



Hamaton

Innovation to Perfection

PRODUCT CATALOG

TPMS Sensors | Valves | Tire Tools

About Hamaton

About Us

Hamaton Inc. is a subsidiary of Hamaton Automotive Technology Co., Ltd, a global leader in the manufacturing and supply of traditional tire valves and TPMS products for both OE and aftermarket located in Hangzhou, China.

Established in 1993, Hamaton Automotive Technology Co., Ltd is the main production facility and distribution center for the extensive range of Hamaton products, initially specializing in tire valve production prior to expanding into the TPMS industry. Hamaton Ltd opened its UK headquarters in 2015 to fulfill increased demand for TPMS products across Europe, with an additional subsidiary opening in Wixom, Michigan in 2016 to meet the needs of the North American TPMS market. Hamaton GmbH was opened in Willich, Germany in 2021 to provide additional support and distribution networks throughout Europe.

Hamaton Inc., headquartered in Wixom, Michigan, provides industry-leading technology through our complete range of TPMS and traditional valve solutions, expert training courses and certified quality standards, while also being home to our first-class customer support, e-commerce, and distribution networks.

Our Products

As an internationally recognized brand, Hamaton is dedicated to providing the latest TPMS solutions and technology to meet the needs of our customers across the globe, with an emphasis on manufacturing excellence controlled by the strictest quality standards.

Hamaton TPMS sensors such as our programmable and configurable universal U-Pro sensors, Tesla BLE, workshop tools, tire valves, and service parts are manufactured and tested on a fully-automated, environmentally-controlled production line. Hamaton's products are also stress tested using certified industry standard methods to ensure product durability, lifespan, and quality, with our products certified by TÜV Süd for IATF 16949 and ISO 9001.

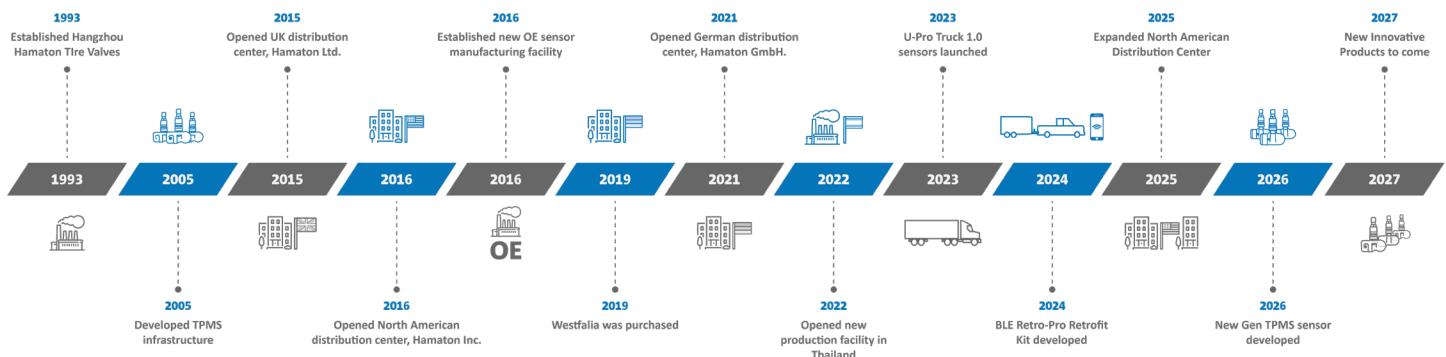
Hamaton's range of TPMS diagnostic tools are designed and manufactured by global market-leader, ATEQ, ensuring we continue to introduce the most advanced TPMS technological features to the market.

Hamaton is also one of the largest manufacturers of tire valve inflation products in the world, producing millions of valve products for bicycle, motorcycle, passenger car, light truck, heavy commercial vehicle, OTR and Earthmover applications. We complement our extensive valve product range with tire inflation, pressure, and tread depth gauges, alongside valve and wheel accessories.

Hamaton Overview



Hamaton Timeline



About Hamaton

Factory Overview

China Factory



Thailand Factory



Distributor Support

Training Support

At Hamaton, we believe that knowledge is power. Our commitment to training has played a vital role in supporting our customers and driving growth. With the expertise of our sales and technical support teams, we provide hands-on instruction that ensures professionals remain confident and up-to-date on every aspect of TPMS.

Training is designed to cover the essentials that technicians face daily. Step-by-step guidance builds mastery of TPMS tool functions, while up-to-date insights keep teams ahead of industry changes and technology trends. Best practices for servicing and replacing TPMS sensors and valve components are also addressed in detail, along with a comprehensive overview of vehicle relearn procedures for a wide range of makes and models.

For added convenience, we offer virtual training through 30–60 minute video sessions. These interactive programs deliver an efficient TPMS “crash course,” covering fundamental knowledge, product overviews, and tool usage. They also create a direct connection between your technicians and our support team, strengthening relationships beyond the classroom.

When hands-on instruction is preferred, training can be delivered on-site at the shop level. Each program is tailored to the specific needs of the team, ensuring consistent and practical education. For larger groups, Hamaton also provides regional training sessions that bring multiple shops together for collaborative learning, hands-on demonstrations, and real-world applications. All training is arranged with flexible scheduling, allowing shops to minimize disruption while maximizing the benefits of education.

Marketing Support

We understand that technical excellence must be matched with strong marketing to truly drive success. That is why we provide professional marketing support, designed to help our partners promote TPMS solutions confidently and effectively.

Our team creates high-quality materials that highlight products, showcase promotions, and strengthen brand presence. Flyers can be tailored for print or digital use, offering clear and visually engaging ways to present information to customers. Digital posters are designed for screens, websites, and social media, ensuring your message is delivered with impact in every format. For more structured presentations, we also provide polished PowerPoint decks that are ready to support client meetings, training sessions, or internal sales discussions.

By supplying resources that are both professional and practical, we help our partners increase visibility, educate customers, and ultimately boost sales. Marketing support at Hamaton is more than just design — it is a partnership that equips you with the tools to grow your business and make a lasting impression.

Table of Contents

| | | | |
|-----------|--|-----------------------------------|---------|
| Section 1 | | TPMS | Page 1 |
| Section 2 | | Passenger Car & Motorcycle Valves | Page 13 |
| Section 3 | | Commercial Vehicle Valves | Page 17 |
| Section 4 | | Valve Caps & Cores | Page 25 |
| Section 5 | | Tire Repair Tools & Accessories | Page 29 |
| Section 6 | | Needles & Probes | Page 33 |
| Section 7 | | Gauges | Page 39 |
| Section 8 | | Valve Fishing & Repair Tools | Page 43 |
| Section 9 | | Best Practice | Page 47 |

* The information contained herein is accurate and reliable as of the date of publication. However, we do not assume any liability whatsoever for the accuracy and completeness of the above information.

** Please do not hesitate to contact your local sales representative for more information about our other product ranges.



TPMS

SECTION 1



U-Pro TPMS Sensors

U-Pro Hybrid NFC



HTS-A78ED

- A True ONE SKU Solution – The first sensor in the market that offers dual valves in one box alongside our patented, leading-edge NFC technology.
- Lightning-Fast Programming – Program Hybrid NFC sensors with a single tap, outperforming traditional TPMS tools.
- Stay Updated in Real Time – Instantly add new vehicle coverage through the free NFC App with automatic cloud-based updates.
- Multiple Programming Options – Program by creating a new ID or manually enter an OE ID to skip the relearn process entirely.
- Always Up-to-Date – Free App with lifetime updates ensures you have the latest coverage without obsolete stock.
- All the benefits of U-Pro Hybrid 2.5 plus NFC technology!

Valve Options for Sensors: Bulk options available



HTS-A78EG

HTS-A78EH

HTS-A78EK

U-Pro Hybrid 2.5



HTS-A78DG

- Unmatched Vehicle Coverage – Compatible with 99.9% of direct TPMS-enabled vehicles.
- Future-Proof Technology – Continuously updated with new programmable protocols to support the latest vehicles.
- Dual-Frequency Capability – Operates on 315 MHz and 433 MHz.
- Lightning-Fast Configuration – Configures in as little as 1-3 seconds saving time and boosting shop efficiency.
- Wide Tool Compatibility – Works with 30+ ATEQ TPMS tools for seamless integration.
- OEM-Level Features – Replicates LOC SYNC, PAL, WAL, and Tire Fill Assist, ensuring precise wheel location.

Valve Options for Sensors: Bulk options available



HTS-A78DD

HTS-A78DH

HTS-A78DK

U-Pro TPMS BLE Sensors

U-Pro Hybrid BLE



- Cost-effective aftermarket Bluetooth Low Energy TPMS sensors for Tesla models.
- Install and Drive – No programming or configuration required
- Direct OE sensor replacement.
- Pre-programmed for Tesla Model 3, S, X, Y, and Cybertruck.
- Reliable BLE communication for live pressure monitoring.
- Vehicle Coverage:
 - Tesla Model 3 (October 2020 to current)
 - Tesla Model S (June 2021 to current)
 - Tesla Model X (October 2021 to current)
 - Tesla Model Y (October 2020 to current)
 - Tesla Cybertruck (July 2023 to current)



Retro Pro BLE



- Real-Time Tire Monitoring – Get accurate updates straight from your tires as you drive.
- Free Mobile App (iOS & Android) – Easy access to tire data on your phone, anytime.
- Clamp-In Valve (180 PSI Rated) – Built for durability and high-pressure performance.
- 2-Year Warranty – Coverage you can count on from the date of installation.
- Retrofit-Friendly Solution – Works seamlessly with vehicles, trailers, and RVs, and includes installation hardware for 0.453" and 0.625" valve holes.
- Our Retrofit App is compatible with Apple CarPlay and Android Auto.



Supported Tools

ATEQ Tools



Hamaton Hybrid HT



Hamaton H57



Hamaton H56



Hamaton H46



Hamaton H47



ATEQ VT57



ATEQ VT56



ATEQ VT47



ATEQ VT37



ATEQ VT36



ATEQ VT55



AirTech AT200



Bosch TPA 300



Continental TPMS D



Cornwell C509



Ktool VT46



Ktool VT36



LAUNCH TSAP-1



Matco MD56



Matco MAXTPMS



Monster VT46



Monster VT36



Myers Hybrid HT



Myers MTS56



Myers MTS46



Myers 360



NAPA 92-1551



NAPA 92-1541



OTC 3838



PREMA H46



PREMA H47



QWIK T46000



Snap-on TPMS3



TECH H56



TECH H46



TECH H47



ATEQ VT67



Matco MAXTPMS 2.0



Snap-on TPMS5



Snap-on TPMS4

There are over 30 ATEQ-manufactured TPMS diagnostic tools that can configure/program our range of U-Pro TPMS Sensors.

Tech Support

At Hamaton, we know that dependable support can make all the difference in a busy tire shop. That's why our technical support program has become one of the most valuable resources we offer. Based in Wixom, Michigan, our team of TPMS experts is available seven days a week to provide direct, reliable guidance whenever it's needed.

What makes our program stand out is the people behind it — a solid, knowledgeable team that understands the challenges technicians face and is committed to making things as easy as possible. From sensors and tools to relearns and troubleshooting, we cover every aspect of TPMS so technicians never have to waste time searching for answers or contacting multiple manufacturers. If an issue takes more than five minutes to solve, we encourage technicians to pick up the phone and let us step in.

This hands-on approach reduces downtime, increases efficiency, and keeps vehicles moving smoothly through the bays. For our partners, it means peace of mind knowing that help is just a call away. For the customers, it means quicker service and greater satisfaction — proof that the right support team doesn't just solve problems, it drives success.

TPMS TECHNICAL SUPPORT

Need TPMS Help?
Relearn questions? Vehicle coverage?
We've got you covered—7 days a week.

(888) 588-7039

support@hamatonusa.com

TECHNICAL SUPPORT HOURS

MON thru FRI: 8AM - 10PM
SAT: 9AM-8PM SUN: 10AM-7PM (EST)



Scan the QR code to visit us at
www.HamatonUSA.com



U-Pro Heavy Duty TPMS Sensors

U-Pro Truck 1.0 VMS



HTS-T01A

- Wide Compatibility – Works with North American trucks, trailers, and buses, plus both OE and aftermarket TPMS valves.
- Tool Integration – Compatible with ATEQ's VT Truck 2.0 and VT56/57 and H56/57 tools with truck upgrade.
- Durable Performance – Built with a high-capacity battery, latest NXP chip, and engineered for heavy-duty applications.
- OE-Quality Valves – Choose from 11 clamp-in options, tested for high-pressure and temperature standards.
- Flexible Fit – Designed for 17.5" to 24.5" one-piece rims, ensuring long service life.
- 2-Year Warranty – Backed by reliable coverage for peace of mind.

Valve Options for U-Pro Truck 1.0 VMS Sensors



6-430



6-431



6-432



6-433



6-434



6-460



6-461



6-462



6-463



6-464



6-465

U-Pro Truck 1.0 BMS



HTS-T01B

- Universal Fit Strap – Ideal for trailers and mixed fleets; installs without valve replacement.
- Easy Installation – Adjustable, durable band with high tensile strength integrates with standard tire service procedures.
- Tool Compatibility – Works with ATEQ's VT Truck 2.0, plus VT56/57 and H56/57 tools with HD sensor upgrade.
- Heavy-Duty Reliability – Built with a cutting-edge battery, latest NXP chip, and engineered for 17.5" to 24.5" one-piece rims.

TPMS Diagnostic Tools

H47 Hybrid Tool



HAM-D065

- Reads and activates 100% of OE and aftermarket sensors – Full compatibility for complete coverage.
- Quick U-Pro Hybrid configuration and programming – Fast and easy sensor setup.
- Sync-ID with 90% OBDII relearn coverage – Simplifies relearns on most vehicles.
- Program up to 6 sensors at once – Save time with multi-sensor programming.
- Integrated OBDII module and cable included – Ready for quick and easy vehicle connection.
- Free lifetime updates + 2-year warranty – Always up-to-date and backed with support.

H57 Tool



HAM-D081

- 4.3" color touchscreen – Compact yet durable design for quick use.
- Wi-Fi and Real-time Updates – Powered by Live Sensor
- Advanced tire management – Measure tread depth, record DOT, and update placard values.
- Global vehicle database – Covers North America, Europe, Asia, and more for broad compatibility.
- OBDII module included – Provides advanced diagnostics and faster, more accurate relearns.
- VIN scanning – Identify vehicles for faster, more accurate service.

OBDII Module



ATE-D006

- Direct ECU Connection – Links compatible ATEQ and Hamaton tools to a vehicle's ECU for TPMS relearns.
- Wide Tool Compatibility – Works with VT57, H57, VT56, H56, VT46, and H46 diagnostic tools.
- Added Functionality – Expands tool capabilities with:
 - OBDII TPMS relearns
 - Read/clear DTC codes
 - Placard adjustments
 - Sensor ID retrieval
 - ECU unlock

TPMS Tools

VT67 Tool



ATE-D084

- SGW-Ready with Global Coverage – Supports Stellantis vehicles and covers domestic, European, and Asian markets.
- Cloud-Based Job Management – Save, edit, and manage reports anywhere.
- Program & Clone Sensors – Supports 20+ aftermarket TPMS brands.
- Built-in Camera – Capture wheel and vehicle inspection photos.
- Advanced Tire Management Suite – Tread depth, tire registration, wheel inspection.
- BLE Sensor Compatibility – Reads BLE TPMS sensors.

VT Truck 2.0 Tool



HAM-D076

- Supports full TPMS service – Designed for heavy-duty trucks, buses, and trailers
- All-in-One Display – Shows complete TPMS information on a single screen.
- Reads sensors with ease – Quickly activates sensors, even in twin-wheel setups.
- Manages up to 22 wheels per vehicle – Handles large commercial fleets efficiently.
- Wide compatibility – Programs Hamaton's U-Pro Truck sensors and multiple other aftermarket sensors.
- Regular database updates – Ensures coverage for the latest vehicles

Tire Tread Depth Gauge



ATE-D027

- Quick Vehicle Safety Check – Detects worn tires, damage, and poor alignment in one step.
- Triple-Point Measurement – Captures inner, center, and outer tread depths instantly.
- High Accuracy – Measures within $\pm 1\% + 0.0012$ in (0.03 mm).
- Color-Coded Results – Green, yellow, and red indicators displayed on VT56 screen.
- Automatic Calibration – Performs a self-check before every use.
- Added Service Value – Creates new opportunities for tire sales and customer safety.

TPMS OE Replacement Parts

Service Kits



6-102



6-104



6-106



6-108



6-109



6-110

6-111



6-112



6-116T



6-117



6-118



6-119



6-120

6-122



6-123



6-127



6-129

| Product Number | Product Description |
|----------------|----------------------------|
| 6-102 | Kit for Schrader Gen J |
| 6-103 | Kit for Schrader Gen 2/3 |
| 6-104 | Kit for Schrader Gen 2/3 |
| 6-106 | Kit for Schrader Gen 2/3 |
| 6-108 | Kit for VDO TG1B |
| 6-109 | Kit for TRW Version 2 |
| 6-110 | Kit for HUF Gen 1 |
| 6-111 | Kit for HUF Gen 2 |
| 6-112 | Kit for Schrader Gen 2/3 |
| 6-114 | Kit for TRW Version 2 |
| 6-116T | Kit for Pacific LFB1/LFC1 |
| 6-117 | Kit for Pacific LFB1/LFC1 |
| 6-118 | Kit for Schrader Gen 2/3 |
| 6-119 | Kit for Schrader Gen 2/3 |
| 6-120 | Kit for Schrader Gen Alpha |
| 6-122 | Kit for Schrader Gen J |
| 6-123 | Kit for Schrader Gen 1 |
| 6-125 | Kit for TRW Version 2 |
| 6-127 | Kit for TRW Version 1 |
| 6-129 | Kit for VDO TG1B |
| 6-138 | Kit for VDO TG1C |
| 6-139 | Kit for VDO TG1C |
| 6-153 | Kit for Baolong |



6-138



6-139



6-153

TPMS Replacement Valves

Clamp-In Valves

| Product Number | Product Description |
|-------------------|---------------------------------------|
| 6-201 | Valve for VDO TG1B |
| 6-203 | Valve for Schrader Gen 4 |
| 6-203B | Brass Valve for Schrader High Speed |
| 6-204 | Valve for HUF-56 mm |
| 6-206B | Valve for VDO MB |
| 6-216 | Valve for Schrader Gen 4 |
| 6-218 | Valve for VDO MB |
| 6-228 | Valve for Schrader Gen Alpha |
| 6-231C | Valve for VDO TG1C |
| 6-233 | Valve for CUB/Smart Sensor |
| 6-235 | Valve for Schrader Gen Gamma |
| 6-235BK | Black Valve for Schrader Gen Gamma |
| 6-236 | Valve for TRW Version 2 |
| 6-240 | Valve for Gen 2 HUF-43 mm |
| 6-240BK | Black Valve for Gen 2 HUF-43 mm |
| 6-241 | Valve for Gen 2 HUF-48 mm |
| 6-242 | Valve for Gen 2 HUF-49 mm |
| 6-243 | Valve for Gen 2 HUF-51 mm |
| 6-266 | Valve for U-Pro Sensor |
| 6-266BK | Black Valve for U-Pro Sensor |
| 6-266-SH | Graphite Valve for U-Pro Sensor |
| 6-270 | Valve for Pacific |
| 6-284-BK | Black Valve for Sysgration Tesla |
| 6-437AL | Aluminum Valve for Schrader Faraday |
| 6-437BK | Black Valve for Schrader Faraday |
| 6-437-1 | Tri-Fit Valve for Schrader Faraday |
| 6-439 | Valve for Dill 5001 Universal |
| 6-439AL | Valve for TRW Ram |
| 6-440 | Valve for 20° Bend ITEC & Volvo Buses |
| 6-458 | Valve for U-Pro & GM Dually |
| 6-468 | Valve for Ford F600 Super Duty Trucks |
| TPMS-416 | Valve for Schrader |
| TPMS-416AL | Valve for Schrader |
| TPS-1-502C | Valve for TRW Truck |



TPMS Replacement Valves

Snap-In Valves



| Product Number | Product Description |
|-----------------|-------------------------------|
| 6-207 | Valve for Schrader Rev 4 |
| 6-207B | Valve for Dual-Fitment |
| 6-207C | Valve for Schrader Gen 4 |
| 6-208 | Valve for VDO TG1D |
| 6-209D-1 | Valve for Lear Sensors |
| 6-210 | Valve for Schrader EZ-Sensors |
| 6-210H | Valve for Schrader EZ-Sensors |
| 6-211 | Valve for TRW Version 4 |
| 6-213 | Valve for Schrader REV 4 |
| 6-214 | Valve for Ali Sens.It |
| 6-215A | Valve for CUB/Smart Sensor |
| 6-502 | Valve for REDI Sensor |
| 6-503 | Valve for Pacific N11 |
| 6-504 | Valve for FCA/Jeep |
| 6-505 | Valve for Honda/Acura |
| 6-507 | Valve for Toyota |
| TPS412 | Valve for Schrader REV 4 |

Starter Kit



- The Hamaton Starter Kit provides a selection of the most popular TPMS sensor replacement parts, covering 85% of direct TPMS-enabled vehicles in the USA to meet the TPMS servicing requirements of most tire shops.
- Starter Kit Includes:
 - 32 Service Kits
 - 16 Clamp-In Valves
 - 16 Snap-In Valves

Passenger Car & Motorcycle Valves

SECTION 2



Passenger Car & Motorcycle Valves

TR400 Series

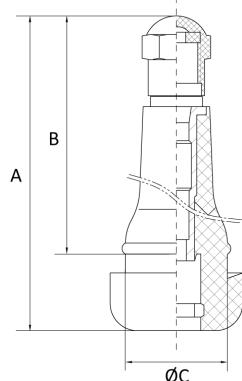


1-101

1-102

1-103

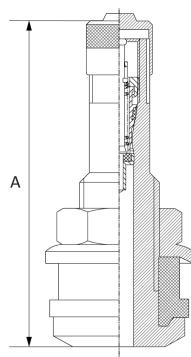
1-108



Brass valve cores with ozone resistant EPDM rubber for aluminum wheels with an 11.3 mm valve hole.

| Product Number | Product Description | TR Number | Valve Hole Size (mm) | A (mm) | B (mm) | C (Ø) |
|----------------|-------------------------------|-----------|----------------------|--------|--------|-------|
| 1-101 | TR412 with Normal Plastic Cap | TR412 | Ø 11.3 | 33 | 22 | 15 |
| 1-102 | TR413 with Normal Plastic Cap | TR413 | Ø 11.3 | 43 | 32 | 15 |
| 1-103 | TR414 with Normal Plastic Cap | TR414 | Ø 11.3 | 49 | 38 | 15 |
| 1-108 | TR425 with Normal Plastic Cap | TR425 | Ø 15.7 | 62 | 50 | 19 |

TR400 Custom Series



1-801

Nickel-plated brass valves for aluminum wheels with an 11.5-15.8 mm valve hole. Use a torque of 27-44 in-lbs to install the valve.

| Product Number | Product Description | TR Number | A (mm) |
|----------------|-----------------------------------|-----------|--------|
| 1-801 | TR416 Custom Wheel Clamp-In Valve | TR416 | 40.5 |

The products contained in the above table use: Valve Hole Size: Ø 15.7

Passenger Car & Motorcycle Valves

SECTION 2

TR High Pressure Series

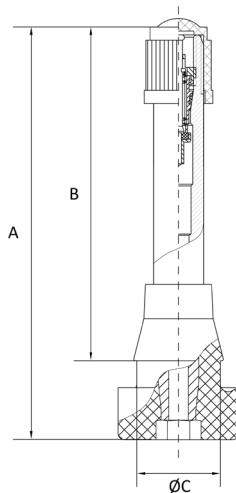
Brass valve cores with ozone resistant EPDM rubber for aluminum wheels with an 11.5 mm valve hole.



1-401



1-403



| Product Number | Product Description | TR Number | Valve Hole Size (mm) | A (mm) | B (mm) | C (Ø) |
|----------------|-----------------------------------|-----------|----------------------|--------|--------|-------|
| 1-401 | TR600 High Pressure Valve (80PSI) | TR600HP | Ø 11.3 | 42.8 | 31 | 12.5 |
| 1-403 | TR801 High Pressure Valve (80PSI) | TR801HP | Ø 15.7 | 49 | 33.5 | 17 |



Commercial Vehicle Valves

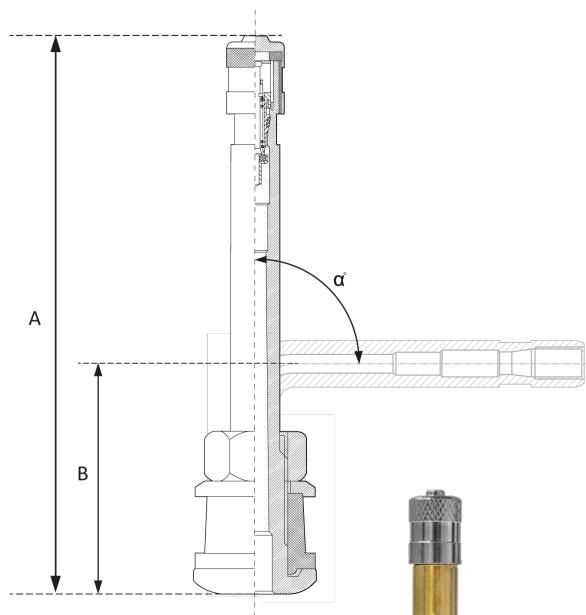
SECTION 3



Commercial Vehicle Valves

TR500 Series

Brass valves for wheels with a 15.7 mm valve hole. Use a torque of 35-53 in-lbs to install the valve.



1-201



1-201A



1-202



1-203



1-204



1-205



1-206



1-207



1-203C

| Product Number | Product Description | TR Number | A (mm) | B (mm) | α° |
|----------------|----------------------------------|-----------|--------|--------|----------------|
| 1-201 | TR500 Commercial Vehicle Valve | TR500 | 51 | - | - |
| 1-201A | TR500A Commercial Vehicle Valve | TR500A | 51 | 26 | 23° |
| 1-202 | TR501 Commercial Vehicle Valve | TR501 | 38 | - | - |
| 1-203 | TR570 Commercial Vehicle Valve | TR570 | 79.5 | - | - |
| 1-203C | TR570C Commercial Vehicle Valve | TR570C | 79.5 | 33 | 90° |
| 1-204 | TR571 Commercial Vehicle Valve | TR571 | 86 | - | - |
| 1-205 | TR572 Commercial Vehicle Valve | TR572 | 96 | - | - |
| 1-206 | TR573 Commercial Vehicle Valve | TR573 | 111 | - | - |
| 1-207 | TR574 Commercial Vehicle Valve | TR574 | 127 | - | - |
| 1-208 | TR575 Commercial Vehicle Valve | TR575 | 29 | - | - |
| 1-209 | TR501OV Commercial Vehicle Valve | TR501OV | 31 | - | - |

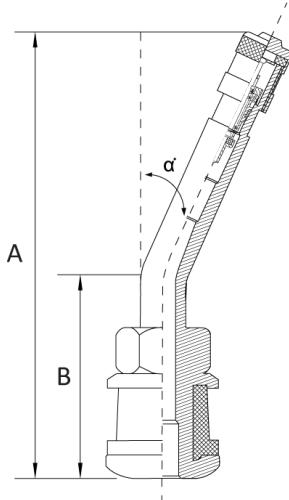
Commercial Vehicle Valves

TR500 Series

Brass valves for wheels with a 15.7 mm valve hole. Use a torque of 35-53 in-lbs to install the valve.



1-201A



| H ("/mm) | A ("/mm) | | | | |
|-----------------|-----------------|--------------|--------------|--------------|--------------|
| | TR570 | TR571 | TR572 | TR573 | TR574 |
| 1.50/38 | 1.63/41.5 | 1.88/48 | 2.25/57 | 2.88/73 | 3.50/89 |
| 1.63/41.5 | 1.50/38 | 1.75/44.5 | 2.13/54 | 2.75/70 | 3.38/86 |
| 1.75/44.5 | 1.38/35 | 1.63/41.5 | 2.00/51 | 2.63/67 | 3.25/82.5 |
| 1.88/48 | 1.25/31.8 | 1.50/38 | 1.88/48 | 2.50/63.5 | 3.13/79.5 |
| 2.00/51 | 1.13/28.7 | 1.38/35 | 1.75/45.5 | 2.38/60.5 | 3.00/76 |
| 2.13/54 | 1.00/25.4 | 1.25/31.8 | 1.63/41.5 | 2.25/57 | 2.88/73 |
| 2.25/57 | - | 1.13/28.7 | 1.50/38 | 2.13/54 | 2.75/70 |
| 2.38/60.5 | - | 1.00/25.4 | 1.38/35 | 2.00/51 | 2.63/67 |
| 2.63/60.5 | - | *0.88/22.4 | 1.25/31.8 | 1.88/48 | 2.50/63.5 |
| 2.63/67 | - | - | 1.13/28.7 | 1.75/44.5 | 2.38/60.5 |
| 2.75/70 | - | - | 1.00/25.4 | 1.63/41.5 | 2.25/57 |
| 3.00/76 | - | - | *0.88/22.4 | 1.50/38 | 2.13/54 |
| 3.00/76 | - | - | - | 1.38/35 | 2.00/51 |
| 3.13/79.5 | - | - | - | 1.25/31.8 | 1.88/48 |
| 3.25/82.5 | - | - | - | 1.13/28.7 | 1.75/44.5 |
| 3.38/86 | - | - | - | 1.00/25.4 | 1.63/41.5 |
| 3.50/89 | - | - | - | *0.88/22.4 | 1.50/38 |
| 3.63/92 | - | - | - | - | 1.38/35 |
| 3.75/95.3 | - | - | - | - | 1.25/31.8 |
| 3.88/98.6 | - | - | - | - | 1.13/28.7 |
| 4.0/101.5 | - | - | - | - | 1.00/25.4 |

The following shows how to order products from the table below:

TR572 - F19



| Angle Code | Angle° | Spec Number |
|-------------------|---------------|--------------------|
| A | 4° | 12 |
| B | 11° | 13 |
| C | 16° | 14 |
| D | 21° | 15 |
| E | 26° | 16 |
| F | 31° | 17 |
| G | 36° | 18 |
| H | 41° | 19 |
| I | 46° | 20 |
| J | 51° | 21 |
| K | 56° | 22 |
| L | 61° | 23 |
| M | 66° | 24 |
| N | 71° | 25 |
| O | 76° | 26 |
| P | 81° | 27 |
| Q | 86° | 28 |
| | | 29 |
| | | 30 |
| | | 31 |
| | | 32 |

The products contained in the above and left tables use:

Grommet: **2-305** | Washer: **2-501E-2** | Torque: **4-6 Nm** | Hex Nut: **2-403** | Valve Core: **1-1400-1** | Cap: **2-101** | Valve Hole Size: **Ø 15.7**

* Maximum Bend Angle is 26°

Commercial Vehicle Valves

TR510 Series

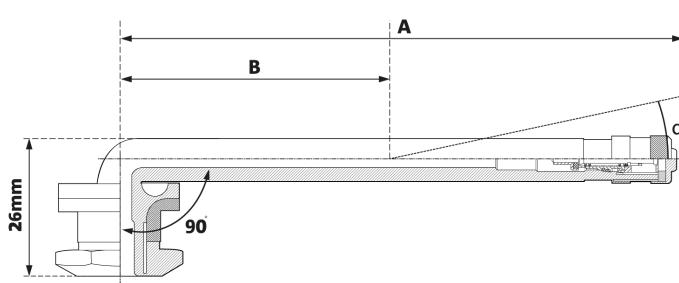
Nickel-plated brass valves for aluminum wheels with a 15.7 mm valve hole. Use a torque of 106-133 in-lbs to install the valve.



1-303



1-302



1-301

| Product Number | Product Description | TR Number | A (mm) | B (mm) | α° |
|----------------|--|-----------|--------|--------|----------------|
| 1-301 | TR509 Nickel-Plated Commercial Vehicle Valve | TR509 | 120.5 | - | - |
| 1-302 | TR510 Nickel-Plated Commercial Vehicle Valve | TR510 | 140 | - | - |
| 1-303 | TR511 Nickel-Plated Commercial Vehicle Valve | TR511 | 108 | - | - |

The products contained in the above table use:

Grommet: **2-306** | Hex Nut: **2-410 / 2-465** | Valve Core: **1-1400-1** | Cap: **2-101 / 2-103-1** | Valve Hole Size: **$\varnothing 15.7$**



Commercial Vehicle Valves

TR540 Series

Nickel-plated brass valves with O-rings for aluminum wheels with a 9.7 mm valve hole and 5.5-8.4 mm rim. Use a torque of 89-133 in-lbs to install the valve.



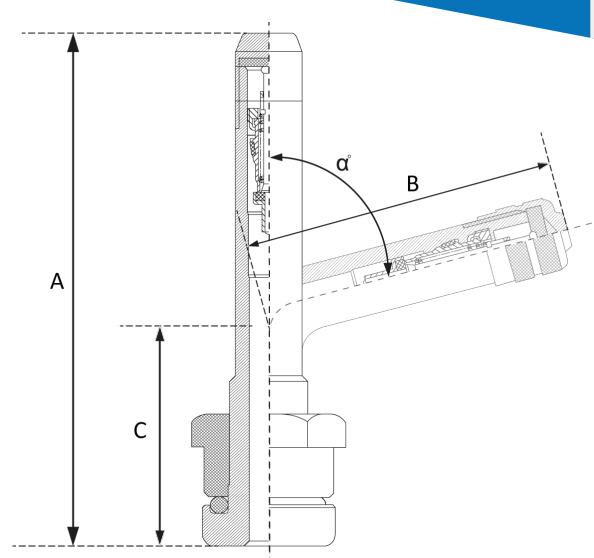
1-501

1-502

1-503

1-504

1-505



1-502C

1-502D

1-502E

1-503D

1-504E

| Product Number | Product Description | TR Number | A (mm) | B (mm) | C (mm) | α° |
|----------------|---|-----------|--------|--------|--------|-----|
| 1-501 | TR542 Nickel-Plated Commercial Vehicle Valve | TR542 | 32 | - | - | - |
| 1-502 | TR543 Nickel-Plated Commercial Vehicle Valve | TR543 | 58.5 | - | - | - |
| 1-502C | TR543C Nickel-Plated Commercial Vehicle Valve | TR543C | 58.5 | 35 | 23.6 | 45° |
| 1-502D | TR543D Nickel-Plated Commercial Vehicle Valve | TR543D | 58.5 | 35 | 25 | 60° |
| 1-502E | TR543E Nickel-Plated Commercial Vehicle Valve | TR543E | 58.5 | 35 | 25 | 75° |
| 1-503 | TR544 Nickel-Plated Commercial Vehicle Valve | TR544 | 72.5 | - | - | - |
| 1-503D | TR544D Nickel-Plated Commercial Vehicle Valve | TR544D | 72.5 | 49 | 25 | 60° |
| 1-504 | TR545 Nickel-Plated Commercial Vehicle Valve | TR545 | 89 | - | - | - |
| 1-504D | TR545D Nickel-Plated Commercial Vehicle Valve | TR545D | 89 | 66 | 25 | 60° |
| 1-504E | TR545E Nickel-Plated Commercial Vehicle Valve | TR545E | 89 | 66 | 25 | 75° |
| 1-505 | TR546 Nickel-Plated Commercial Vehicle Valve | TR546 | 108.5 | - | - | - |
| 1-505D | TR546D Nickel-Plated Commercial Vehicle Valve | TR546D | 108.5 | 85 | 25 | 60° |
| 1-505E | TR546E Nickel-Plated Commercial Vehicle Valve | TR546E | 108.5 | 85 | 25 | 75° |
| 1-506D | TR547D Nickel-Plated Commercial Vehicle Valve | TR547D | 119.5 | 96 | 25 | 60° |

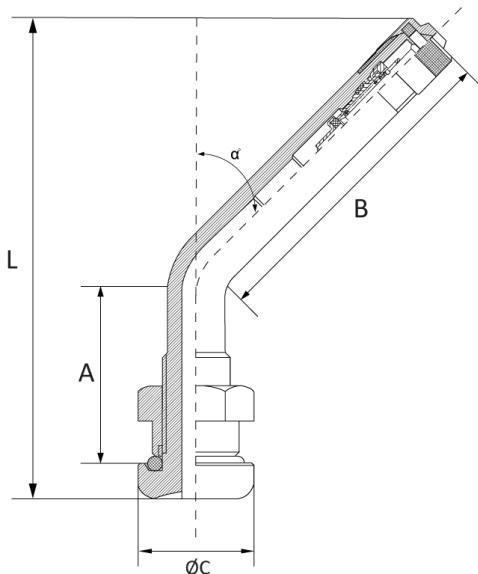
The products contained in the above table use:

Grommet: **2-303S** | Hex Nut : **2-461, 2-408, 2-411** | Valve Core: **1-1400-1** | Cap: **2-101H or 2-115M-1** | Valve Hole Size: **Ø 9.7**

Commercial Vehicle Valves

TR500 Series

Brass valves for wheels with a 15.7 mm valve hole. Use a torque of 35–53 in-lbs to install the valve.



| Product Number | Product Description | A (mm) | B (mm) | L (mm) | α° |
|----------------|--|--------|--------|--------|-----|
| 1-601 | V3-20-4 Drop-Center Rim Commercial Vehicle Valve | 25 | 60 | 85 | 27° |
| 1-602 | V3-20-1 Drop-Center Rim Commercial Vehicle Valve | 36 | - | - | - |
| 1-603 | V3-20-5 Drop-Center Rim Commercial Vehicle Valve | 25 | 40 | 65 | 27° |
| 1-604 | V3-20-6 Drop-Center Rim Commercial Vehicle Valve | 25 | 85 | 110 | 27° |
| 1-605 | V3-20-7 Drop-Center Rim Commercial Vehicle Valve | 25 | 50 | 75 | 27° |



Commercial Vehicle Valves

TR500 Series

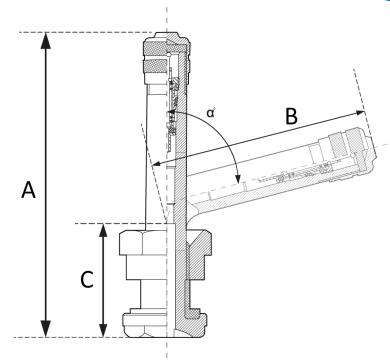
Nickel-plated brass valves with grommet for aluminum wheels with a 9.7 mm valve hole and 5.5-8.4 mm rim. Use a torque of 89–133 in-lbs to install the valve.



1-552

1-553D

1-555E



| Product Number | Product Description | TR Number | A (mm) | B (mm) | C (mm) | α° |
|----------------|---|-----------|--------|--------|--------|----------------|
| 1-552 | TR552 Nickel-Plated Commercial Vehicle Valve | TR552 | 32 | - | - | - |
| 1-553 | TR553 Nickel-Plated Commercial Vehicle Valve | TR553 | 58.5 | - | - | - |
| 1-553C | TR553C Nickel-Plated Commercial Vehicle Valve | TR553C | 58.5 | 35 | 23.6 | 45° |
| 1-553D | TR553D Nickel-Plated Commercial Vehicle Valve | TR553D | 58.5 | 35 | 25 | 60° |
| 1-553E | TR553E Nickel-Plated Commercial Vehicle Valve | TR553E | 58.5 | 35 | 25 | 75° |
| 1-554 | TR554 Nickel-Plated Commercial Vehicle Valve | TR554 | 72.5 | - | - | - |
| 1-554C | TR554C Nickel-Plated Commercial Vehicle Valve | TR554C | 72.5 | 49 | 25 | 45° |
| 1-554D | TR554D Nickel-Plated Commercial Vehicle Valve | TR554D | 72.5 | 49 | 25 | 60° |
| 1-555D | TR555D Nickel-Plated Commercial Vehicle Valve | TR555D | 89 | 66 | 25 | 60° |
| 1-555E | TR555E Nickel-Plated Commercial Vehicle Valve | TR555E | 89 | 66 | 25 | 75° |

Turret Valves

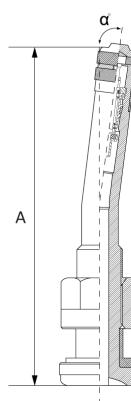
Designed for drop-center rims. Use a nut tightening torque of 221–274 in-lbs and replace the O-ring each time the valve is removed from the tire.



1-651-1

1-652

1-653



| Product Number | Product Description | TR Number | α° | A (mm) |
|----------------|---|-----------|----------------|--------|
| 1-651-1 | 40MS Nickel-Plated Commercial Vehicle Valve | 40ms | - | 40 |
| 1-652 | 54MS Nickel-Plated Commercial Vehicle Valve | 54ms | - | 54 |
| 1-653 | 70MS-7 Nickel-Plated Commercial Vehicle Valve | 70ms-7 | 7° | 70 |

The products contained in the above and left tables use:

Grommet: **2-360F** | Hex Nut : **2-461, 2-408** | Valve Core: **1-1400-1** | Cap: **2-101H or 2-115M-1** | Valve Hole Size: **Ø 9.7**

A large, stylized graphic element consisting of a blue triangle pointing downwards and a white triangle pointing upwards, creating a V-shape that spans the width of the page.

Valves Caps & Cores

SECTION 4



Valve Caps & Cores

Metal and Plastic Valve Caps.



2-101



2-103-1



2-103P-1



2-104



2-105-2



2-105D-3



2-106



2-108



2-110-2



2-114-1



2-118



2-127BK



2-127BK



2-128



2-150

| Product Number | Product Description | Color |
|----------------|---|-------|
| 2-102-1P | Plastic Cap, Chrome-Plated | ◆ |
| 2-103P-1 | Plastic Cap, Black | ◆ |
| 2-103P-2 | Plastic Cap, Orange | ◆ |
| 2-103P-3 | Plastic Cap, Yellow | ◆ |
| 2-103P-4 | Plastic Cap, Green | ◆ |
| 2-103P-5 | Plastic Cap, Blue | ◆ |
| 2-105-6 | Plastic Cap, Chrome-Plated | ◆ |
| 2-105-6B | Plastic Cap, Black | ◆ |
| 2-105-2 | Plastic Cap, Blue | ◆ |
| 2-105-4 | Plastic Cap, Green | ◆ |
| 2-105-5 | Plastic Cap, Red | ◆ |
| 2-105-8 | Plastic Cap, Orange | ◆ |
| 2-105-9 | Plastic Cap, Yellow | ◆ |
| 2-105-10 | Plastic Cap, Grey | ◆ |
| 2-105-11 | Plastic Cap, Dark Green | ◆ |
| 2-105D-2 | Plastic Cap with Rubber Grommet, Black | ◆ |
| 2-105D-3 | Plastic Cap with Rubber Grommet, Green | ◆ |
| 2-105D-5 | Plastic Cap with Rubber Grommet, Grey | ◆ |
| 2-105D-6 | Plastic Cap with Rubber Grommet, Dark Green | ◆ |
| 2-105D-7 | Plastic Cap with Rubber Grommet, Pink | ◆ |
| 2-126 | Plastic Cap, Green | ◆ |
| 2-126BK | Plastic Cap, Black | ◆ |
| 2-127BK | Plastic Cap, Black | ◆ |
| 2-127R | Plastic Cap, Red | ◆ |
| 2-128 | Plastic Cap, Grey | ◆ |
| 2-150 | Plastic Cap, Black | ◆ |
| 2-157 | Plastic Cap, Grey | ◆ |
| 2-157BK | Plastic Cap, Black | ◆ |
| 2-158 | Plastic Cap, Black | ◆ |
| 2-158G | Plastic Cap, Green | ◆ |

| Product Number | Product Description |
|----------------|---|
| 2-101 | Metal Cap, Nickel-Plated |
| 2-102-1 | Metal Cap, Chrome-Plated, Metal Hex Flat Top |
| 2-103-1 | Metal Cap, Nickel-Plated |
| 2-103H | Metal Cap, Nickel-Plated |
| 2-104 | Metal Cap, Nickel-Plated |
| 2-104A | Metal Cap, Top Fluted |
| 2-104P | Plastic Cap, Chrome-Plated and Flat Top |
| 2-104AP | Plastic Cap, Chrome-Plated and Top Fluted |
| 2-106 | Metal Cap, Brass Finish or Chrome-Plated |
| 2-108 | Metal Cap, Chrome-Plated, Metal Hex Flat Top |
| 2-110-2 | Metal Cap, Brass Finish |
| 2-111-2 | Metal Cap, Brass Finish |
| 2-114-1 | Metal Cap, Nickel-Plated |
| 2-114-3 | Metal Cap, Chrome-Plated |
| 2-115M-1 | Metal Cap, Nickel-Plated |
| 2-115M-4 | Metal Cap, Nickel-Plated |
| 2-115M-5 | Metal Cap, Chrome-Plated |
| 2-116-3 | Metal Cap, Chrome-Plated, Metal Hex Flat Top |
| 2-118 | Metal Cap, Chrome-Plated, H.D. Metal Dome Cap |
| 2-119 | Metal Cap, Nickel-Plated |
| 2-123 | Metal Cap, Brass Finish, Nut Style |
| 2-124 | Metal Cap, Brass Finish, Large to Standard Bore Adapter |
| 2-168 | Metal Cap, Chrome-Plated with Deflates Function |

Valve Caps & Cores

Short and Long Valve Cores.



| Product Number | Product Description |
|----------------|---------------------|
| 2-706A | Dual Seal Valve Cap |

| Product Number | Product Description | Total Length (A) | Effective Length |
|----------------|---------------------------|------------------|------------------|
| 2-702 | Metal Valve Extension Cap | 27 | 19 |
| 2-703 | Metal Valve Extension Cap | 40 | 32 |
| 2-704 | Metal Valve Extension Cap | 46 | 38 |
| 2-705 | Metal Valve Extension Cap | 56 | 51 |
| 2-706-1 | Dual Seal Valve Cap | 23.2 | 16.7 |



| Product Number | Product Description | Finish |
|----------------|---|------------------------|
| 1-1400-1 | Short Valve Core, Red Teflon Sealing | Nickel-Plated |
| 1-1400-2 | Short Valve Core, Black Teflon Sealing | Nickel-Plated |
| 1-1400-4 | Short Valve Core, Red Teflon Sealing | Brass Finish |
| 1-1400-6 | Short Valve Core, Blue Teflon Sealing | Nickel-Plated |
| 1-1400K | Short Valve Core, Red Teflon Sealing | Chemical Plated Nickel |
| 1-1400-1Y | Short Valve Core, Yellow Teflon Sealing | Chemical Plated Nickel |



| Product Number | Product Description | Finish |
|----------------|---------------------------------------|---------------|
| 1-1401 | Long Valve Core, Red Teflon Sealing | Nickel-Plated |
| 1-1401-2 | Long Valve Core, Black Teflon Sealing | Nickel-Plated |



| Product Number | Product Description | Finish |
|----------------|---|---------------|
| 1-1403 | Red Teflon Sealing For Large Bore Application | Nickel-Plated |
| 1-1403-2 | Black Teflon Sealing For Large Bore Application | Nickel-Plated |



| Product Number | Product Description | Finish |
|----------------|--|---------------|
| 1-1404 | Long Valve Core, Red Teflon Sealing For Large Bore Application | Nickel-Plated |
| 1-1404-2 | Long Valve Core, Black Teflon Sealing For Large Bore Application | Nickel-Plated |

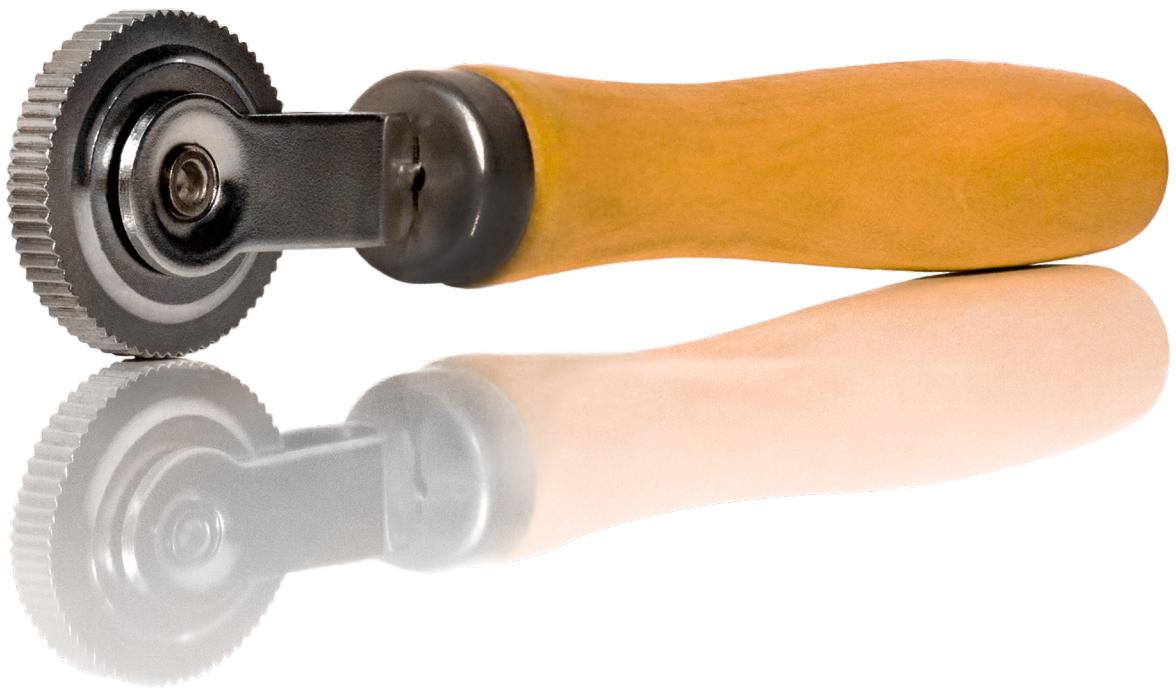


| Product Number | Product Description | Finish |
|----------------|---|---------------|
| 1-1407 | Long Valve Core, Red Teflon Sealing, High Temperature Resistant | Nickel-Plated |



Tire Repair Tools & Accessories

SECTION 5



Tire Repair Tools & Accessories



3-161



4-110

| Product Number | Product Description |
|----------------|-----------------------------------|
| 3-161 | Manual Tire Spreader |
| 4-110 | Power-Awl |
| 4-129-1 | Probing Awl with Indication Rings |
| 5-301 | Tire Mounting Protector |
| 5-196 | Chrome Nut Cover Pliers |
| 5-200 | Rubber Hammer |



4-129-1



5-196



5-200



5-301

| Product Number | Product Description |
|----------------|---|
| 3-121A | Wheel Weight Pliers Heavy-Duty |
| 3-121B | Wheel Weight Pliers Black |
| 3-121 | Wheel Weight Pliers |
| 3-122 | No-Mark Wheel Weight Pliers for Aluminum Rims |



3-121A



3-121B

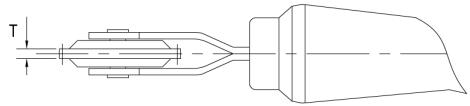
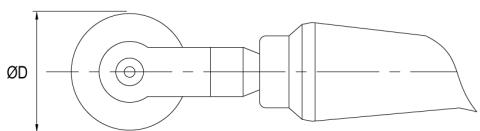


3-121



3-122

Tire Repair Tools & Accessories



3-102

3-102-7

3-102-1



3-110

3-110-1

| Product Number | Product Description | Diameter (mm) | Thickness (mm) |
|----------------|--------------------------|---------------|----------------|
| 3-102 | Wood Handled Stitcher | 38 | 1.6 |
| 3-102-7 | Wood Handled Stitcher | 51 | 4 |
| 3-102-1 | Plastic Handled Stitcher | 38 | 3 |

| Product Number | Product Description |
|----------------|---------------------------------|
| 3-110 | Blade Style Inner Liner Scraper |
| 3-110-1 | Hoe Style Inner Liner Scraper |



3-154C

3-154A



3-154B

| Product Number | Product Description |
|----------------|------------------------------|
| 3-154A | Flexible Skiving Knife |
| 3-154B | Rigid, Tapered Skiving Knife |
| 3-154C | Curved Skiving Knife |

Needles & Probes

SECTION 6



Needles & Probes

| Product Number | Description | Needles (Probes & Rasp) |
|----------------|-------------------|--|
| N01 | Spiral Probe |  |
| N02 | Spiral Probe |  |
| N03 | Rasp |  |
| N04 | Rasp |  |
| N05 | Split-Eye Needle |  |
| N06 | Closed-Eye Needle |  |
| N07 | Open-Eye Needle |  |



4-201N01

Pistol-Grip
(Spiral Probe N01)



4-202N02

Pistol-Grip
(Spiral Probe N02)



4-203N03

Pistol-Grip
(Rasp N03)



4-204N04

Pistol-Grip
(Rasp N04)



4-205N05

T Handle
(Split-Eye Needle N05)



4-206N06

T Handle
(Closed-Eye Needle N06)

Needles & Probes



4-207N07

Straight Handle
(Open-Eye Needle N07)



4-208N01

Straight Handle
(Spiral Probe N01)



4-209N01

Zinc-Alloy Handle
(Spiral Probe N01)



4-210N01

Metal Handle
(Spiral Pv N01)

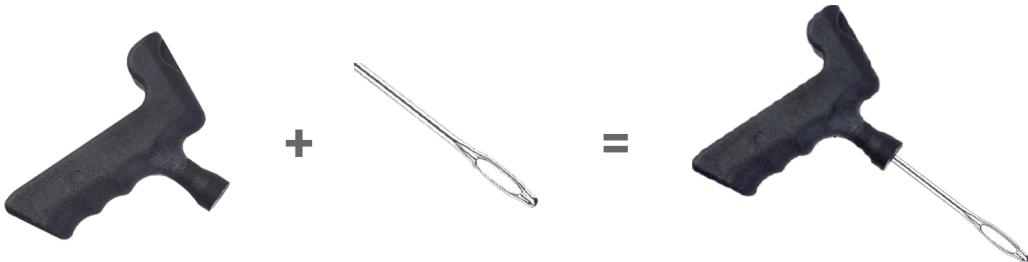


4-211N01

Metal Handle
(Spiral Probe N01)

Mix and Match

Select a handle, then combine it with a needle to make a tire repair tool of your choice. For example:



4-202

N06

4-202N06

(Pistol-Grip Closed-Eye Needle)

Needles & Probes



4-209A



4-200A



4-200A-1

| Product Number | Handle (Optional) | Needle (Optional) |
|--|-------------------|-------------------|
| 4-200A Zinc Alloy T-Handle Tool Kit | 4-209 | |
| | 4-209-1 | |
| | 4-209A | |
| 4-200A-1 Zinc Alloy (Black) T-Handle Tool Kit | 4-209 | |
| | 4-209-1 | |
| | 4-209A | |
| 4-200A-2 Zinc Alloy (Chrome Finished) T-Handle Tool Kit | 4-209 | |
| | 4-209-1 | |
| | 4-209A | |
| 4-200B Metal T-Handle Tool Kit | 4-210 | |
| | 4-210 | |



4-200A-2



4-200B

Needles & Probes



4-200C



4-200D

| Product Number | Product Description | Quantity |
|----------------|---------------------|----------|
| 4-200C | Plastic Handle | 1 |
| | Needles | 4 |
| 4-200D | Metal Handle | 1 |
| | Needles | 4 |



Gauges

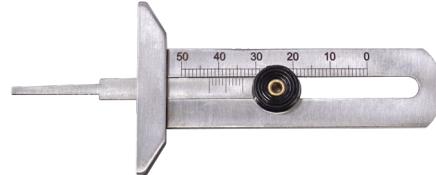
SECTION 7



Tread Depth Gauges



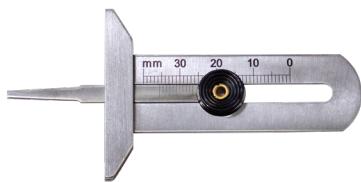
HT-1420



HT-1420-1



HT-1420-2



HT-1420-3



HT-1450



HT-1460



HT-190



HT-190C



HT-190L

| Product Number | Product Description | Measure Unit | Measure Range |
|----------------|--|------------------|-------------------|
| HT-1411 | Dial Gauge | 0.1 mm | 0-11 mm |
| HT-1420 | Stainless Steel Truck Tread Depth Gauge | 0.1 mm 1/10 in | 0-50 mm 2 in |
| HT-1420-3 | Stainless Steel Truck Tread Depth Gauge, Small Base | 1 mm | 0-30 mm |
| HT-1420-2 | Stainless Steel Truck Tread Depth Gauge, Large Base | 1 mm | 0-50 mm |
| HT-1420-1 | Stainless Steel Truck Tread Depth Gauge, Small Base | 1 mm | 0-50 mm |
| HT-1460 | Digital Tread Depth Gauge, Metal Bar Tip, Large Base | 1 mm 1/10 in | 0-200 mm 0-8 in |
| HT-190 | Tread Depth Gauge | 1 mm 1/32 in | 0-23 mm 1 in |
| HT-190C | Color Coded Tread Depth Gauge | 1 mm 1/32 in | 0-23 mm 1 in |
| HT-190L | Color Coded Tread Depth Gauge | 1/32 in | 1 in |
| HT-1450 | Digital Tread Depth Gauge, Plastic Bar Tip | 0.01 mm | 0-25.4 mm |



HT-1411

Pressure Gauges



HT-1440

| Product Number | Product Description |
|----------------|---------------------|
| HT-1440 | P.C.D Gauge |



HT-4109



HT-4221



HT-4101



HT-4109



HT-4224

| Product Number | Product Description | Color |
|------------------|---|-------|
| HT-4101 | 0-100psi, 0-6.90Bar, 0-690kPa Digital gauge | ◆ |
| HT-4109 | 0-100psi, 0-6.90Bar, 0-690kPa Digital gauge | ◆ |
| HT-4221 | 0-100psi, 0-6.90Bar, 0-690kPa Digital gauge | ◆ |
| HT-4224 | 0-100psi, 0-6.90Bar, 0-690kPa Digital gauge | ◆ |
| HT-4224B | 0-100psi, 0-6.90Bar, 0-690kPa Digital gauge | ◆ |
| HT-4224BK | 0-100psi, 0-6.90Bar, 0-690kPa Digital gauge | ◆ |
| HT-4226 | 3-150psi, 0.20-10.3Bar Digital gauge | |

Valve Installation, Fishing & Repair Tools

SECTION 8



Valve Installation Tools

| Product Number | Product Description |
|-----------------|---|
| 3-114 | Valve Installation Tool, Clamp-On Tool |
| 3-115 | Pull-a-Stem Valve Installation Tool |
| 3-101 | Chrome Coated Valve Installation Tool, Screw-On Type |
| 3-101-1 | Valve Installation Tool with Plastic Cover, Screw-On Type |
| 3-101-2 | Chrome Coated Valve Installation Tool, Screw-On Type |
| 3-101-3 | Plastic Handle Valve Installation Tool, Screw-On Type |
| 3-101-3A | Plastic Handle 2 Way Valve Installation Tool |
| 3-101-4 | Valve Installation Tool, Screw-On Type |
| 3-101-5 | Chrome Coated Valve Installation Tool, Screw-On Type |
| 3-101-6 | Chrome Coated Valve Installation Tool, Screw-On Type |
| 3-107 | Valve Core Remover Tool, Double End |
| 3-150T | Valve Core Torque Tool |
| 3-312 | TPMS Torque Tool Kit and Carry Case |
| 3-313 | TPMS Torque Tool Kit and Carry Case |

**3-114****3-115****3-101-5****3-101****3-101-4****3-101-1****3-101-3A****3-101-3****3-101-6****3-313****3-312****3-107****3-150**

Valve Fishing & Repair Tools



3-112



3-113



3-133

| Product Number | Length (in) | Product Description |
|----------------|-------------|-------------------------------|
| 3-112 | 8 | Chain-Type Valve Fishing Tool |
| 3-113 | 8 | Cable-Type Valve Fishing Tool |
| 3-133 | 25 | Long-Chain Valve Fishing Tool |
| 3-138 | 8 | Valve Fishing Tool |



3-138



3-108



3-108-1



3-108-2



3-109

| Product Number | Product Description |
|----------------|---------------------------------|
| 3-108 | 4-Way Valve Tool |
| 3-108-1 | 4-Way Valve Tool Black Hardened |
| 3-108-2 | 4-Way Valve Tool |
| 3-109 | 4-Way Valve Tool |
| 3-111 | 2-Way Valve Tool |
| 5-121 | 4-Way Valve Tool |
| 5-159 | 4-Way Valve Tool Black Hardened |



Best Practice

SECTION 9





Best Practice

Storage and Shelf Life

Rubber valves are often stored for prolonged periods.

Most rubbers change in physical properties during storage and ultimately become unserviceable, for example, due to excessive hardening, softening, cracking or other surface degradation. These changes may be the result of a set of factors or combination of factors, such as the action of deformation, oxygen, ozone, light, heat, humidity, or oils and solvents.

With a few simple precautions, the shelf life of these products can be considerably lengthened.

Fundamental instructions on storage, cleaning, and maintenance of rubber valve elements are described in **SAE ARP 5316D**.

The **SAE ARP 5316D** standard provides several recommendations for the storage and shelf life of rubber products.

The following recommendations are based on **SAE ARP 5316D** and are intended to provide the most suitable conditions for storage of rubber valves. They should be observed to maintain the optimum physical and chemical values of the parts:

Heat

The storage temperature should preferably be kept below 100° F, with an optimum range between 59° F and 77° F. Short-term exposure down to 32°F or up to 104°F is acceptable, but direct contact with sources of heat such as boilers, radiators, and direct sunlight should be avoided.

If articles are taken from low temperature storage, care should be taken to avoid distorting them during handling as they may have stiffened. In this case the temperature of the articles should be raised gradually to approximately 68°F before they are put into service.

Humidity

The relative humidity in the storage area should be maintained below 65%. Excessively moist or excessively dry conditions should be avoided, and condensation must not be allowed to form.

Light

Elastomeric materials such as rubber valves should be protected from light, particularly direct sunlight and strong artificial light with a high ultraviolet content. Storage in opaque, UV-resistant containers or bags provides the best protection. If windows are present in the storage area, they should be covered with suitable filters or coatings to prevent UV exposure.

Radiation

Stored articles should be protected from all sources of ionizing radiation, as exposure can cause degradation and reduce serviceability of the components.

Oxygen and Ozone

Where possible, elastomeric materials should be protected from circulating air by packaging, sealing in airtight containers, or by other suitable means.

Because ozone is particularly harmful to rubber materials, storage rooms should not contain equipment capable of generating ozone, such as mercury vapor lamps, high-voltage electrical devices, electric motors, or other equipment that may create sparks or silent electrical discharges. Combustion gases and organic vapors should also be excluded, as they can contribute to ozone formation through photochemical reactions.

Best Practice

Deformation

Rubber valves should be stored in a relaxed state, free from tension, compression, or any other form of deformation. Whenever possible, articles should remain in their original packaging, provided they were packed without strain.

Contact with Liquid and Semi-Solid Materials

Rubber should not be exposed to solvents, oils, greases, fuels, or any other liquid or semi-solid materials during storage, unless such contact is part of the manufacturer's original packaging.

Contact with Metal and Non-Metals

Elastomeric materials should not be stored in direct contact with certain metals, including manganese, iron, and especially copper and its alloys (such as brass), as well as their compounds, since these can have harmful effects on rubber.

Additionally, rubber products must not be stored in contact with PVC due to the potential transfer of plasticizers or other ingredients. Where possible, different types of rubber should be stored separately to prevent cross-contamination.

Shelf Life and Shelf Life Control

The useful life of a rubber valve depends largely on the storage conditions in which it is kept. Under recommended conditions, the shelf life of a Hamaton-produced rubber valve is 36 months. All rubber products should be inspected regularly during this period to ensure they remain in suitable condition for use.

General Practices

Part Replacement

The components that require replacing when servicing a tire are highlighted in blue:

Clamp-In Valve



Snap-In Valve



Notes Page

Notes Page

Hamaton

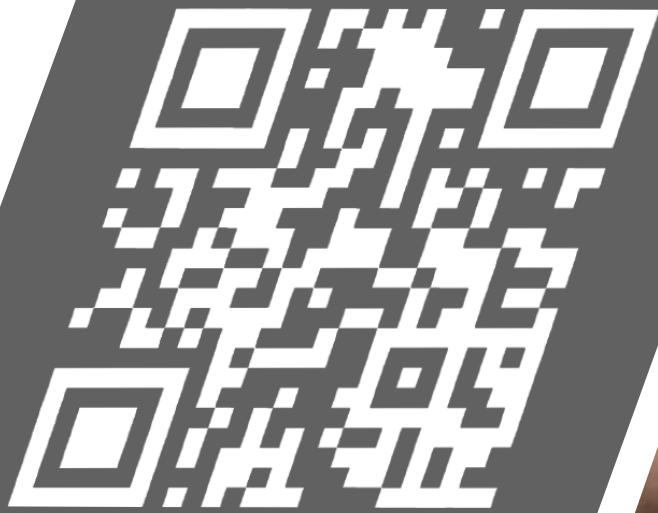
Innovation to Perfection

Office: (248) 308-3856

Tech Support: (888) 588-7039

Inquiries: info.usa@hamatonusa.com

www.hamatonusa.com



Distributed By

