



# Hamaton

Innovation to Perfection

## PRODUCT CATALOG

TPMS Sensors | Valves | Tire Tools

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.

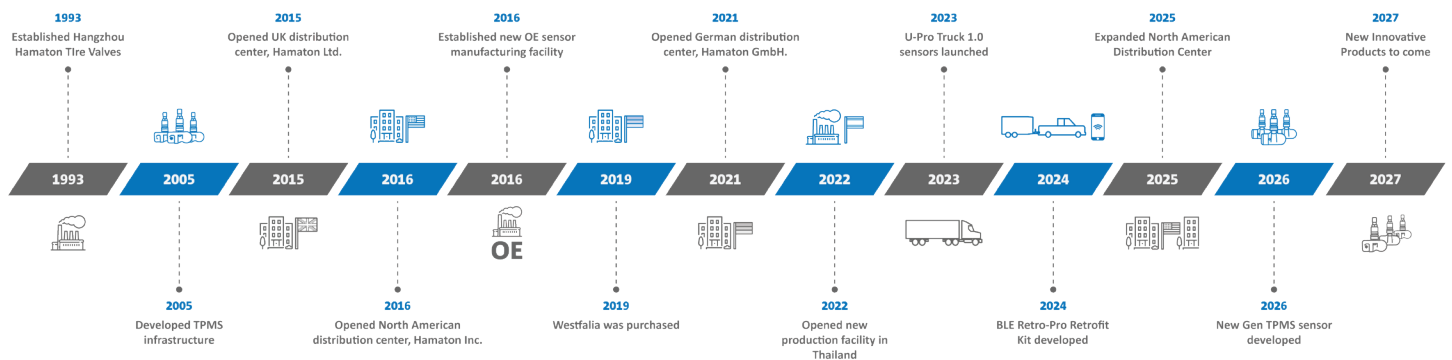
Hamaton's range of TPMS diagnostic tools are designed and manufactured by global market-leader, ATEQ, ensuring we continue to introduce the most advanced TPMS technological features to the market.

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



**Hamaton**

万通智控科技股份有限公司

HAMATON AUTOMOTIVE TECHNOLOGY CO., LTD

### Thailand Factory



**Hamaton**

บริษัท ฮามาตัน (ประเทศไทย) จำกัด

万通智控(泰国)有限公司

HAMATON (THAILAND) CO., LTD

## 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 & Chucks	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



**HTS-B10BN-US**

- 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



**HTS-RT01**

- 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](mailto: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](http://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.

## Service Kits



**6-102**



**6-103**



**6-104**



**6-106**



**6-108**



**6-109**



**6-110**



**6-111**



**6-112**



**6-114**



**6-116T**



**6-117**



**6-118**



**6-119**



**6-120**



**6-122**



**6-123**



**6-125**



**6-127**



**6-129**



**6-138**



**6-139**



**6-153**

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

# TPMS Replacement Valves

## Clamp-In Valves

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

**6-201****6-203****6-203B****6-204****6-206B****6-216****6-218****6-228****6-231C****6-235****6-235BK****6-236****6-240****6-240BK****6-241****6-242****6-243****6-266****6-266BK****6-266-SH****6-270****6-284-BK****6-437AL****6-437BK****6-437-1****6-439****6-439AL****6-440****6-458****6-468****TPMS-416****TPMS-416AL****TPS-1-502C**

# TPMS Replacement Valves

## Snap-In Valves



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

## Starter Kit



**6-352**

- 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

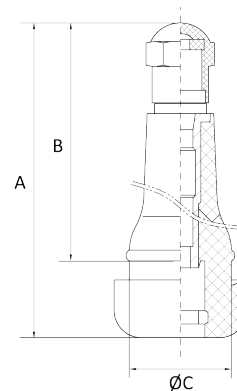
SECTION 2



# Passenger Car & Motorcycle Valves

## TR400 Series

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



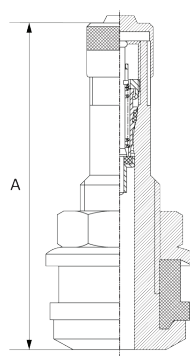
Product Number	Product Description	TR Number	Valve Hole Size (mm)	A (mm)	B (mm)	C (Ø)
<b>1-101</b>	TR412 with Normal Plastic Cap	TR412	Ø 11.3	33	22	15
<b>1-102</b>	TR413 with Normal Plastic Cap	TR413	Ø 11.3	43	32	15
<b>1-103</b>	TR414 with Normal Plastic Cap	TR414	Ø 11.3	49	38	15
<b>1-108</b>	TR425 with Normal Plastic Cap	TR425	Ø 15.7	62	50	19
<b>1-110</b>	TR438 with Normal Plastic Cap	TR438	-	41	31	12.5

## TR400 Custom Series

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.



**1-801**



Product Number	Product Description	TR Number	A (mm)
<b>1-801</b>	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

## TR High Pressure Series

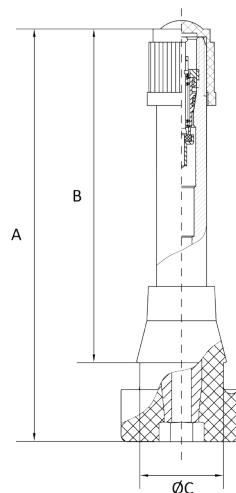
Brass valve cores with ozone resistant EPDM rubber for aluminum wheels with an 11.5 mm valve hole.



**1-401**



**1-403**



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



# Commercial Vehicle Valves

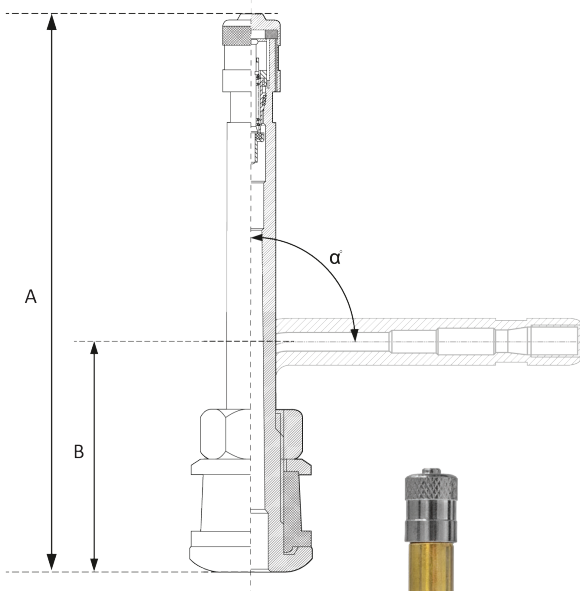
SECTION 3



# 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**



**1-202**



**1-203**



**1-204**



**1-205**



**1-206**



**1-207**

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



**1-203C**

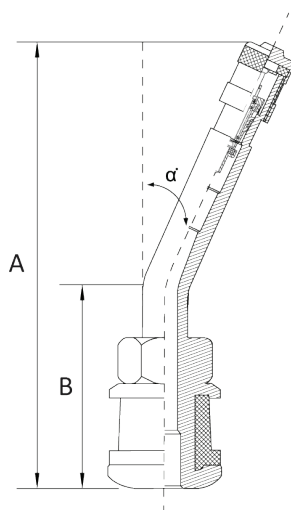
# Commercial Vehicle Valves

## 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.

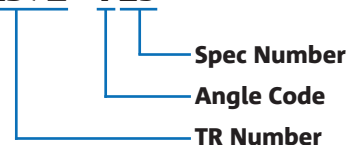


**1-201A**



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

### TR572 - F19



Spec Number

Angle Code

TR Number

	TR570	TR571	TR572	TR573	TR574
H (" /mm)	A (" /mm)				
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

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

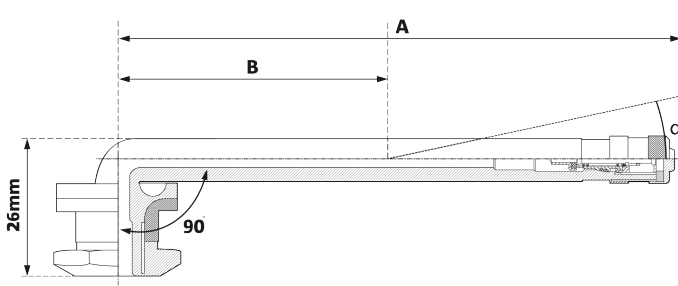
Nickel-plated brass valves for aluminum wheels with a 15.7 mm valve hole. Use a torque of 106-133 in-lbs to install the valve.



**1-303**



**1-302**



**1-301**

Product Number	Product Description	TR Number	A (mm)	B (mm)	$\alpha^\circ$
<b>1-301</b>	TR509 Nickel-Plated Commercial Vehicle Valve	TR509	120.5	-	-
<b>1-302</b>	TR510 Nickel-Plated Commercial Vehicle Valve	TR510	140	-	-
<b>1-303</b>	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



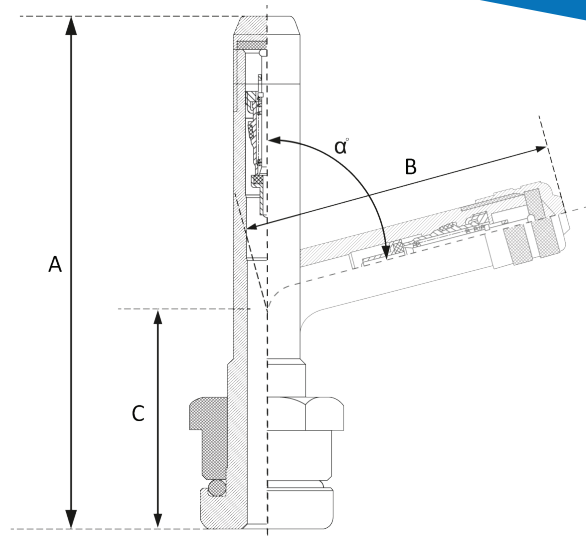
1-503



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)	$\alpha^\circ$
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°

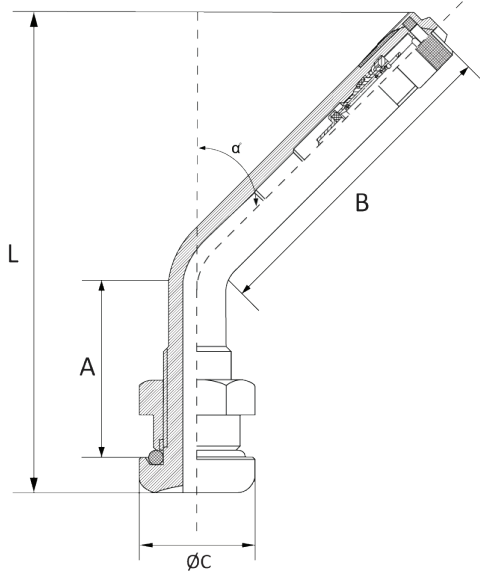
The products contained in the above table use:

Grommet: **2-3035** | 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)	$\alpha^\circ$
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.



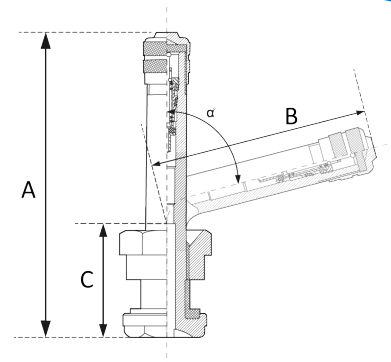
1-552



1-553D



1-555E



Product Number	Product Description	TR Number	A (mm)	B (mm)	C (mm)	$\alpha^\circ$
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.



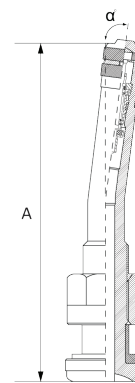
1-651-1



1-652



1-653



Product Number	Product Description	TR Number	$\alpha^\circ$	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

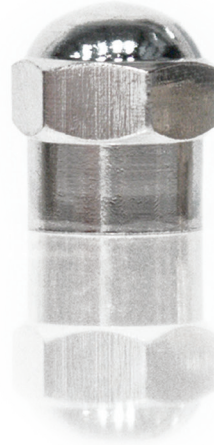
The products contained in the above and left tables use:

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



# Valves Caps & Cores

SECTION 4



# Valve Caps & Cores

Metal and Plastic Valve Caps.



= TPMS Friendly

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


Product Number	Product Description	Color
<b>2-102-1P</b>	Plastic Cap, Chrome-Plated	◆
<b>2-103P-2</b>	Plastic Cap, Orange	◆
<b>2-103P-3</b>	Plastic Cap, Yellow	◆
<b>2-103P-4</b>	Plastic Cap, Green	◆
<b>2-103P-5</b>	Plastic Cap, Blue	◆
<b>2-105-6</b>	Plastic Cap, Chrome-Plated	◆
<b>2-105-1</b>	Plastic Cap, Black	◆
<b>2-105-2</b>	Plastic Cap, Blue	◆
<b>2-105-4</b>	Plastic Cap, Green	◆
<b>2-105-5</b>	Plastic Cap, Red	◆
<b>2-105-8</b>	Plastic Cap, Orange	◆
<b>2-105-9</b>	Plastic Cap, Yellow	◆
<b>2-105-10</b>	Plastic Cap, Grey	◆
<b>2-105-11</b>	Plastic Cap, Dark Green	◆
<b>2-105D-2</b>	Plastic TPMS Cap with Rubber Grommet, Black	◆
<b>2-105D-3</b>	Plastic TPMS Cap with Rubber Grommet, Green	◆
<b>2-105D-5</b>	Plastic TPMS Cap with Rubber Grommet, Grey	◆
<b>2-105D-6</b>	Plastic TPMS Cap with Rubber Grommet, Dark Green	◆
<b>2-105D-7</b>	Plastic TPMS Cap with Rubber Grommet, Pink	◆
<b>2-126</b>	Plastic Cap, Green	◆
<b>2-126BK</b>	Plastic Cap, Black	◆
<b>2-127BK</b>	Plastic TPMS Cap, Black	◆
<b>2-127R</b>	Plastic TPMS Cap, Red	◆
<b>2-128</b>	Plastic TPMS Cap, Grey	◆
<b>2-128BK</b>	Plastic TPMS Cap, Black	◆
<b>2-150</b>	Plastic Cap, Black	◆
<b>2-157</b>	Plastic TPMS Cap, Grey	◆
<b>2-157BK</b>	Plastic TPMS Cap, Black	◆
<b>2-158</b>	Plastic TPMS Cap, Black	◆
<b>2-158G</b>	Plastic TPMS Cap, Green	◆
<b>2-171</b>	Plastic TPMS Cap, Black	◆

# Valve Caps & Cores

Short and Long Valve Cores.



2-706A

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

 = TPMS Friendly








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



2-702

2-703

2-704

Product Number	Product Description	Finish
1-1400-1 	Short TPMS 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





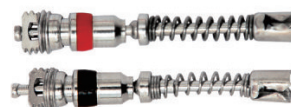
1-1400-1

1-1400-2

1-1400-4



1-1400-6

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



1-1401


1-1403-1

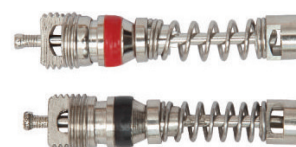
Product Number	Product Description	Finish
1-1403	Red Teflon Sealing For Large Bore Application	 Nickel-Plated
1-1403-2	Black Teflon Sealing For Large Bore Application	 Nickel-Plated



1-1403


1-1403-2

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



1-1404

1-1404-2

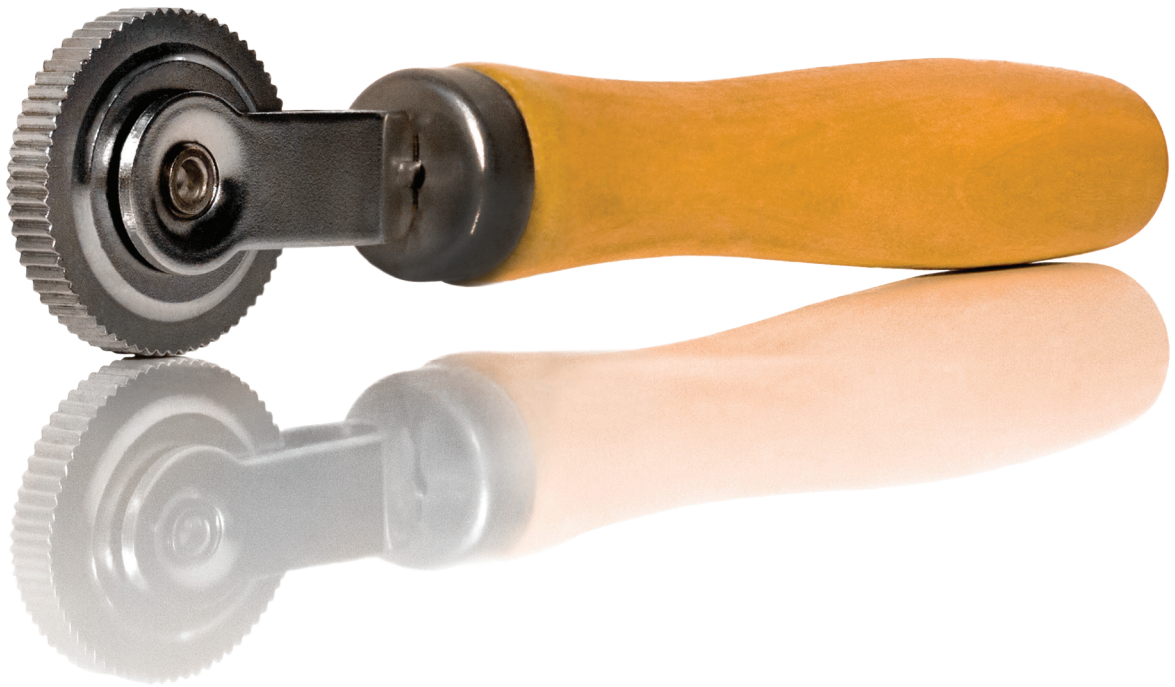
Product Number	Product Description	Finish
1-1407	Long Valve Core, Red Teflon Sealing, High Temperature Resistant	 Nickel-Plated



1-1407

# Tire Repair Tools & Accessories

SECTION 5



# Tire Repair Tools & Accessories

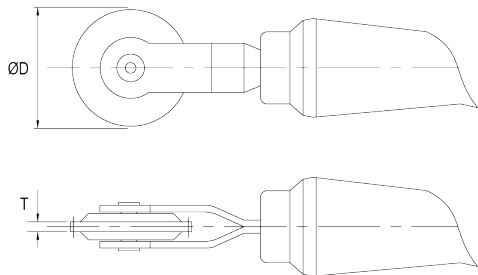
Product Number	Product Description
<b>3-161</b>	Manual Tire Spreader
<b>4-110</b>	Power-Awl
<b>4-129-1</b>	Probing Awl with Indication Rings
<b>5-301</b>	Tire Mounting Protector
<b>5-196</b>	Chrome Nut Cover Pliers
<b>5-200</b>	Rubber Hammer
<b>5-302</b>	Wheel Weight Removal Tool

**3-161****4-110****4-129-1****5-196****5-302****5-200****5-301**

Product Number	Product Description
<b>3-121</b>	Wheel Weight Pliers
<b>3-121A</b>	Wheel Weight Pliers Heavy Duty
<b>3-121B</b>	Wheel Weight Pliers Black
<b>3-122</b>	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)
<b>3-102</b>	Wood Handled Stitcher	38	1.6
<b>3-102-7</b>	Wood Handled Stitcher	51	4
<b>3-102-1</b>	Plastic Handled Stitcher	38	3

Product Number	Product Description
<b>3-110</b>	Blade Style Inner Liner Scraper
<b>3-110-1</b>	Hoe Style Inner Liner Scraper



**3-154C**



**3-154A**



**3-154B**

Product Number	Product Description
<b>3-154A</b>	Flexible Skiving Knife
<b>3-154B</b>	Rigid, Tapered Skiving Knife
<b>3-154C</b>	Curved Skiving Knife









# Needles & Probes

SECTION 6



# Needles & Probes

Product Number	Description	Needles (Probes & Rasps)
<b>N01</b>	Spiral Probe	
<b>N02</b>	Spiral Probe	
<b>N03</b>	Rasp	
<b>N04</b>	Rasp	
<b>N05</b>	Split-Eye Needle	
<b>N06</b>	Closed-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)



**4-209N01**

Zinc-Alloy Handle  
(Spiral Probe N01)



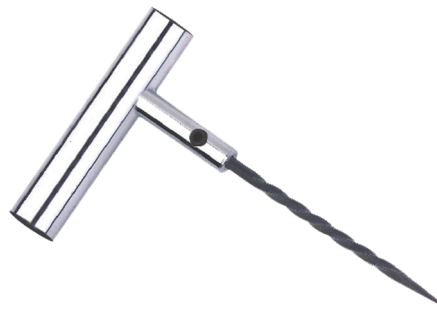
**4-208N01**

Straight Handle  
(Spiral Probe N01)



**4-210N01**

Metal Handle  
(Spiral Probe 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)
<b>4-200A</b> Zinc Alloy T-Handle Tool Kit	4-209	
	4-209-1	
	4-209A	
<b>4-200A-1</b> Zinc Alloy (Black) T-Handle Tool Kit	4-209	
	4-209-1	
	4-209A	
<b>4-200A-2</b> Zinc Alloy (Chrome Finished) T-Handle Tool Kit	4-209	
	4-209-1	
	4-209A	
<b>4-200B</b> Metal T-Handle Tool Kit	4-210	
	4-210	






4-200A-2



4-200B



**4-200D**

Product Number	Product Description	Quantity	Needle
<b>4-200C</b>	Plastic Handle	<b>1</b>	
	Needles	<b>4</b>	
<b>4-200D</b>	Metal Handle	<b>1</b>	
	Needles	<b>4</b>	



**4-200C**

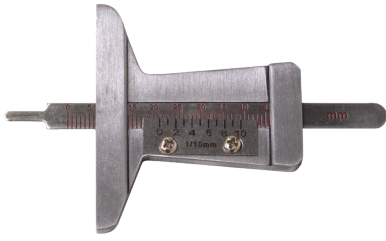


# Gauges & Chucks

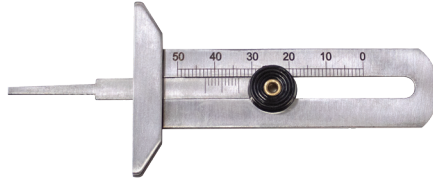
SECTION 7



# Tread Depth Gauges



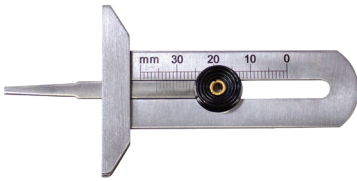
HT-1420



HT-1420-1



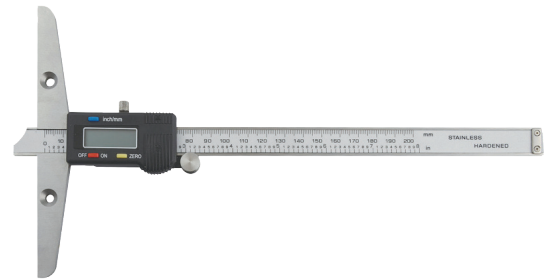
HT-1420-2



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 Truck Tread Depth Gauge	0.1 mm   1/10 in	0-50 mm   2 in
HT-1420-3	Stainless Truck Tread Depth Gauge, Small Base	1 mm	0-30 mm
HT-1420-2	Stainless Truck Tread Depth Gauge, Large Base	1 mm	0-50 mm
HT-1420-1	Stainless 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

# Air Chucks & Pressure Gauges



**HT-350-LO**



**HT-115**



**HT-155**



**HT-355-LO**



**HT-165**



**HT-333-LO**

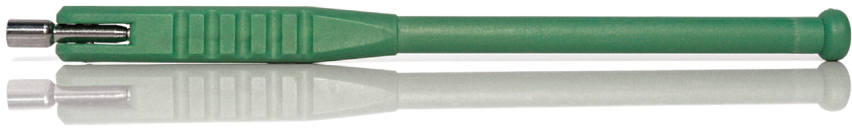


**HT-330-LO**

Product Number	Product Description	Color
<b>HT-115</b>	20-120psi, 1.4–8.3 bar, 138–827 kPa gauge	Chrome
<b>HT-155</b>	10-150psi, 2psi Increment	Chrome
<b>HT-165</b>	10-150psi, 2psi	Black
<b>HT-330-LO</b>	6", straight-on 30° & 180° reverse angle dual-foot air chuck	Chrome
<b>HT-333-LO</b>	14", straight-on 30° & 180° reverse angle dual-foot air chuck	Chrome
<b>HT-350-LO</b>	6", straight-on 30° & 180° reverse angle dual-foot air chuck	Black Polyurethane
<b>HT-355-LO</b>	14", straight-on 30° & 180° reverse angle dual-foot air chuck	Black Polyurethane

# Valve Installation, Fishing & Repair Tools

SECTION 8



# Valve Installation Tools

Product Number	Product Description
<b>3-101</b>	Chrome Coated Valve Installation Tool, Screw-On Type
<b>3-101-1</b>	Valve Installation Tool with Plastic Cover, Screw-On Type
<b>3-101-2</b>	Chrome Coated Valve Installation Tool, Screw-On Type
<b>3-101-3</b>	Plastic Handle Valve Installation Tool, Screw-On Type
<b>3-101-3A</b>	Plastic Handle 2 Way Valve Installation Tool
<b>3-101-4</b>	Valve Installation Tool, Screw-On Type
<b>3-101-5</b>	Chrome Coated Valve Installation Tool, Screw-On Type
<b>3-101-6</b>	Chrome Coated Valve Installation Tool, Screw-On Type
<b>3-104B</b>	Blue Valve Core Remover Tool
<b>3-105-1</b>	Green Valve Core Remover Tool
<b>3-107</b>	Valve Core Remover Tool, Double End
<b>3-114</b>	Valve Installation Tool, Clamp-On Tool
<b>3-115</b>	Pull-a-Stem Valve Installation Tool
<b>3-150T</b>	Valve Core Torque Tool
<b>3-312</b>	TPMS Torque Tool Kit and Carry Case
<b>3-313</b>	TPMS Torque Tool Kit and Carry Case

**3-114****3-115****3-105-1****3-104B****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**



**3-133**



**3-113**

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



**3-138**



**3-108**



**3-108-1**



**3-108-2**

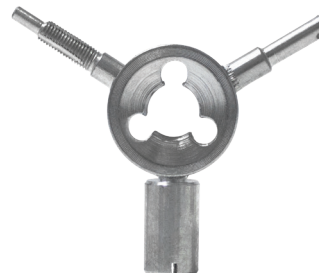


**3-109**

Product Number	Product Description
<b>3-108</b>	4-Way Valve Tool
<b>3-108-1</b>	4-Way Valve Tool Black Hardened
<b>3-108-2</b>	4-Way Valve Tool
<b>3-109</b>	4-Way Valve Tool
<b>3-111</b>	2-Way Valve Tool
<b>5-121</b>	4-Way Valve Tool
<b>5-159</b>	4-Way Valve Tool Black Hardened




**3-111**



**5-121**



**5-159**



# Best Practice

SECTION 9



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.

## 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

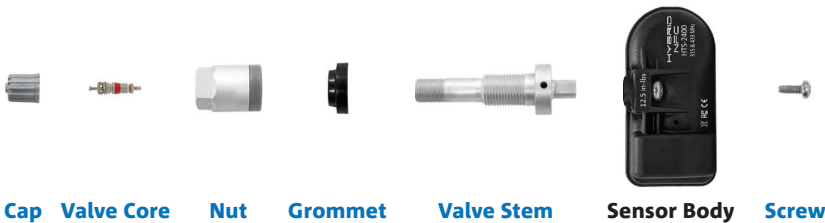
The useful life of a rubber valve depends largely on the storage conditions in which it is kept. Under recommended conditions, the shelf life of a Hamaton-produced rubber valve is 36 months. All rubber products should be inspected regularly during this period to ensure they remain in suitable condition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







# Hamaton

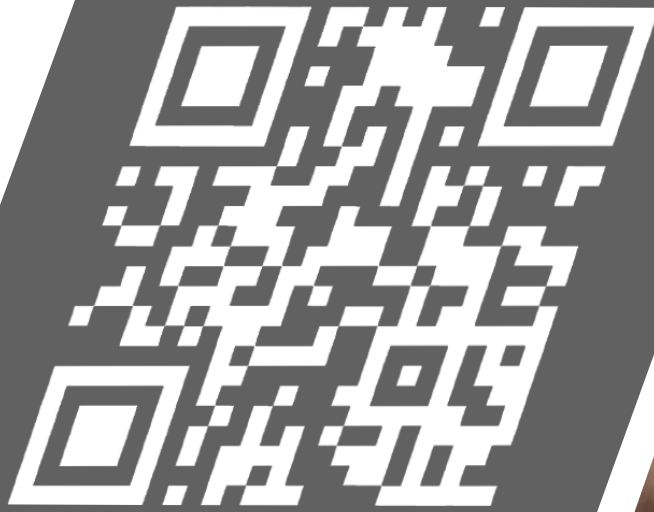
Innovation to Perfection

Office: (248) 308-3856

Tech Support: (888) 588-7039

Inquiries: [info.usa@hamatonusa.com](mailto:info.usa@hamatonusa.com)

[www.hamatonusa.com](http://www.hamatonusa.com)



**Distributed By**