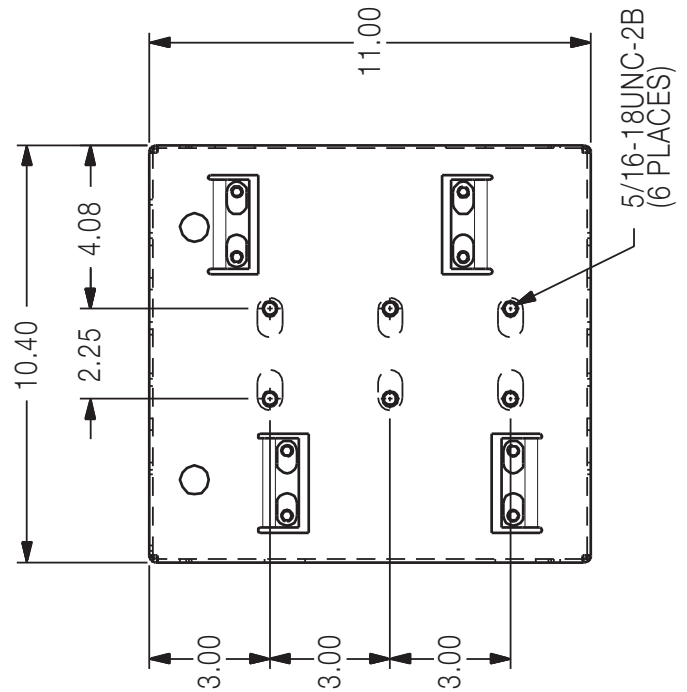
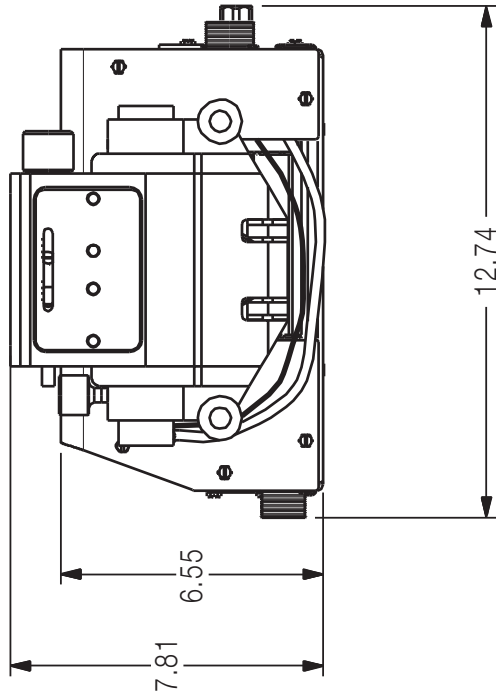
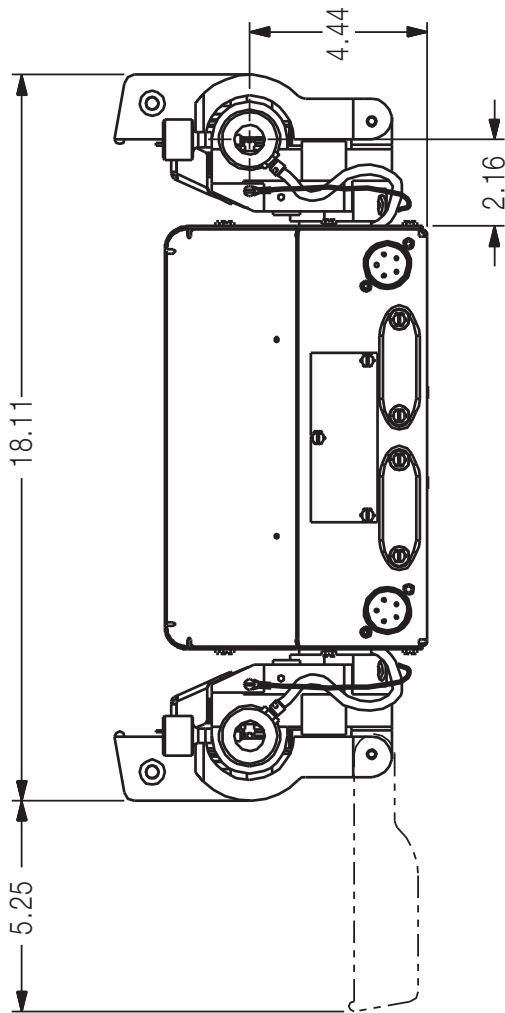
16 FT. HYDRAULIC ZIPLINE BOOM ASSEMBLY



N.A. BOOM ADJUSTS FROM THE HORIZONTAL POSITION UPWARD 50° TO DOWNWARD 18°.
N.B. PALLET BASE IS OPTIONAL. AVAILABLE SIZES ARE 46" X 48" OR 60" X 60".



WIRE DRIVE DIMENSION PRINT



5-2-97

M 18034

DH-10 / ZIPLINE BOOM PACKAGE



WARNING	<ul style="list-style-type: none"> Do not touch electrically live parts or electrode with skin or wet clothing. Insulate yourself from work and ground. 	<ul style="list-style-type: none"> Keep flammable materials away. 	<ul style="list-style-type: none"> Wear eye, ear and body protection.
Spanish AVISO DE PRECAUCION	<ul style="list-style-type: none"> No toque las partes o los electrodos bajo carga con la piel o ropa mojada. Aislese del trabajo y de la tierra. 	<ul style="list-style-type: none"> Mantenga el material combustible fuera del área de trabajo. 	<ul style="list-style-type: none"> Protéjase los ojos, los oídos y el cuerpo.
French ATTENTION	<ul style="list-style-type: none"> Ne laissez ni la peau ni des vêtements mouillés entrer en contact avec des pièces sous tension. Isolez-vous du travail et de la terre. 	<ul style="list-style-type: none"> Gardez à l'écart de tout matériel inflammable. 	<ul style="list-style-type: none"> Protégez vos yeux, vos oreilles et votre corps.
German WARNUNG	<ul style="list-style-type: none"> Berühren Sie keine stromführenden Teile oder Elektroden mit Ihrem Körper oder feuchter Kleidung! Isolieren Sie sich von den Elektroden und dem Erdboden! 	<ul style="list-style-type: none"> Entfernen Sie brennbares Material! 	<ul style="list-style-type: none"> Tragen Sie Augen-, Ohren- und Körperschutz!
Portuguese ATENÇÃO	<ul style="list-style-type: none"> Não toque partes elétricas e electrodos com a pele ou roupa molhada. Isole-se da peça e terra. 	<ul style="list-style-type: none"> Mantenha inflamáveis bem guardados. 	<ul style="list-style-type: none"> Use proteção para a vista, ouvido e corpo.
Japanese 注意事項	<ul style="list-style-type: none"> 通電中の電気部品、又は溶材にヒフやぬれた布で触れないこと。 施工物やアースから身体が絶縁されている様にして下さい。 	<ul style="list-style-type: none"> 燃えやすいものの側での溶接作業は絶対にしてはなりません。 	<ul style="list-style-type: none"> 目、耳及び身体に保護具をして下さい。
Chinese 警告	<ul style="list-style-type: none"> 皮肤或湿衣物切勿接触带电部件及焊条。 使你自已与地面和工作件绝缘。 	<ul style="list-style-type: none"> 把一切易燃物品移离工作场所。 	<ul style="list-style-type: none"> 佩戴眼、耳及身体劳动保护用具。
Korean 위험	<ul style="list-style-type: none"> 전도체나 용접봉을 젖은 형갑 또는 피부로 절대 접촉치 마십시오. 모재와 접지를 접촉치 마십시오. 	<ul style="list-style-type: none"> 인화성 물질을 접근시키지 마십시오. 	<ul style="list-style-type: none"> 눈, 귀와 몸에 보호장구를 착용하십시오.
Arabic تحذير	<ul style="list-style-type: none"> لا تلمس الاجزاء التي يسري فيها التيار الكهربائي أو الألكترود بجلد الجسم أو بالملابس المبللة بالماء. ضع عازلا على جسمك خلال العمل. 	<ul style="list-style-type: none"> ضع المواد القابلة للاشتعال في مكان بعيد. 	<ul style="list-style-type: none"> ضع أدوات وملابس واقية على عينيك وأذنيك وجسمك.

READ AND UNDERSTAND THE MANUFACTURER'S INSTRUCTION FOR THIS EQUIPMENT AND THE CONSUMABLES TO BE USED AND FOLLOW YOUR EMPLOYER'S SAFETY PRACTICES.

SE RECOMIENDA LEER Y ENTENDER LAS INSTRUCCIONES DEL FABRICANTE PARA EL USO DE ESTE EQUIPO Y LOS CONSUMIBLES QUE VA A UTILIZAR, SIGA LAS MEDIDAS DE SEGURIDAD DE SU SUPERVISOR.

LISEZ ET COMPRENEZ LES INSTRUCTIONS DU FABRICANT EN CE QUI REGARDE CET EQUIPMENT ET LES PRODUITS A ETRE EMPLOYES ET SUIVEZ LES PROCEDURES DE SECURITE DE VOTRE EMPLOYEUR.

LESEN SIE UND BEFOLGEN SIE DIE BETRIEBSANLEITUNG DER ANLAGE UND DEN ELEKTRODENEINSATZ DES HERSTELLERS. DIE UNFALLVERHÜTUNGSVORSCHRIFTEN DES ARBEITGEBERS SIND EBENFALLS ZU BEACHTEN.

			
<ul style="list-style-type: none"> ● Keep your head out of fumes. ● Use ventilation or exhaust to remove fumes from breathing zone. 	<ul style="list-style-type: none"> ● Turn power off before servicing. 	<ul style="list-style-type: none"> ● Do not operate with panel open or guards off. 	WARNING
<ul style="list-style-type: none"> ● Los humos fuera de la zona de respiración. ● Mantenga la cabeza fuera de los humos. Utilice ventilación o aspiración para gases. 	<ul style="list-style-type: none"> ● Desconectar el cable de alimentación de poder de la máquina antes de iniciar cualquier servicio. 	<ul style="list-style-type: none"> ● No operar con panel abierto o guardas quitadas. 	Spanish AVISO DE PRECAUCION
<ul style="list-style-type: none"> ● Gardez la tête à l'écart des fumées. ● Utilisez un ventilateur ou un aspirateur pour ôter les fumées des zones de travail. 	<ul style="list-style-type: none"> ● Débranchez le courant avant l'entretien. 	<ul style="list-style-type: none"> ● N'opérez pas avec les panneaux ouverts ou avec les dispositifs de protection enlevés. 	French ATTENTION
<ul style="list-style-type: none"> ● Vermeiden Sie das Einatmen von Schweißrauch! ● Sorgen Sie für gute Be- und Entlüftung des Arbeitsplatzes! 	<ul style="list-style-type: none"> ● Strom vor Wartungsarbeiten abschalten! (Netzstrom völlig öffnen; Maschine anhalten!) 	<ul style="list-style-type: none"> ● Anlage nie ohne Schutzgehäuse oder Innenschutzverkleidung in Betrieb setzen! 	German WARNUNG
<ul style="list-style-type: none"> ● Mantenha seu rosto da fumaça. ● Use ventilação e exaustão para remover fumo da zona respiratória. 	<ul style="list-style-type: none"> ● Não opere com as tampas removidas. ● Desligue a corrente antes de fazer serviço. ● Não toque as partes elétricas nuas. 	<ul style="list-style-type: none"> ● Mantenha-se afastado das partes moventes. ● Não opere com os painéis abertos ou guardas removidas. 	Portuguese ATENÇÃO
<ul style="list-style-type: none"> ● ヒュームから頭を離すようにして下さい。 ● 換気や排煙に十分留意して下さい。 	<ul style="list-style-type: none"> ● メンテナンス・サービスに取りかかる際には、まず電源スイッチを必ず切ってください。 	<ul style="list-style-type: none"> ● パネルやカバーを取り外したまま機械操作をしないで下さい。 	Japanese 注意事項
<ul style="list-style-type: none"> ● 頭部遠離煙霧。 ● 在呼吸區使用通風或排風器除煙。 	<ul style="list-style-type: none"> ● 維修前切斷電源。 	<ul style="list-style-type: none"> ● 儀表板打開或沒有安全罩時不準作業。 	Chinese 警告
<ul style="list-style-type: none"> ● 얼굴로부터 용접가스를 멀리하십시오. ● 호흡지역으로부터 용접가스를 제거하기 위해 가스제거기나 통풍기를 사용하십시오. 	<ul style="list-style-type: none"> ● 보수전에 전원을 차단하십시오. 	<ul style="list-style-type: none"> ● 판넬이 열린 상태로 작동치 마십시오. 	Korean 위험
<ul style="list-style-type: none"> ● ابعد رأسك بعيداً عن الدخان. ● استعمل التهوية أو جهاز ضغط الدخان للخارج لكي تبعد الدخان عن المنطقة التي تتنفس فيها. 	<ul style="list-style-type: none"> ● أقطع التيار الكهربائي قبل القيام بأية صيانة. 	<ul style="list-style-type: none"> ● لا تشغيل هذا الجهاز اذا كانت الاغطية الحديدية الواقية ليست عليه. 	Arabic تحذير

LEIA E COMPREENDA AS INSTRUÇÕES DO FABRICANTE PARA ESTE EQUIPAMENTO E AS PARTES DE USO, E SIGA AS PRÁTICAS DE SEGURANÇA DO EMPREGADOR.

使う機械や溶材のメーカーの指示書をよく読み、まず理解して下さい。そして貴社の安全規定に従って下さい。

請詳細閱讀並理解製造廠提供的說明以及應該使用的銀焊材料，並請遵守貴方的有閣勞動保護規定。

이 제품에 동봉된 작업지침서를 숙지하시고 귀사의 작업자 안전수칙을 준수하시기 바랍니다.

اقرأ بتمعن وافهم تعليمات المصنع المنتج لهذه المعدات والمواد قبل استعمالها واتبع تعليمات الوقاية لصاحب العمل.