

# **Revolution™ Tire Changer**

**Fully Automatic and Easy-to-Use**



**MADE IN USA**  
HUNTER ENGINEERING COMPANY ST. LOUIS, MO



# Key features at a glance

PATENT PENDING

## Fully Automatic



- ✓ Same procedure for all tires and wheels
- ✓ Operator experience no longer a factor

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## Leverless Tool Head



- ✓ Demounts without levers
- ✓ Prevents damage to tire and rim

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## “Go” Pedal Controls Progress

- ✓ Press “Go” to make selection
- ✓ Hold “Go” to allow sequence to advance automatically
- ✓ Release “Go” to pause at any time.







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## Space Saving Wheel Lift

- ✓ Spindle lifts tire directly into position
- ✓ Built-in wheel lift reduces overall footprint



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## Powered Press Arms

- ✓ Mount virtually any tire
- ✓ Powered for maximum control



*EXCLUSIVE*

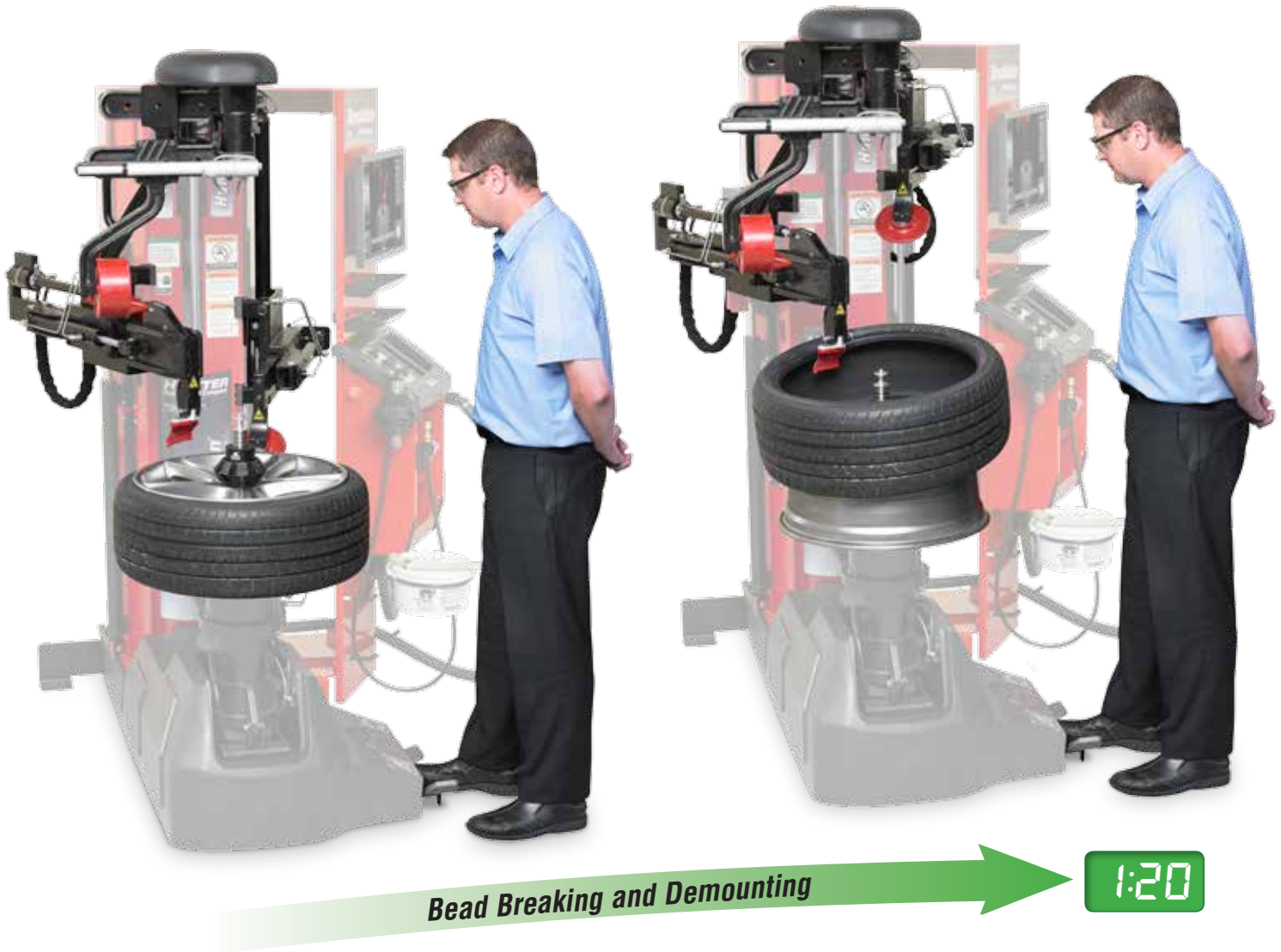
## Animations & Videos

- ✓ Animations train operator "on the job"
- ✓ Video training for new users
- ✓ Video library of special procedures



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***Fully-automatic operation saves effort and mistakes***



## The Operator's Role



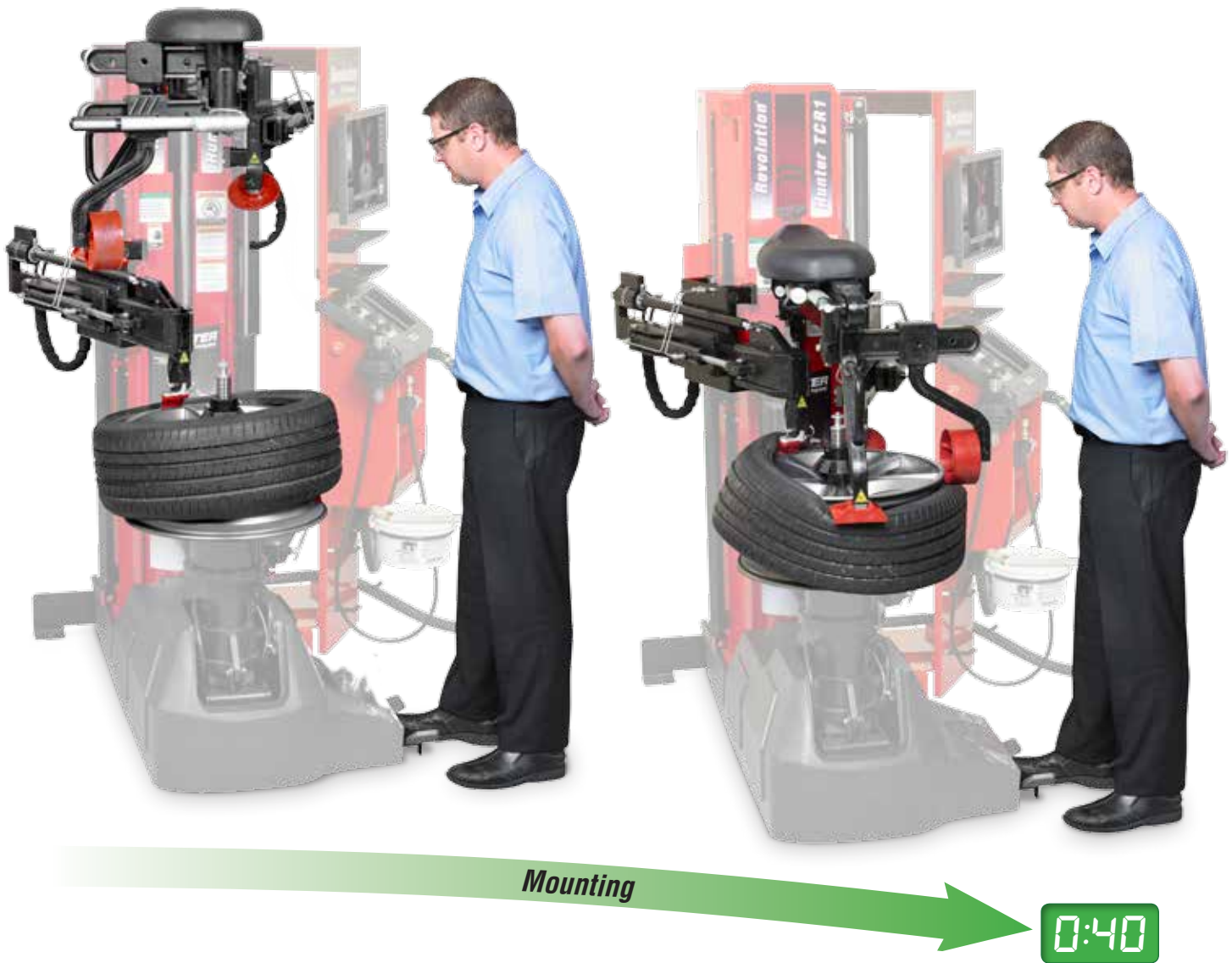
✓ Load and unload the assembly



✓ Set the diameter and position valve stem/TPMS



Changing today's tires and wheels with traditional equipment requires an ever-expanding set of skills. The Revolution™ has these skills built in — simplifying the role of the technician. In short, the technician becomes a machine operator.



✓ Monitor the process



✓ Offload old tire and load new tire

# Fully automatic adds safety



## Position Safety

- ✓ Operator stands back and lets machine do the work



## Inflation Safety

- ✓ Inflation station algorithm fills to set pressure automatically — not necessary to stand on foot pedal to inflate
- ✓ Inflation controls keep operator away from assembly



## Leverless Safety

- ✓ No levers to hit operator
- ✓ Automatic press arms replace using levers for mounting



## Power and Clamping Safety

- ✓ Operator's hands stay away from the assembly
- ✓ No pinch points
- ✓ No risk of rim slipping



## Wheel Lift Safety

- ✓ Protects operator's back
- ✓ No need to lift heavy assemblies



## TPMS Safety

- ✓ Monitors TPMS location constantly
- ✓ Won't allow tire to be mounted or demounted in unsafe TPMS location








## Tire and Wheel Safety

- ✓ Automatic procedure protects rim and tire
- ✓ All rim contact, or near rim contact, is plastic



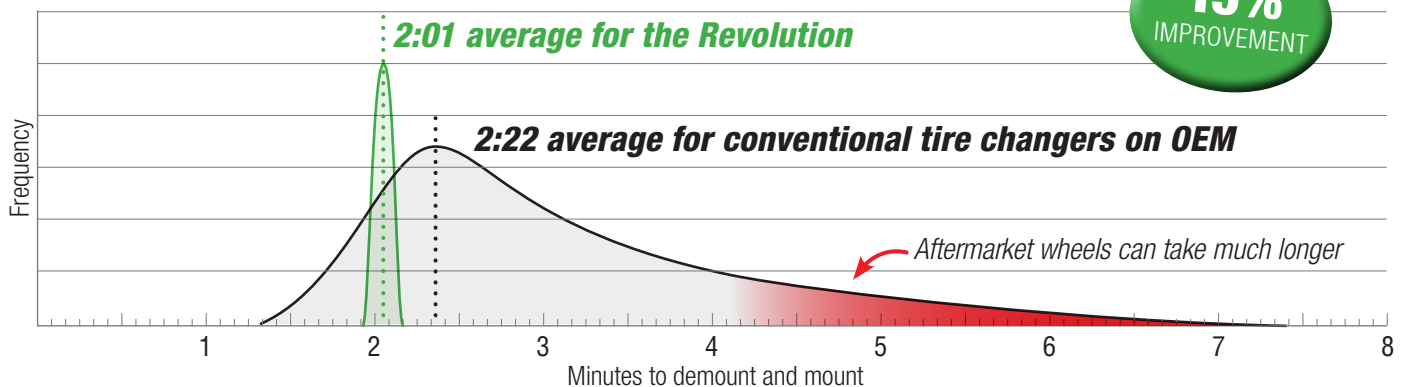
# Fully automatic saves time

Operators often judge how fast they can complete a single assembly, but tire changing is an all-day process with extreme variation. Against a skilled tire technician, an automatic tire changer may be slightly slower on the simplest assemblies, but in the long run and with today's tires, the time spent changing 100 tires will be less.

OEM Fitments (2011–2014)	Percent of Fitments	Typical Conventional Time (skilled operator)	Revolution™ Time (any operator)
 Low profile (under 50 series)	51%	2:08	2:00
 Traditional	22%	1:20	1:56
 Heavy assembly (over 30" assembly)	14%	3:14	2:00
 Run flat	10%	4:06	2:07
 Large diameter (over 20" wheel)	3%	3:59	2:10
<b>100%</b>		<b>2:22</b> AVERAGE	<b>2:01</b> AVERAGE

## Cycle Time Variation

The Revolution™ handles virtually all tires in the same time.

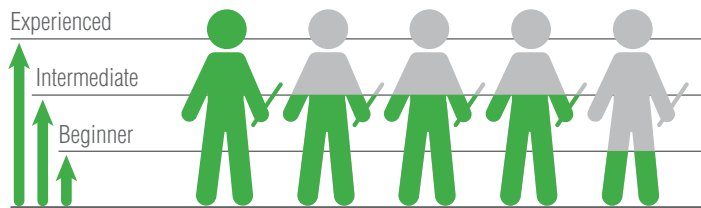


# Fully automatic eliminates experience gap

The Revolution™ can elevate your tire-changing team with differing experience levels to a team of experts.

## Conventional Tire Changer

*Equipment is the tool  
and the technician is the tire changer.*



**17** critical decisions for  
conventional tire changers

### Bead Breaking with Shovel

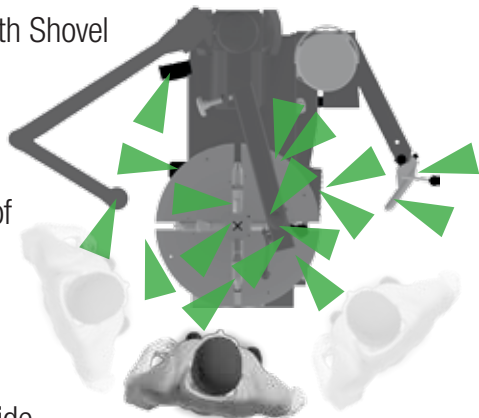
1. Avoid TPMS sensor
2. Set angle and position of shovel
3. Avoid rim

### Clamp

4. Inside or outside
5. Use jaw protectors or not
6. Position jaws as needed

### Demount

7. Set mount head
8. TPMS sensor position
9. Use lever protector or not
10. Reloosen bottom bead

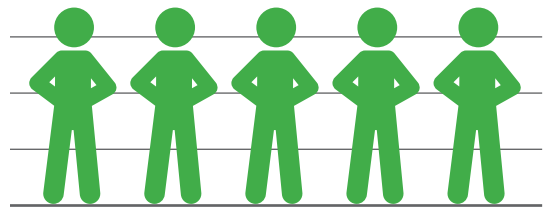


### Mount

11. Position mount head
12. Over/under head
13. TPMS sensor position
14. Use press arms as needed
15. Keep tire turning with rim Inflation
16. Inflate, then check pressure
17. Repeat as needed

## Revolution™ Tire Changer

*The Revolution is the tire changer  
and the technician is an equipment operator.*



**4** critical decisions  
for the Revolution



1. Select clamp size
2. Set TPMS sensor and rim diameter
3. Use press arms as needed
4. Set inflation pressure

vs.



# Fully automatic simplifies training

**Technique is no longer a requirement for tire changing — learn on one tire and apply same skills to all tires.**

The old push here, pull there technique learned through making mistakes and busted knuckles no longer applies. On the Revolution™, the same process learned for one tire assembly applies to all tire assemblies.

## Three Ways to Train:

### The “Walk Me Through It” Mode

- ✓ Animation details each step
- ✓ 13 unique animations
- ✓ Can be bypassed by experienced operator



### 18 On-board videos

Including:

- ✓ Basic operation
- ✓ Detailed operations
- ✓ Special procedures
- ✓ Accessories



### STANDARD

### Camera Monitors Operations

- ✓ Identify incorrect operation
- ✓ Verify proper work
- ✓ Protect your investment



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## Leverless tool head advantages

- ✓ Demounting hook automatically deploys to catch and lift bead
- ✓ No risk of lever damage to operator or rim
- ✓ Demount hook always avoids TPMS sensor — no risk of damage
- ✓ Mount head designed to work with clad, raised spoke and all unique wheel designs



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## TPMS protection is automatic

Once the operator sets the diameter and positions valve stem/TPMS, the Revolution™ tracks the sensor during mounting and demounting, avoiding costly damage.

***Eliminates timely “drop sensor” technique with TPMS service.***



Top bead demount



Bottom bead demount



Bottom bead mount



Top bead mount

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## ***Powered press arms assist on demand***

- ✓ Utilize Press Arms only when necessary or set up to always use them
- ✓ Press Arms adjust automatically when you set the diameter
- ✓ Press Arms power clockwise to prevent tire slippage
- ✓ Mount correctly the first revolution and protect TPMS sensors!



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## ***Bead loosening rollers are damage free***

- ✓ Bead loosening rollers work best for widest variety of tires
- ✓ Procedure loosens even the most stuck on soft sidewall tires
- ✓ No risk of TPMS damage
- ✓ No risk of rim damage

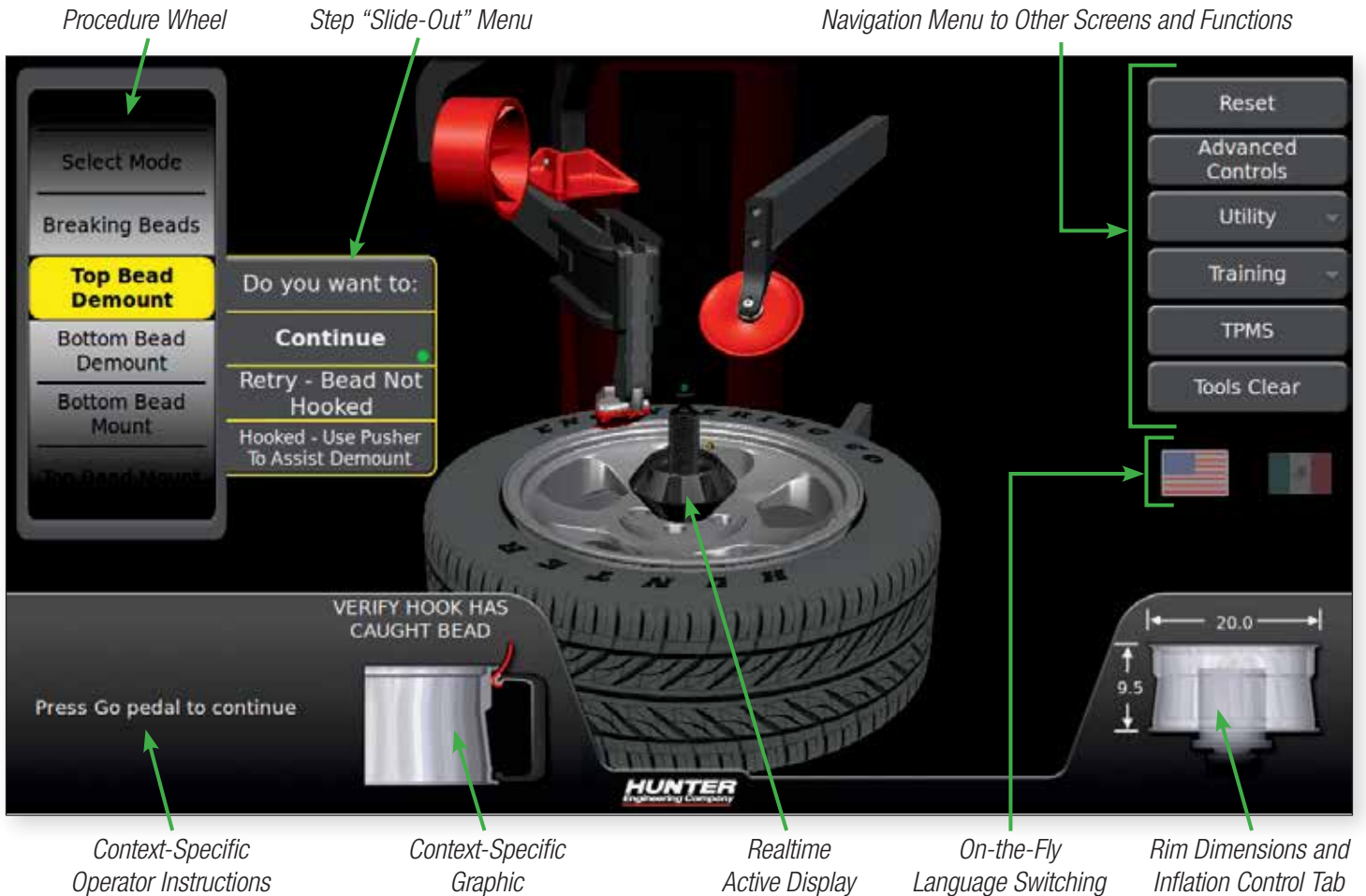




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## Touchscreen interface is simple to use

The display shows the operator's current step and monitors progress. Interactions with screen are generally not required. When needed, slide out menus guide the operator through procedure.



## Clamping versatility

- ✓ Powerful pneumatic clamp holds wheel secure
- ✓ Center clamp design avoids clamping damage
- ✓ Three position cone handles wide variety of wheels



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## ***Fast inflation saves time***

### **Inflation**

Inflation station automatically fills tire to desired pressure.

- ✓ 33% faster than traditional foot pedal inflation systems
- ✓ Target air pressure is adjusted on screen.
- ✓ Operator stands back from inflation process



### **Blast inflation**

Directs large blast of air for tough bead seating.



## ***Hydraulic operation is powerful and precise***



- ✓ Hydraulic operation with filter means long durable life, much like industrial equipment
- ✓ Hydraulic operation means power and control
- ✓ Each tool can be moved quickly or slowly into position and held as needed



# Reduce comebacks and do it right the first time

**PATENTED**

## Match-mounting

When used with Hunter's Road Force Touch<sup>®</sup>, the Revolution<sup>™</sup> quickly and easily helps eliminate vibration problems balancers alone can't fix.

The Revolution's bead roller discs allow spinning of tire on rim, helping match-mount stiffest point on tire to low spot on rim.



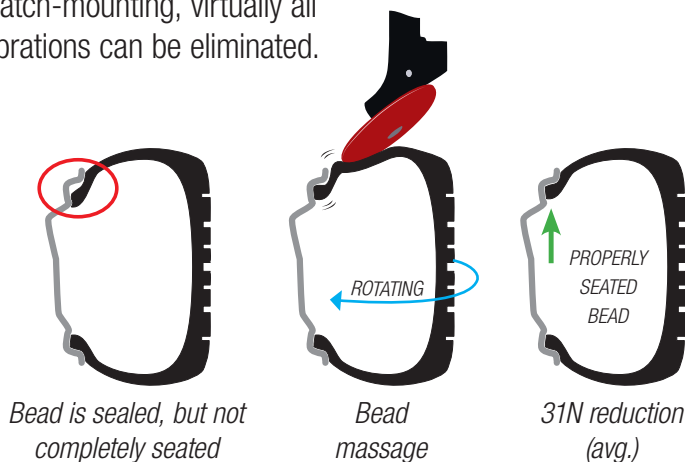
**PATENT PENDING**

## Bead Massage

The Revolution tire changer introduces an automatic bead massage sequence.

During bead massage, rollers apply force to the tire walls, assisting proper bead seating and reducing vibration concerns.

When combined with Road Force<sup>®</sup> match-mounting, virtually all vibrations can be eliminated.



**50% of tire sets are significantly improved using bead massage\***

\* (one or more tires has 31N reduction)



## Standard accessories

The standard Revolution tire changer comes equipped to handle virtually all tire and wheel combinations.

<b>A</b>	RP6-3784	Paste
<b>B</b>	RP6-1506	Paste brush
<b>C</b>	69-1394-2	Pin protector (2)
<b>D</b>	221-759-2	Valve core remover
<b>E</b>	221-659-2	Bead starting tool
<b>F</b>	RP11-2020688	Valve puller
<b>G</b>	192-233-1	In-between cone (2)
<b>H</b>	192-223-2	Small polymer cone (1)
<b>I</b>	192-226-1	Double-sided polymer cone (2)
<b>J</b>	111-154-3	Spare roller
<b>K</b>	179-15-2	Glasses
<b>L</b>	221-713-2	Polymer mount head (2)
<b>M</b>	69-1392-2	Rubber platten cover (2)



## Optional accessories

The following options can be used to enhance serviceability of specialized applications.



### Flange plate kit 20-3158-1

Ideal for plastic clad wheels or reverse wheels where maximum protection is needed. Maximum diameter 240 mm.



### Dual wheel adaptor 20-2964-1

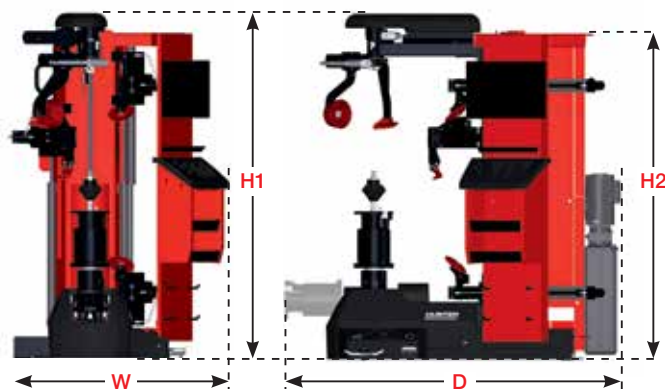
Optional adaptor adds clamping capability for dual wheels, 19.5 in. wheels and other wheels with large center holes.



### Thick bead kit 20-3160-1

Wider hook for thicker beads. Suitable for skid steer, load range G-H-J-tires. Plus, reverse wheel plate for 19.5- and 17.5-in. rims.

# Specifications



## TCR1S Revolution™

Width (W)	Height (H1)	Height (H2)	Depth (D)	Weight
1,272 mm 50 in	1,994 mm 78.5 in	1,918 mm 75.5 in	1,981 mm 78 in	842 kg 1,856 lbs

Because of continuing technological advancements, specifications, models and options are subject to change without notice.

### Model Choices

**TCR1SE-216:** 208-230V, 1Ph, 60Hz, 24A, NEMA L6 30P Supplied  
**TCR1SE-215:** 208-230V, 1Ph, 50Hz, 24A, NEMA L6 30P Supplied  
**TCR1SE-435:** 230/380V, 3Ph, 50Hz, 10/6A, NEMA L22 20P Supplied

### Air Supply Requirements

8.6 ± 1.7 bar (125 ± 25 psi)

### Mount / Demount Tool

Polymer Self Inserting Leverless

### Clamping Type

Center w/Quick Clamp

### Bead Loosening Type

Upper / Lower Roller

### Match Mounting Capable

Yes

### Rim Diameter Range

305 mm – 762 mm (12 in. – 30 in.)

### Maximum Tire Diameter

1,270 mm (50 in.)

### Maximum Wheel Width

381 mm (15 in.)

### Drive

Variable up to 15 rpm Clockwise/Counter Clockwise  
 Torque: 1186 Nm (875 ft-lbs)

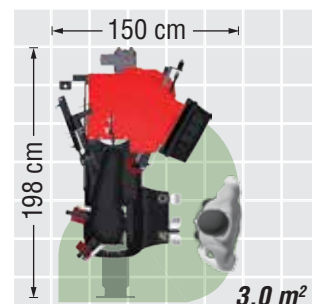
### Shipping Weight

842 kg (1,857 lbs)

### Footprint Comparison

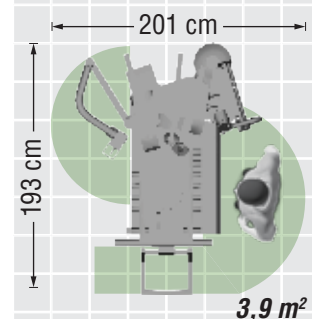
#### Revolution™

Revolution is space efficient for a premium changer.



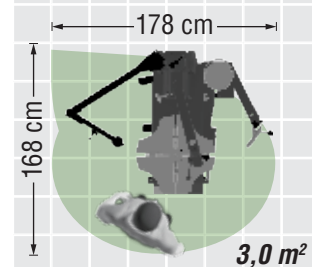
#### Premium Changer

Other popular premium tire changers are larger.



#### Typical Tabletop

Even simple conventional changers are larger than they appear when work area is factored.



This product is listed to UL201 Garage Equipment Standard by Intertek (ETL) Testing Laboratories.

Meets national electrical code requirements for electrically powered shop equipment — 1st for an electric tire changer!

**HUNTER**  
 Engineering Company

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