

L J w e l d i n g . c o m

PRODUCT CATALOG 2021

WELDING AUTOMATION & MATERIAL HANDLING EQUIPMENT RENTAL • NEW • USED • CUSTOMIZED



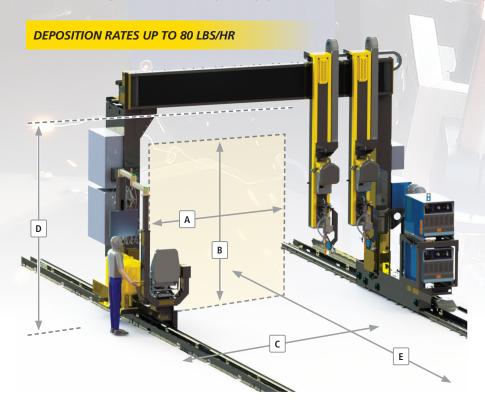
# Table of Contents

Welding Manipulators	3
Gantry Beam Welding Systems	
Column & Boom Manipulators	
Manipulator & Gantry Options	
MIG Welding Boom Mount	
Turning Rolls	8
Modular Alignment Rolls	
Pipe Double-Jointing: Faster, Safer, Easier!	
Growing Line	
Tank Fit Up Rolls	
Fixed Height Turning Rolls	
Vessel Turning Rolls – Height Adjustable	13
Pipe Rolls – Height Adjustable	14
Pipe Rolls – Height Adjustable & Benchtop	15
Pipe Stands	16
Modular Roller Support Stands	
Jack Stands & Tripods	
Welding Positioners	18
Gear Tilt Positioners	
Pipe Turning Positioners	
High Volume Pipe Spooling Cell	
Turnkey Welding Systems	
Powered Headstock Positioners	
Powered Height, Tilt & Rotate Positioners	
Portable & Benchtop Positioners	
Low Profile Turntables	
Positioner Accessories	26
Grippers & Chucks	26
Elbow Jigs	26
Automation & Controls	27
Controls Panels	27
Foot Switches	27
Hand Pendants	27
Automation Capabilities	27
Cable Reel Rollers	28
Pipeline Roller Equipment	29
Beam Clamp Rigging Rollers	30
Pipe Rigging Jacks & Hangers	31



# Gantry Beam Welding Systems

Gantry welding systems are used for longitudinal welding of long structural beams. Typically, two independent submerged arc welding systems are utilized to maximize productivity, complete with individual weld seam tracking, camera, and torch adjustability systems.



Dimensions A through E fully customizable

# Easy to Customize

LJ Welding's gantry systems are used for longitudinal welding of long structural beams and are built to order for every customer. Welding gantry systems come complete with two welding heads, weld seam tracking, camera systems and torch adjustability.

#### **CUSTOMIZE WORK AREA & FOOTPRINT**

- Working area width/height (A/B)
- Overall gantry width/height/rail length (C/D/E)

#### **CUSTOMIZE STANDARD FEATURES**

- Dual 1,000A sub-arc typically set up in twin or tandem wire mode, sized to customer requirements
- Seam tracking system choose mechanical (probe) or vision (laser)

#### **SELECT OPTIONAL FEATURES**

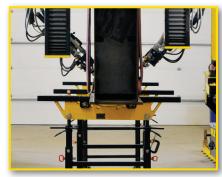
- ✓ Induction or flame preheat system
- ✓ MIG or CMT welding systems

Typical Max. Deposition Rates*			
Single Weld Head Dual Weld Head			
Single Wire Up to 25 lbs/hr		Up to 50 lbs/hr	
Tandem Wire Up to 40 lbs/hr Up to 80 lbs/hr			

<sup>\*</sup> Using 1,000 amp sub-arc power source.



Select HMI or custom control options, sub-arc or open arc camera systems, and probe or laser seam tracking systems.



Choose from a complete line of modular supports for structural steel, pipe and vessels up to 60 tons and more.



Specify onboard twin or tandem SAW, MIG or CMT configurations, flux delivery, recovery and heating systems.



# Column & Boom Manipulators

U engineers and manufactures manipulators with boom stiffness and welding head stability, operator controls, and ease of use as key driving factors. Automatic welding heads are designed to be mounted on a stiff and nearly vibrationless boom, and moved to desired height with powered column. The welding head can then be positioned as required for automated welding of large vessels or structural steel.

## **CUSTOM SIZES AVAILABLE**

Typical Max. Deposition Rates\*

Single Weld Head
Dual Weld Head
Single Wire
Up to 25 lbs/hr
Up to 50 lbs/hr
Tandem Wire
Up to 40 lbs/hr
Up to 80 lbs/hr







MNC4-100

MN6-100 6' x 6'

MN12-200 12' x 12'

SPECS	MNC4-100 4' x 4'	MNP-600 4' x 5'	MN6-100 6' x 6'	MN9-400 9' x 9'	MN12-200 12' x 12'	<b>MN16-100</b> 16' x 16'
Load Capacity (at Boom End):	250 lbs	250 lbs	500 lbs	500 lbs	500 lbs	250 lbs
Boom Stroke:	48"	42"	72"	108"	144"	192"
Column Stroke:	48"	58"	72"	108"	144"	192"
Power Requirements:	110V, 1-ph*	480V, 3-ph*	480V, 3-ph*	480V, 3-ph*	480V, 3-ph*	480V, 3-ph*
Equipment Mass**:	1,900 lbs	4,400 lbs	7,500 lbs	8,500 lbs	9,000 lbs	9,500 lbs

<sup>\* 208 - 600</sup>V, 50 or 60 Hz input power options available. Specifications subject to change; consult factory for all specifications. Equipment mass not including attachments. \*\* base machine weight

#### **Available Options**

Control platform (Joystick or fully integrated touchscreen options)

SAW or GMAW welding systems (Single, Twin, or Tandem wire)

Cold Wire TIG Systems

Powered cross slides (1 or 2 axis)

Weld Camera systems (SAW or Open Arc)

Seam Tracking (Vision/Laser or Tactile/Mechanical)

Travel Car (Powered or Manual)

Pre-heating system (Rolling Induction Heater)

Flux Recovery and delivery systems

Dual SAW or MIG/SAW set-ups

#### **Standard Features**

480Volt, 3Phase input power (Other voltages available)

Boom Traverse, Mast Traverse and Travel Car Speed: 5-120 in/min

Adjustable Rotation Stops (up to 355°)

Variable speed boom and column controls (in/out, up/down)





# **Manipulator & Gantry Options**





## Camera Systems

Subarc or open arc options; allows for easier set up of weld torch and safer viewing for operator throughout the welding process.





## Seam Tracking

Seam tracking for fully automated welding processes complete with simple user interface. Laser (vision) or tactile (mechanical probe) style options available.





## Powered Cross Slides & Joystick Controller

Standard 6" x 6" travel range and 200lb payload. Available with regular joystick, oscillation, or servo controls.



Double SAW custom weld head set-ups

Free standing or powered rail car options c/w safety shut off

bumpers

# **Control Options**

Optional user-friendly HMI touch screens to control all functions, and integrate any of LJ's material handling solutions (rolls, positioners, etc).



# **Power Sources**

LJ can integrate any welding process or power source, including submerged arc (SAW), MIG, or CMT processes.



Miller SubArc



Lincoln SubArc



Fronius CMT



Optional fully integrated rolling induction heating systems.



For subarc applications, any combination of flux delivery and recovery systems.





# MIG Welding Boom Mount

#### **EXTREME PRECISION AND WELD QUALITY**

Ideal for busy shops where floor space is limited, tripping hazards are a concern, and maximum operator on-arc time is required.

Manual GMAW (MIG) processes that are otherwise difficult to reach are made more convenient using LJ's innovative WSM-400 MIG welding boom. Often used as a standalone process, or as a convenient root weld pass system for heavy wall tanks or vessels prior to submerged arc fill passes.

# RIGID CONSTRUCTION AND UNBENDING RELIABILITY AT YOUR SHOP OR JOB SITE

LJ's WSM-400 MIG welding booms are chosen for their:

- ✓ Boom & column resistance from adjustable drag brakes
- ✓ Smooth motion from tapered roller bearings
- Customizable boom end mounts using two rotating equipment platforms
- ✓ Total coverage double articulated boom ensures no dead zones in your work area while optimizing limited floor space

## POPULAR FOR MANUFACTURING IN:

- √ Tank and vessel construction
- ✓ Trailer and railcar fabrication
- ✓ Wind tower fabrication
- ✓ Mining equipment
- ✓ Pipeline fitups



5

WELDING

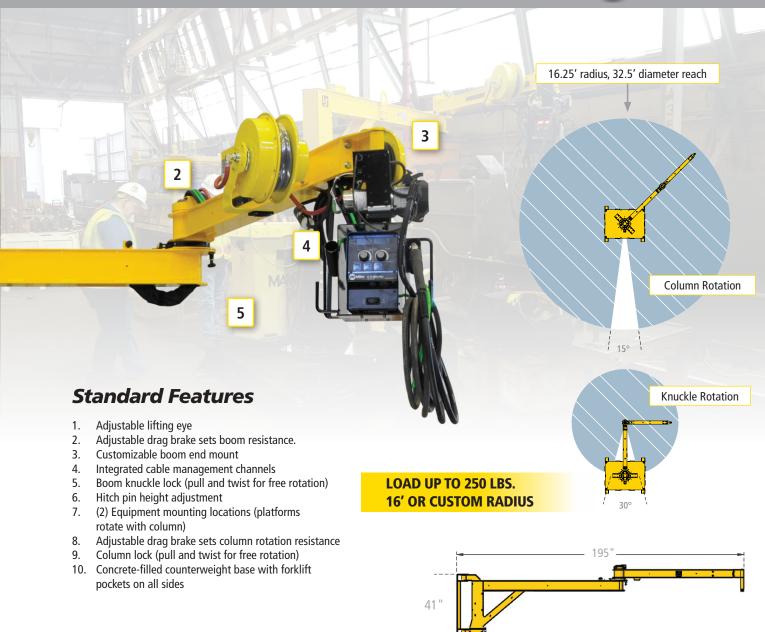
#### **CUSTOMIZE YOUR WELDING JIB**

- ✓ 110V power
- ✓ Air hose
- ✓ Grinder holster
- ✓ Wire Feed Controller
- ✓ Optional turntable for wire drum
- ✓ Optional rail mount
- ✓ Integrates with any welding power source
- ✓ Optional shield gas bottle rack









SPECIFICATIONS	WSM-400
Area Coverage:*	16' or custom size
Max. Working Height:	120"
Vertical Adjustment:	Up to 32"
Max. Boom Reach:	195"(16.25')
Base Dimensions:	66"-66"
Approx. Shipping Weight**:	5,100 lbs

<sup>\*</sup> May be customized to your requirements. \*\* Base machine weight only, not including welding gear.

# **Wall Mount Option**

SPECIFICATIONS	WSM-200WM
Capacity:	250 lbs
Working Length:	195"

Automate with an LJ welding positioner or turning roll set for optimum productivity





SPECIFICATIONS	10TMR-100	10TMR-GL-100	20TSR-100/200
	Modular Pipe Alignment	Tank & Vessel Modular	Pipe Alignment Rolls
	Rolls 10-Ton	Alignment Rolls 10-Ton	20-Ton
Load Capacity:	Driver: 10,000 lbs	Driver: 10,000 lbs	Driver: 20,000 lbs
	Idler: 10,000 lbs	Idler: 10,000 lbs	Idler: 20,000 lbs
Vessel Diameter Range:	6"-96"	6"-96"	6"-60"
Tractive Effort:	Dual Drive, 3,400 lbs	Dual Drive, 2,400 lbs	Single Drive 5,700 lbs
Output Torque:	17,000 in-lbs	Tractive 12,000 in-lbs	40,000 in-lbs
Power Requirements:	110V, 1-ph*	480V, 3-ph*	480V, 3-ph*
Rotation Speed:	5-50 in/min	8-70 in/min	0-80 in/min

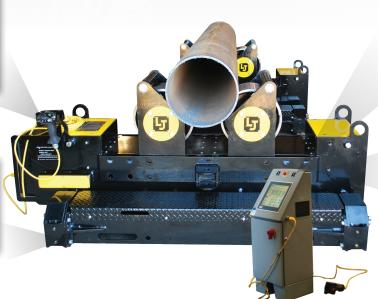
<sup>\* 208 - 600</sup>V, 50 or 60 Hz input power options available. Specifications subject to change; consult factory for all specifications.



Cabled or wireless hand pendant with or without digital readout.



Rail-mount base can be supplied as motorized or non-motorized for driving pipe sections together.





Easy to use HMI touchscreen to control hydraulic jacking, alignment, indexing/track drive, and powered rotation.



Variable speed and bidirectional controls for rotation, alignment, leveling and/or rail mount drive.



# Pipe Double-Jointing: Faster, Safer, Easier!

LJ responded to customer demand and now offers turnkey pipe joining systems, for maximum productivity and safety. Complete pipe handling and welding automation functionality is fully integrated into a single user-friendly system. The result is up to a 65% decrease in cycle times for double-jointing and pipe welding applications.



# **Fully Automated Pipe Joining Systems**



Pipe loaded, lined up using track drive.



Alignment, side shift, and leveling functionality.



Available with fully integrated subarc manipulators or robotic welding systems.



Optional Tailstock system available for adding flanges or end caps.



# **Growing Line**

LJ specializes in an innovative growing line system used for fast alignment, leveling, fit up and indexing of large pipe and vessels up to 80 tons and 20 ft diameter or more. Growing lines can reduce fit up time by up to 65% when compared with traditional methods, minimize crane handling and maximize operator safety.

MINIMIZE CRANES & REDUCE FIT UP TIMES BY UP TO 65%





Easy to use HMI touchscreen to control hydraulic jacking, alignment, indexing/track drive, and powered rotation.



Cabled or wireless pendants plug and play with main control console to any operator preference.

SPECIFICATIONS	<b>40TA-100</b> Growing Line	<b>60TA-100</b> Growing Line	100TA-100 Growing Line
Load Capacity:	80,000 lbs	120,000 lbs	200,000 lbs
Diameter Range:	24"- 216"	24"- 216"	66" - 240"
Minimum Workpiece Length:	72"	72"	72"
Rotation Speed:	5-50 in/min	5-50 in/min	5-100 in/min
Track Drive Speed:	12-120 in/min	12-120 in/min	12-120 in/min
Input Power:	480V, 3-ph*	480V, 3-ph*	480V, 3-ph*

<sup>\* 208 - 600</sup>V, 50 or 60 Hz input power options available. Specifications subject to change; consult factory for all specifications.



Each section loaded onto rolls.



Sections brought together using powered track drive.



Alignment, leveling and high/lows easily adjustable using pendant or touch screen control.



Ready for fit up and/or automated welding, then index for next section to be added.



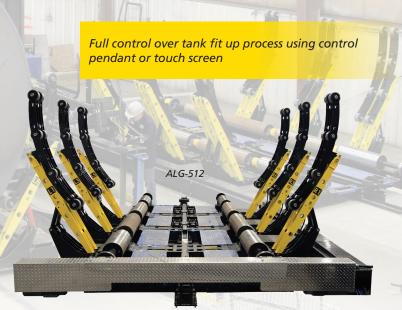
# Tank Fit Up Rolls

For fit up of thin walled or difficult to handle tanks where extra lateral support, alignment and line up of tank sections is required.

#### Benefits include:

- √ Fast & easy addition of sections for longer tank
- Maintaining workpiece cylindrical shape by supporting the entire length of the tank or vessel
- ✓ Fast and safe alignment and fit up capabilities





SPECIFICATIONS	ALG-412 Roller Bed Style	ALG-512 Fully Automated Fit Up Rolls
oad Capacity:	Up to 60 tons	Up to 20 tons
Diameter Range:	3' - 14'	5' – 14'
Orive System:	Dual drive, drive-shaft free style	Dual drive, drive-shaft free style
Tractive Effort:	6,000 lbs	6,000 lbs
Power Requirements:	480V, 3-ph*	480V, 3-ph*
Rotation Speed:	5-96 in/min	5-96 in/min
Equipment Mass:	8,300 lbs (5 sections)	11,300 lbs (5 sections)

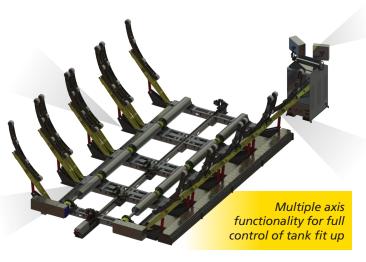
<sup>\* 208 - 600</sup>V, 50 or 60 Hz input power options available. Specifications subject to change; consult factory for all specifications.



Hydraulic alignment jacking system to align and pull vessel sections together.



Modular construction allows for multiple lengths to be added for longer vessels.





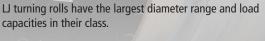
Integration with automated LJ welding manipulators.



Side Jigs to eliminate thin-wall vessel sagging.



# Fixed Height Turning Rolls





SPECIFICATIONS	<b>60T-100/60T-200</b> 60-Ton	<b>80T-700/80T-800</b> 80-Ton	<b>120T-500/120T-600</b> 120-Ton	<b>200T-500/200T-600</b> 200-Ton
Load Capacity:	Driver: 60,000 lbs Idler: 60,000 lbs	Driver: 80,000 lbs Idler: 80,000 lbs	Driver: 120,000 lbs Idler: 120,000 lbs	Driver: 200,000 lbs Idler: 200,000 lbs
Vessel Diameter Range:	1' – 18'	1.5' – 26'	1.5' – 26'	1.5' – 26'
Footprint: Idler (top of wheel): Driver (top of wheel):	66"x 131"x 61" 66"x 121"x 61"	50"x 174"x 32" 36"x 162"x 32"	50"x 184"x 31" 36"x 162"x 31"	50"x 184"x 31" 36"x 162"x 31"
Tractive Effort: Output Torque:	Dual Drive 8,400 lbs 120,000 in-lbs	Dual Drive 12,000 lbs 120,000 in-lbs	Dual Drive 20,400 lbs 240,000 in-lbs	Dual Drive 20,400 lbs 240,000 in-lbs
Power Requirements:	480V, 3-ph*	480V, 3-ph*	480V, 3-ph*	480V, 3-ph*
Operation Speed Range:	5-70 in/min	5-50 in/min	5-70 in/min	5-70 in/min

<sup>\* 208 - 600</sup>V input power options available. All LJ turning rolls available with digital speed readout calibrated to inches/min or mm/min for precise welding speed control. Specifications subject to change; consult factory for all specifications.

Fixed height turning rolls are useful for:

- Quick change-overs between different sized work pieces
- Maximizing ease & quality of welds using synchronized rotation
- Seamless integration with manipulator applications



Cabled or wireless hand pendant with or without digital readout.



Bi-directional or variable speed foot switches.





# Vessel Turning Rolls – Height Adjustable

Dual adjustable drive heads designed such that load can be centered on rolls.

Height adjustable turning rolls ensure:

- Quality control by maintaining a constant centerline
- Faster cycle times from reduced changeover effort
- Ease of welding using height adjusts for optimal



SPECIFICATIONS	<b>06R-100A/200</b> 12-Ton	<b>10TRV-500/600</b> 20-Ton	<b>20TRV-100/200</b> 40-Ton
Load Capacity:	Driver: 12,000 lbs Idler: 12,000 lbs	Driver: 20,000 lbs Idler: 20,000 lbs	Driver: 40,000 lbs Idler: 40,000 lbs
Vessel Diameter Range:	0.5'- 12'	1'- 14'	1'- 14'
Footprint:	34"x 103"x 26"	113"x 44"x 33"	116"x 44"x 31"
Height Adjustability (top of wheel):	23" – 39" Adjustable in 3" increments	27"– 45" Adjustable in 3" increments	30" – 48" Adjustable in 3" increments
Tractive Effort: Output Torque:	Single Drive 3,500 lbs 25,000 in-lbs	Dual Drive 6,000 lbs 50,000 in-lbs	Dual Drive 8,700 lbs 80,000 in-lbs
Power Requirements:	110V, 1-ph*	240V 1-ph OR 480V 3-ph*	480V, 3-ph*
Operation Speed Range:	5-50 in/min	5-50 in/min	5-50 in/min

<sup>\* 208 - 600</sup>V input power options available. Specifications subject to change; consult factory for all specifications.

## Standard Features



Cabled or wireless hand pendant with or without digital readout.



Bi-directional or variable speed foot switches.

## Adjustable height with mountable track







LJ pipe rolls are used for pipe welding applications ranging from light tubes to extra-heavy walled pipe. Whatever your pipe rolling application, LJ has the most cost effective and user friendly equipment.





SPECIFICATIONS	SHD-700/SHD-750 8-Ton Low Profile Pipe Roll	SHD-800/SHD-850 8-Ton Geared Height Adjust
Load Capacity:	Driver: 8,000 lbs Idler: 8,000 lbs	Driver: 8,000 lbs Idler: 8,000 lbs
Pipe Diameter Range:	2"-48"	4"-48"
Footprint:	34"x 50"x 21"	36"x 50"x 29"
Height Range:	14" – 26" (top of wheel) Adjustable in 1" increments	29"– 41" (top of wheel) Manual or Powered geared height adjustable
Tractive Effort: Output Torque:	Single Drive, 2,400 lbs tractive effort 12,000 in-lbs output torque	Single Drive, 2,400 lbs tractive effort 12,000 in-lbs output torque
Power Requirements:	110V, 1-ph*	110V, 1-ph*
Operation Speed Range:	5-50 in/min	5-50 in/min

<sup>\* 208 - 600</sup>V, 50 or 60 Hz input power options available. Specifications subject to change; consult factory for all specifications.



Cabled or wireless hand pendant with or without digital readout.



Bi-directional or variable speed foot switches.





Forklift pockets for safe and easy transport.







SPECIFICATIONS	BPR-200/300 1.5-Ton Benchtop Roller	HD2L-100/150 4-Ton Pipe Roller	EMCC-300 4-Ton Pipe Roller & Cart
Load Capacity:	Driver: 1,500 lbs Idler: 1,500 lbs	Driver: 4,000 lbs Idler: 4,000 lbs	Driver & Idler System: 8,000 lbs
Pipe Diameter Range:	2"-16"	2"-36"	2" - 24"
Footprint:	26" x 13" x 10"	30"x 31" x 40"	69"-116"x 39"x 49"
Height Range:	Low Profile, Fixed Height	28"-40"	37"-49"
Tractive Effort: Output Torque:	Single Drive, 270 lbs 1,300 in-lbs	Single Drive, 650 lbs 2,000 in-lbs	Single Drive, 650 lbs 2,000 in-lbs
Power Requirements:	110V, 1-ph*	110V, 1-ph*	110V, 1-ph*
Operation Speed Range:	8-80 in/min	8-80 in/min	8-80 in/min

<sup>\* 208 - 600</sup>V, 50 or 60 Hz input power options available. Specifications subject to change; consult factory for all specifications.

#### Optional base for Benchtop Rolls



Cabled or wireless hand pendant with or without digital readout.



Bi-directional or variable speed foot switches.





# Modular Roller Support Stands

LJ's modular pipe support stands offer a range of customizable options that will meet your application's needs. LJ can also custom engineer your stands for welding applications that require unique solutions.

## **Top Options**







Sawhorse Top



Multidirectional Rollers



Vee-Rollers



SPECIFICATIONS	<b>HD2L-200U</b> 4,000 lbs	<b>HD2-300U</b> 4,000 lbs	SHD-850 (forklift pockets) 8,000 lbs	UHD-200 (forklift pockets) 16,000 lbs
Load Capacity:	4,000 lbs	4,000 lbs	8,000 lbs	16,000 lbs
Diameter Range:	2"- 48"	2"-48"	4"-48"	8" - 60"
Height Range:	24"- 36"	39"-63"	30" – 42" (Dual screw jack geared height adjust)	30" – 42" (Dual screw jack geared height adjust)
Footprint (top of wheel):	30"x 31"x 26"	34"x 31"x 40"	36"x 50"x 29"- 41"	43"x 51"x 29"– 41"
Weight:	138 lbs	165 lbs	450 lbs	530 lbs

Specifications subject to change; consult factory for all specifications.

## **Base Foot Options**

STANDARD



Self Leveling Flat Foot

FOR RAIL TRACK



Rail Mount Caster Kit

FOR MOBILITY



Swivel Caster Kit with Brakes





# Jack Stands & Tripods

HDJ-style roller supports provide the widest range of features available, including geared height adjustability, braking base casters, ratchet hold down straps, fork lift pockets, and extra heavy duty frame design.

Modular design, maximum flexibility with steel wheel options available!



#### **GEARED HEIGHT ADJUST UNDER LOAD!**

SPECIFICATIONS	HDJ2C-100 4,000 lbs Geared Height/Roller Base	HDJ5C-100 10,000 lbs Geared Height/Roller Base	
Load Capacity:	4,000 lbs	10,000 lbs	
Diameter Range:	2"- 36"	4"-48"	
Height Range:	27"-39 "	27"- 39 "	
Footprint (top of wheel):	38"x 24"x 28"	48"x 28"x 28"	
Equipment Mass:	191 lbs	429 lbs	

## **Built-in Safety Features**



Geared height adjust easily changes working heights under load.



Braking base caster securely lock wheels into position.



Ratchet strap system for safe hold down, handling, or moving pipe.

# **Modular Tripod Stands**







Sawhorse Top



Multidirectional Rollers



Vee-Rollers



LD255-100



SPECIFICATIONS	<b>LD255-100</b> 2,500 lbs Roller Tripod	<b>TS3-160V</b> 5,000 lbs	<b>TS3-280V</b> 5,000 lbs	<b>TS3-330V</b> 5,000 lbs
Load Capacity:	2,500 lbs	5,000 lbs	5,000 lbs	5,000 lbs
Diameter Range:	2"-28"	2"-28"	2"-28"	2"-28"
Height Range:	21"-33"	16"-25"	28"- 44"	33"-56"
Footprint:	23"x 26"x 26"	26"x 26"x 21"	33"x 33"x 21"	33"x 33"x 21"
Equipment Mass:	60 lbs	39 lbs	53 lbs	58 lbs

Specifications subject to change; consult factory for all specifications.

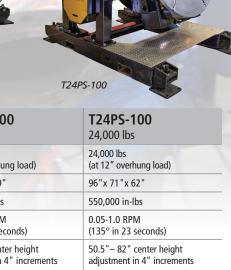


# Gear Tilt Positioners

Gear tilt positioners are used for powered, variable speed tilting and rotation to automate and increase welding productivity of cumbersome, heavy work pieces.







SPECIFICATIONS	<b>1PT-300</b> 3,000 lbs	<b>T6PS-100</b> 6,000 lbs	<b>T12PS-100</b> 12,000 lbs	<b>T24PS-100</b> 24,000 lbs
Load Capacity:	3,000 lbs 1,700 lbs (at 12" overhung load)	6,000 lbs (at 12" overhung load)	12,000 lbs (at 12" overhung load)	24,000 lbs (at 12" overhung load)
Footprint:	64"x 48"x 35"	53" x 68" x 73"	89"x 60"x 59"	96"x 71"x 62"
Tilting Torque:	35,000 in-lbs	125,000 in-lbs	250,000 in-lbs	550,000 in-lbs
Tilting Speed:	0.1-0.9 RPM (135° in 25 seconds)	0.1-0.9 RPM (135° in 25 seconds)	0.05-1.00 RPM (135° in 23 seconds)	0.05-1.0 RPM (135° in 23 seconds)
Height Adjustability:	29"— 49" center height adjustment in 5" increments	30"– 50" center height adjustment in 5" increments	48" – 80" center height adjustment in 4" increments	50.5"— 82" center height adjustment in 4" increments
Table Diameter:	26" (available with 48" OD slotted faceplate)	42" T-Slot Plate with 6 x 5/8" slots	52" T-Slot Plate with 6 x 3/4" slots	62" T-Slot Plate OD faceplate with 6" x 1" slots
Power Requirements:	110V, 1-ph*	480V, 3-ph*	480V, 3-ph*	480V, 3-ph*
Rotation Speed:	0.1–2.2 RPM	0.1–2.5 RPM	0.05–2.2 RPM (Other speed options available)	0.05–1.2 RPM (Other speed options available)
Turning Torque:	20,000 in-lbs	60,000 in-lbs	125,000 in-lbs	250,000 in-lbs
Ground Capacity:	800 Amps	800 Amps	1,500 Amps	1,500 Amps

<sup>\* 208 - 600</sup>V, 50 or 60 Hz input power options available. Ground Capacity: up to 2500 Amps available. Specifications subject to change; consult factory for all specifications.



Cabled or wireless hand pendant with or without digital readout.



Bi-directional or variable speed foot switches.



Grippers up to 60" OD.







SPECIFICATIONS	<b>16P-700</b> 3,000 lbs	<b>30P-200</b> 5,400 lbs	<b>P12PS-100</b> 12,000 lbs	<b>P24PS-100</b> 24,000 lbs	<b>P60PS-200</b> 60,000 lbs	
Load Capacity:	3,000 lbs (at Mounting Plate)	5,400 lbs (at Mounting Plate)	12,000 lbs (at 12" overhung load)	24,000 lbs (at 12" overhung load)	60,000 lbs (at 12" overhung load)	
Footprint:	72"x 42"x 77"	72"x 42"x 77"	96"x 71"x 62"	96"x 71"x 69"	133"x 96"x 105"	
Turning Torque:	20,000 in-lbs (With Counterweight)	40,000 in-lbs	125,000 in-lbs	250,000 in-lbs	800,000 in-lbs	
Height Adjustability:	45"– 69" in 4" increments	33"– 69" in 4" increments	48"– 96" in 6" increments	48"– 96" in 6" increments	73"- 145" in 8" increments	
Power Requirements:	110V, 1-ph*	480V, 3-ph*	480V, 3-ph*	480V, 3-ph*	480V, 3-ph*	
Operation Speed:	0.3–3.0 RPM	0.2–2.4 RPM	0.05-2.2 RPM	0.05–1.2 RPM	0.04-0.8 RPM	
Ground Capacity:	400 Amps	800 Amps	1,500 Amps	1,500 Amps	1,500 Amps	

<sup>\* 208–600</sup>V, 50 or 60 Hz input power options available. Ground Capacity: up to 2500 Amps available. Pipe Stands: various capacities with gear or manual elevation. Specifications subject to change; consult factory for all specifications.



Cabled or wireless hand pendant with or without digital readout.



Bi-directional or variable speed foot switches.





# High Volume Pipe Spooling Cell

LJ's pipe spooling cells significantly accelerate pipe fabrication cycle times, compared to conventional material handling and low deposition rate welding processes.

The high volume pipe spooling cell removes cumbersome and time-consuming steps, streamlining your entire pipe spool welding process, while efficiently utilizing limited shop floor space.



MAXIMUM EFFICIENCY MATERIAL HANDLING

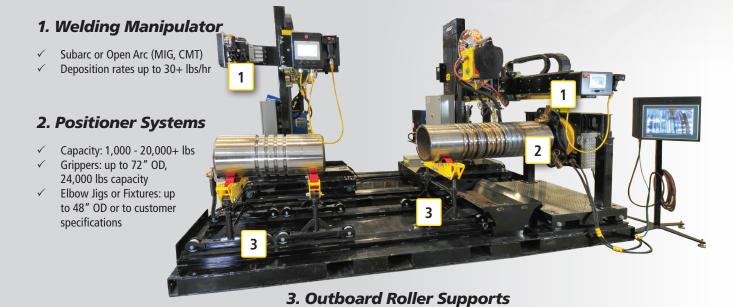


INNOVATIVE WELDING AUTOMATION



MAXIMUM PIPE FABRICATION PRODUCTIVITY & ROI

# **Customize Your Own System**



- ✓ Modular design accommodates a range of roller top, base, and functionality options
- ✓ Typically up to 60" diameter and 16,000 lbs capacity available



# Turnkey Welding Systems

LJ's unique modular and flexible design allows for multiple pieces of equipment to be integrated into fully automated welding cells. Integrated systems ranging from standard positioners, fixtures and manipulators through to fully automated robotic welding systems are available to suit any application.

## Subarc Overlay System





ACDC-1000 Submerged Arc manipulator integrated with custom 5-ton capacity tilt positioner for high-deposition overlay rebuild of pipe mill rollers.

# Aerospace Welding Manipulator and Positioner System





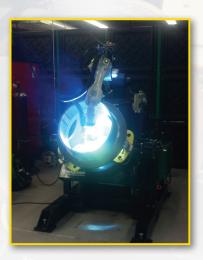
High precision aerospace GTAW+PAW welding manipulator with integrated servo positioner, used for welding of a variety of heat input sensitive turbine components. HMI interface, remote viewing camera and specialized Liburdi Automation welding system.

# Robotic Welding and Positioner System

Fully integrated robotic welding process with coordinated motion tilt/rotate positioner, for up to 2,000 lbs high batch welding parts.

- √ Ideal for high-volume repetitive welding
- ✓ Fully integrated positioner, fixture, robot and welding package options
- ✓ Easy to use

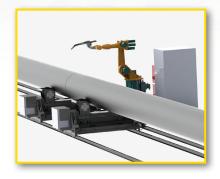




# Robotic Pipe Joining System

Fully integrated robotic welding process with servo positioner and material handling system for automated joining of heavy wall large bore pipe up to 60" diameter.

- Servo headstock for precise rotation speed
- Full alignment capabilities for roller supports for quick fit up of weld joint
- Robotic welding system automatically tracks seam for maximum productivity







H24PS-100

# Powered Headstock Positioners Synchronized powered elevating head and tailstocks allow for maximum flexibility when lifting or rotating heavy workpieces such as trailer frames or large vessels. POWERED HEIGHT ADJUSTABILITY

H12PS-100

SPECIFICATIONS	<b>H6PS-200</b> 6,000 lbs	H12PS-100 12,000 lbs	<b>H24PS-100</b> 24,000 lbs
Load Capacity:	6,000 lbs (at 12" overhung load)	12,000 lbs (at 12" overhung load)	24,000 lbs (at 12" overhung load)
Footprint:	60"x 42"x 95"	89"x 60"x 118"	96"x 71"x 122"
Turning Torque:	60,000 in-lbs	125,000 in-lbs	250,000 in-lbs
Height Adjustability:	32"-72"	42"- 96"	42"- 96"
Power Requirements:	480V, 3-ph*, 10 AMP	480V, 3-ph*, 20 AMP	480V, 3-ph*, 20 AMP
Rotation Speed:	0.1-2.5 RPM	0.05-2.2 RPM 0.05-1.2 RPM (Other speed options available) (Other speed options available)	
Table Diameters:	42"	52"	60"
Ground Capacity:	800 Amps	1500 Amps	1500 Amps
Equipment Mass:	2,500 lbs	6,390 lbs 9,600 lbs	

<sup>\* 208–600</sup>V, 50 or 60 Hz input power options available. Ground Capacity: 200 Amp, 400 Amp, 800 Amp, or 1500 Amp available. Custom Height Range: to customer requirement. Specifications subject to change; consult factory for all specifications.

# Tailstocks Available With Heavy Duty Positioners

Headstock Model	Optional Tailstock	System Capacity	Height Adjustability
1PS-100	✓	2,000 lbs	Fixed
P3PS	✓	6,000 lbs	Manual coarse adjustable
P6PS	✓	12,000 lbs	Manual coarse adjustable
P12PS	✓	24,000 lbs	Manual coarse adjustable
P24PS-100	✓	48,000 lbs	Manual coarse adjustable
P60PS-200	✓	120,000 lbs	Manual coarse adjustable
H6PS-100	✓	12,000 lbs	Synchronized powered elevation
H12PS-100	✓	24,000 lbs	Synchronized powered elevation
H24PS-100	✓	48,000 lbs	Synchronized powered elevation





# Powered Height, Tilt & Rotate Positioners

LJ's 1HT-style positioner has the widest range of positions in its class, allowing for extremely low profile flat positions during loading and smooth powered adjustability for height, tilt and rotation axes.







Maximum versatility and a huge range of motion

SPECIFICATIONS	<b>1HT-300</b> 6,000 lbs
Load Capacity:	6,000 lbs (at Mounting Plate)
Footprint:	71"x 98"x 29"
Turning Torque:	40,000 in-lbs
Power Requirements:	480V, 3-ph
Rotation Speed:	0.2–2 RPM
Height Adjustability:	25"x 72" Centerline height (hydraulically actuated height adjustability)
Range of Operation:	-45° to 90°
Ground Capacity:	800 Amps
Equipment Mass:	5,400 lbs

Available in any custom capacity, consult sales for details. Specifications subject to change; consult factory for specification requirements.



- Powered height, tilt, and rotation through compact hand pendant
- Best in class range of motion
- ✓ Compact design



Cabled or wireless hand pendant with or without digital readout.



Bi-directional or variable speed foot switches.



Grippers up to 60" OD.

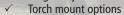




# Portable & Benchtop Positioners

LJ bench top positioners are available with a variety of features, such as:

- ✓ Air purge fitting for stainless steel or TIG welding applications
- ✓ Hollow spindle
- ✓ Height adjustable roller cart







8P-200 Bench Top	
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SPECIFICATIONS	8P-200 Bench Top Positioner 300 lbs	12P-800 Thru - Bore Positioner 1,000 lbs	12P-900 Portable Positioner 1,000 lbs	
Load Capacity:	300 lbs (at chuck face)	1,000 lbs (at chuck face)	1,000 lbs (at chuck face)	
Footprint:	14"x 17" x 20"	26"x 26"x 26"	22"x 23"x 25"	
Power Requirements:	110V, 1-ph*	110V, 1-ph*	110V, 1-ph*	
Speed Range:	0.7–7 RPM	0.45–4.5 RPM	0.5–5 RPM	
Turning Torque:	730 in-lbs	3,000 in-lbs	3,000 in-lbs	
Table:	:: 12" OD table, 8" chuck optional 12" OD table, 12" chuck optional		12" OD table, 12" chuck optional	
Ground Capacity:	200 Amps	200 or 400 Amps	800 Amps	
Thru-Bore: 3/8" hollow spindle c/w air purge fitting		3" hollow thru-bore 3/8" hollow spindle c/w air i		
Range of Operation: Manually adjustable with handle -15° – 105° in 15° increments		Hand crank self locking worm gear tilt feature -5° – 105° range c/w angle gauge	Hand crank self locking worm gear tilt feature -5° – 105° range c/w angle gauge	
Equipment Mass:	Positioner: 110 lbs, Chuck 39 lbs	Positioner: 190 lbs, Chuck 110 lbs	Positioner: 280 lbs, Chuck 110 lbs	

<sup>\* 208–680</sup>V, 50 or 60 Hz input power options available. Positioner must always be mounted to a suitable base. Specifications subject to change; consult factory for all specifications.

12LT-200 Scissor Lift Cart 1,600 lbs				
Capacity:	1,600 lbs			
Footprint:	42"x 40"x 26"			
Height Range:	26"-42"			
Roller Base: Swivel lock urethane casters				
Equipment Mass: 400 lbs				

## **Features & Options**



Cabled or wireless hand pendant with or without digital readout.



Bi-directional or variable speed foot switches.



Portable scissor lift cart.

#### Key Features: Tilt, Height Adjustable, & Portable





# Low Profile Turntables

Low profile turntables are used for precise positioning in the flat or horizontal position. LJ's ultra-low profile turntables are the lowest profile turntables available on the market.







## Low Profile Turntables

		Contract of the Contract of th				
SPECS	TRN2LS-300	TRN2HS-300	TRN10-700	TRN10HS- 100	TRN20-200	TRN40-100
	2-Ton	2-Ton	10-Ton		20-Ton	40-Ton
	2 1011		10 1011		20 10.1	
Load Capacity:	4,000 lbs	4,000 lbs	20,000 lbs	5,000 lbs or 10,000 lbs	40,000 lbs	80,000 lbs
Eccentricity:	Up to 4"	0" (high speed operation)	Up to 6"	0" (high speed operation)	Up to 6"	Up to 12"
Footprint:	23.5" x 22" x 13.625"	23.5" x 22" x 13.625"	48.625" x 27.75" x 19.5"	36.75" x 36.75" x 21.375"	36.75" x 36.75" x 21.375"	120"x 120"x 44"
Table Size/ Span:	30"	30"	42"	52"	52"	120"
Power Requirements:	110V, 1-ph	110V, 1-ph*	110V, 1-ph*	480V, 3-ph*	480V 3-ph*	480V, 3-ph*
Rotation Speed:	0.1–1.8 RPM	0.2–10 RPM	0.1-3.6 RPM	3-60 RPM/1.5-30 RPM	0.05-1.5 RPM	0.05–1.2 RPM
Ground Capacity:	800 Amps	800 Amps	800 Amps	800 Amps	1,500 Amps	1,500 Amps
Equipment Mass:	350 lbs	400 lbs	1,550 lbs	1,900 lbs	1,900 lbs	12,350 lbs

<sup>\* 208 - 600</sup>V, 50 or 60 Hz input power options available. Custom Height Range or powered height adjustability. Ground Capacity: up to 2500 Amp available. Specifications subject to change; consult factory for all specifications.



## **Features & Options**



Cabled or wireless hand pendant with or without digital readout.



Bi-directional or variable speed foot switches.

# **Custom Turntables**

- Table size up to 16 ft diameter any style
- Capacity up to 100 tons
- Any speed range or precision





# **Grippers & Chucks**

High-quality, cost-effective welding grippers and chucks are a standard accessory on all welding positioners.

3-jaw self centering scroll chucks with reversible top jaws available in 8", 12", 16" gripping diameter ranges.



For oversized or heavy gripping requirements with smooth, serrated or carbide insert top jaws.





# **Gripper Options**

SPECS	T30-200	T50-200	T60-100
Load Capacity:	5,000 lbs	10,000 lbs	10,000 lbs
Diameter Range:	2"-30"	2"-50"	2"-60"

V72-100 Gripper now available for up to 72" OD & 24,000 lbs load capacity

SAFER, EASIER ELBOW FIXTURING



SPECS	Elbo	Elbow Jigs (2"– 48")   30E-200 AND LARGER DO NOT COME WITH CLAMPING PIPE														
	02E-	03E-	04E-	06E-	08E-	10E-	12E-	14E-	16E-	18E-	20E-	24E-	30E-	36E-	42E-	48E-
	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
Nominal Diameter:	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"
Capacity:	250	250	250	250	500	500	500	500	1,000	1,000	1,000	1,000	2,000	2,000	2,000	2,000
	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs	lbs

45° and 90° Elbows: Precision fit and clamp allows for quick and easy fitting, prepping and welding of elbows for use with welding positioners.



Remove hold down u-bolt.



Load elbow into jig.



Measure the fit.



Fasten elbow into the jig.



# **Automation & Controls**

#### **Controls Panels**

- Input power supply: 110-600 Volts and 50/60 Hz optional
- Master variable speed, direction, on/off local/remote controls
- PLC based HMI touchscreen or conventional push button controls to customer preference



### FS-FR Forward/Reverse **Foot Switch**

- Heavy Duty Cast steel body with heavy duty guard/handle Momentary actuation
- (normally off)
- Heavy rubber 8 m (25 ft) cable with 4-pin metal plugs

## **HP-100** Single/Dual Axis **Hand Pendants**

- Ergonomic, easy to use, lightweight design, c/w protective guard
- Optional LCD digital speed readout
- Heavy rubber 8 m (25 ft) cable with 19-pin metal plugs







## FS-V Variable Speed **Foot Switch**

- · Plug & Play with optional controller upgrade
- Main panel controls master speed range, foot switch used for variable speed in master

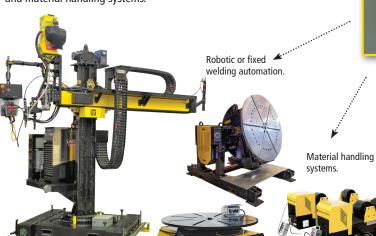
#### Wireless Pendants

 For multiple-axes control or complex functions



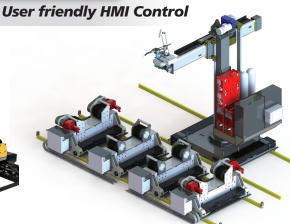
# **Automation Capabilities**

LJ utilizes user-friendly touch screen controls for plug and play integration of multiple machines to create fully integrated welding and material handling systems.





Fully integrated automated welding systems.





# Cable Reel Rollers

Cable Reel Rollers are used for rolling large cable spools, for payout, unwinding and take-up of heavy cable. LJ engineers & manufactures cable reel rollers to any capacity or specification required.



SPECIFICATIONS	CRR55-100 10 Ton Cable Reel Roller	CRR68-100 15 Ton Cable Reel Roller	CRR810-100 40 Ton Cable Reel Roller
Load Capacity:	20,000 lbs	30,000 lbs	80,000 lbs
Spool Size Range:	2–8 ft diameter 5 ft–3 in max width	2–12 ft diameter 8 ft max width	5–16 ft diameter 10 ft max width
Tractive Effort/Torque:	2,150 lbs	3,000 lbs	8,500 lbs
Rotation Speed:	30-780 in/min	48-480 in/min	48-480 in/min
Height Range:	Low Profile, fine adjust leveling feet optional	Low Profile, fine adjust leveling feet optional	Low Profile, fine adjust leveling feet optional
Power Requirements:	240V, 1-ph*	240V, 1-ph*	480V, 3-ph*
Equipment Mass:	2,200 lbs	3,015 lbs	6,700 lbs
Footprint:	79"x 95"x 29"	99"x 134"x 22"	102"x 156"x 43"

<sup>\* 208 - 600</sup>V, 50 or 60 Hz input power options available. Specifications subject to change; consult factory for all specifications.

# **Features & Options**

for diameter settings.





Best in class performance and safety features



# Pipeline Roller Equipment

Pipeline rollers are designed to protect, support, and guide a pipeline section during river and road crossings. Pipe guide rollers help minimize drag forces of pipe-pulling through horizontally drilled or bored holes. LJ manufactures conical or conveyor roller style pipe rollers for applications ranging from 2" light walled HDPE piping up to heavy walled 72" steel pipe with capacities ranging from 2,000 to 80,000 lbs or greater.



SPECS	<b>HZ6-300</b> 1-Ton, 2–24" OD	<b>HZM5-200</b> 5-Ton, 4–48" OD	<b>HZM10-200</b> 10-Ton, 4–48" OD	<b>HZM303-100</b> 20-Ton, 8-60" OD	<b>HZM405-100</b> 40-Ton, 4–72" OD
Load Capacity:	2,000 lbs	10,000 lbs	20,000 lbs	40,000 lbs	80,000 lbs
Diameter Range:	2"-24"	4"-48"	4"-48"	8 - 60"	4"-72"
Footprint:	26"x 16"x 8"	61"x 30"x 22"	63"x 43"x 22"	58" x 33" x 26"	71"x 56"x 32"
Equipment Mass:	90 lbs	600 lbs	1,100 lbs	900 lbs	1,725 lbs
Roller Style:	Single setting urethane cone rollers	2 urethane side rollers, 1 horizontal roller (optional)	4 urethane side rollers, 2 horizontal rollers (optional)	4 Urethane side rollers, 2 horizontal rollers (optional)	8 urethane side rollers, 2 horizontal rollers (optional)

# **Pipeline Cradles**

LJ Roller Cradles are used as an effective method for supporting and rolling pipe at the entrance of pipeline crossings. The cradle safely supports, guides, and protects the pipe.

SPECIFICATIONS         PRC-612         PRC-1224         PRC-2436         PRC-3648           Description:         6-12" Rolli Cradle         12-24" Rolli Cradle         24-36" Rolli Cradle         36-48" Rolli Cradle					
Description:     6-12" Rolli Cradle     12-24" Rolli Cradle     24-36" Rolli Cradle     36-48" Rolli Cradle	SPECIFICATIONS	PRC-612	PRC-1224	PRC-2436	PRC-3648
	Description:	6-12" Rolli Cradle	12-24" Rolli Cradle	24-36" Rolli Cradle	36-48" Rolli Cradle
Load Capacity: 7.5 ton capacity 14 ton capacity 25 ton capacity 31 ton capacity	Load Capacity:	7.5 ton capacity	14 ton capacity	25 ton capacity	31 ton capacity
Diameter Range:         6" - 12" pipe         12" - 24" pipe         24" - 36" pipe         36" - 48" pipe	Diameter Range:	6" – 12" pipe	12" – 24" pipe	24" – 36" pipe	36" – 48" pipe

Specifications subject to change; consult factory for all specifications.





# Beam Clamp Rigging Rollers

Pipe rigging rollers are used for a variety of applications, in particular for installation of pipe into racks at refineries, power plants, and other industrial facilities.

SAFER, FASTER, EASIER **INSTALLATION OR REMOVAL OF PIPE** 







HZD-100



HZDD60-200

SPECIFICATIONS	HZD12-100 1-Ton Unidirectional	HZ6-200 1-Ton Unidirectional	HZ2-100 2-Ton Unidirectional	HZD-100 5-Ton Unidirectional	<b>HZDD60-200</b> 10-Ton Unidirectional
Load Capacity:	2,000 lbs	2,000 lbs	4,000 lbs	10,000 lbs	20,000 lbs
Diameter Range:	2"-12"	2-3/8" - 24"	2"-16" (2-32" optional)	2"-42"	24"-60"
Equipment Mass:	43 lbs	94 lbs	98 lbs	95 lbs	222 lbs
Shipping Dimensions:	15"x 10"x 5"	26"x 15"x 9"	31"x 19"x 26"	26"x 15"x 7"	41"x 16"x 11"

HZ2-100

Extra small footprint or extra large capacity options are available







Handles for safe & easy lifting for installations

SPECIFICATIONS	MDRN-100 1-Ton Multi-Directional	MDR-200 1-Ton Multi-Directional	MDR-700 2-Ton Multi-Directional
Load Capacity:	2,000 lbs	2,000 lbs	4,000 lbs
Diameter Range:	2"-8"	2"-24"	4"-36"
Equipment Mass:	40 lbs	60 lbs	80 lbs
Footprint:	15"x 9" x 5"	15"x 22" x 6"	18" x 31" x 7"

Specifications subject to change; consult factory for all specifications.

## Features & Options

**High-grade urethane rolls** for grip, protecting pipe coatings and shock absorption.



Quick clamp system for 5-12" structural beam flange range.



Available with jacking systems to load or offload rollers easily



# Pipe Rigging Jacks

Pipe lifting jacks are an easy to use, cost-effective, simple unit that makes pipe rack installations and repairs more efficient. They are completely mechanical, portable, light weight and will greatly reduce the chance of damaging pipe during lifting.



LOAD OR OFFLOAD ROLLERS EASILY!

SPECIFICATIONS	BCPJS15-100	BCPJS40-100
Load Capacity:	1,500 lbs	4,000 lbs
Diameter Range:	0"-12"	0"-18"
Beam Width:	5"-10.5"	5"-10.5"
Height Range:	12" – 24" Screw Jack Adjustable	12" – 24" Screw Jack Adjustable
Beam Size Height	8"-15"	8"-15"
Equipment Mass:	34 lbs	98 lbs
Footprint:	28" x 6.5"	29" x 8.5"

# Pipe Roller Hangers

Pipe roller hangers are designed for suspended pipe where longitudinal pipe movement may occur due to thermal expansion or contraction and where vertical adjustments may be required.







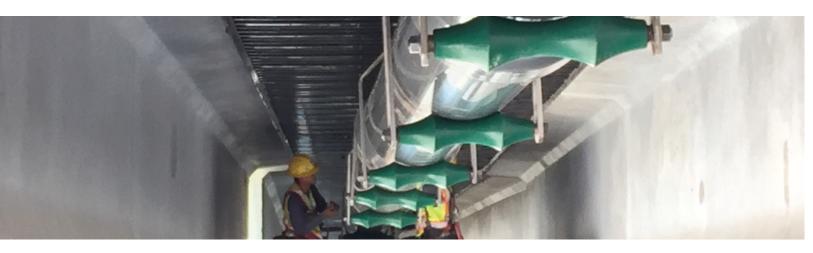
YPRNC-16

YPRNC-18

YPRNC-20

<b>SPECIFICATIONS</b>	YPRNC-16	YPRNC-18	YPRNC-20
Load Capacity:	1,200 lbs	1,400 lbs	1,700 lbs
Diameter:	16"	18"	20"
Equipment Mass:	35 lbs	40 lbs	56 lbs
Footprint:	5" x 20" x 24"	6" x 22" x 27"	6" x 24" x 29"

Specifications subject to change; consult factory for all specifications.





## **ABOUT US**

LJ Welding Automation specializes in the engineering and manufacturing of positioning, welding automation and material handling equipment.

LJ services and supports customers in diverse industries including oil & gas, pipelines, mechanical contractors, aerospace, wind power and more, with installations in over 46 countries around the world.

## **ENGINEERING**

3D CAD software (Solidworks<sup>™</sup>) is utilized by LJ's engineering team for all detailed design. Customers have input from concept through to final shop drawings, which ensures that the customer receives quality engineering design with input all the way through the design process. LJ is an APEGA-licensed company.

## **MANUFACTURING**

LJ operates out of two company owned buildings with over 45,000 sq ft manufacturing space and 4.5 acres of land. Our CSA certified manufacturing facility is fully equipped with robotic welding and CNC machining centers, while our sister company Automated Metal Processing (AMP) provides highly automated laser cutting and metal processing services.

## THOUSANDS OF INSTALLATIONS IN OVER 46 COUNTRIES AND 6 CONTINENTS



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