

INNOVATION PRECISION ENGINEERING EXCELLENCE



WHO WE ARE

Snap-on Incorporated

Who We Are

OUR MISSION

The most valued productivity solutions in the world

BELIEFS

We deeply believe in:

- Non-negotiable Product and Workplace Safety
- Uncompromising Quality
- Passionate Customer Care
- Fearless Innovation
- Rapid Continuous Improvement

VALUES

Our behaviors define our success:

- We demonstrate Integrity.
- We tell the Truth.
- We respect the Individual.
- We promote Teamwork.
- We Listen.

VISION

To be acknowledged as the:

- Brands of Choice
- Employer of Choice
- Franchisor of Choice
- Business Partner of Choice
- Investment of Choice



WHAT WE MAKE

Products and services include:

- HAND AND POWER TOOLS
- TOOL STORAGE
- DIAGNOSTICS SOFTWARE
- INFORMATION AND MANAGEMENT SYSTEMS
- SHOP EQUIPMENT

SNAP-ON IS IDEAS

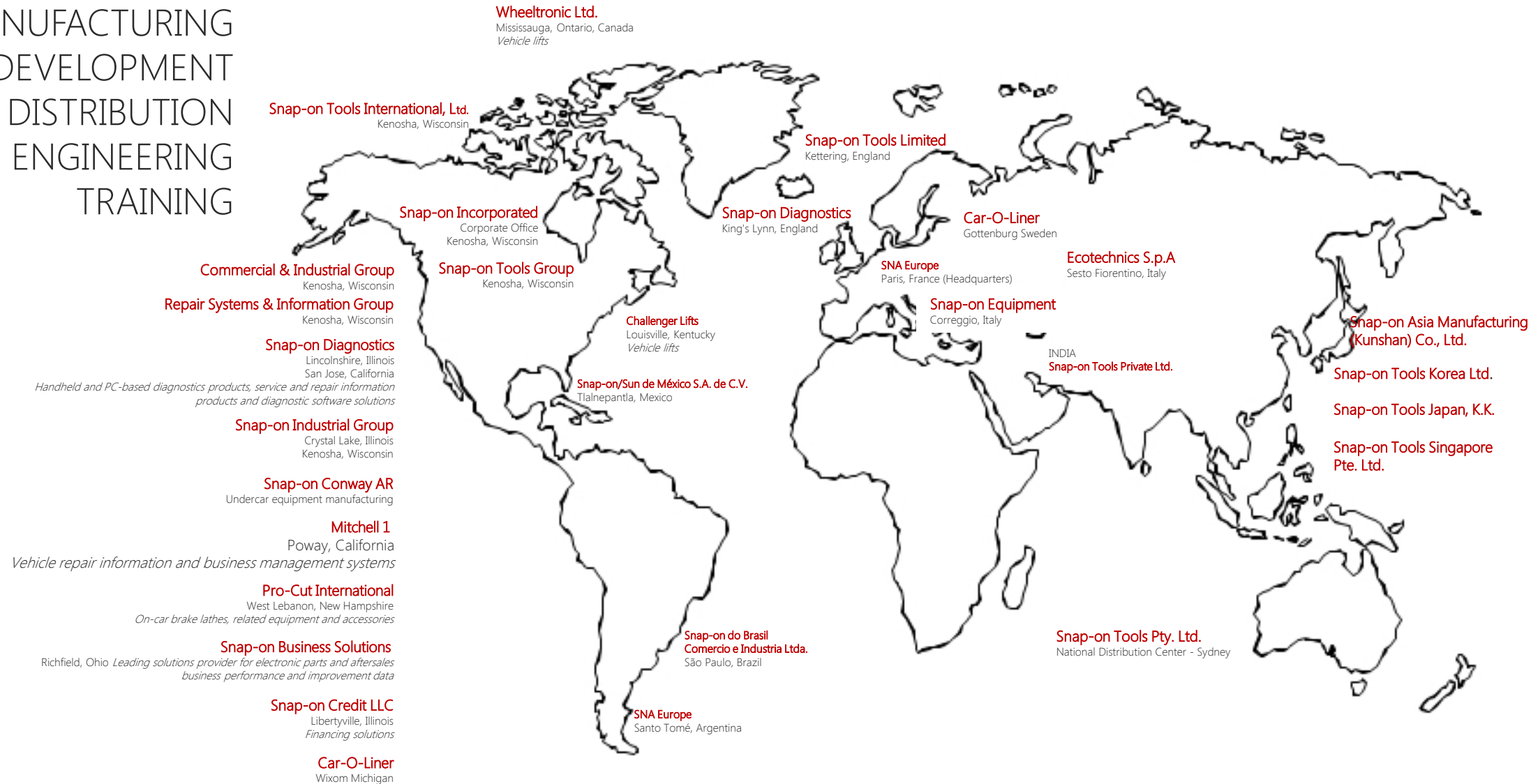
It started with a spark and the spark became an idea; and the innovation ignited our Company...and that tradition has continued through the decades...Idea after Idea...formed by observing the practical...and enabling the invention of the possible.





OUR WORLDWIDE FOOTPRINT

PRODUCT MANUFACTURING
PRODUCT DEVELOPMENT
DISTRIBUTION
ENGINEERING
TRAINING





5



SNAP-ON IS THE LARGEST AUTOMOTIVE EQUIPMENT MANUFACTURER IN THE WORLD

**WE HELP MORE PEOPLE DAILY, WITH
CRITICAL TASK SOLUTIONS WORLDWIDE,
THAN ANY OTHER AUTOMOTIVE SERVICE
EQUIPMENT COMPANY**

WHO IS HOFMANN?

HOFMANN is a division of Snap-on Incorporated, a leading global innovator, manufacturer and marketer of:

- IMAGING WHEEL ALIGNMENT EQUIPMENT
- WHEEL BALANCERS
- TIRE CHANGERS
- ALIGNMENT RACKS

for professional users performing critical tasks

WHERE SECOND BEST IS NOT AN OPTION

▶ 1931

The company Gebrüder Hofmann OHG is founded by Dyonis and Roman Hofmann in Darmstadt/Germany.

▶ 1934

The first balancers for industrial applications are launched into the market. A subsidiary is founded in the United Kingdom.

▶ 1949

The first mechanical balancer is developed for garages and work shops.

▶ 1961

The ER2 wheel balancer is introduced and manufactured until 1978. Even today those balancers can be found in workshops, fully operational.

▶ 1969

Start of automotive lift production.

▶ 1971

The geodyna series of wheel balancers are launched into the market. The name consists of geo for geometric wheel data and dyna for dynamic measurement in two planes. Geometric wheel data entry is patented for Hofmann wheel balancers worldwide.

▶ 1980

Wheel aligners are introduced to complete the garage equipment range.

▶ 1987

The launch of the geodyna 88 sees the introduction of the patented optimization mode on wheel balancers. This mode allows optimization of the tire position relative to the rim.

▶ 1997

Hofmann becomes part of the Snap-on Corporation, the world's largest tools and equipment company

▶ 1998

The patented Virtual Plane Measurement technique (VPM) is introduced for all wheel balancers. This technique ensures the most accurate balance results and is insensitive to ambient conditions.

▶ 2004

The geodyna optima, the first fully automatic wheel balancer with diagnostic capability, is launched at the Frankfurt Automechanika show.

▶ 2011

Hofmann celebrates 80 years of quality, expertise and innovation.





THE BEST CUSTOMER EXPERIENCE THE INDUSTRY CAN OFFER



FACTORY TRAINED SERVICE TECHNICIANS

SNAP-ON EQUIPMENT

A NEW STANDARD IN AUTOMOTIVE EQUIPMENT SERVICE

Snap-on Equipment has over 300 factory-trained service technicians nationwide with an average of 17 years of experience, representing the industry's largest repair & maintenance organization.

When you need installation, training or service, we'll have the right tools, genuine OEM replacement parts and the knowledge to satisfy your needs.

Your business is servicing automobiles. Keeping your equipment running smoothly and profitably is ours.



Highly skilled technicians equipped with the right tools and latest technology will ensure that repairs are done right, every time.



Equipment Service On-Site



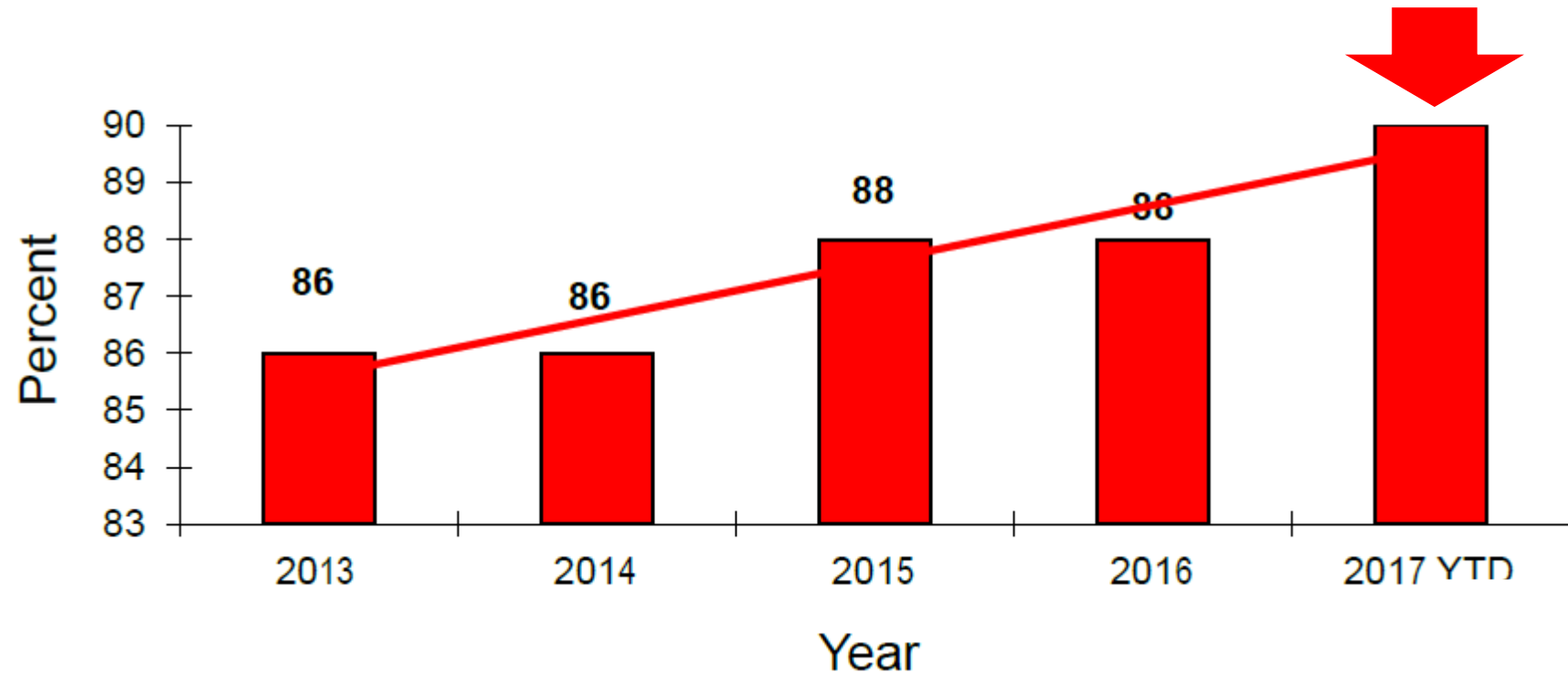
FAST AND DEPENDABLE SERVICE

SNAP-ON EQUIPMENT KEY PERFORMANCE INDICATOR

The most efficient service repair technicians in the industry

**90% OF ALL SERVICE
CALLS ARE COMPLETED
WITHIN 48 HOURS**

Our service technicians carry an array of repair parts on their trucks



SNAP-ON CREDIT

SNAP-ON CREDIT HAS
SEVERAL EQUIPMENT
PURCHASE PROGRAMS
AVAILABLE, DESIGNED
SPECIFICALLY FOR OUR
INDUSTRY, AND TO MEET
EVERY BUDGET.



WE UNDERSTAND THE AUTOMOTIVE BUSINESS

Snap-on Credit is a world-class provider of innovative tools and equipment acquisition solutions to Snap-on and its customers on a global basis. What makes us so successful is our commitment to quality service.

Our dedication to your satisfaction begins with our support staff. In fact, no one else in the industry can give you the level of confidence you'll feel when working with Snap-on Credit.

TRAINING WHEN YOU NEED IT

- AT YOUR OWN PACE
- CERTIFIED COURSE

- OPTIMIZE YOUR KNOWLEDGE
- MINIMIZE YOUR TRAINING EXPENSE
- INCREASE YOUR SHOP'S PRODUCTIVITY

The Snap-on Training group develops and delivers training for individuals as-well-as for groups.

- Wheel alignment geometry Level 1 and Level 2
- OEM specific wheel alignment training
- Equipment specific training
- Group assessment

Patents

Method and apparatus for determining the alignment of motor vehicle wheels

US 5535522 A

ABSTRACT

An apparatus for determining the alignment of a motor vehicle's wheels and including targets (22L, 22R, 24L, 24R) which either form part of the wheels or are attached thereto, an optical sensing means such as a television camera (30) for viewing the targets, an electronic processing means (32) connected to the optical sensing means for processing the target images to determine wheel alignment, and a display means (34, 36) for displaying the alignment information. The optical sensing means (30) views a target located on each wheel and forms an image of each target. Electronic signals corresponding to each of the images are transferred to the electronic processing means (32) which correlates the perspective image of each of the targets with the true shape of each target. In so doing, the processor (32) relates the dimensions of certain known geometric elements (62, 63) of the target with the dimensions of corresponding elements in the perspective image and calculates the alignment of the wheels of the vehicle.

[Find prior art](#)

[Discuss this patent](#)

Publication number	US5535522 A
Publication type	Grant
Application number	US 08/122,550
PCT number	PCT/US1993/008333
Publication date	Jul 16, 1996
Filing date	Sep 3, 1993
Priority date	Sep 4, 1992
Fee status	Paid
Also published as	CA2143844A1 , 7 More »
Inventors	Bernie F. Jackson
Original Assignee	Jackson; Bernie F.
Export Citation	BiBTeX , EndNote , RefMan
Patent Citations (3), Referenced by (146), Classifications (11), Legal Events (6)	

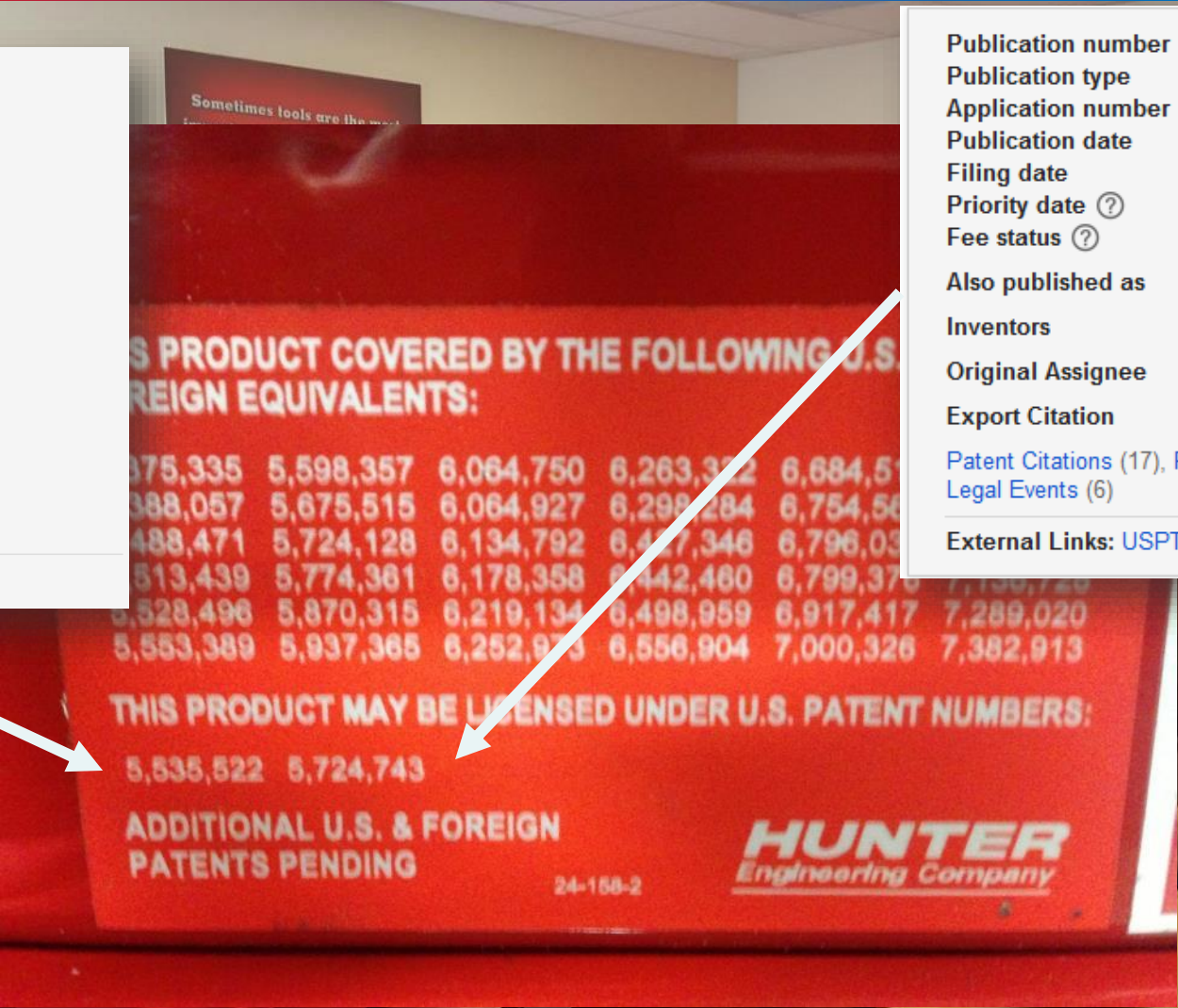
External Links: [USPTO](#), [USPTO Assignment](#), [Espacenet](#)



OUR COMPETITORS USE OUR TECHNOLOGY

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Inventors [Bernie F. Jackson](#)
Original Assignee [Jackson; Bernie F.](#)
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Publication number US5724743 A
Publication type Grant
Application number US 08/544,378
Publication date Mar 10, 1998
Filing date Oct 10, 1995
Priority date ? Sep 4, 1992
Fee status ? Paid
Also published as [CA2232534A1](#), [10 More »](#)
Inventors [Bernie Fergus Jackson](#)
Original Assignee [Snap-On Technologies, Inc.](#)
Export Citation [BiBTeX](#), [EndNote](#), [RefMan](#)
[Patent Citations](#) (17), [Referenced by](#) (152), [Classifications](#) (10), [Legal Events](#) (6)
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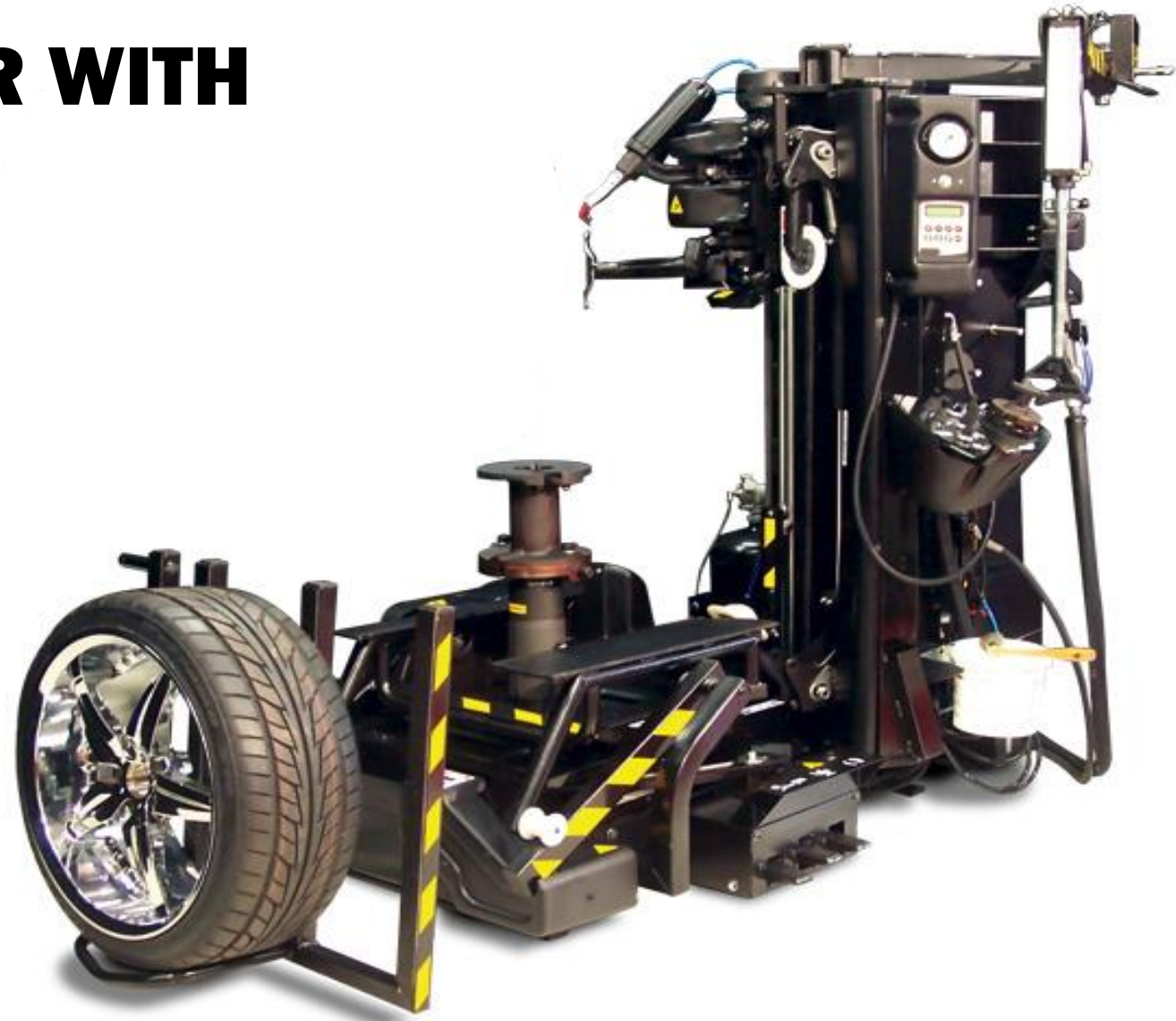


Picture taken from the back of a Hunter Wheel Aligner

AUTOMATED TIRE CHANGER WITH AUTOMATIC FUNCTIONS

**IT'S NOT ABOUT SPEED, IT'S
NOT ABOUT GETTING IT
DONE IN "NO TIME"**

**IT'S ALL ABOUT GETTING
DONE RIGHT THE FIRST
TIME EVERY TIME**

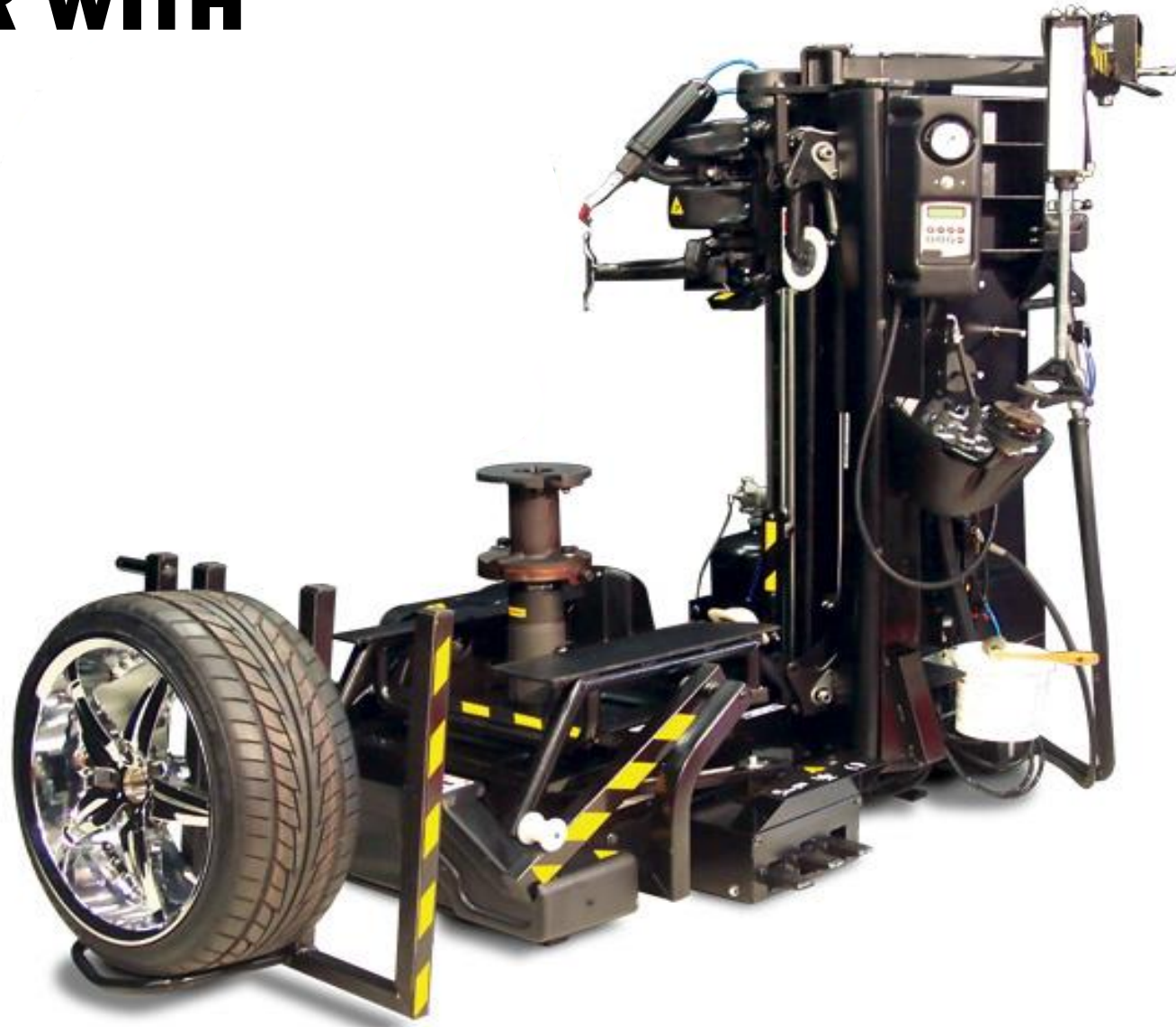


AUTOMATED TIRE CHANGER WITH AUTOMATIC FUNCTIONS

MAKES THE HARDEST TIRES AND WHEEL
COMBINATIONS EASY TO HANDLE

- ✓ REGULAR TIRES
- ✓ UHP (ULTRA HIGH PERFORMANCE TIRES)
- ✓ RFT (RUN FLAT TIRES)
- ✓ EMT (EXTENDED MOBILITY TIRES)
- ✓ PAX (MICHELIN ZERO AIR PRESSURE)

- ✓ STANDARD MOUNT
- ✓ REVERSE MOUNT
- ✓ SPLIT RIMS



AUTOMATED TIRE CHANGER WITH AUTOMATIC FUNCTIONS

EASY TO LEARN AND OPERATE

THREE MODES OF
OPERATION FOR
DIFFERENT
DEGREES OF
DIFFICULT TIRES,
MAKES THIS TIRE
CHANGER THE
EASIEST TO USE IN
THE INDUSTRY

NORMAL
SOFT
SPORT

STANDARD PASSENGER CAR

PICK UP TRUCKS AND SUV

UHP AND RFT TIRES

WIDEST RANGE OF COVERAGE

- THE FA1000 OFFERS THE WIDEST RANGE OF WHEEL AND TIRE ASSEMBLIES, DIAMETERS AND ASPECT RATIOS, FOR STANDARD OEM PRODUCTION PASSENGER CARS, AND LIGHT DUTY TRUCKS

ASPECT RATIO
HIGH

LOW



All Terrain



Truck SUV



All Season Tire



Summer



Passenger



Performance

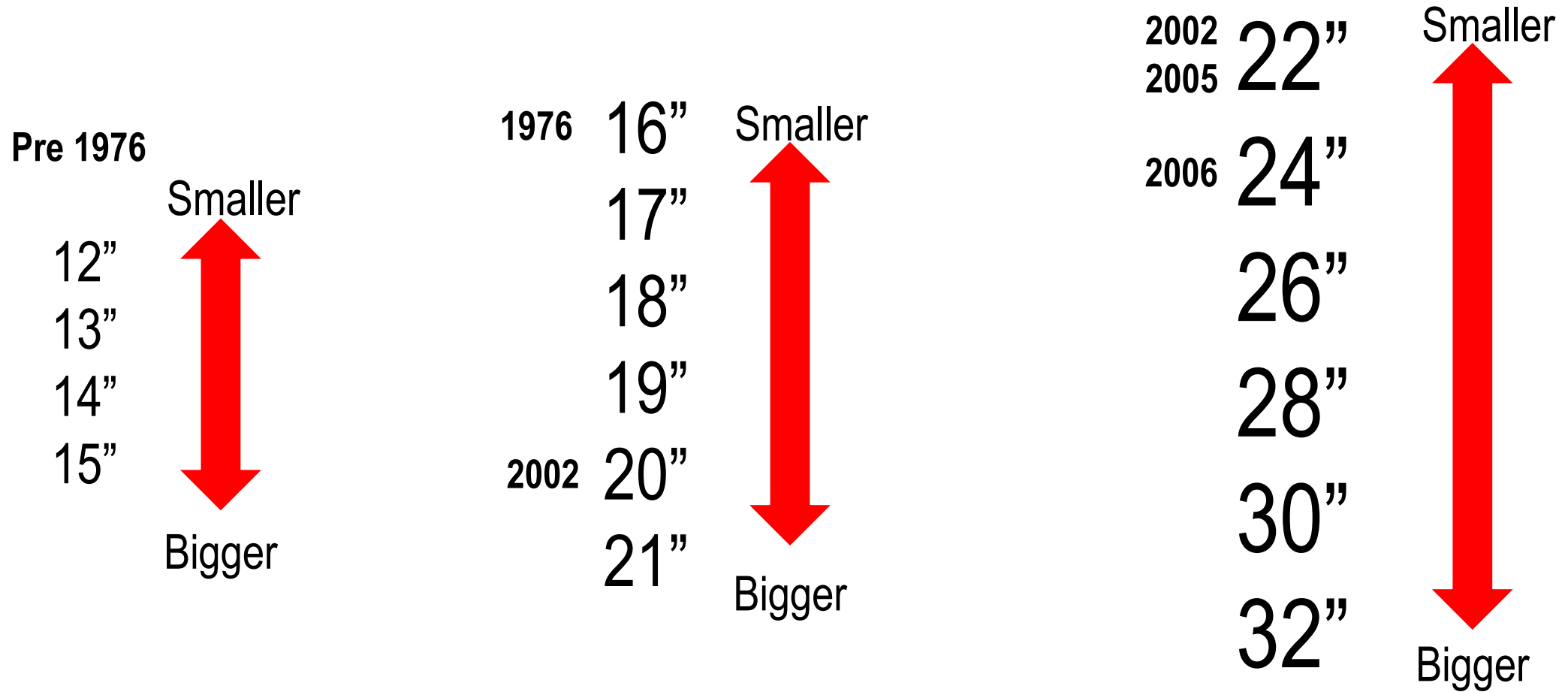


Competition

EASY
DEGREE OF DIFFICULTY

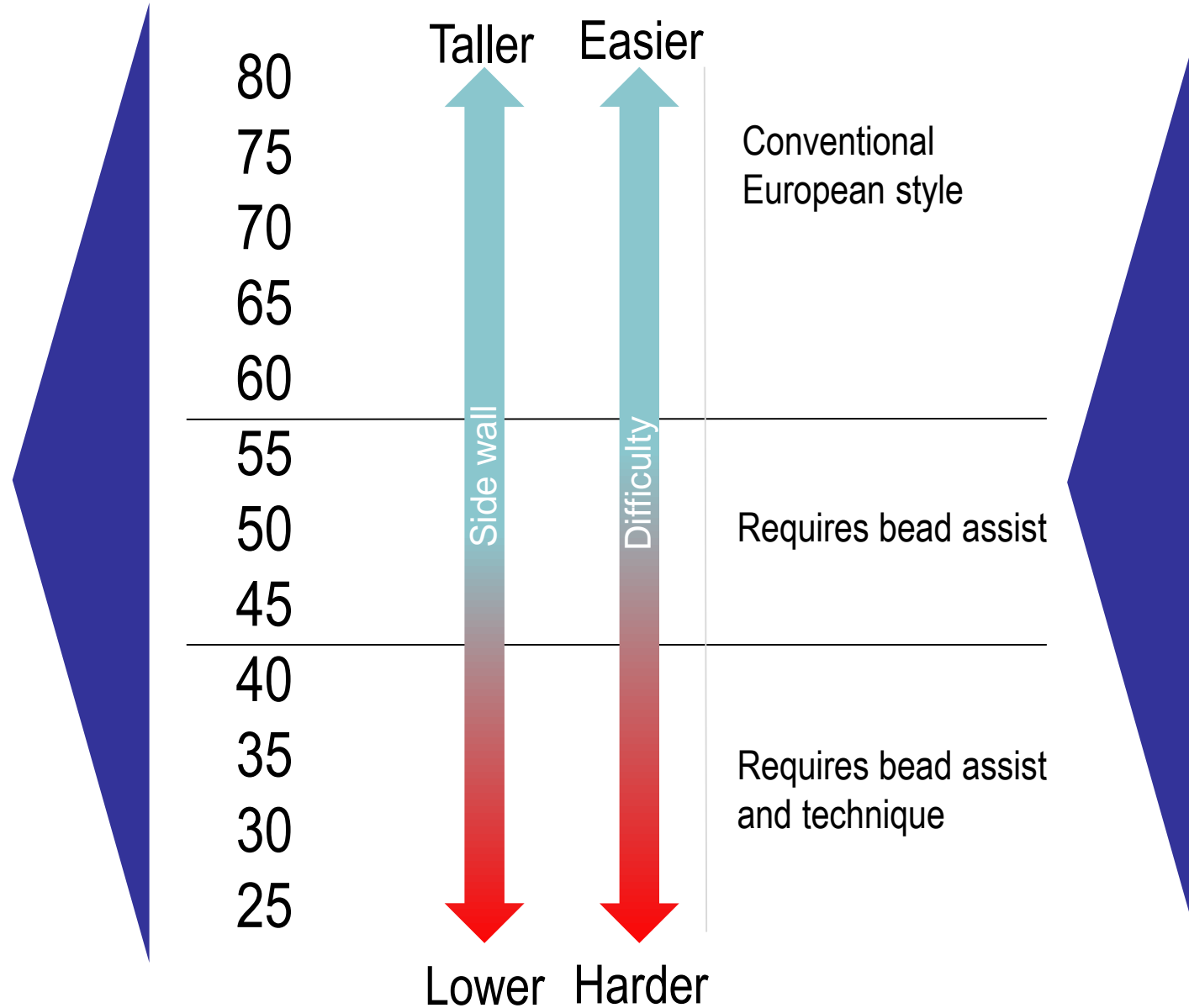
HARD

WHEEL SIZES



WHEEL DIAMETERS ARE GETTING BIGGER

ASPECT RATIOS



WHEELS

STEEL



Mostly found on Police Cars, steel wheels are still around. Some clad wheels are steel with a plastic bonded chrome cover

ALLOY PAINTED



Very common today. Scratches are highly visible, extra care must be taken. Aftermarket wheels sometimes cannot be replaced as they have limited production. Damaging "a" wheel could mean replacing all four wheels.

SPLIT



FA1000 allows mounting and demounting without separating the rim

WHEELS

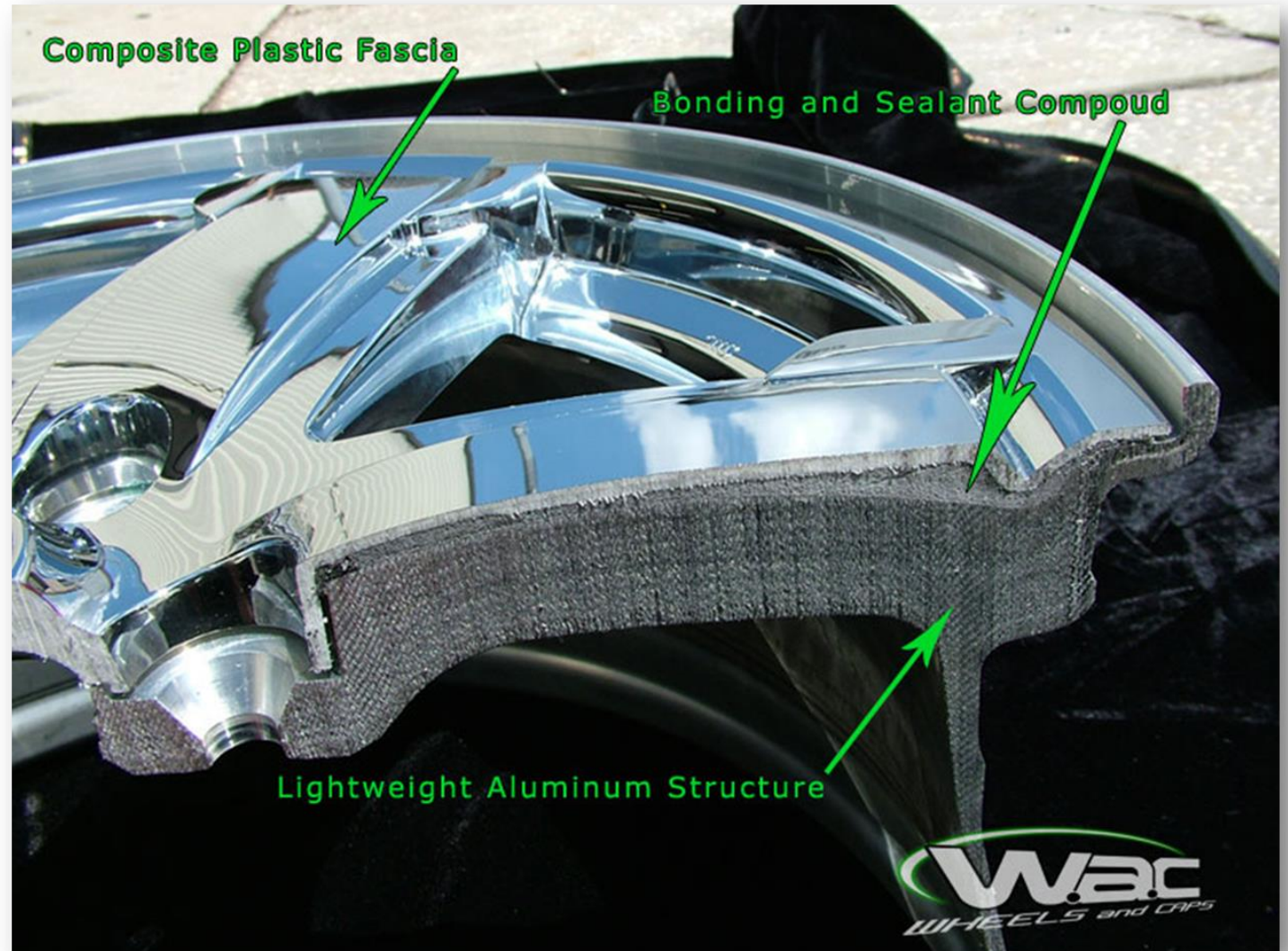
Clad wheel with closed center

Chrome clad with closed center require the use of pin plates and collets to insure proper mounting and not damage the clad surface.

Chrome clad is consist of a cosmetic cover that is bonded to a steel or aluminum wheel and is non-removable

Allows the wheel manufacturer to extract one wheel slug from a mold, 4 or 5 spoke for example, and change the physical appearance of the wheel

These types of wheels are mostly found on domestic products and require special attention when mounting on a balancer or tire changer



WHEELS

Clad wheel with open center

Clad wheel with open center, can use the standard quick nut with the small cup.

Chrome clad is consist of a cosmetic cover that is bonded to a steel or aluminum wheel and is non-removable

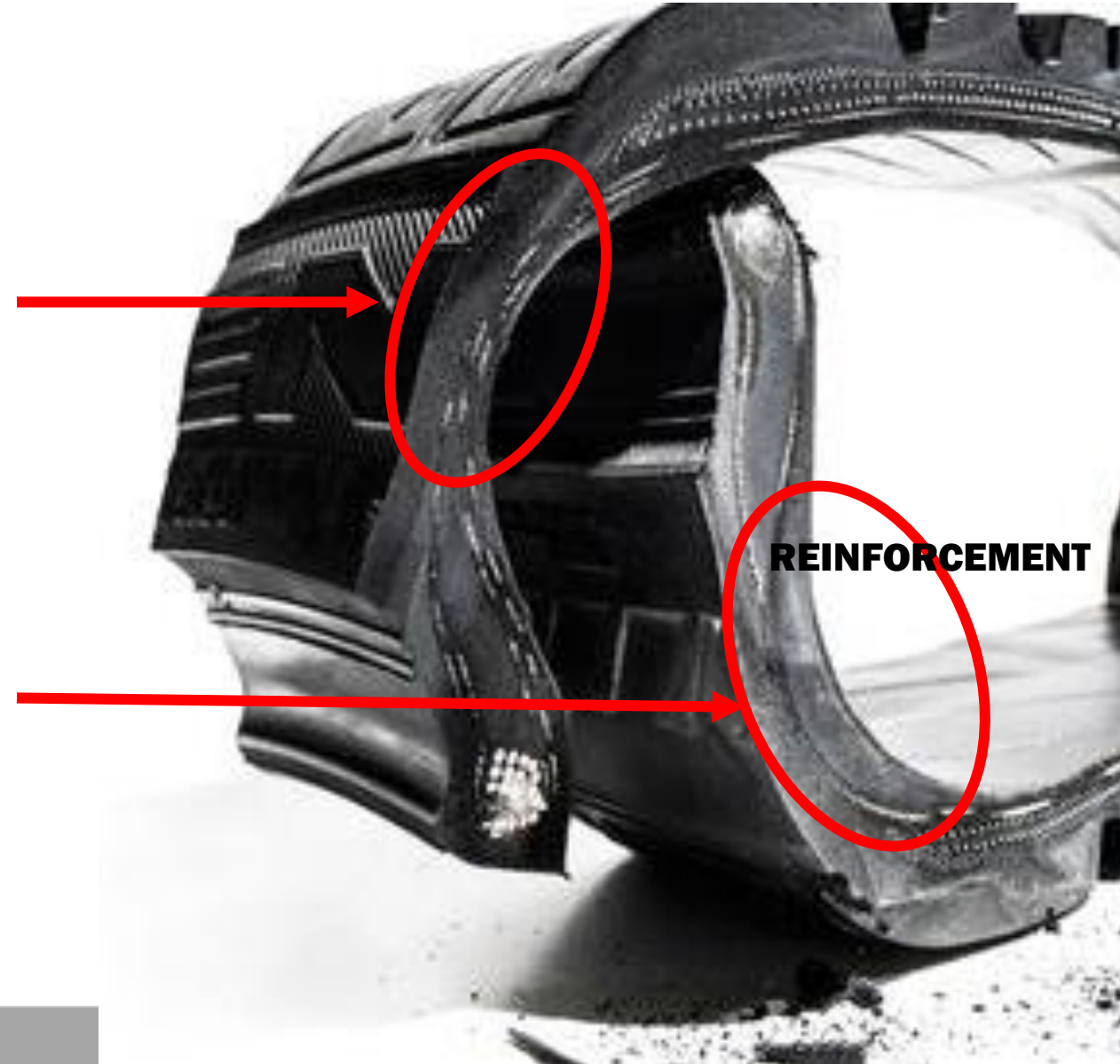
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TIRE DIFFERENCES

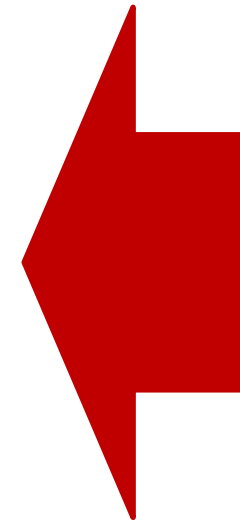
- REGULAR OR STANDARD TIRES HAVE SOFT AND FLEXIBLE SIDEWALLS ALONG WITH A PLIABLE CARCASSE. CONVENTIONAL TIRE CHANGERS CAN HANDLE THESE TYPES OF TIRES WITH MINIMUM EFFORT
- RUN FLAT TIRES HAVE REINFORCEMENTS IN THE SIDEWALLS MAKING THE TIRES DIFFICULT TO REMOVE AND INSTALL. IN ADDITION, THE CARCASSE IS NOT PLIABLE. CONVENTIONAL TIRE CHANGERS STRUGGLE WITH THESE TYPES OF TIRES



TIRE MOUNT TYPE

Original
Equipment
Manufacturer

- ✓ 98% of all OEM wheels are standard mount
- ✓ Tires mount from the front side
 - ✓ Some OEM's are standard mount in the front and reverse in the back mostly European (BWM, Mercedes)



Rule #1

98%

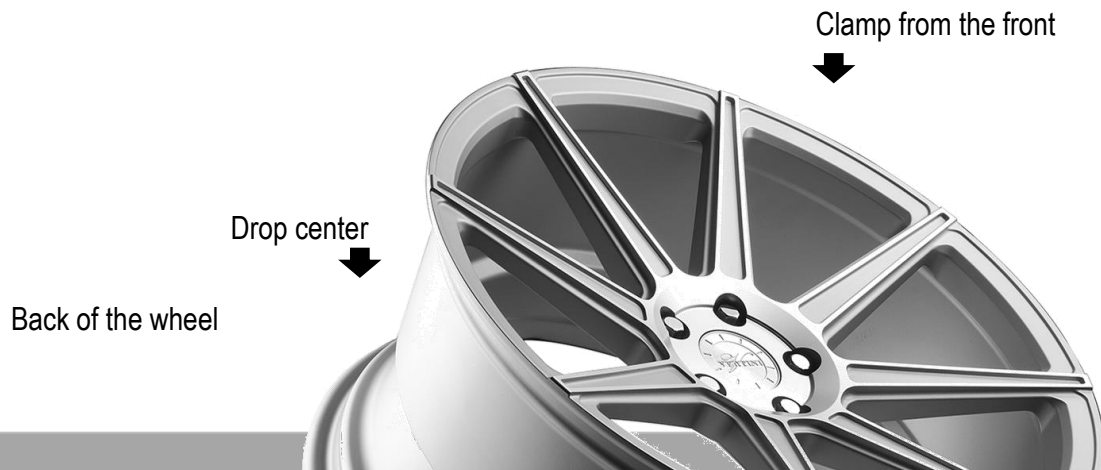
TIRE MOUNT TYPE

Non original
equipment

- ✓ 98% of “AFTERMARKET” wheels are reverse mount
- ✓ Tires mount from the back side
 - ✓ To protect the cosmetic appearance of the front of the wheel
 - ✓ To avoid damaging the raised spokes on certain types of wheels

Rule #2

98%



Reason why this wheel is a reverse mount,
Raised spoke wheel, the mount/demount head could collide with the spoke and
damage the cosmetic appearance of the wheel

TIRE MACHINE SELECTOR

How it works:

- 1) Determine the largest wheel size you work with
- 2) Determine the tire type
- 3) Scroll upward to identify the best machines for your shop

The **YELLOW** range indicates that it is possible to use this tire changer for difficult tire and wheel combinations, but it will take more time to do the job

The **RED** range indicates EASY tire mount and dismount

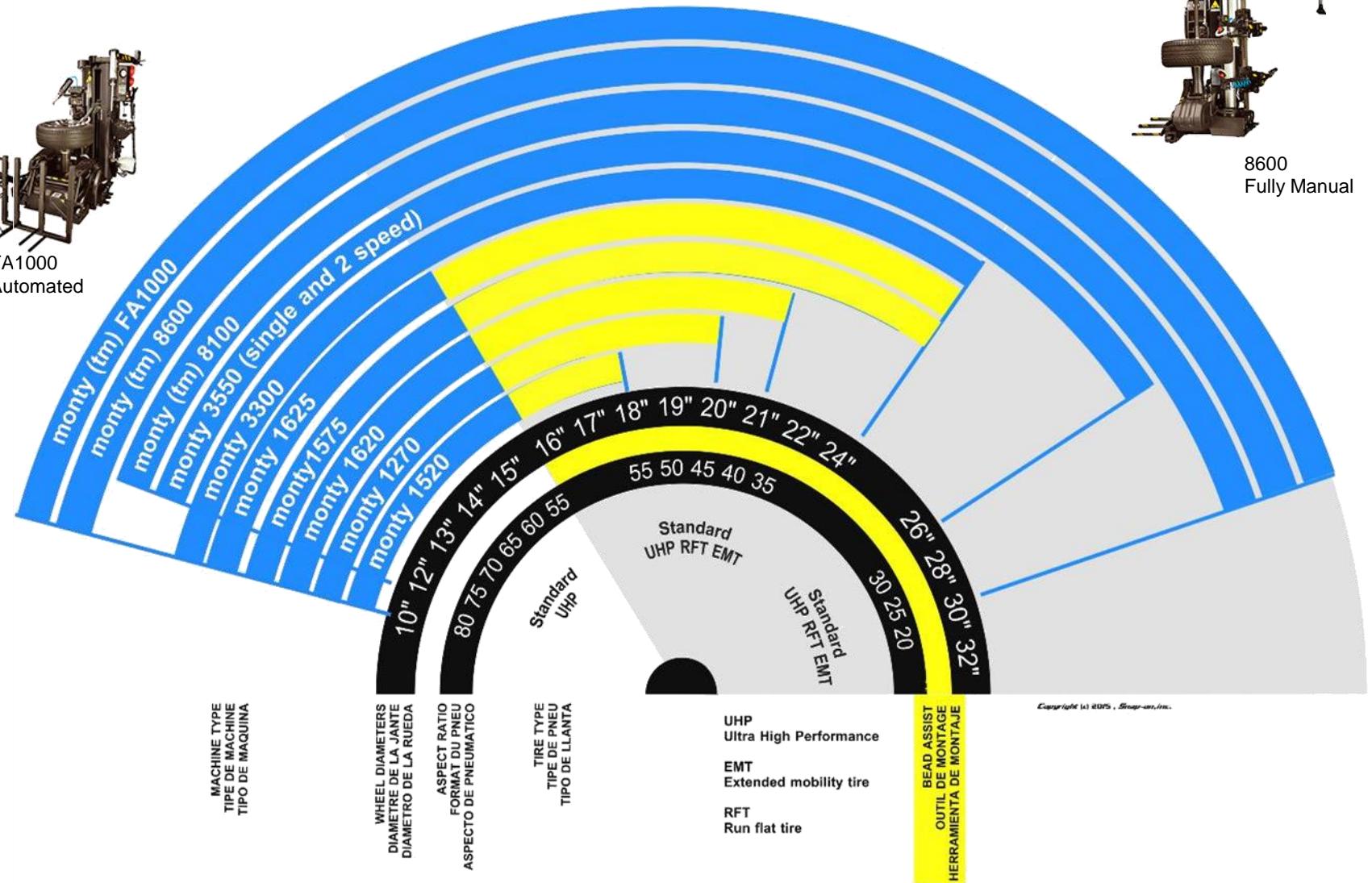
THE FA1000 OFFERS THE MOST
COVERAGE IN AN AUTOMATED
MACHINE THAN ANY OTHER
MACHINE



FA1000
Automated

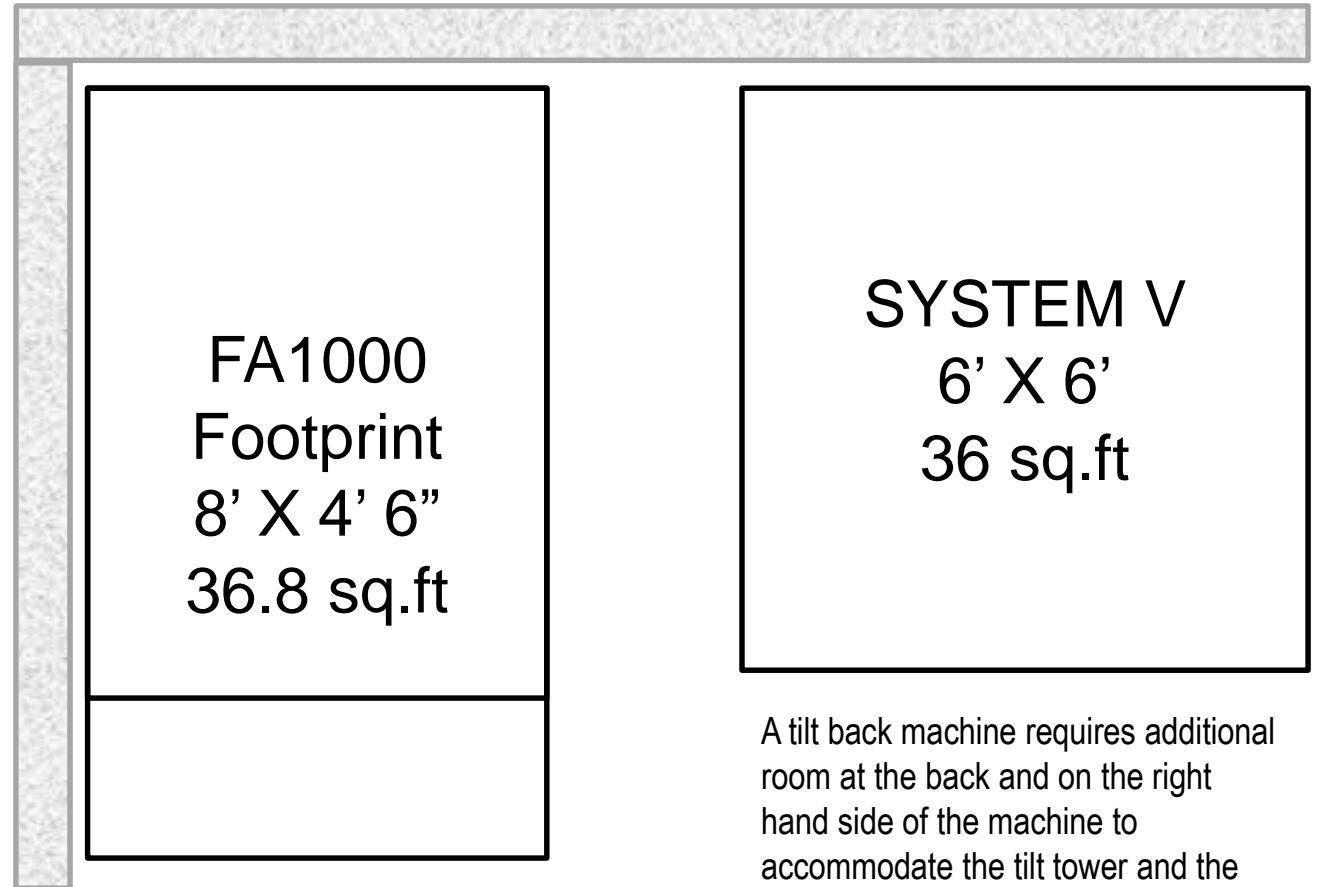


8600
Fully Manual



FOOTPRINT

- The FA1000 footprint on the ground is similar to a standard table top style tire changer.
- The FA1000 is slightly longer than a 3550EM but it is slightly narrower.
- It fits better in a corner than a tilt back with bead assist. All the tools are located on one side of the machine



EXTENDED MOBILITY TIRE

**DO IT FASTER AND
BETTER WITH LESS
EFFORT**

- **EXTENDED MOBILITY**
- **RUN FLAT**
- **ZERO AIR**

**THESE TYPES OF TIRES ARE
ESPECIALLY DIFFICULT TO
HANDLE**

GOODYEAR EAGLE F1

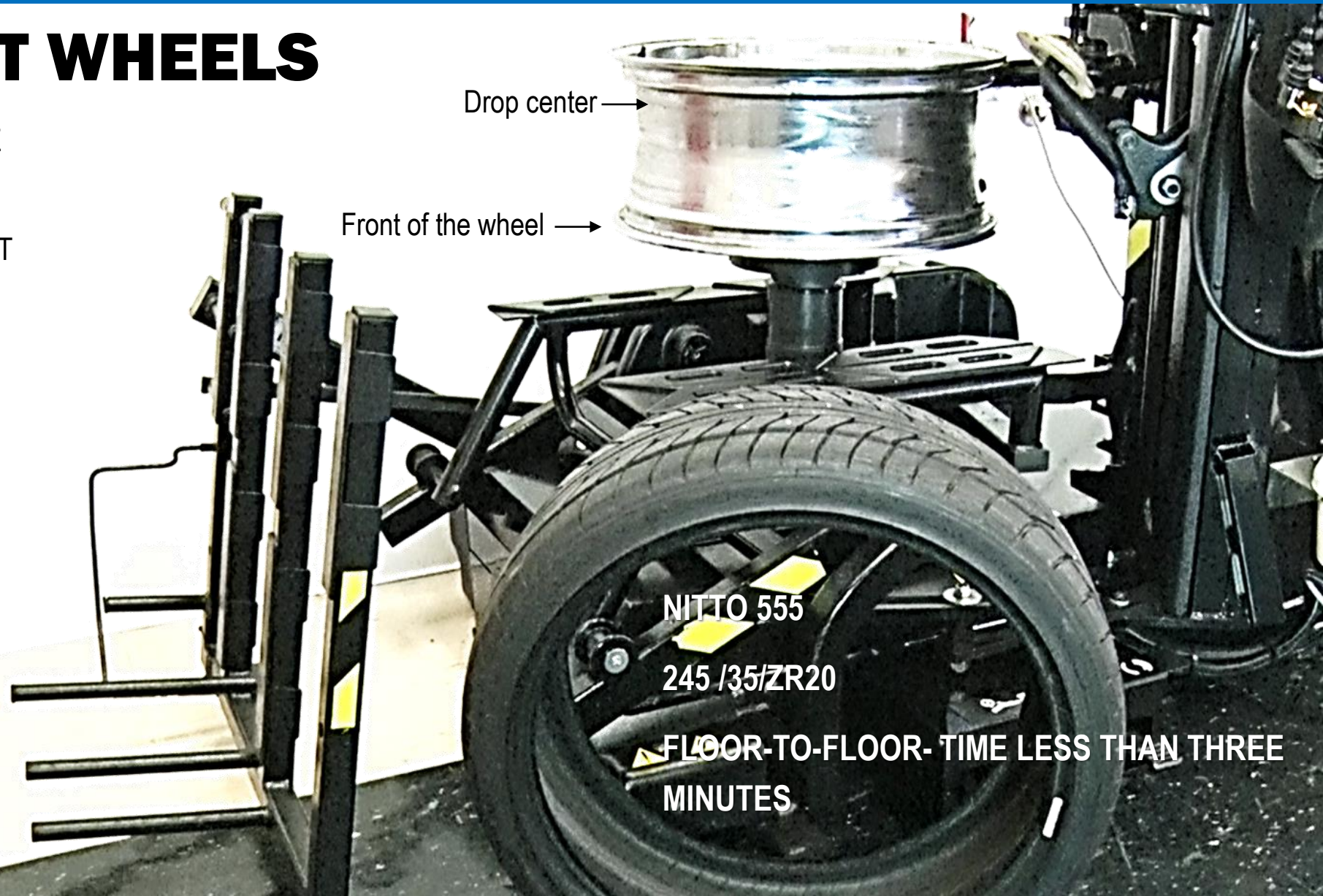
P 325 / 30 / ZR19

EXTENDED MOBILITY TIRE (EMT)

**FLOOR-TO-FLOOR TIME LESS THAN FOUR MINUTES, SINGLE
MAN OPERATION**

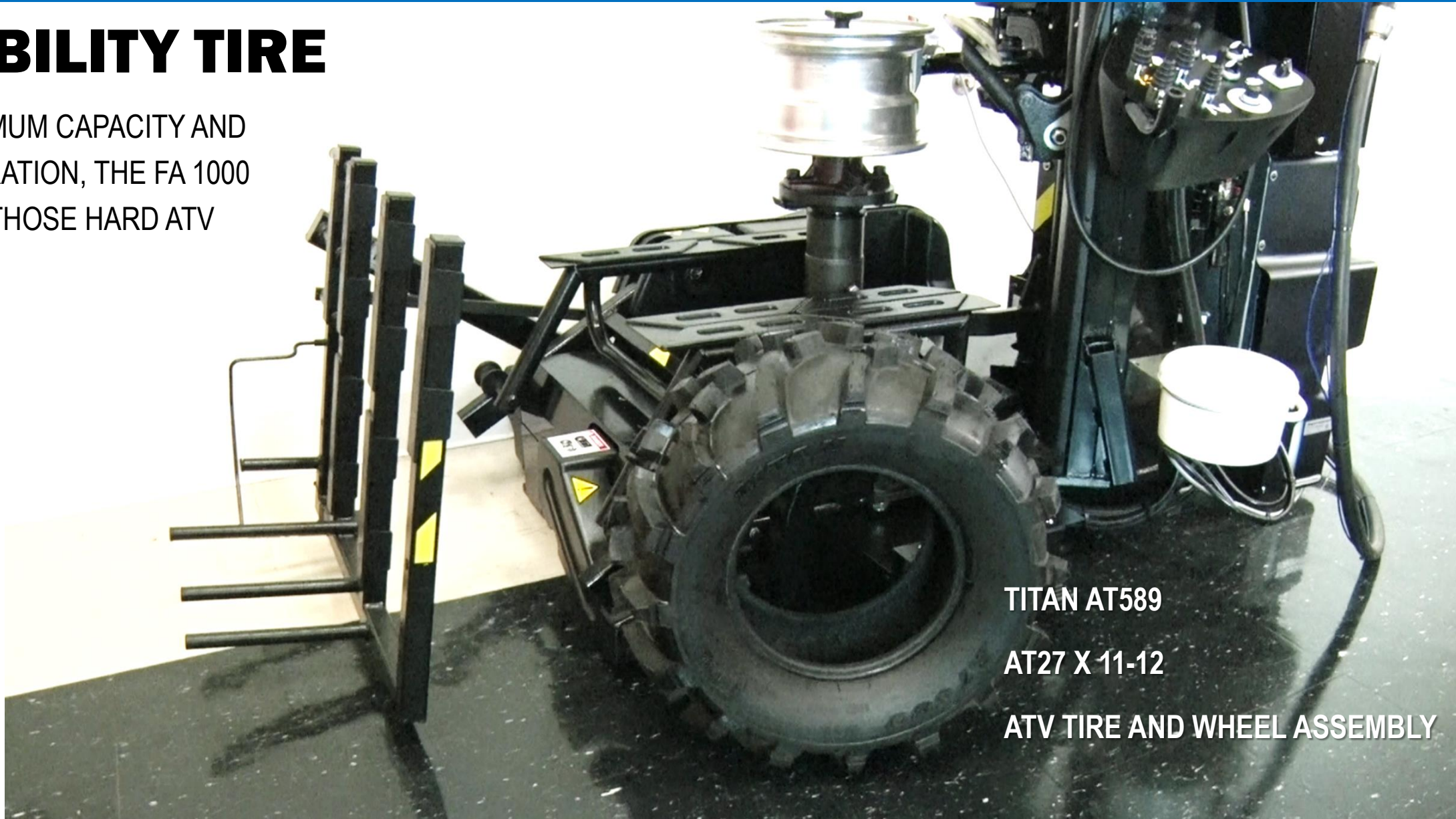
REVERSE MOUNT WHEELS

- THE TIRE COME OUT THE BACK OF THE WHEEL
- USUALLY LOW PROFILE \ AFTERMARKET WHEELS
- THE FA1000 CAN EASILY HANDLE THESE TYPES OF TIRES WITHOUT ANY DAMAGE TO THE TIRE AND OR WHEEL AND USING ONLY ONE TECHNICIAN
- GET MORE DONE WITH LESS EFFORT



ATV MOBILITY TIRE

- WITH 12" MINIMUM CAPACITY AND MANUAL OPERATION, THE FA 1000 CAN HANDLE THOSE HARD ATV TIRES



TITAN AT589

AT27 X 11-12

ATV TIRE AND WHEEL ASSEMBLY

WHEEL LIFT

BACK SAVER

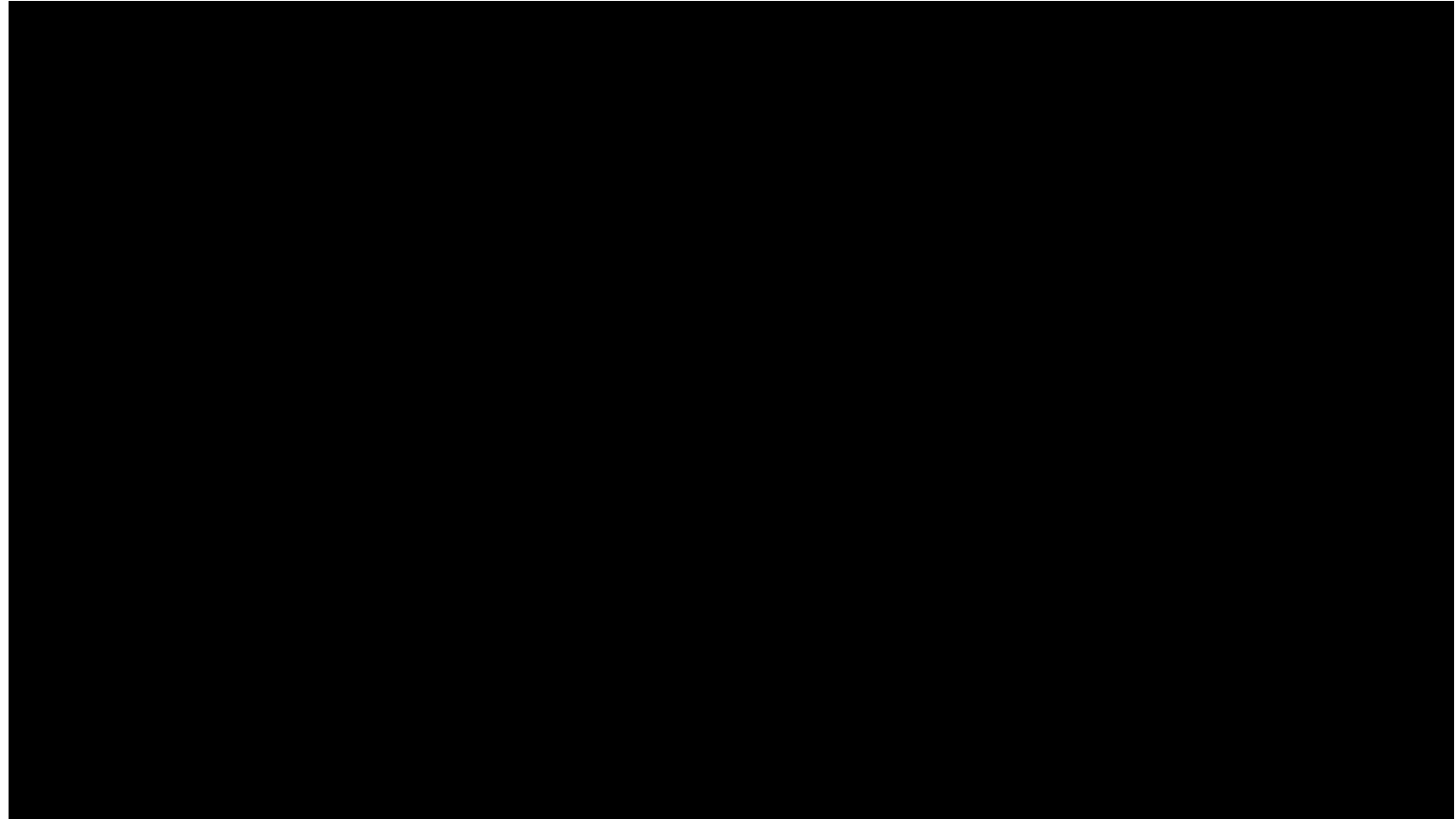
- THE FA1000 WHEEL LIFT CAN HANDLE WHEEL SIZES UP TO 28" IN DIAMETER. WHEEL AND TIRE ASSEMBLIES ARE GETTING HEAVIER. THE INTEGRATED WHEEL LIFT MAKES IT EASIER TO MOUNT THE TIRE AND WHEEL ASSEMBLY ON THE MACHINE.
- **POWERFULL LIFT**
- **ONE MAN OPERATION**
- **AUTO-CENTERING TURN TABLE**



HYDRAULIC CENTER-POST WHEEL CLAMPING

POSITIVE LOCK NO SLIPPAGE

- HYDRAULIC WHEEL LOCKING MAINTAINS A CENTERED WHEEL DURING THE ROTATION. ALLOWS FOR A HIGHER TORQUE APPLICATION DURING THE TIRE MOUNT\DISMOUNT PHASES
- FASTER WHEEL SET UP THAN A CONVENTIONAL TABLE TOP TIRE CHANGER
- LOWER RISK OF DAMAGING THE WHEEL THAN BY GRABBING IT FROM THE INSIDE



AUTO-CLAMPING

LASER\CAMERA

NON-CONTACT MEASUREMENT OF THE WHEEL

- THE LASER\CAMERA ARRAY PRECISLY MEASURES THE POSITION OF THE RIM LIP, BEAD SEAT, AND DROP CENTER FOR BOTH TOP AND BOTTOM PART OF THE WHEEL, FOR PROPER TOOL POSITIONING
 - STEEL
 - ALLOY
 - COMPOSITE
 - BLACK CHROME



HYDRAULIC BEAD BREAKERS

POWER WHERE YOU NEED IT

- HYDRAULIC BEAD BREAKER ENSURE SAFE AND EASY BEAD SEPARATION.
- THE TECHNICIAN HAS ALL OF THE CONTROL
- NO PNEUMATIC LOAD UP AND RELEASE
- PRECISE TOOL POSITIONING



Effective bread breaking, the machine positions the bead disk over the bead core and pushes down on the bead core, instead of pulling on the side wall

HYDRAULIC CENTER-POST STYLE

RIM GUARD

- RIM GUARD TIRES HAVE AN ADDITIONAL PIECE OF RUBBER THAT EXTENDS OVER THE RIM TO PROTECT AGAINST CURB SCRUBBING
- THIS MAKES THE TIRE AND WHEEL ASSEMBLY DIFFICULT TO MOUNT ON A CONVENTIONAL TABLE STYLE TIRE CHANGER.
 - THE JAWS PUSH THE TIRE UPWARDS WHEN ATTEMPTING TO CLAMP THE WHEEL FROM THE OUTSIDE, SINCE THE SIDEWALLS ARE VER STIFF, THE WHEEL FOLLOWS THE TIRE MAKING IT DIFFICULT TO CLAMP



ROBOTIC MOUNT \ DEMOUNT TOOLS

LEVERLESS AN EFFORTLESS

- ROBOTIC TOOLS POSITION THEMSELVES AUTOMATICALLY TO REMOVE AND INSTALL THE TIRES
 - Notice the clearance between the tool and wheel
1. MINIMIZES RIM DAMAGE
 2. MINIMIZES TIRE DAMAGE
 3. FASTER TIMES ON DIFFICULT TIRES
 4. EASIER ON TECHNICIANS



BEAD PUSHER

ADJUSTABLE, PNEUMATIC AND ARTICULATED, BEAD PUSHER

- The bead pusher is design to assist the technician and the machine when mounting difficult tires
- The bead pusher keeps the tire in the drop center area of the wheel for easy mounting and dismounting
- It's like having a third hand

MAKES THE HARDEST TIRES
EASIER TO REMOVE



TOP SIDE TIRE INFLATOR

TOP SIDE INFLATION

- THE FA1000 IS EQUIPPED WITH TOP SIDE INFLATION

INJECTS A POWERFULL JET OF AIR FROM
THE TOP
STICK THOSE HIGH ASPECT RATIO
SIDEWALL TIRES



CONTROL PANEL

ALL THE CONTROLS AT YOUR FINGERTIPS

- YOU JUST WANT TO BREAK THE TOP BEAD TO REPLACE A TPMS SENSOR, NOT A PROBLEM USE THE EXPERT MODE AND GET THE JOB DONE SAFELY IN LESS TIME
- NEED TO MASSAGE THE SIDEWALLS, NO PROBLEM, MOUNT THE WHEEL AND USE THE BEAD BREAKERS TO ACCOMPLISH THE TASK



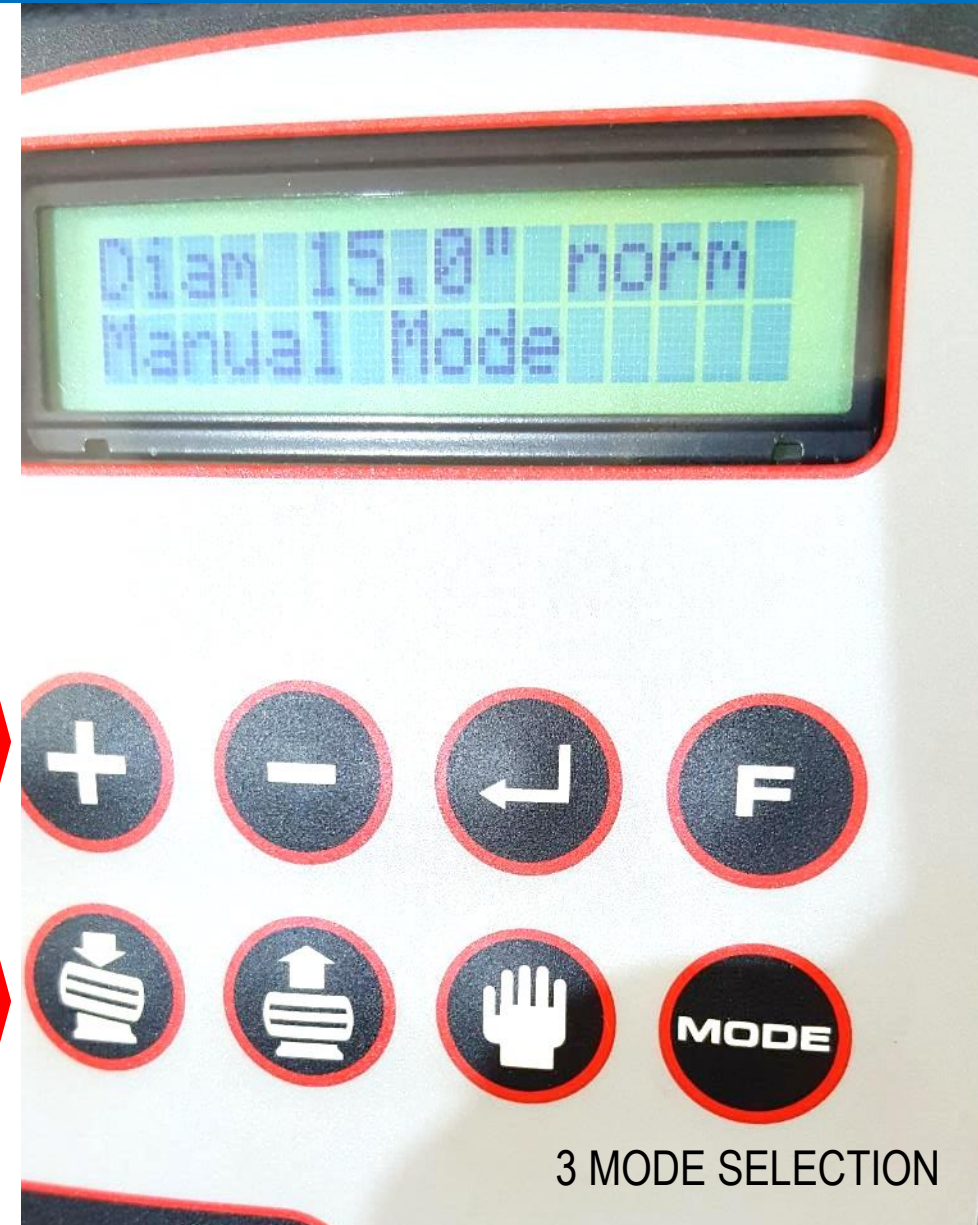
CONTROL PANEL

ALL THE CONTROLS AT YOUR
FINGERTIPS

- QUICK AND SIMPLE SET UP

1 RIM DIAMETER SELECTION

2 MOUNT OR DEMOUNT FUNCTION



3 MODE SELECTION

**PUT ONE TO
WORK IN YOUR
SHOP TODAY**

SHOP TODAY

WORK IN YOUR

<http://www.hofmann-usa.com>

