

KEEP FOR FUTURE REFERENCE

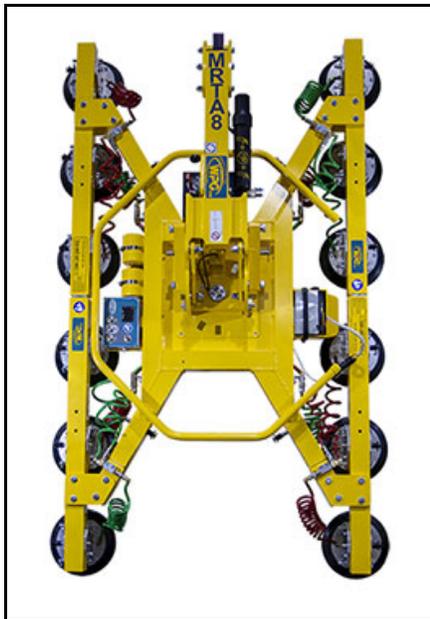
# INSTRUCTIONS

# MANUAL



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 **INTENDED FOR USE BY SKILLED PROFESSIONALS • READ AND UNDERSTAND BEFORE ASSEMBLING, INSTALLING AND USING**



## CURVED-LOAD ADAPTER KIT FOR MRTA6/8-DC(2/3) LIFTERS

Stock number: 93720



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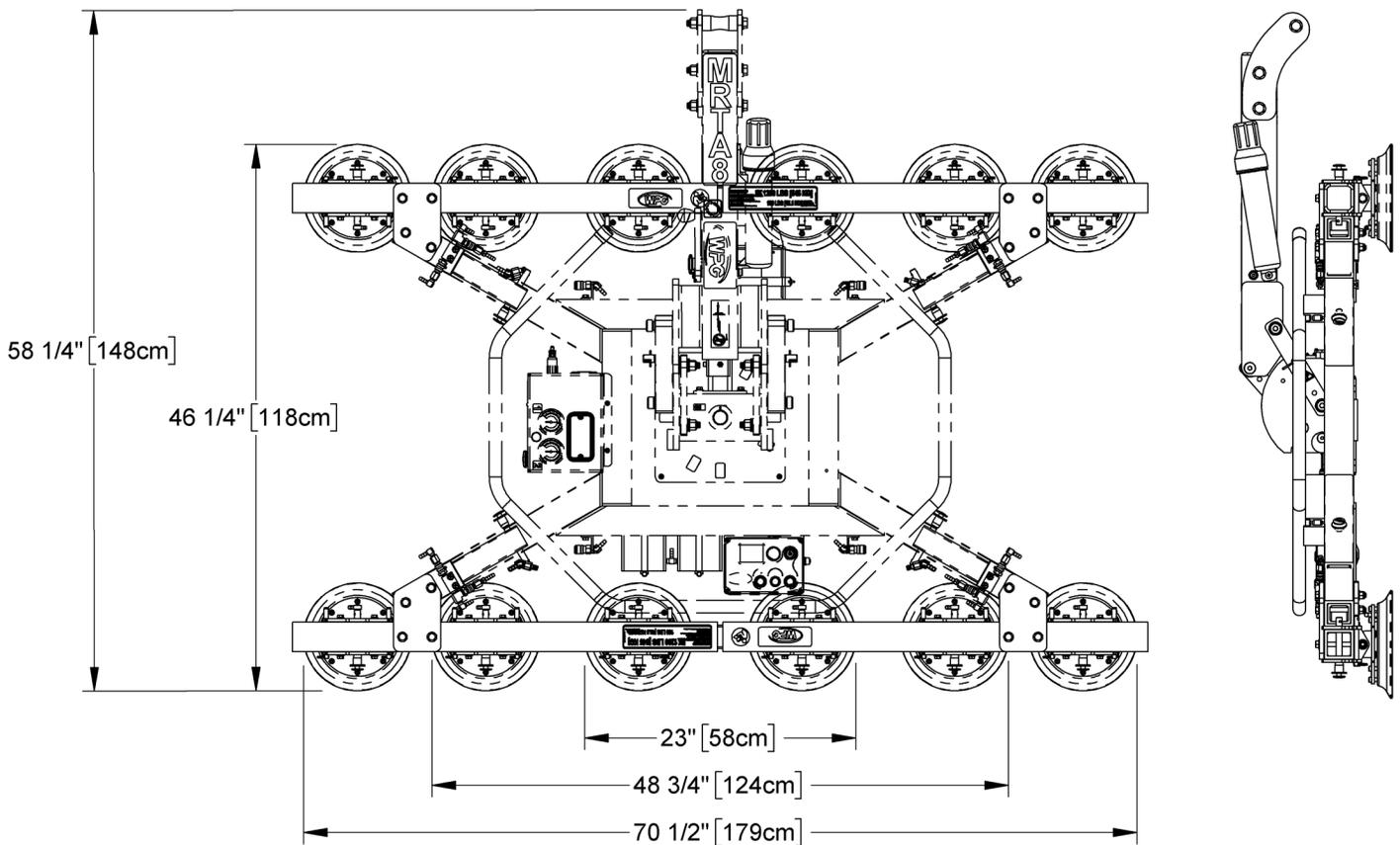
# SPECIFICATIONS

<b>Product Description</b>	Designed for use with Wood's Powr-Grip® Model MRTA6/8-DC(2/3) vacuum lifters, this kit adapts the pad frame to support concave and convex loads, as well as flat loads.			
<b>Stock Number</b>	93720			
<b>Compatible Lifter Models<sup>1</sup></b>	MRTA6-DC (+2 pads)	MRTA6-DC2 (+2 pads)	MRTA8-DC2	MRTA8-DC3
 <b>Adjusted Lifter Weight</b>	273 lbs [124 kg]	265 lbs [120 kg]	260 lbs [118 kg]	270 lbs [123 kg]
<b>Vacuum Pads</b>	Twelve 9" [23 cm] nominal diameter, curved (Model VPCS9), standard rubber <sup>2</sup>			
<b>Adjusted Pad Spread</b> (to outer edges)	Minimum: 46¼" x 23" [117 cm x 58 cm] Maximum: 46¼" x 122¾" [117 cm x 312 cm]			
 <b>Adjusted Maximum Load Capacity<sup>3</sup></b>	Per pad: 100 lbs [45.5 kg] Total: 1200 lbs [545 kg] <b>Caution:</b> Capacity can be reduced with some curved loads (see chart in "INTENDED USE").			

- 1..... Lifters must be converted to have 8 vacuum pads in order to take this option.
- 2..... Available with other rubber compounds for special purposes (see [www.wpg.com](http://www.wpg.com)).
- 3..... The Maximum Load Capacity is rated at a vacuum of 16" Hg [-54 kPa] on clean, smooth, nonporous surfaces with a friction coefficient of 1. Pad compound, load rigidity, strength, surface conditions, overhang, angle, center of gravity and temperature can also affect the lifting capacity. A "qualified person" should evaluate the effective lifting capacity for each use (see definition under "Rated Load Test" in the lifter's OPERATING INSTRUCTIONS).

**Note:** Before assembling, installing and using the Curved-Load Adapter Kit read, understand and follow the lifter's OPERATING INSTRUCTIONS **except when directed differently in these option instructions**. Operation, storage, inspections, tests and maintenance in the lifter's instructions should be understood to include options, when relevant. All warnings in the "SAFETY" section, as well as alerts in other sections, are applicable when using the adapted pad frame.

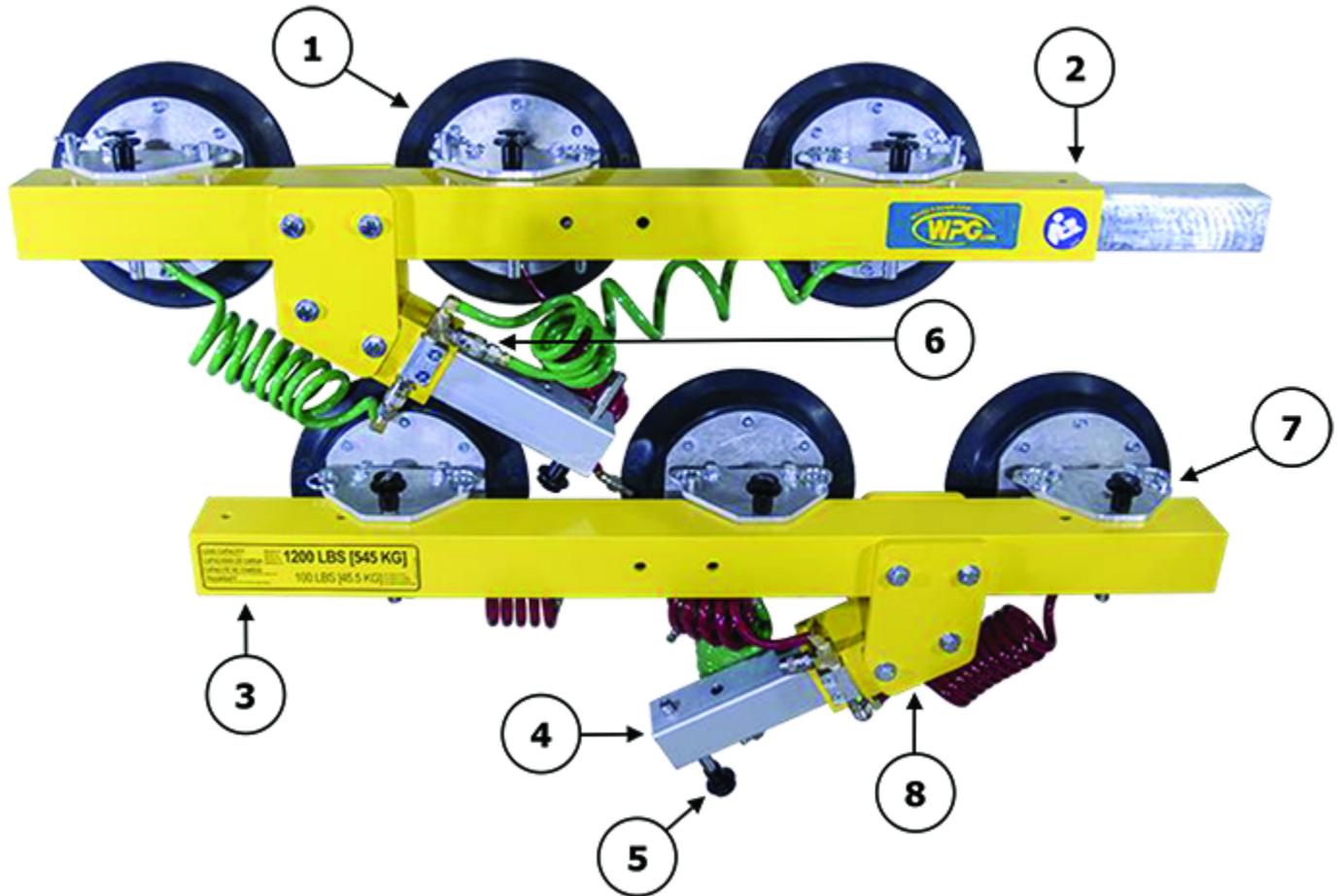
# SPECIFICATIONS



*Note: The optional Curved-Load Adapter Kit is shown installed on a standard MRTA8-DC3 vacuum lifter.*

# OPERATING FEATURES

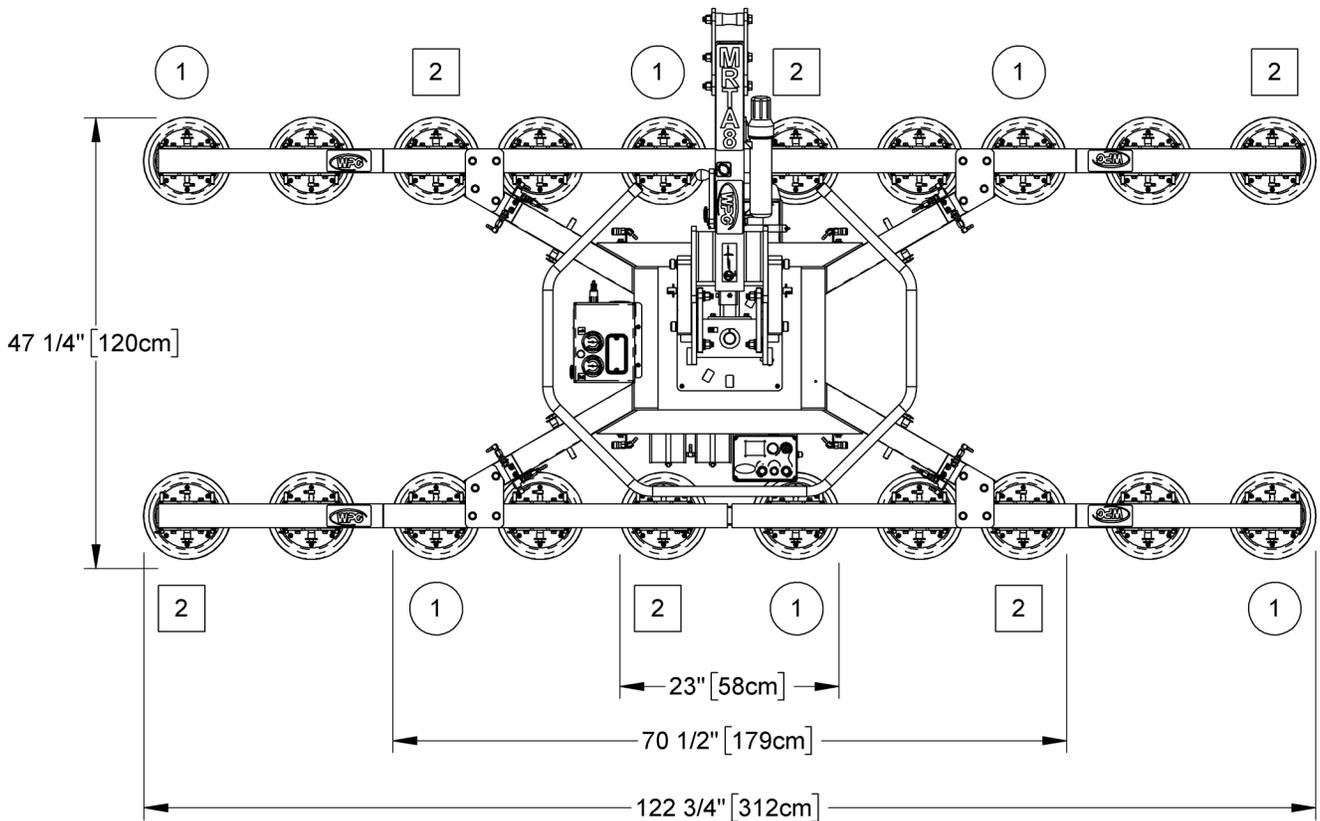
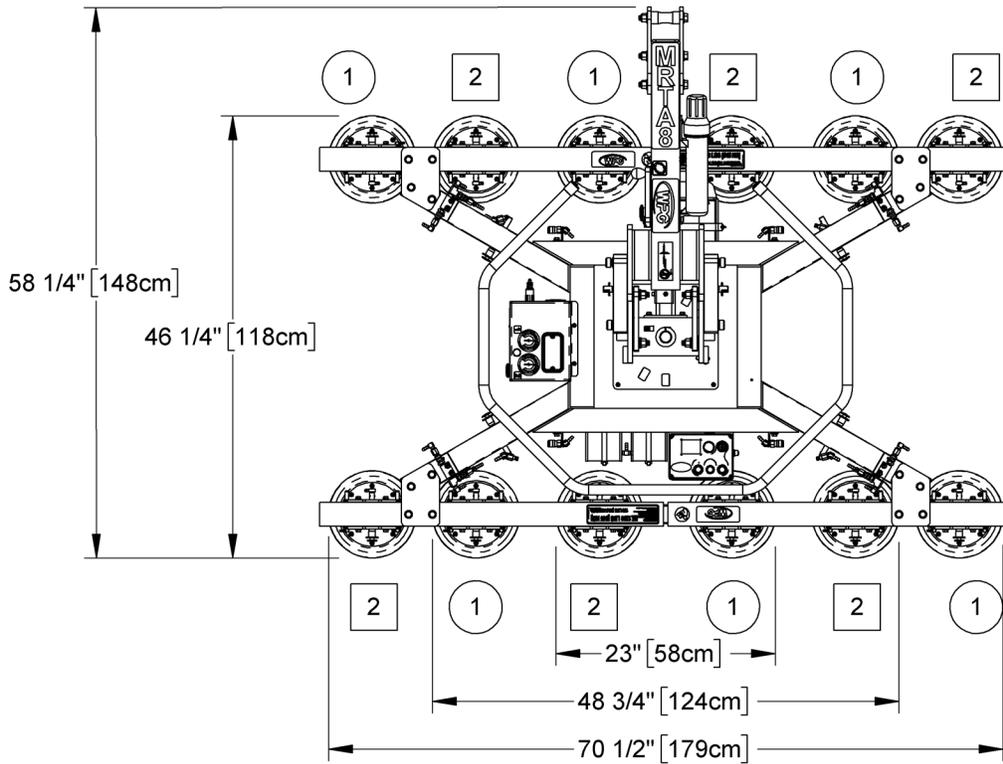
Features shown here are underlined> on their first appearance in each section following.



- |   |                           |   |                      |   |                      |
|---|---------------------------|---|----------------------|---|----------------------|
| 1 | VACUUM PAD                | 2 | MALE FRAME SECTION   | 3 | FEMALE FRAME SECTION |
| 4 | PAD FRAME CONNECTION TUBE | 5 | COTTERLESS HITCH PIN | 6 | QUICK CONNECTORS     |
| 7 | PIVOTING PAD MOUNT        | 8 | FRAME PLATE          |   |                      |

For information about specific parts, see [“REPLACEMENT PARTS”](#).

# ASSEMBLY



# ASSEMBLY

Various vacuum pad configurations enable the lifter to match different load lengths, as shown in the illustrations on page 5.

**Caution:** Connect the vacuum pads to the 2 circuits of the dual vacuum system (marked “1” and “2” in the illustrations).

- 1) Disassemble the lifter’s standard pad frame (see “TO CHANGE THE PAD FRAME CONFIGURATION” in the lifter’s *OPERATING INSTRUCTIONS*).
- 2) Choose a vacuum pad configuration to maximize support across the load surface and to minimize load overhang (see “LOAD CHARACTERISTICS”).
  - To support the maximum load weight, you must install all vacuum pads on the adapted pad frame and connect all vacuum hoses to the pads, using the quick connectors (see step 8).
  - To support larger load dimensions, you must also install the lifter’s extension arms on the adapted pad frame (see steps 10-13).
  - To support smaller weights and dimensions, you may remove certain vacuum pads and disconnect the corresponding vacuum hoses, **provided that the lifter still has the sufficient capacity to support the load.**



**Disconnecting or removing any vacuum pad reduces lifting capacity.**

To calculate the lifting capacity when some pads are removed, consult the Per Pad Load Capacity and multiply by the number of pads currently activated. **Some calculated lifting capacities must be reduced in proportion with the relevant Maximum Load Capacity listed on page 11.**



**Caution:** Always arrange pads in a symmetrical configuration and use as many pads as possible for each load.

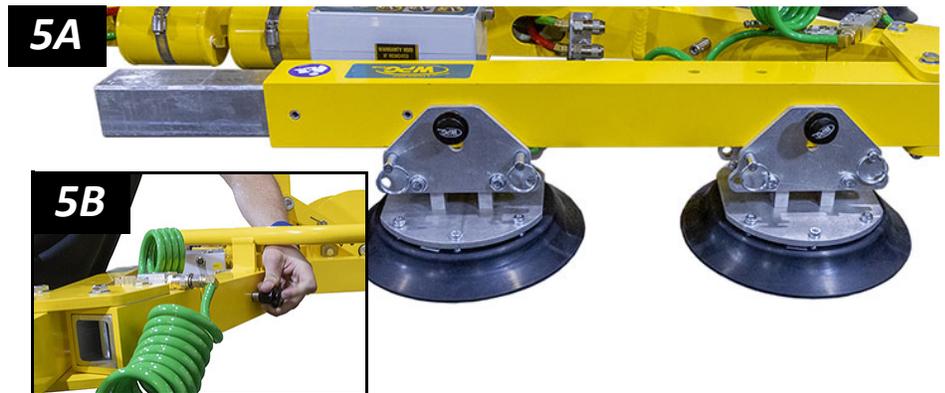
# ASSEMBLY



3) Install a female frame section by inserting its pad frame connection tube into the lifter's pad frame socket and securing with a cotterless hitch pin (fig. 3A).

4) Remove the 2 bolts that secure a female frame section tube to its frame plates (fig. 4A). Then remove the tube from the plates.

5) On the same side of the lifter at the opposite end, install a male frame section similarly to step 3 (figs. 5A-B).

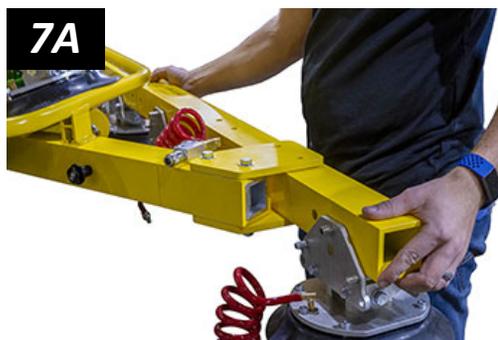


*Note: Repeating step 4 is not necessary.*

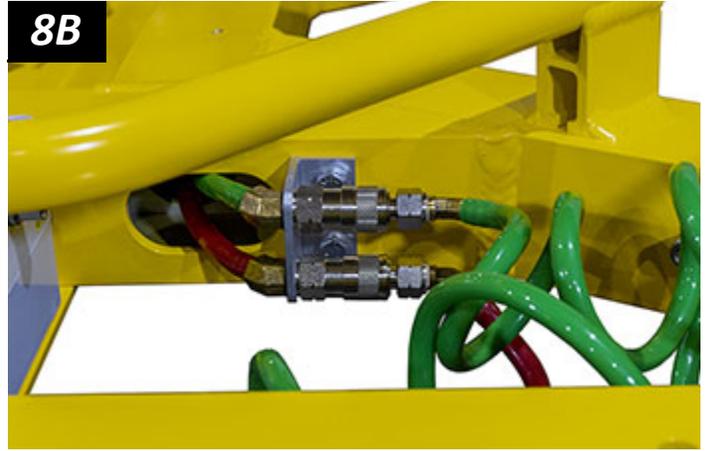
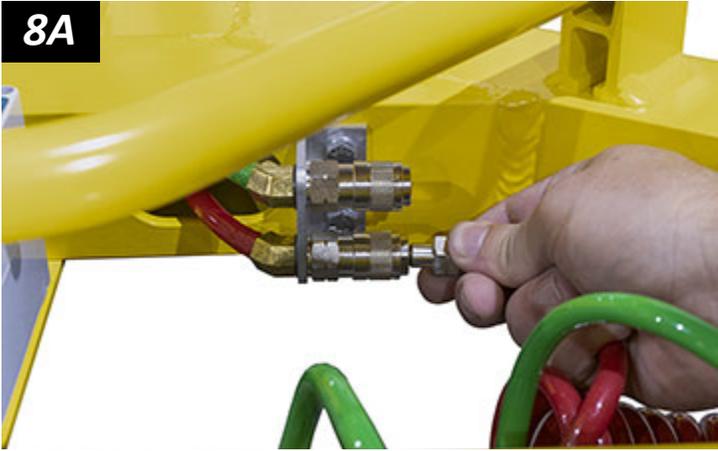
6) Reinsert the female frame section tube between the frame plates. Then slide the tube until it connects with the male frame section's tube (fig. 6A).



7) Align the holes of the female frame section tube with the holes in the plates (fig. 7A). Then reinstall the bolts and tighten securely (fig. 7B).



# ASSEMBLY

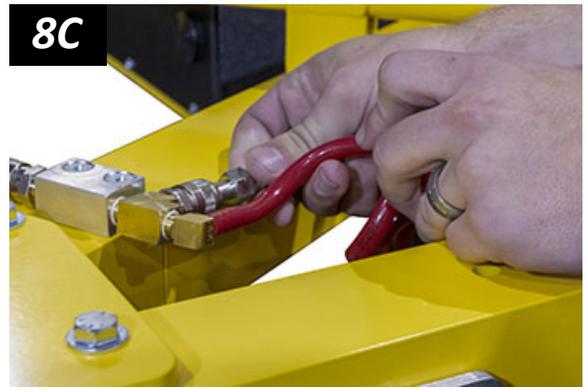


8) Connect the quick connectors for the 6 vacuum pads to the lifter's vacuum system (figs. 8A-C).

**Caution:** Make sure to connect pads to the correct vacuum circuits (see illustrations on page 5).



**Securely position vacuum hoses to avoid damage during lifter operation.**



*Note: For more information, see "Connecting/ Disconnecting Vacuum Hoses" in the lifter's OPERATING INSTRUCTIONS.*

9) Repeat steps 3-8 on the opposite side of the lifter, to complete the smaller configuration (fig. 9A).

**9A**



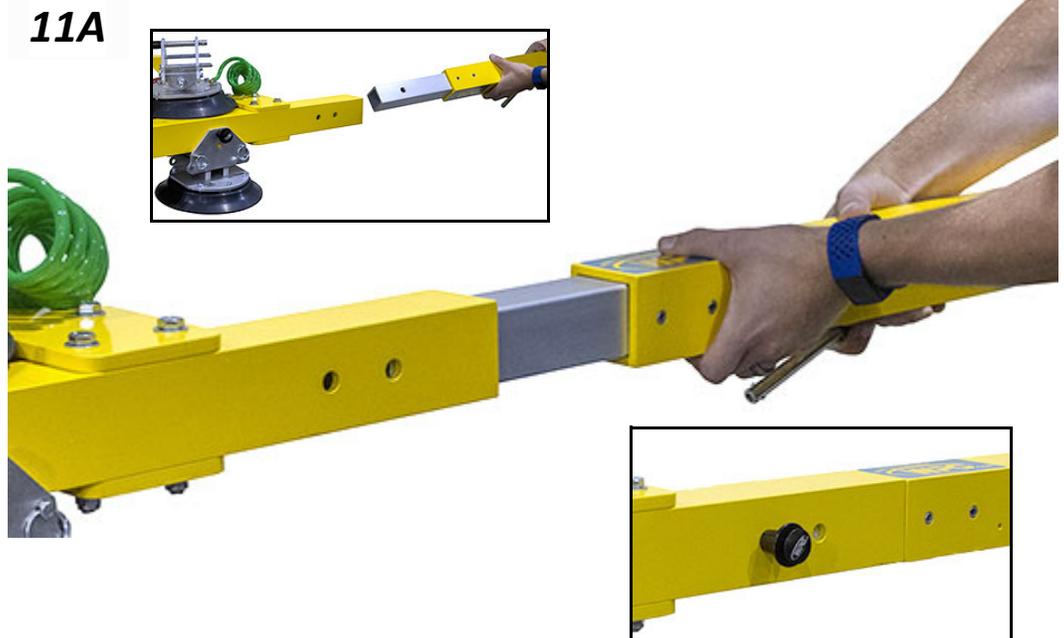
# ASSEMBLY

If the larger configuration is needed, complete the remaining steps:

- 10) Remove one of the outer pivoting pad mounts (fig. 10A).



- 11) Install one of the lifter's extension arms into the socket at the end of the optional pad frame section until the holes for the cotterless hitch pin align. Then secure with the arm's hitch pin (fig. 11A and insets).

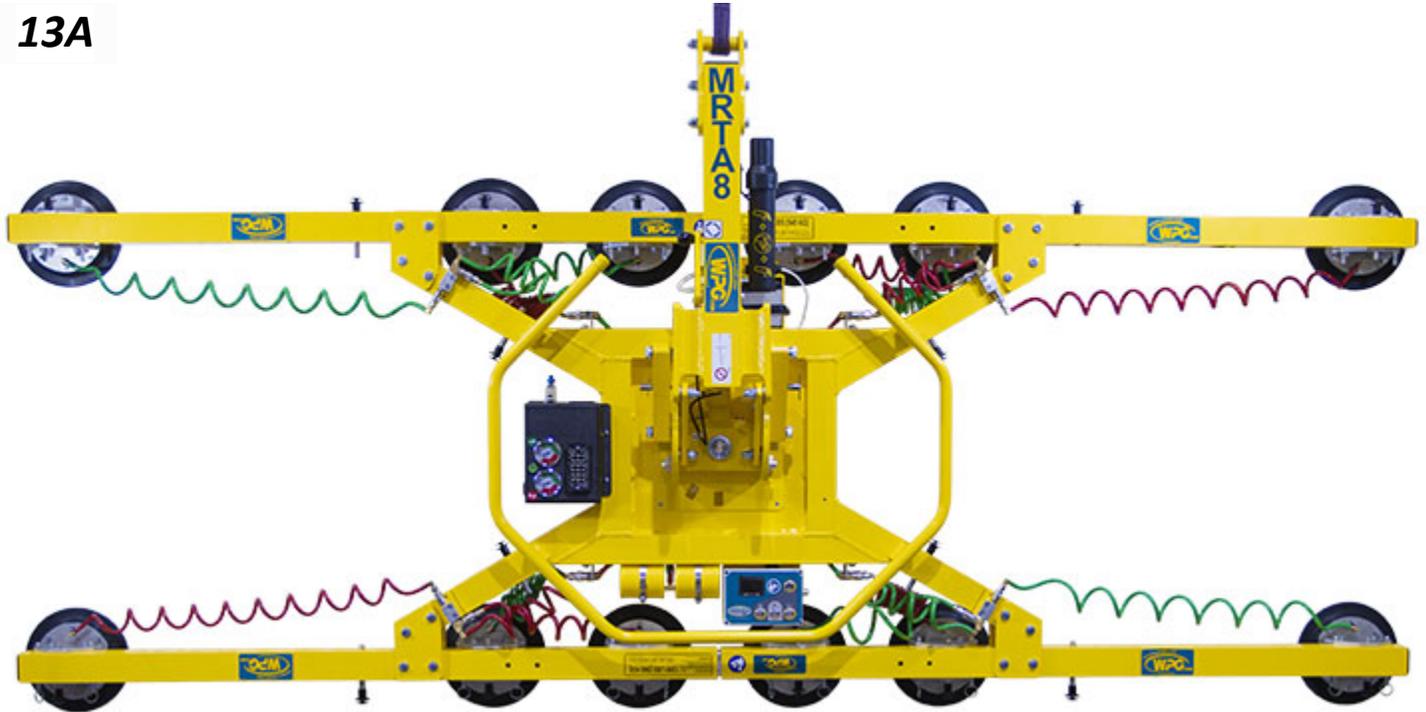


- 12) Move the pad mount to the end of the extension arm. Align the holes and secure with the pad mount's hitch pin (fig. 12A).



# ASSEMBLY

13A



- 13) Repeat steps 10-12 for the remaining pivoting pad mounts and extension arms, to complete the larger configuration (fig. 13A).

*Notes: Repeat or reverse these steps to reconfigure the pad frame as needed. Store removed components in a clean, dry location.*

Additionally, you can view a [WPG video](#) demonstrating how to assemble the Curved-Load Adapter Kit.

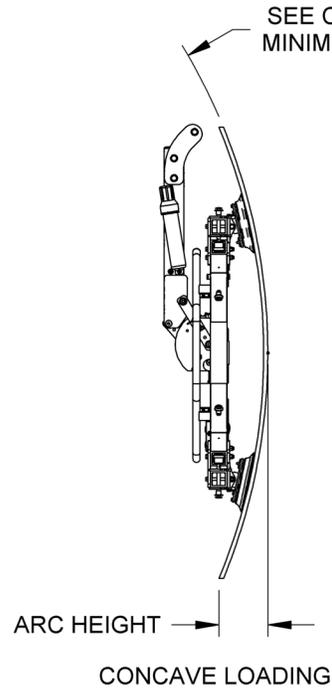
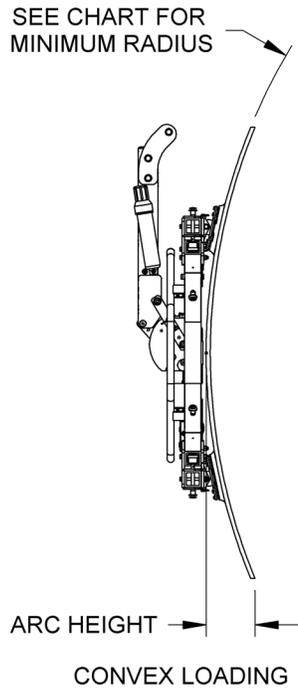


*Note: If you have only a printed copy of these instructions, scan this QR code to access the video.*



# ← INTENDED USE →

## LOAD CHARACTERISTICS



Lifter Model	MRTA8		MRTA6 (+2 pads)	
	Retracted	Extended	Retracted	Extended
<b>Pad Mount Offset Position</b>				
<b>Arc Height</b>	----- Maximum Load Capacity -----			
1" [2.5 cm] — convex or concave loading	1200 lbs [545 kg]	1200 lbs [545 kg]	1100 lbs [500 kg]	1050 lbs [475 kg]
2" [5 cm] — convex or concave loading	1200 lbs [545 kg]	1200 lbs [545 kg]	1080 lbs [490 kg]	1030 lbs [465 kg]
3" [7.5 cm] — convex or concave loading	1200 lbs [545 kg]	1200 lbs [545 kg]	1060 lbs [480 kg]	1010 lbs [460 kg]
4" [10 cm] — convex or concave loading	1200 lbs [545 kg]	1200 lbs [545 kg]	1040 lbs [470 kg]	990 lbs [450 kg]
5" [12.5 cm] — convex or concave loading	1200 lbs [545 kg]	1200 lbs [545 kg]	1020 lbs [460 kg]	970 lbs [440 kg]
6" [15 cm] — convex or concave loading	1200 lbs [545 kg]	1200 lbs [545 kg]	1000 lbs [455 kg]	950 lbs [430 kg]
7" [17.5 cm] — convex or concave loading	1200 lbs [545 kg]	1200 lbs [545 kg]	980 lbs [445 kg]	940 lbs [425 kg]
8" [20 cm] — convex loading only	1200 lbs [545 kg]	1200 lbs [545 kg]	960 lbs [435 kg]	920 lbs [415 kg]
9" [23 cm] — convex loading only	1200 lbs [545 kg]	1200 lbs [545 kg]	950 lbs [430 kg]	900 lbs [410 kg]
10" [25.5 cm] — convex loading only	1200 lbs [545 kg]	1180 lbs [535 kg]	930 lbs [420 kg]	880 lbs [400 kg]
11" [28 cm] — convex loading only	1200 lbs [545 kg]	1160 lbs [525 kg]	910 lbs [410 kg]	860 lbs [390 kg]
12" [30.5 cm] — convex loading only	1190 lbs [540 kg]	1140 lbs [515 kg]	890 lbs [400 kg]	840 lbs [380 kg]
<b>For Convex Loading</b>	Minimum radius : 60" [152.5 cm]. Pad mounts must be in the retracted position for radii greater than 90" >228.5 cm]; use the extended position for radii between 60" [152.5 cm] and 90" [228.5 cm].			
<b>For Concave Loading</b>	Minimum radius : 44" [112 cm]. Use pad mounts in the retracted position whenever possible ( <i>extended position may be used to prevent the load from contacting the lift point</i> ).			

Note: To retract or extend the pad mounts, see [“Changing the Offset of Pad Mounts”](#).

# INTENDED USE



**Do NOT lift explosives, radioactive substances or other hazardous materials.**

Make sure the vacuum lifter is intended to handle each load according to these requirements:

- The load weight must not exceed the *Adjusted* Maximum Load Capacity (see “SPECIFICATIONS”).
- Curved loads may be handled from the convex or concave side, but must conform to the Minimum Radius (ie, maximum curvature) and Maximum Arc Height (see chart on page 11).
- The load must be a single piece of relatively nonporous material with a relatively smooth contact surface.<sup>1</sup> To determine whether the load is too porous or rough, perform the Lifter/Load Compatibility Test in the lifter’s *OPERATING INSTRUCTIONS*.
- The load's contact surface must be able to obtain a friction coefficient of 1 with the lifter's vacuum pads (see “Pad-to-Load Friction Coefficient” in lifter’s *OPERATING INSTRUCTIONS*). Otherwise, the capacity should be derated appropriately.
- The load's surface temperature must not exceed the Operating Temperatures.<sup>2</sup>
- The load's *minimum* length and width are determined by the *Adjusted* Pad Spread (see “SPECIFICATIONS”).
- The load's *maximum* length and width are determined by its allowable overhang.<sup>3</sup>



*Note: Standard vacuum pads can stain or deform load surfaces with light colors or soft coatings. Test such surfaces for damaging effects before using the lifter on them.*<sup>4</sup>

## OPERATING ENVIRONMENT AND DISPOSAL OF THE LIFTER

See these sections of the lifter’s *OPERATING INSTRUCTIONS*.

1..... A “single piece” of material includes curtainwall assemblies, unitized glazing systems and similar construction units.

2..... Vacuum pads made from a heat-resistant rubber compound can enable you to lift loads with higher surface temperatures. Contact WPG or an authorized dealer for more information.

3..... The allowable overhang is the amount of load material that can extend sideways beyond the vacuum pad without breaking or otherwise being damaged. This depends on the load material, its thickness, and the angle of handling (if any). Since every material has different physical properties, the allowable overhang must be evaluated separately for each load type. Contact WPG or an authorized dealer for more information.

4..... Alternative rubber compounds are available for these purposes. Contact WPG or an authorized dealer for more information.

# OPERATION

## BEFORE USING THE LIFTER

Make sure the load is positioned correctly on the lifter and tilt locks are used when appropriate (see “OPERATION” in lifter’s *OPERATING INSTRUCTIONS*).

Follow the lifter’s *OPERATING INSTRUCTIONS*, with the following differences:

- To select appropriate hoisting equipment, use the *Adjusted* Maximum Load Capacity and *Adjusted* Lifter Weight in “SPECIFICATIONS” to determine the required hoist capacity.
- To determine appropriate lifter use with the Curved-Load Adapter Kit, consult “[INTENDED USE](#)”. If necessary, change the offset of the pad mount as directed in the next section.

## Changing the Offset of Pad Mounts

The pivoting pad mounts have 2 offset positions: retracted and extended. Depending on the curvature of the load, the extended position may be required for convex loading (see “[LOAD CHARACTERISTICS](#)”). Before attaching the vacuum pads to such loads, change the offset as follows:

- 1) Starting with a pad mount in the *retracted* position (fig. 1A), remove the push-button cotterless hitch pin that secures the pad mount on the pad frame (fig. 1B).
- 2) Position the pad mount to align the holes for the *extended* position and secure with the hitch pin (fig. 2A).

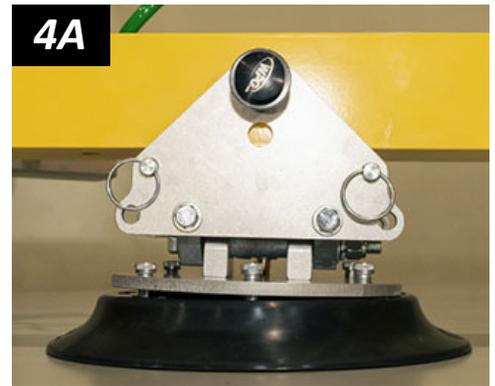


# OPERATION



- 3) Remove the remaining cotterless hitch pins from the pad mount and insert them in the holes closer to the pad frame (figs. 3A and 3B).
- 4) Now the pad mount is in the *extended* position (fig. 4A). Repeat steps 1-3 for all remaining pad mounts.

**Caution:** All pads mounts must share the same offset position to work correctly.



Reverse steps 1-4 to change the pad mounts from the extended position to the retracted position.

*Note: The [WPG video](#) for the Curved-Load Adapter Kit includes instruction for changing the pad mount offset (see "ASSEMBLY").*



## Pivoting the Pad Mounts

The pivoting pad mounts are designed to pivot as needed for vacuum pads to attach to curved loads. If necessary, manually align the angle of the pad mounts with the load surface before attaching the pads to a load.

# REPLACEMENT PARTS

Stock No.	Description	Qty.
93128	Pivoting Pad Mount Assembly	12
65010	Pad Spring – Coil Type	12
49520TA	Vacuum Pad – Model VPCS9 / 9" [28 cm] Diameter – Concave	12
29353	Pad Cover	12
15632	Pad Filter Screen – Small	12
13532	Cotterless Hitch Pin – 1/2" x 3-3/8"	16
13524	Cotterless Hitch Pin – 3/8" x 3-5/8"	24
10900	Shoulder Bolt – Socket Head – 5/16" x 1/2" x 1/4-20 Thread (for mounting pads)	72

**SERVICE ONLY WITH IDENTICAL REPLACEMENT PARTS,  
AVAILABLE AT [WPG.COM](http://WPG.COM) OR THROUGH AN AUTHORIZED WPG DEALER**

# LIMITED WARRANTY

Wood's Powr-Grip® (WPG) products are carefully constructed, thoroughly inspected at various stages of production, and individually tested. They are warranted to be free from defects in workmanship and materials for a period of one year from the date of purchase.

If a problem develops during the warranty period, follow the instructions below to obtain warranty service. If inspection shows that the problem is due to defective workmanship or materials, WPG will repair the product without charge.

## **Warranty does not apply when ...**

- modifications have been made to the product after leaving the factory
- rubber portions have been cut or scratched during use;
- repairs are required due to abnormal wear and tear, and/or;
- the product has been damaged, misused or neglected.

If a problem is not covered under warranty, WPG will notify the customer of costs prior to repair. If the customer agrees to pay all repair costs and to receive the repaired product on a C.O.D. basis, then WPG will proceed with repairs.

## **TO OBTAIN REPAIRS OR WARRANTY SERVICE**

### **For purchases in *North America*:**

Contact the WPG Technical Service Department. When factory service is required, ship the complete product – prepaid – along with your name, address and phone number to the street address listed at the bottom of this page. WPG may be reached by phone or fax numbers listed below.

### **For purchases in all *other localities*:**

Contact your dealer or the WPG Technical Service Department for assistance. WPG may be reached by phone or fax numbers listed below.

Wood's Powr-Grip Co., Inc.

908 West Main St.

Laurel, MT 59044 USA

406-628-8231 (phone)

800-548-7341 (phone)

406-628-8354 (fax)