

UNIVERSAL FASTENER GAGING PRODUCTS

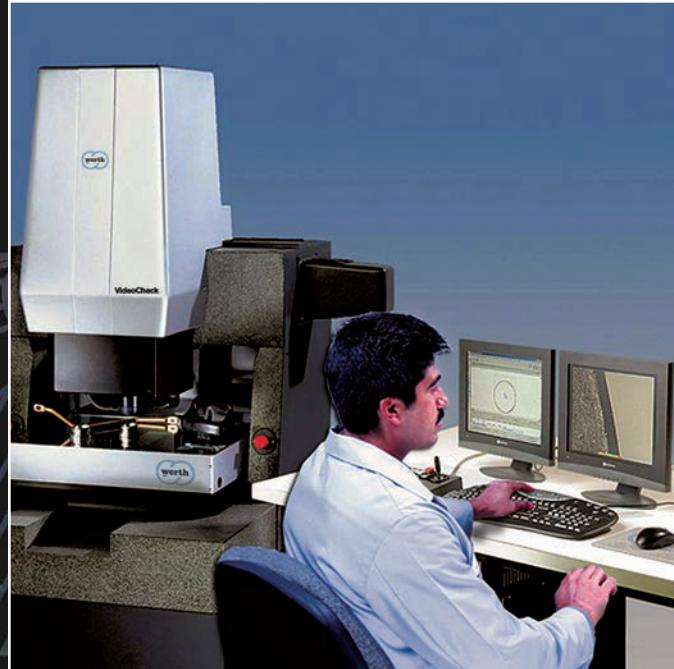




Modern Production Support Our modern facility, including in-house Vacuum Heat Treating, CNC Form Grinding, CNC Turning, Production CNC Milling, Automated Wire EDM, Conventional EDM, CNC 6 & 5 Axis Grinding, custom press-type work and SPC quality systems allow us to perform for you with speed, reliability and precision. Our trained customer service and engineering staff, as well as worldwide agents, are available to assist you with your manufacturing requirements. Our application engineers have the experience to provide you with the solution to your product inspection or application needs.



GAGE CALIBRATIONS



INSPECTION LABORATORY

Calibration ISO17025 To help maintain compliance with applicable standards, we offer gage calibration services to re-certify and repair all the gages we manufacture, and many similar types from other manufacturers. All measurements performed are in accordance with ISO Guide 17025 and all reference masters are directly traceable to N.I.S.T. (National Institute of Standards & Technology). We recommend your gages be routinely re-certified based on their usage to ensure the gaging members and dial indicators are accurate and reliable.

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INTRODUCTION

MISSION STATEMENT: To be a world class contract supplier of tools and gages to the Aerospace, Automotive, Appliance, Defense, Electronic, Machine Tool, Medical Devices, Munition, and other industries with innovative designs, and to always be attentive to the needs of our customers.

COMPANY: Universal Punch Corp. is an ISO 9001:2008 registered company and has been a leader in the tooling and gaging industry for four decades. As part of our continuing commitment to provide precision and excellence in all of our products, we maintain a state of the art 65,000 sq.ft. facility. Our spacious new plant is equipped with increased machining capacity, expanded heat treating department and a calibration and inspection laboratory. Our laboratory ensures that all products sold conform to ISO17025 standards. All measuring equipment and gaging masters are directly traceable to N.I.S.T.

SERVICES: Universal Punch Corp. is a high precision tool and gage manufacturer. We use high tech applications to make a wide range of products to meet today's increased demands for superior performing tools and high precision gaging. Our modern vacuum heat treating facility provides the control necessary to make tools with the highest structural integrity, capable of withstanding the severest heading application of warm or cold forming. In addition, complete inventories of standard tooling are available for immediate delivery in a variety of materials, finishes, and coatings.

FASTENER DRIVES: We offer products for many popular drive systems, such as Phillips Type I, Pozi 1A Type II, Square Type III, 6-Lobe (Torx), 6-Lobe Extra (TorxPlus), Supadrive, Six & Eight-Point Drives, 12-Point VW, ISO Hexalobular, Hexagon, Double Hex, Penta Drive, Square Drive, Indented Hexagon, Combinations, Splines, Tamper Proof, NAS Tri Slot, NAS Cruciform, Star type forms, and custom forms.

GAGING: Go/No-Go, Penetration, Final Inspection, Plug Gages, Concentricity Gages, Thickness, Driver Bit, Recess, Wobble, Screw Recess, Screw Testing Fixtures, Runout, Protrusion Height, Variable Reading Thread Gages, Special Modular Gaging Fixtures, SPC Data Collection Systems, and Gage Calibration Service.

SPECIALTIES: We have full time engineering staff using AutoCAD and SolidWorks CAD/CAM software for drawing and CNC machine programming. Our manufacturing processes consist of a large number of special five and six axis CNC Form Ginders, CNC Mill/Turning Lathes, Mills, Swiss Screw Machines, Wire EDM, and conventional EDM to ensure quality and reliability of products. We have a full in-house laboratory, temperature and humidity controlled for customer calibration of gages, which includes SIP 305, Video Microscope, and Fiber Optics CMM.

INTERNATIONAL SERVICES: Universal Punch Corp. is dedicated to the global marketplace. Agents or distributors located in the United States, Mexico, Canada, South America, England, France, Spain, Germany, Italy, Switzerland, Turkey, India, South Korea, Singapore, China, Taiwan, Japan, and Australia are ready to assist you.

ACHIEVEMENTS: ISO9001/2008 by Underwriters Laboratories UL DQS Inc. with quality emphasis on compliance to ISO 17025 Guide 25; the development of the two-piece hex punch system and later the 6-Lobe/Hexalobular system; special Medical Driver Systems; the patented Concentricity Gage and various fastener gages are just some of our achievements.

WEBSITES: www.universalpunch.com; www.concentricitygage.com; www.six-lobe.com; www.hexalobular.com; www.wobble-broaches.com

EMAIL: sales@universalpunch.com

PHONE: 714-556-4488

FAX: 714-556-6314

Servicing Your Tooling And Gaging Requirements Into The Twenty First Century.

TERMS AND CONDITIONS

TERMS: NET 30 DAYS ON APPROVED CREDIT, F.O.B. SANTA ANA, CALIFORNIA. ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

DELIVERY: IS ALWAYS QUOTED AFTER RECEIPT OF ORDER. STOCK ORDERS WILL PROCESS IN 2 BUSINESS DAYS UNLESS SPECIFIED NEXT DAY RUSH SERVICE.

ORDERING & BILLING:

MINIMUM BILLING - \$100.00

MINIMUM ORDER FROM STOCK - \$100.00

MINIMUM MANUFACTURED ORDER - \$200.00

SHIPPING: UNLESS OTHERWISE INSTRUCTED SHIPPING WILL BE DONE BY THE LEAST EXPENSIVE WAY. WE CANNOT ASSUME CHARGES OR RESPONSIBILITY DUE TO TRANSPORTATION DIFFICULTIES. DUE TO THE NATURE OF OUR BUSINESS, WE RESERVE THE RIGHT TO SHIP AND CHARGE THE CUSTOMER FOR 10% OVER OR UNDER SPECIFIED QUANTITIES.

QUOTATIONS: ARE VALID FOR 30 DAYS ONLY, UNLESS SPECIAL ARRANGEMENTS ARE MADE. WE RESERVE THE RIGHT TO ADVISE THE CUSTOMER OF ANY CHANGE IN PRICE UPON RECEIPT OF ORDER, IF YOU HAVE BEEN QUOTED INCORRECTLY.

CANCELLATIONS: WILL BE SUBJECT TO A MINIMUM CHARGE OF \$75.00 PLUS ANY APPLICABLE MATERIAL AND LABOR CHARGES FOR WORK IN PROGRESS.

RETURNS: POSITIVELY NO PRODUCT OR GAGES MAY BE RETURNED WITHOUT FACTORY AUTHORIZATION (RMA) AND REQUESTS FOR SUCH MUST BE MADE WITHIN 10 BUSINESS DAYS OF RECEIPT OF MERCHANDISE. GAGES ACCEPTED UNDER THESE CONDITIONS SHALL BE SUBJECT TO THE RIGHT OF REPAIR OR REPLACEMENT.

MERCHANDISE RETURNS: ALL RETURNED STOCK ITEMS WILL BE SUBJECT TO A 25% RESTOCKING CHARGE.

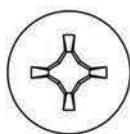
EXCLUSIONS AND LIMITATIONS: DUE TO THE SEVERITY AND CONDITIONS SURROUNDING GAGE USAGE, IT IS A FIRM POLICY OF THIS COMPANY NOT TO GUARANTEE PERFORMANCE OR RELIABILITY, BUT ONLY CONFORMANCE TO PHYSICAL SPECIFICATIONS AND WORKMANSHIP. ALL GAGES WILL REQUIRE MAINTENANCE, TESTING AND CALIBRATION UNDER NORMAL USE.

GAGE LIMITED WARRANTY: THIS LIMITED WARRANTY APPLIES ONLY TO GAGES AND GAGE PARTS MANUFACTURED BY OR FOR UNIVERSAL PUNCH CORP.: THAT WITHIN TWELVE (12) MONTHS FROM DATE OF SHIPMENT, WE WILL REPAIR OR REPLACE, AT OUR OPTION, FREE OF CHARGE, ANY PART OR PARTS WHICH UPON EXAMINATION WE FIND DEFECTIVE IN WORKMANSHIP OR MATERIAL. THE LIMITED WARRANTY DOES NOT APPLY TO ANY GAGES OR GAGE PARTS THAT HAVE BEEN DISASSEMBLED OR MODIFIED IN ANY WAY BY THE USER. UNIVERSAL PUNCH CORP. IS NOT RESPONSIBLE FOR DAMAGE ARISING FROM FAILURE TO FOLLOW INSTRUCTIONS RELATING TO THE PRODUCT'S USE. THIS WARRANTY DOES NOT APPLY: (A) TO DAMAGE CAUSED BY NON-UNIVERSAL PUNCH CORP. PRODUCTS; (B) TO DAMAGE CAUSED BY ACCIDENT, ABUSE, MISUSE, FLOOD, FIRE, OR OTHER EXTERNAL CAUSES; (C) TO DAMAGE CAUSED BY OPERATING THE PRODUCT OUTSIDE THE PERMITTED USES DESCRIBED BY UNIVERSAL PUNCH CORP.; (D) TO DAMAGE CAUSED BY SERVICE PERFORMED BY ANYONE OTHER THAN UNIVERSAL PUNCH CORP. TECHNICIANS; (E) TO A GAGE OR GAGE PART THAT HAS BEEN MODIFIED TO SIGNIFICANTLY ALTER FUNCTIONALITY OR CAPABILITY WITHOUT THE WRITTEN PERMISSION OF UNIVERSAL PUNCH CORP.; OR (F) IF ANY SERIAL NUMBER HAS BEEN REMOVED OR DEFACED.

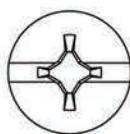
TO THE EXTENT PERMITTED BY LAW, THIS WARRANTY AND REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL OR WRITTEN, STATUTORY, EXPRESS OR IMPLIED. AS PERMITTED BY APPLICABLE LAW, UNIVERSAL PUNCH CORP. SPECIFICALLY DISCLAIMS ANY AND ALL STATUTORY OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND WARRANTIES AGAINST HIDDEN OR LATENT DEFECTS, AND IN NO EVENT WILL UNIVERSAL PUNCH CORP. BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES INCLUDING BUT NOT LIMITED TO, LOST PROFITS OR OTHER DAMAGES FROM LOSS OF PRODUCTION CAUSED BY DEFECTIVE PRODUCT, OR BY UNSATISFACTORY PERFORMANCE OF THE PRODUCT. NO UNIVERSAL PUNCH AGENT OR DISTRIBUTOR IS AUTHORIZED TO MAKE ANY MODIFICATION, EXTENSION, OR ADDITION TO THIS WARRANTY. THIS LIMITED WARRANTY IS GOVERNED BY AND CONSTRUED UNDER THE LAWS OF THE COUNTRY AND STATE IN WHICH THE PRODUCT WAS MANUFACTURED.

OBTAINING WARRANTY SERVICE: WARRANTY SERVICE CAN ONLY BE OBTAINED DIRECTLY FROM THE MANUFACTURER, UNIVERSAL PUNCH CORP. AND PRIOR MANUFACTURER APPROVAL MUST BE OBTAINED. WARRANTY SERVICE APPLIES TO PARTS THAT ARE TENDERED OR PRESENTED FOR SERVICE DURING THE WARRANTY PERIOD. SERVICE OPTIONS, PARTS AVAILABILITY AND RESPONSE TIMES MAY VARY ACCORDING TO THE PRODUCT BEING RETURNED.

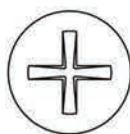
SCREW DRIVE FORM REFERENCES



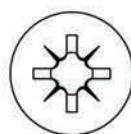
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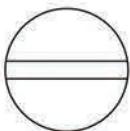
COMBO PHILLIPS SLOT



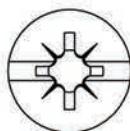
TYPE II FREARSON



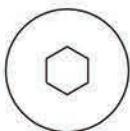
TYPE 1A PZ DRIVE



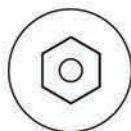
SLOTTED



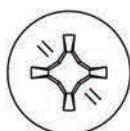
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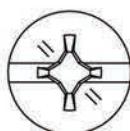
HEXAGON



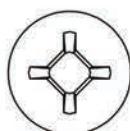
TAMPER RESISTANT HEX



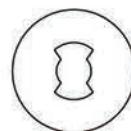
PHILLIPS RIBBED



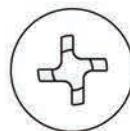
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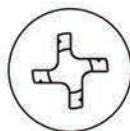
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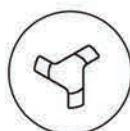
CLUTCH DRIVE



NAS CRUCIFORM



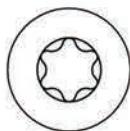
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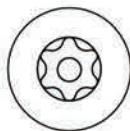
TRI-SLOT WING



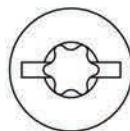
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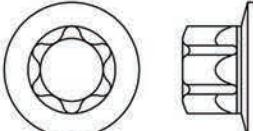
6-LOBE (TX)



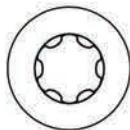
TAMPER RESISTANT 6-LOBE



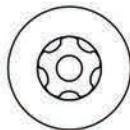
COMBO 6-LOBE (TX)



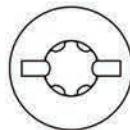
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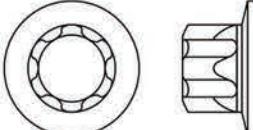
6-LOBE EXTRA (TXP)



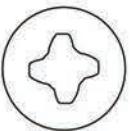
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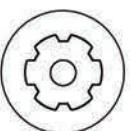
COMBO EXTRA SLOT



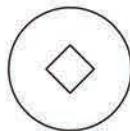
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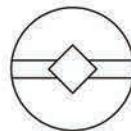
MORETORQUE



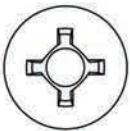
TAMPER SPLINE



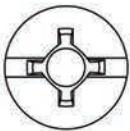
SQUARE DRIVE



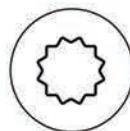
COMBO SQUARE SLOT



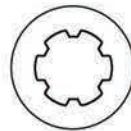
QUADREX



QUADREX PLUS



12-POINT DRIVE



SPLINE DRIVE

GAGE INSPECTION USE

Penetration Gage Inspection

There are three types of Penetration Gages available.

Penetration Gage: This gage has a moving element and an indicator. Generally used for inspection of finished products, the Penetration Gage is used to check acceptance of a drive form by representing the minimum form size allowable after plating. In addition, this gage measures form depth. If the Penetration Gage does not enter the form then the form has likely been coated past allowable limits during plating. For acceptance of the part, the Penetration Gage should fully enter the screw form and have a depth compliant to the specification.



GO Production Gage: This gage has a moving element and an indicator. Generally used for receiving and manufacturing inspection, the GO Production Gage is used to check acceptance of a drive form by representing the minimum form size allowable. In addition, this gage measures form depth. If the GO Production Gage does not enter the form then the form is either undersized, or the form is irregular in some way. For acceptance of the part, the GO Production Gage should fully enter the screw form and have a depth compliant to the specification.

NO-GO Fallaway Gage: This gage has a moving element and an indicator. Generally used for receiving and manufacturing inspection, the NO-GO Fallaway Gage is used to check acceptance of a drive form by representing the maximum form size allowable. In addition, this gage measures form fallaway depth. The NO-GO Fallaway Gage can at best enter into the form just slightly, but may not at all. Should it enter, it shall not exceed the specified fallaway depth.

Plug Gage Inspections

There are two types of Plug Gages available.

GO / NO-GO Plug Gage: This gage is double ended, with one end being the GO and the other the NO-GO. This Gage is generally used for receiving and manufacturing inspection. The "GO" end is used to check acceptance of a drive form by representing the minimum form size allowable. If the "GO" end does not enter the form then the form is either undersized, or the form is irregular in some way. For acceptance of the part, the GO Plug Gage should fully enter the screw form to its complete depth. The "NO-GO" end is used to check acceptance of a drive form by representing the maximum form size allowable. The "NO-GO" end can at best enter into the form just slightly, but may not at all. Should it enter, it shall not exceed the specified fallaway depth. To properly gage fallaway depth, a NO-GO Fallaway Gage is required.



Final Plug Gage: This gage is single ended. Generally used for inspection of finished products, the Final Plug Gage is used to check acceptance of a drive form by representing the minimum form size allowable after plating. If the Final Plug Gage does not enter the form then the form has likely been coated past allowable limits during plating. For acceptance of the part, the Final Plug Gage should fully enter the screw form to its complete depth.

#1180 6-LOBE (TX) PENETRATION GAGE

TXQ-809

FOR INTERNAL (TX) RECESS HEAD SCREWS
REFERENCES: TXF-809, TMF-809

PART NUMBER	DRIVE SIZE	REFERENCE NUMBER
1180-04	T4	4-TXI-809
1180-05	T5	5-TXI-809
1180-06	T6	6-TXI-809
1180-07	T7	7-TXI-809
1180-08	T8	8-TXI-809
1180-09	T9	9-TXI-809
1180-10	T10	10-TXI-809
1180-15	T15	15-TXI-809
1180-20	T20	20-TXI-809
1180-25	T25	25-TXI-809
1180-27	T27	27-TXI-809
1180-30	T30	30-TXI-809
1180-40	T40	40-TXI-809
1180-45	T45	45-TXI-809
1180-50	T50	50-TXI-809
1180-55	T55	55-TXI-809
1180-60	T60	60-TXI-809
1180-70	T70	70-TXI-809
1180-80	T80	80-TXI-809
1180-90	T90	90-TXI-809
1180-100	T100	100-TXI-809



When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible With Digital Indicators. Tamper-Proof Style Available (Sizes #6 Thru #45). All Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#1181 6-LOBE (TX) GO PENETRATION GAGE

TXQ-804

FOR INTERNAL (TX) RECESS HEAD SCREWS
STANDARD REFERENCES TMF-804, TXQ-804

PART NUMBER	DRIVE SIZE	REFERENCE NUMBER
1181-04	T4	4-TXI-804
1181-05	T5	5-TXI-804
1181-06	T6	6-TXI-804
1181-07	T7	7-TXI-804
1181-08	T8	8-TXI-804
1181-09	T9	9-TXI-804
1181-10	T10	10-TXI-804
1181-15	T15	15-TXI-804
1181-20	T20	20-TXI-804
1181-25	T25	25-TXI-804
1181-27	T27	27-TXI-804
1181-30	T30	30-TXI-804
1181-40	T40	40-TXI-804
1181-45	T45	45-TXI-804
1181-50	T50	50-TXI-804
1181-55	T55	55-TXI-804
1181-60	T60	60-TXI-804
1181-70	T70	70-TXI-804
1181-80	T80	80-TXI-804
1181-90	T90	90-TXI-804
1181-100	T100	100-TXI-804



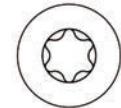
When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible With Digital Indicators. Tamper-Proof Style Available (Sizes #6 Thru #45). All Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#1182 6-LOBE (TX) NO-GO FALLAWAY GAGE

TXQ-812

FOR INTERNAL (TX) RECESS HEAD SCREWS
REFERENCES: TXF-812, TMF-810, TMQ-812, TXQ-812

PART NUMBER	DRIVE SIZE	REFERENCE NUMBER
1182-04	T4	P6TX4/905
1182-05	T5	P6TX5/905
1182-06	T6	P6TX6/905
1182-07	T7	P6TX7/905
1182-08	T8	P6TX8/905
1182-09	T9	P6TX9/905
1182-10	T10	P6TX10/905
1182-15	T15	P6TX15/905
1182-20	T20	P6TX20/905
1182-25	T25	P6TX25/905
1182-27	T27	P6TX27/905
1182-30	T30	P6TX30/905
1182-40	T40	P6TX40/905
1182-45	T45	P6TX45/905
1182-50	T50	P6TX50/905
1182-55	T55	P6TX55/905
1182-60	T60	P6TX60/905
1182-70	T70	P6TX70/905
1182-80	T80	P6TX80/905
1182-90	T90	P6TX90/905
1182-100	T100	P6TX100/905



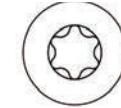
When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible With Digital Indicators. Tamper-Proof Style Available (Sizes #6 Thru #45). All Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#1184 6-LOBE (TX) GO NO-GO GAGE

TXQ-804

FOR INTERNAL (TX) RECESS HEAD SCREWS
STANDARD REFERENCES TMF-804, TXQ-804

PART NUMBER	DRIVE SIZE	REFERENCE NUMBER
1184-04	T4	4-TXI-900
1184-05	T5	5-TXI-900
1184-06	T6	6-TXI-900
1184-07	T7	7-TXI-900
1184-08	T8	8-TXI-900
1184-09	T9	9-TXI-900
1184-10	T10	10-TXI-900
1184-15	T15	15-TXI-900
1184-20	T20	20-TXI-900
1184-25	T25	25-TXI-900
1184-27	T27	27-TXI-900
1184-30	T30	30-TXI-900
1184-40	T40	40-TXI-900
1184-45	T45	45-TXI-900
1184-50	T50	50-TXI-900
1184-55	T55	55-TXI-900
1184-60	T60	60-TXI-900
1184-70	T70	70-TXI-900
1184-80	T80	80-TXI-900
1184-90	T90	90-TXI-900
1184-100	T100	100-TXI-900



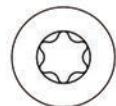
When Ordering Specify Tamper-Proof Style (Sizes #6 Thru #45). Gage Probes Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#1185 6-LOBE (TX) FINAL INSPECTION GAGE

TXQ-811

FOR INTERNAL (TX) RECESS HEAD SCREWS

REFERENCES: TMQ-811, TMF-811, TXF-811, TXQ-811



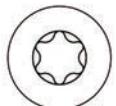
PART NUMBER	DRIVE SIZE	REFERENCE NUMBER
1185-04	T4	4-TXI-901
1185-05	T5	5-TXI-901
1185-06	T6	6-TXI-901
1185-07	T7	7-TXI-901
1185-08	T8	8-TXI-901
1185-09	T9	9-TXI-901
1185-10	T10	10-TXI-901
1185-15	T15	15-TXI-901
1185-20	T20	20-TXI-901
1185-25	T25	25-TXI-901
1185-27	T27	27-TXI-901
1185-30	T30	30-TXI-901
1185-40	T40	40-TXI-901
1185-45	T45	45-TXI-901
1185-50	T50	50-TXI-901
1185-55	T55	55-TXI-901
1185-60	T60	60-TXI-901
1185-70	T70	70-TXI-901
1185-80	T80	80-TXI-901
1185-90	T90	90-TXI-901
1185-100	T100	100-TXI-901



When Ordering Specify Tamper-Proof Style (Sizes #6 Thru #45). Gage Probes Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#1190 HEXALOBULAR PENETRATION GAGE

ISO10664 / IFI-562 /JIS B1015



FOR INTERNAL ISO HEXALOBULAR RECESS HEAD SCREWS

REFERENCES: ISO10664:2014(E) IFI 562 & JIS B1015:2008

PART NUMBER	DRIVE SIZE	REFERENCE NUMBER
1190-05	5	ISO10664:2014(E)
1190-06	6	-
1190-07	7	-
1190-08	8	-
1190-09	9	-
1190-10	10	-
1190-15	15	-
1190-20	20	-
1190-25	25	-
1190-27	27	-
1190-30	30	-
1190-40	40	-
1190-45	45	-
1190-50	50	-
1190-55	55	-
1190-60	60	-
1190-70	70	-
1190-80	80	-
1190-90	90	-
1190-100	100	-

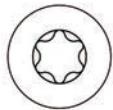


When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible With Digital Indicators. All Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#1191 HEXALOBULAR GO PENETRATION GAGE ISO10664 / IFI-562 / JIS B1015

FOR INTERNAL ISO HEXALOBULAR RECESS HEAD SCREWS
REFERENCES: ISO10664:2014(E) IFI562 & JIS B1015:2008

PART NUMBER	DRIVE SIZE	REFERENCE NUMBER
1191-05	5	ISO10664:2014(E)
1191-06	6	-
1191-07	7	-
1191-08	8	-
1191-09	9	-
1191-10	10	-
1191-15	15	-
1191-20	20	-
1191-25	25	-
1191-27	27	-
1191-30	30	-
1191-40	40	-
1191-45	45	-
1191-50	50	-
1191-55	55	-
1191-60	60	-
1191-70	70	-
1191-80	80	-
1191-90	90	-
1191-100	100	-

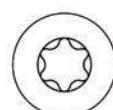


When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible With Digital Indicators. All Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#1192 HEXALOBULAR NO-GO FALLAWAY GAGE ISO10664 / IFI-562 / JIS B1015

FOR INTERNAL ISO HEXALOBULAR RECESS HEAD SCREWS
REFERENCES: ISO10664:2014(E) IFI 562 & JIS B1015:2008

PART NUMBER	DRIVE SIZE	REFERENCE NUMBER
1192-05	5	ISO10664:2014(E)
1192-06	6	-
1192-07	7	-
1192-08	8	-
1192-09	9	-
1192-10	10	-
1192-15	15	-
1192-20	20	-
1192-25	25	-
1192-27	27	-
1192-30	30	-
1192-40	40	-
1192-45	45	-
1192-50	50	-
1192-55	55	-
1192-60	60	-
1192-70	70	-
1192-80	80	-
1192-90	90	-
1192-100	100	-



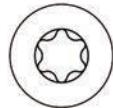
When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible With Digital Indicators. All Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#1194 HEXALOBULAR GO NO-GO GAGE

ISO10664 / IFI-562 / JIS B1015

FOR INTERNAL ISO HEXALOBULAR RECESS HEAD SCREWS
REFERENCES: ISO10664:2014(E) IFI 562 & JIS B1015:2008

PART NUMBER	DRIVE SIZE	REFERENCE NUMBER
1194-05	5	ISO10664:2014(E)
1194-06	6	-
1194-07	7	-
1194-08	8	-
1194-09	9	-
1194-10	10	-
1194-15	15	-
1194-20	20	-
1194-25	25	-
1194-27	27	-
1194-30	30	-
1194-40	40	-
1194-45	45	-
1194-50	50	-
1194-55	55	-
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1194-80	80	-
1194-90	90	-
1194-100	100	-



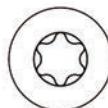
Universal's Gage Probes Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#1195 HEXALOBULAR CYLINDRICAL NO-GO GAGE

ISO10664 / IFI-562

FOR INTERNAL ISO HEXALOBULAR RECESS HEAD SCREWS
REFERENCES: ISO10664: 2014(E) IFI 562 & JIS B1015:2008

PART NUMBER	DRIVE SIZE	REFERENCE NUMBER
1195-05	5	ISO10664:2014(E)
1195-06	6	-
1195-07	7	-
1195-08	8	-
1195-09	9	-
1195-10	10	-
1195-15	15	-
1195-20	20	-
1195-25	25	-
1195-27	27	-
1195-30	30	-
1195-40	40	-
1195-45	45	-
1195-50	50	-
1195-55	55	-
1195-60	60	-
1195-70	70	-
1195-80	80	-
1195-90	90	-
1195-100	100	-



When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible With Digital Indicators. All Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

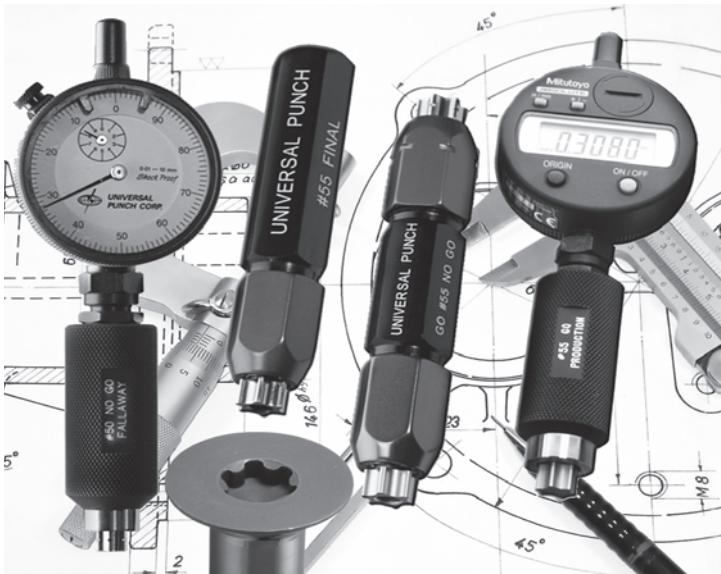
ENHANCED HEXALOBULAR / 6-LOBE EXTRA (TXP)

• Worldwide Sales & Support

Global Industries currently using the ISO Hexalobular and IFI 6-LOBE (TX) now have access to a *NEW* improved drive called Enhanced Hexalobular, Extra. This elliptical drive has many new improvements for multiple applications including: NAS Aerospace, Appliance, Automotive, Construction Electronics, Military, Nuclear, Medical and others. Universal Punch Corp. has become a preferred supplier to worldwide manufacturing markets through superior quality, technical support and cost effective distribution of stocked inventories of standard tools and gages.

• Manufacturing Standards & Documents

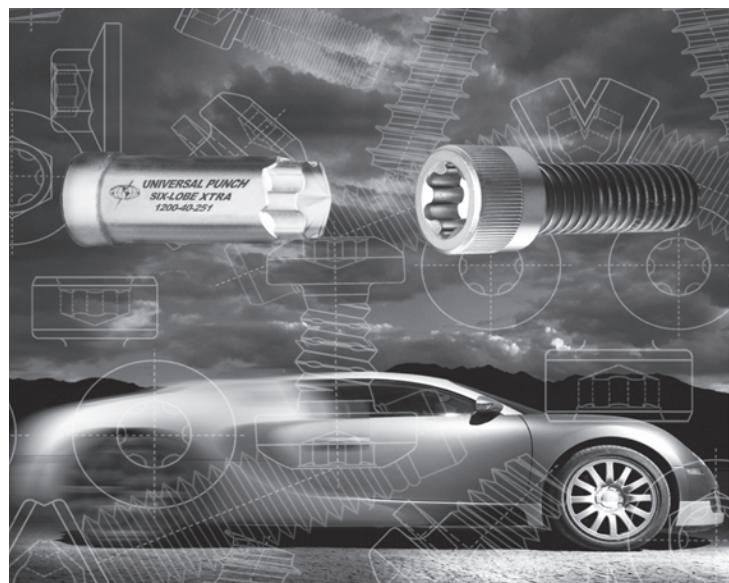
Around the world, several international and governmental committees (ISO, EN, DIN, JIS, IFI, NAS, ANSI) have published fastener manufacturing standards including the gaging documents that provide technical data support ("Know-How") for most common designs. These controlled documents are consistently updated and the necessary manufacturing technology can be obtained from numerous on-line agencies or document stores with current revisions, which provides worldwide document standardization.



• Technical Advantages & Economic Benefits

Enhanced Hexalobular, 6-Lobe Extra / (TXP) all provide benefits that overcome the inherent limitations of Phillips, Pozi, Hexagon, Square, 12-Point, Slotted and other drive systems. The result is improved drive tool life and reduced overall costs.

- Improved Driver Bit Life
- Improved Driver Bit Torsional Strength
- Superior Fit Between Drive Tool & Fastener
- High Torque Transfer Capability
- Reduced Camout
- Reduced Tool Slippage
- Reduced Worker Fatigue
- Improved Quality With Economic Benefits

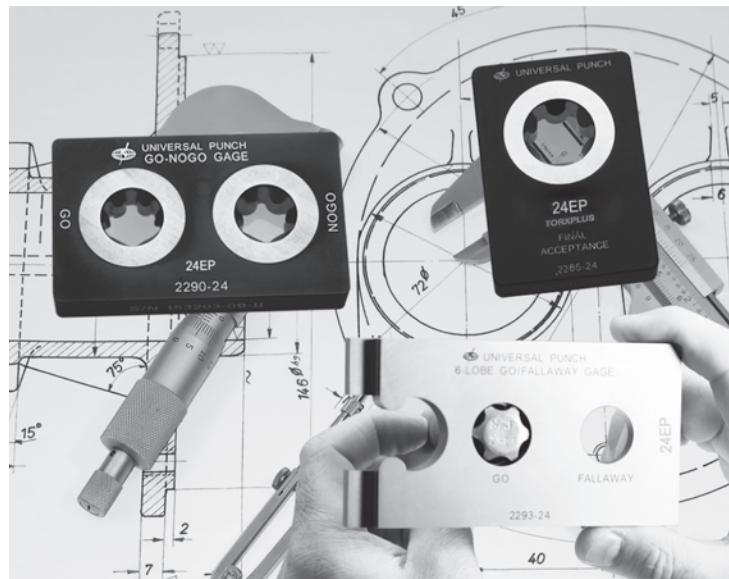


• Gage Re-Certification

To help maintain compliance with all standards for both internal sizes (T5-T100, 5IP-100IP) and external sizes (E4-E44, 4EP-44EP) we offer gage calibration services to re-certify and repair any parts on our Enhanced Hexalobular, 6-Lobe Extra (TXP) Gages. Our state-of-the-art inspection laboratory services conform to ISO 17025 and all reference masters are directly traceable to N.I.S.T., which ensures the gaging standards used by manufacturers remains consistent and within established specifications. We recommend your gages be routinely re-certified based on their usage to ensure the gage members and indicators remain accurate and reliable.

• Gage Types & Classification

Manufacturing & Receiving Inspection • Penetration • Fallaway Penetration • Go / No-Go Internal • Go Final • Tamper Resistant • No-Go Fallaway • Final Inspection External • Go / No-Go External • Driver Bit & Key / Screwdriver • Tapered Bit Go • Socket Driver Go • Plating Thickness Go / No-Go

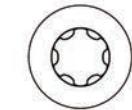


#1280 EXTRA (TXP) PENETRATION GAGE

CIQ-811

FOR INTERNAL EXTRA (TXP) RECESS HEAD SCREWS
REFERENCES: NIQ-811 & CIQ-811

PART NUMBER	DRIVE SIZE	REFERENCE NUMBER
1280-05	5IP	5-PLI-801
1280-06	6IP	6-PLI-801
1280-07	7IP	7-PLI-801
1280-08	8IP	8-PLI-801
1280-09	9IP	9-PLI-801
1280-10	10IP	10-PLI-801
1280-15	15IP	15-PLI-801
1280-20	20IP	20-PLI-801
1280-25	25IP	25-PLI-801
1280-27	27IP	27-PLI-801
1280-30	30IP	30-PLI-801
1280-40	40IP	40-PLI-801
1280-45	45IP	45-PLI-801
1280-50	50IP	50-PLI-801
1280-55	55IP	55-PLI-801
1280-60	60IP	60-PLI-801
1280-70	70IP	70-PLI-801
1280-80	80IP	80-PLI-801
1280-90	90IP	90-PLI-801
1280-100	100IP	100-PLI-801



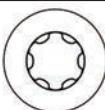
When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible With Digital Indicators. All Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#1281 EXTRA (TXP) GO PENETRATION GAGE

CIQ-804.1.2

FOR INTERNAL EXTRA (TXP) RECESS HEAD SCREWS
REFERENCES: CIQ-804.1, & CIQ-804.2

PART NUMBER	DRIVE SIZE	REFERENCE NUMBER
1281-05	5IP	5-PLI-800
1281-06	6IP	6-PLI-800
1281-07	7IP	7-PLI-800
1281-08	8IP	8-PLI-800
1281-09	9IP	9-PLI-800
1281-10	10IP	10-PLI-800
1281-15	15IP	15-PLI-800
1281-20	20IP	20-PLI-800
1281-25	25IP	25-PLI-800
1281-27	27IP	27-PLI-800
1281-30	30IP	30-PLI-800
1281-40	40IP	40-PLI-800
1281-45	45IP	45-PLI-800
1281-50	50IP	50-PLI-800
1281-55	55IP	55-PLI-800
1281-60	60IP	60-PLI-800
1281-70	70IP	70-PLI-800
1281-80	80IP	80-PLI-800
1281-90	90IP	90-PLI-800
1281-100	100IP	100-PLI-800



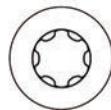
When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible With Digital Indicators. All Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#1282 EXTRA (TXP) NO-GO FALAWAY GAGE

CIQ-812

FOR INTERNAL EXTRA (TXP) RECESS HEAD SCREWS
REFERENCES: NIQ-812 & CIQ-812

PART NUMBER	DRIVE SIZE	REFERENCE NUMBER
1282-05	5IP	5-PLI-805
1282-06	6IP	6-PLI-805
1282-07	7IP	7-PLI-805
1282-08	8IP	8-PLI-805
1282-09	9IP	9-PLI-805
1282-10	10IP	10-PLI-805
1282-15	15IP	15-PLI-805
1282-20	20IP	20-PLI-805
1282-25	25IP	25-PLI-805
1282-27	27IP	27-PLI-805
1282-30	30IP	30-PLI-805
1282-40	40IP	40-PLI-805
1282-45	45IP	45-PLI-805
1282-50	50IP	50-PLI-805
1282-55	55IP	55-PLI-805
1282-60	60IP	60-PLI-805
1282-70	70IP	70-PLI-805
1282-80	80IP	80-PLI-805
1282-90	90IP	90-PLI-805
1282-100	100IP	100-PLI-805



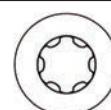
When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible With Digital Indicators. All Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#1284 EXTRA (TXP) PRODUCTION GO NO-GO GAGE

CIQ-804.1.2

FOR INTERNAL EXTRA (TXP) RECESS HEAD SCREWS
REFERENCES: CIQ-804.1, & CIQ-804.2

PART NUMBER	DRIVE SIZE	REFERENCE NUMBER
1284-05	5IP	5-PLI-800
1284-06	6IP	6-PLI-800
1284-07	7IP	7-PLI-800
1284-08	8IP	8-PLI-800
1284-09	9IP	9-PLI-800
1284-10	10IP	10-PLI-800
1284-15	15IP	15-PLI-800
1284-20	20IP	20-PLI-800
1284-25	25IP	25-PLI-800
1284-27	27IP	27-PLI-800
1284-30	30IP	30-PLI-800
1284-40	40IP	40-PLI-800
1284-45	45IP	45-PLI-800
1284-50	50IP	50-PLI-800
1284-55	55IP	55-PLI-800
1284-60	60IP	60-PLI-800
1284-70	70IP	70-PLI-800
1284-80	80IP	80-PLI-800
1284-90	90IP	90-PLI-800
1284-100	100IP	100-PLI-800

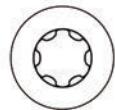


Universal's Gage Probes Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#1285 EXTRA (TXP) FINAL INSPECTION GO GAGE

CIQ-811

FOR INTERNAL EXTRA (TXP) RECESS HEAD SCREWS
REFERENCES: NIQ-811 & CIQ-811



PART NUMBER	DRIVE SIZE	REFERENCE NUMBER
1285-05	5IP	5-PLI-801
1285-06	6IP	6-PLI-801
1285-07	7IP	7-PLI-801
1285-08	8IP	8-PLI-801
1285-09	9IP	9-PLI-801
1285-10	10IP	10-PLI-801
1285-15	15IP	15-PLI-801
1285-20	20IP	20-PLI-801
1285-25	25IP	25-PLI-801
1285-27	27IP	27-PLI-801
1285-30	30IP	30-PLI-801
1285-40	40IP	40-PLI-801
1285-45	45IP	45-PLI-801
1285-50	50IP	50-PLI-801
1285-55	55IP	55-PLI-801
1285-60	60IP	60-PLI-801
1285-70	70IP	70-PLI-801
1285-80	80IP	80-PLI-801
1285-90	90IP	90-PLI-801
1285-100	100IP	100-PLI-801



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#1290 EXTRA (TXP) TAMPER RESISTANT PENETRATION GAGE

FOR INTERNAL EXTRA (TXP) TAMPER RESISTANT RECESS SCREWS
REFERENCES: NIQ-611 & CIQ-611



PART NUMBER	DRIVE SIZE	REFERENCE NUMBER
1290-05	5IPR	5-PLI-601
1290-06	6IPR	6-PLI-601
1290-07	7IPR	7-PLI-601
1290-08	8IPR	8-PLI-601
1290-09	9IPR	9-PLI-601
1290-10	10IPR	10-PLI-601
1290-15	15IPR	15-PLI-601
1290-20	20IPR	20-PLI-601
1290-25	25IPR	25-PLI-601
1290-27	27IPR	27-PLI-601
1290-30	30IPR	30-PLI-601
1290-40	40IPR	40-PLI-601
1290-45	45IPR	45-PLI-601
1290-50	50IPR	50-PLI-601
1290-55	55IPR	55-PLI-601
1290-60	60IPR	60-PLI-601
1290-70	70IPR	70-PLI-601
1290-80	80IPR	80-PLI-601
1290-90	90IPR	90-PLI-601
1290-100	100IPR	100-PLI-601



When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible With Digital Indicators. All Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#1291 EXTRA (TXP) TAMPER RESISTANT GO PENETRATION GAGE

FOR INTERNAL EXTRA (TXP) TAMPER RESISTANT RECESS SCREWS

REFERENCES: NIQ-804.1,.2 & CIQ-804.1,.2

PART NUMBER	DRIVE SIZE	REFERENCE NUMBER
1291-05	5IPR	5-PLI-600
1291-06	6IPR	6-PLI-600
1291-07	7IPR	7-PLI-600
1291-08	8IPR	8-PLI-600
1291-09	9IPR	9-PLI-600
1291-10	10IPR	10-PLI-600
1291-15	15IPR	15-PLI-600
1291-20	20IPR	20-PLI-600
1291-25	25IPR	25-PLI-600
1291-27	27IPR	27-PLI-600
1291-30	30IPR	30-PLI-600
1291-40	40IPR	40-PLI-600
1291-45	45IPR	45-PLI-600
1291-50	50IPR	50-PLI-600
1291-55	55IPR	55-PLI-600
1291-60	60IPR	60-PLI-600
1291-70	70IPR	70-PLI-600
1291-80	80IPR	80-PLI-600
1291-90	90IPR	90-PLI-600
1291-100	100IPR	100-PLI-600



When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible With Digital Indicators. All Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (NIST) National Institute Of Standards & Technology.

#1292 EXTRA (TXP) TAMPER RESISTANT NO-GO FALLOWAY GAGE

FOR INTERNAL EXTRA (TXP) TAMPER RESISTANT RECESS SCREWS

REFERENCES: NIQ-612 & CIQ-612

PART NUMBER	DRIVE SIZE	REFERENCE NUMBER
1292-05	5IPR	5-PLI-605
1292-06	6IPR	6-PLI-605
1292-07	7IPR	7-PLI-605
1292-08	8IPR	8-PLI-605
1292-09	9IPR	9-PLI-605
1292-10	10IPR	10-PLI-605
1292-15	15IPR	15-PLI-605
1292-20	20IPR	20-PLI-605
1292-25	25IPR	25-PLI-605
1292-27	27IPR	27-PLI-605
1292-30	30IPR	30-PLI-605
1292-40	40IPR	40-PLI-605
1292-45	45IPR	45-PLI-605
1292-50	50IPR	50-PLI-605
1292-55	55IPR	55-PLI-605
1292-60	60IPR	60-PLI-605
1292-70	70IPR	70-PLI-605
1292-80	80IPR	80-PLI-605
1292-90	90IPR	90-PLI-605
1292-100	100IPR	100-PLI-605



When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible With Digital Indicators. All Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#1294 EXTRA (TXP) TAMPER RESISTANT GO NO-GO GAGE

CIQ-804.1

FOR INTERNAL EXTRA (TXP) TAMPER RESISTANT RECESS SCREWS

REFERENCES: NIQ-804.1,.2 & CIQ-804.1,.2

PART NUMBER	DRIVE SIZE	REFERENCE NUMBER
1294-05	5IPR	5-PLI-600
1294-06	6IPR	6-PLI-600
1294-07	7IPR	7-PLI-600
1294-08	8IPR	8-PLI-600
1294-09	9IPR	9-PLI-600
1294-10	10IPR	10-PLI-600
1294-15	15IPR	15-PLI-600
1294-20	20IPR	20-PLI-600
1294-25	25IPR	25-PLI-600
1294-27	27IPR	27-PLI-600
1294-30	30IPR	30-PLI-600
1294-40	40IPR	40-PLI-600
1294-45	45IPR	45-PLI-600
1294-50	50IPR	50-PLI-600
1294-55	55IPR	55-PLI-600
1294-60	60IPR	60-PLI-600
1294-70	70IPR	70-PLI-600
1294-80	80IPR	80-PLI-600
1294-90	90IPR	90-PLI-600
1294-100	100IPR	100-PLI-600



Universal's Gage Probes Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

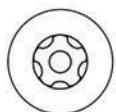
#1295 EXTRA (TXP) TAMPER RESISTANT FINAL GAGE

NIQ-611

FOR INTERNAL EXTRA (TXP) TAMPER RESISTANT RECESS SCREWS

REFERENCES: NIQ-611, CIQ-611

PART NUMBER	DRIVE SIZE	REFERENCE NUMBER
1285-05	5IPR	5-PLI-601
1285-06	6IPR	6-PLI-601
1285-07	7IPR	7-PLI-601
1285-08	8IPR	8-PLI-601
1285-09	9IPR	9-PLI-601
1285-10	10IPR	10-PLI-601
1285-15	15IPR	15-PLI-601
1285-20	20IPR	20-PLI-601
1285-25	25IPR	25-PLI-601
1285-27	27IPR	27-PLI-601
1285-30	30IPR	30-PLI-601
1285-40	40IPR	40-PLI-601
1285-45	45IPR	45-PLI-601
1285-50	50IPR	50-PLI-601
1285-55	55IPR	55-PLI-601
1285-60	60IPR	60-PLI-601
1285-70	70IPR	70-PLI-601
1285-80	80IPR	80-PLI-601
1285-90	90IPR	90-PLI-601
1285-100	100IPR	100-PLI-601



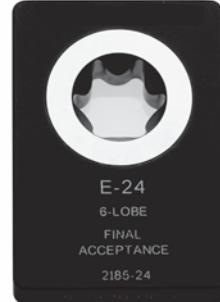
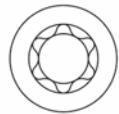
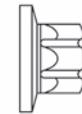
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#2185 6-LOBE (TX) RECEIVING INSPECTION GO GAGE

TXQ-801.1

FOR EXTERNAL 6-LOBE (TX) BOLTS & FLANGE HEADS STYLES
REFERENCES: TMF-801.1, TXQ-801.1

PART NUMBER	DRIVE SIZE	GAGE REFERENCE
2185-01	E1	1-TXE-911
2185-02	E2	2-TXE-911
2185-04	E4	4-TXE-911
2185-05	E5	5-TXE-911
2185-06	E6	6-TXE-911
2185-07	E7	7-TXE-911
2185-08	E8	8-TXE-911
2185-10	E10	10-TXE-911
2185-11	E11	11-TXE-911
2185-12	E12	12-TXE-911
2185-14	E14	14-TXE-911
2185-16	E16	16-TXE-911
2185-18	E18	18-TXE-911
2185-20	E20	20-TXE-911
2185-24	E24	24-TXE-911
2185-28	E28	28-TXE-911
2185-32	E32	32-TXE-911
2185-36	E36	36-TXE-911
2185-40	E40	40-TXE-911
2185-44	E44	44-TXE-911



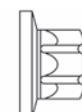
Universal's External Gages Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificate Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#2190 6-LOBE (TX) PRODUCTION GO NO-GO GAGE

TQM-801

FOR EXTERNAL 6-LOBE (TX) BOLTS & FLANGE HEADS STYLES
REFERENCES: TMF-801, TQM-801

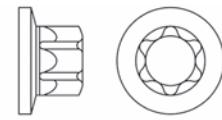
PART NUMBER	DRIVE SIZE	GAGE REFERENCE
2190-01	E1	1-TXE-900
2190-02	E2	2-TXE-900
2190-04	E4	4-TXE-900
2190-05	E5	5-TXE-900
2190-06	E6	6-TXE-900
2190-07	E7	7-TXE-900
2190-08	E8	8-TXE-900
2190-10	E10	9-TXE-900
2190-11	E11	10-TXE-900
2190-12	E12	12-TXE-900
2190-14	E14	14-TXE-900
2190-16	E16	16-TXE-900
2190-18	E18	18-TXE-900
2190-20	E20	20-TXE-900
2190-24	E24	24-TXE-900
2190-28	E28	28-TXE-900
2190-32	E32	32-TXE-900
2190-36	E36	36-TXE-900
2190-40	E40	40-TXE-900
2190-44	E44	44-TXE-900



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#2193 6-LOBE (TX) EXTERNAL INSPECTION GAGE DIN34801 IFI-562 TXQ-803

FOR EXTERNAL 6-LOBE (TX) BOLTS & FLANGE HEADS STYLES
REFERENCES: TMQ-803, TXQ-803, DIN34801 & IFI-562



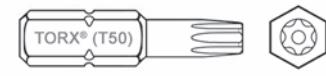
PART NUMBER	DRIVE SIZE	GAGE REFERENCE
2193-01	E1	1-TXE-915
2193-02	E2	2-TXE-915
2193-04	E4	4-TXE-915
2193-05	E5	5-TXE-915
2193-06	E6	6-TXE-915
2193-07	E7	7-TXE-915
2193-08	E8	8-TXE-915
2193-10	E10	10-TXE-915
2193-11	E11	11-TXE-915
2193-12	E12	12-TXE-915
2193-14	E14	14-TXE-915
2193-16	E16	16-TXE-915
2193-18	E18	18-TXE-915
2193-20	E20	20-TXE-915
2193-24	E24	24-TXE-915
2193-28	E28	28-TXE-915
2193-32	E32	32-TXE-915
2193-36	E36	36-TXE-915
2193-40	E40	40-TXE-915
2193-44	E44	44-TXE-915



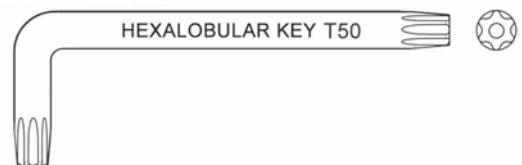
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#2196 6-LOBE (TX) DRIVER BIT & KEY GAGE TXQ-805.1

FOR 6-LOBE (TX) DRIVER BITS, KEYS & SCREWDRIVERS
REFERENCES: TXF-805.1, TXQ-805.1



PART NUMBER	DRIVE SIZE	GAGE REFERENCE
2196-01	T1	1-TXI-921
2196-02	T2	2-TXI-921
2196-03	T3	3-TXI-921
2196-04	T4	4-TXI-921
2196-05	T5	5-TXI-921
2196-06	T6	6-TXI-921
2196-07	T7	7-TXI-921
2196-08	T8	8-TXI-921
2196-09	T9	9-TXI-921
2196-10	T10	10-TXI-921
2196-15	T15	15-TXI-921
2196-20	T20	20-TXI-921
2196-25	T25	25-TXI-921
2196-27	T27	27-TXI-921
2196-30	T30	30-TXI-921
2196-40	T40	40-TXI-921
2196-45	T45	45-TXI-921
2196-50	T50	50-TXI-921
2196-55	T55	55-TXI-921
2196-60	T60	60-TXI-921
2196-70	T70	70-TXI-921
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2196-90	T90	90-TXI-921
2196-100	T100	100-TXI-921

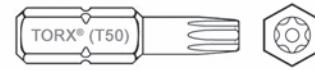


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#2197 6-LOBE (TX) USER DRIVER BIT & KEY GAGE

TXQ-805.4

FOR 6-LOBE (TX) DRIVER BITS, KEYS & SCREWDRIVERS
REFERENCES: TQM-805.4, TMQ-805.4, TXQ-805.4



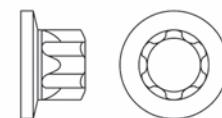
PART NUMBER	DRIVE SIZE	GAGE REFERENCE
2197-05	T5	5-TXI-922
2197-06	T6	6-TXI-922
2197-07	T7	7-TXI-922
2197-08	T8	8-TXI-922
2197-09	T9	9-TXI-922
2197-10	T10	10-TXI-922
2197-15	T15	15-TXI-922
2197-20	T20	20-TXI-922
2197-25	T25	25-TXI-922
2197-27	T27	27-TXI-922
2197-30	T30	30-TXI-922
2197-40	T40	40-TXI-922
2197-45	T45	45-TXI-922
2197-50	T50	50-TXI-922
2197-55	T55	55-TXI-922
2197-60	T60	60-TXI-922
2197-70	T70	70-TXI-922
2197-80	T80	80-TXI-922
2197-90	T90	90-TXI-922
2197-100	T100	100-TXI-922



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#2285 EXTRA (TXP) FINAL INSPECTION GO GAGE FORD WB900/NIQ-801.1

FOR EXTERNAL EXTRA (TXP) BOLTS & FLANGE HEADS STYLES
REFERENCES: NIQ-801.1, 801.1A, 801.1B, & FORD WB900 STANDARDS



PART NUMBER	DRIVE SIZE	GAGE REFERENCE
2285-05	5EP	5-PLE-811
2285-06	6EP	6-PLE-811
2285-07	7EP	7-PLE-811
2285-08	8EP	8-PLE-811
2285-10	10EP	10-PLE-811
2285-11	11EP	11-PLE-811
2285-12	12EP	12-PLE-811
2285-14	14EP	14-PLE-811
2285-16	16EP	16-PLE-811
2285-18	18EP	18-PLE-811
2285-20	20EP	20-PLE-811
2285-22	22EP	22-PLE-811
2285-24	24EP	24-PLE-811
2285-26	26EP	26-PLE-811
2285-28	28EP	28-PLE-811
2285-30	30EP	30-PLE-811
2285-32	32EP	32-PLE-811
2285-34	34EP	34-PLE-811
2285-36	36EP	36-PLE-811
2285-38	38EP	38-PLE-811
2285-40	40EP	40-PLE-811
2285-42	42EP	42-PLE-811
2285-44	44EP	44-PLE-811



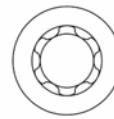
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#2290 EXTRA (TXP) PRODUCTION GO NO-GO GAGE

CIQ-801,A,B

FOR EXTERNAL EXTRA (TXP) BOLT HEADS & FLANGE HEADS STYLES
REFERENCES: CIQ-801, 801A, 801B, & FORD WB900 STANDARDS

PART NUMBER	DRIVE SIZE	GAGE REFERENCE
2290-05	5EP	5-PLE-800
2290-06	6EP	6-PLE-800
2290-07	7EP	7-PLE-800
2290-08	8EP	8-PLE-800
2290-10	10EP	10-PLE-800
2290-11	11EP	11-PLE-800
2290-12	12EP	12-PLE-800
2290-14	14EP	14-PLE-800
2290-16	16EP	16-PLE-800
2290-18	18EP	18-PLE-800
2290-20	20EP	20-PLE-800
2290-22	22EP	22-PLE-800
2290-24	24EP	24-PLE-800
2290-26	26EP	26-PLE-800
2290-28	28EP	28-PLE-800
2290-30	30EP	30-PLE-800
2290-32	32EP	32-PLE-800
2290-34	34EP	34-PLE-800
2290-36	36EP	36-PLE-800
2290-38	38EP	38-PLE-800
2290-40	40EP	40-PLE-800
2290-42	42EP	42-PLE-800
2290-44	44EP	44-PLE-800



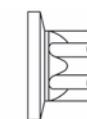
Universal's Gages Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#2293 EXTRA (TXP) EXTERNAL INSPECTION GAGE

WB900 / NIQ-803

FOR EXTERNAL EXTRA (TXP) BOLT HEADS & FLANGE HEADS STYLES
REFERENCES: NIQ-803, & FORD WB900 STANDARDS

PART NUMBER	DRIVE SIZE	GAGE REFERENCE
2293-05	5EP	5-PLE-815
2293-06	6EP	6-PLE-815
2293-07	7EP	7-PLE-815
2293-08	8EP	8-PLE-815
2293-10	10EP	10-PLE-815
2293-11	11EP	11-PLE-815
2293-12	12EP	12-PLE-815
2293-14	14EP	14-PLE-815
2293-16	16EP	16-PLE-815
2293-18	18EP	18-PLE-815
2293-20	20EP	20-PLE-815
2293-22	22EP	22-PLE-815
2293-24	24EP	24-PLE-815
2293-26	26EP	26-PLE-815
2293-28	28EP	28-PLE-815
2293-30	30EP	30-PLE-815
2293-32	32EP	32-PLE-815
2293-34	34EP	34-PLE-815
2293-36	36EP	36-PLE-815
2293-38	38EP	38-PLE-815
2293-40	40EP	40-PLE-815
2293-42	42EP	42-PLE-815
2293-44	44EP	44-PLE-815



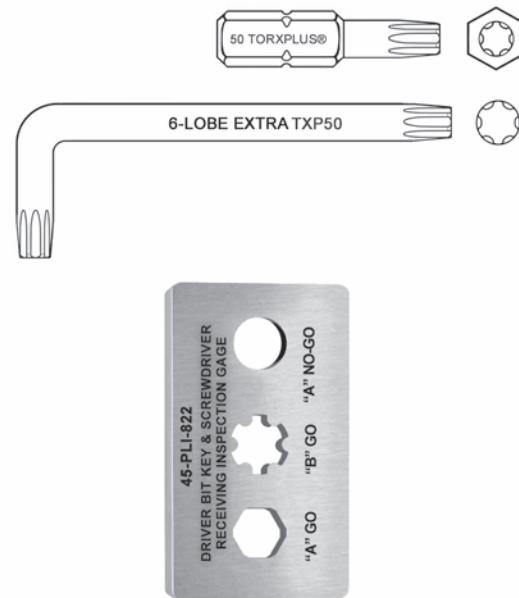
Universal's Gages Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#2297 EXTRA (TXP) USER DRIVER BIT, KEY, GAGE

NIQ-813

FOR EXTERNAL EXTRA (TXP) DRIVER BITS, KEYS & SCREWDRIVERS
REFERENCES: NIQ-813

PART NUMBER	DRIVE SIZE	GAGE REFERENCE
2297-05	5IP	5-PLI-822
2297-06	6IP	6-PLI-822
2297-07	7IP	7-PLI-822
2297-08	8IP	8-PLI-822
2297-09	9IP	9-PLI-822
2297-10	10IP	10-PLI-822
2297-15	15IP	15-PLI-822
2297-20	20IP	20-PLI-822
2297-25	25IP	25-PLI-822
2297-27	27IP	27-PLI-822
2297-30	30IP	30-PLI-822
2297-40	40IP	40-PLI-822
2297-45	45IP	45-PLI-822
2297-50	50IP	50-PLI-822
2297-55	55IP	55-PLI-822
2297-60	60IP	60-PLI-822
2297-70	70IP	70-PLI-822
2297-80	80IP	80-PLI-822
2297-90	90IP	90-PLI-822
2297-100	100IP	100-PLI-822

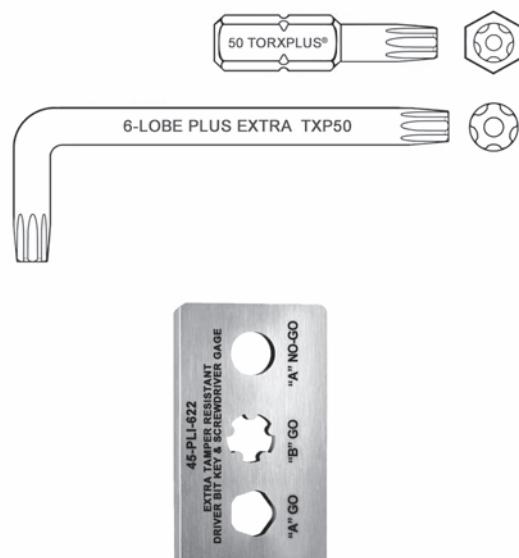


Universal's Gages Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#2298 EXTRA (TXP) TAMPER RESISTANT DRIVER BIT, KEY, GAGE

FOR EXTERNAL EXTRA (TXP) DRIVER BITS, KEYS & SCREWDRIVERS
REFERENCES: NIQ-613 STANDARDS

PART NUMBER	DRIVE SIZE	GAGE REFERENCE
2298-05	5IPR	5-PLI-622
2298-06	6IPR	6-PLI-622
2298-07	7IPR	7-PLI-622
2298-08	8IPR	8-PLI-622
2298-09	9IPR	9-PLI-622
2298-10	10IPR	10-PLI-622
2298-15	15IPR	15-PLI-622
2298-20	20IPR	20-PLI-622
2298-25	25IPR	25-PLI-622
2298-27	27IPR	27-PLI-622
2298-30	30IPR	30-PLI-622
2298-40	40IPR	40-PLI-622
2298-45	45IPR	45-PLI-622
2298-50	50IPR	50-PLI-622
2298-55	55IPR	55-PLI-622
2298-60	60IPR	60-PLI-622
2298-70	70IPR	70-PLI-622
2298-80	80IPR	80-PLI-622
2298-90	90IPR	90-PLI-622
2298-100	100IPR	100-PLI-622



Universal's Gages Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#8900 GAGE STORAGE BOXES

UNIVERSAL PENETRATION GAGE STORAGE BOXES STORAGE & SHIPPING PROTECTION

PART NUMBER	PART DESCRIPTION
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8900-01 GAGE BOX GRAY (SINGLE PIECE)



8900-01

8900-02 GAGE BOX XL GRAY (SINGLE PIECE)



8900-02

8900-03 GAGE BOX BLACK (2 PIECE SET)

8900-04 GAGE BOX BLACK (FOUR PIECES)

8900-05 GAGE BOX RED (FOUR PIECES)



8900-05



8900-03



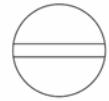
8900-04

#8915 SCREW SLOT PENETRATION GAGE B107.600 & ASME B18.6.4 / .5M

FOR SCREW SLOTTED TYPE RECESS HEAD SCREWS
REFERENCES: ANSI, ISO, JIS, DIN, IFI, BS, AND GB STANDARDS

PART NUMBER	PART DESCRIPTION
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- 8915-01 SCREW SLOT PENETRATION GAGE
METRIC SLOT SCREW SIZE M2 THRU M10
INCH SLOT SCREW SIZE #1 THRU 1/2"



When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible Digital Indicators Are Available. Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#8916 TOTAL RECESS DEPTH GAGE

B107.600 & ASME B18.6.4 / .5M

FOR TOTAL RECESS DEPTH; I, IA, II & III TYPE SCREWS
REFERENCES: ANSI, ISO, JIS, DIN, IFI, BS, AND GB STANDARDS

PART NUMBER	RECESS SIZE
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- 8916-00 0
8916-01 1
8916-02 2
8916-03 3
8916-04 4



When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible Digital Indicators Are Available. Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#9000 TYPE 1 PENETRATION GAGES

B107.600 & ASME B18.6.4 /.5M

FOR PHILLIPS TYPE I, TYPE Z, CROSS RECESS HEAD SCREWS
REFERENCES: ANSI, ISO, JIS, DIN, IFI, BS, AND GB STANDARDS

PART NUMBER	RECESS SIZE
9000-00	0
9000-01	1
9000-02	2
9000-03	3
9000-04	4



When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible Digital Indicators Are Available. Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#9001 TYPE 1 PLUG GAGES

B107.600 & ASME B18.6.4 /.5M

FOR PHILLIPS TYPE I, TYPE Z, CROSS RECESS HEAD SCREWS
REFERENCES: ANSI, ISO, JIS, DIN, IFI, BS, AND GB STANDARDS

PART NUMBER	RECESS SIZE
9001-00	0
9001-01	1
9001-02	2
9001-03	3
9001-04	4



Plug Gages Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9002 TYPE 1 GO NO-GO RING GAGE

B107.600 & ASME B18.6.4 /.5M

FOR PHILLIPS TYPE I, TYPE Z, DRIVER BITS & SCREWDRIVERS
REFERENCES: ANSI, ISO, JIS, DIN, IFI, BS, AND GB STANDARDS



PART NUMBER	RECESS SIZE
9002-00	0
9002-01	1
9002-02	2
9002-03	3
9002-04	4



Gage Rings Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9003 TYPE 1 TEST BLOCK GAGES

B107.600 & ASME B18.6.4 /.5M

FOR PHILLIPS TYPE I, TYPE Z, DRIVER BITS & SCREWDRIVERS
REFERENCES: ANSI, ISO, JIS, DIN, IFI, BS, AND GB STANDARDS



PART NUMBER	RECESS SIZE
9003-00	0
9003-01	1
9003-02	2
9003-03	3
9003-04	4

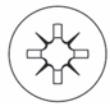


Test Blocks Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9006 TYPE IA PENETRATION GAGES

B107.600 & ASME B18.6.4 / .5M

FOR POZIDRIVE, TYPE IA, TYPE Z RECESSES HEAD SCREWS
REFERENCES: ANSI, ISO, JIS, DIN, IFI, BS, AND GB STANDARDS



PART NUMBER	RECESS SIZE
9006-00	0
9006-01	1
9006-02	2
9006-03	3
9006-04	4

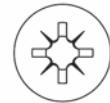


When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible Digital Indicators Are Available. Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#9007 TYPE IA PLUG GAGES

B107.600 & ASME B18.6.4 / .5M

FOR POZIDRIVE, TYPE IA, TYPE Z RECESSES HEAD SCREWS
REFERENCES: ANSI, ISO, JIS, DIN, IFI, BS, AND GB STANDARDS



PART NUMBER	RECESS SIZE
9007-00	0
9007-01	1
9007-02	2
9007-03	3
9007-04	4

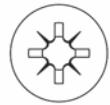


Plug Gages Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9008 TYPE IA GO NO-GO RING GAGE

B107.600 & ASME B18.6.4 /.5M

FOR POZIDRIVE, TYPE IA, TYPE Z DRIVER BITS & SCREWDRIVERS
REFERENCES: ANSI, ISO, JIS, DIN, IFI, BS, AND GB STANDARDS



PART NUMBER	RECESS SIZE
9008-00	0
9008-01	1
9008-02	2
9008-03	3
9008-04	4

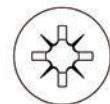


Gage Rings Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9009 TYPE IA TEST BLOCK GAGES

B107.600 & ASME B18.6.4 /.5M

FOR POZIDRIVE, TYPE IA, TYPE Z DRIVER BITS & SCREWDRIVERS
REFERENCES: ANSI, ISO, JIS, DIN, IFI, BS, AND GB STANDARDS



PART NUMBER	RECESS SIZE
9009-00	0
9009-01	1
9009-02	2
9009-03	3
9009-04	4



Test Blocks Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9011 TYPE II PENETRATION GAGES

B107.600 & ASME B18.6.4 /.5M

FOR TYPE II FREARSON RECESS HEAD SCREWS
REFERENCES: ANSI, ISO, JIS, DIN, IFI, BS, AND GB STANDARDS

PART NUMBER	RECESS SIZE
9011-00	0
9011-01	1
9011-02	2
9011-03	3
9011-04	4



When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible Digital Indicators Are Available. Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#9012 TYPE II PLUG GAGES

B107.600 & ASME B18.6.4 /.5M

FOR TYPE II FREARSON RECESS HEAD SCREWS
REFERENCES: ANSI, ISO, JIS, DIN, IFI, BS, AND GB STANDARDS

PART NUMBER	RECESS SIZE
9012-00	0
9012-01	1
9012-02	2
9012-03	3
9012-04	4



Plug Gages Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9013 TYPE II GO NO-GO RING GAGE

B107.600 & ASME B18.6.4 /.5M

FOR TYPE II FREARSON DRIVER BITS & SCREWDRIVERS
REFERENCES: ANSI, ISO, JIS, DIN, IFI, BS, AND GB STANDARDS



PART NUMBER	RECESS SIZE
9013-00	0
9013-01	1
9013-02	2
9013-03	3
9013-04	4



Gage Rings Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9014 TYPE II TEST BLOCK GAGES

B107.600 & ASME B18.6.4 /.5M

FOR TYPE II FREARSON DRIVER BITS & SCREWDRIVERS
REFERENCES: ANSI, ISO, JIS, DIN, IFI, BS, AND GB STANDARDS



PART NUMBER	RECESS SIZE
9014-00	0
9014-01	1
9014-02	2
9014-03	3
9014-04	4



Test Blocks Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9016 TYPE III SQUARE PENETRATION GAGES

ASME B18.6.3/.5M

FOR TYPE III SQUARE RECESS HEAD SCREWS
REFERENCES: ASME B18.6.3 / B18.6.5M STANDARDS

PART NUMBER	DRIVE SIZE
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9016-00	00
9016-0	0
9016-1	1
9016-2	2
9016-3	3
9016-4	4



When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible Digital Indicators Are Available. Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#9017 TYPE III SQUARE PLUG GAGES

ASME B18.6.3/.5M

FOR TYPE III SQUARE RECESS HEAD SCREWS
REFERENCES: ASME B18.6.3 / B18.6.5M STANDARDS

PART NUMBER	RECESS SIZE
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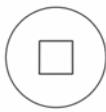
9017-00	00
9017-0	0
9017-1	1
9017-2	2
9017-3	3
9017-4	4



Plug Gages Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9018 TYPE III SQUARE GO NO-GO RING GAGES ASME B18.6.3/.5M

FOR TYPE III SQUARE RECESS DRIVER BITS & SCREWDRIVERS
REFERENCES: ASME B18.6.3 / B18.6.5M STANDARDS



PART NUMBER	RECESS SIZE
9018-00	00
9018-0	0
9018-1	1
9018-2	2
9018-3	3
9018-4	4

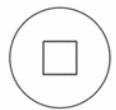


Gage Rings Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9019 TYPE III SQUARE TEST BLOCKS

ASME B18.6.3/.5M

FOR TYPE III SQUARE RECESS DRIVER BITS & SCREWDRIVERS
REFERENCES: ASME B18.6.3 / B18.6.5M STANDARDS



PART NUMBER	RECESS SIZE
9019-00	00
9019-0	0
9019-1	1
9019-2	2
9019-3	3
9019-4	4



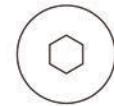
Test Blocks Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9025 HEXAGON PENETRATION GAGES

ASME/ANSI B18.3

FOR HEXAGON SOCKETS, SHOULDER AND SET SCREWS
REFERENCE: ASME/ANSI B18.3 STANDARDS

PART NUMBER	HEXAGON SIZE
9025-03	.035"
9025-05	.050"
9025-06	1/16"
9025-07	5/64"
9025-09	3/32"
9025-10	7/64"
9025-12	1/8"
9025-14	9/64"
9025-15	5/32"
9025-18	3/16"
9025-21	7/32"
9025-25	1/4"
9025-31	5/16"
9025-37	3/8"
9025-43	7/16"
9025-50	1/2"
9025-56	9/16"
9025-62	5/8"
9025-75	3/4"
9025-87	7/8"



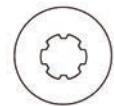
When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible Digital Indicators And Tamper-Proof Style On Sizes 5/64" to 7/8" Available. Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#9030 SPLINE PENETRATION GAGES

ASME/ANSI B18.3

FOR SPLINE SOCKETS, SHOULDER & SET SCREWS
REFERENCE: ASME/ANSI B18.3 STANDARDS

PART NUMBER	SPLINE SIZE
9030-033	0.033
9030-048	0.048
9030-060	0.060
9030-069	0.069
9030-072	0.072
9030-076	0.076
9030-096	0.096
9030-111	0.111
9030-133	0.133
9030-145	0.145
9030-168	0.168
9030-183	0.183
9030-216	0.216
9030-251	0.251
9030-291	0.291
9030-372	0.372
9030-454	0.454
9030-595	0.595
9030-620	0.620
9030-689	0.698
9030-790	0.790



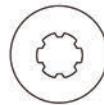
When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible Digital Indicators Are Available. Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#9035 METRIC SPLINE PENETRATION GAGES

ASME/ANSI B18.3.1.6M

FOR SPLINE SOCKETS, SHOULDER & SET SCREWS
REFERENCE: ASME/ANSI B18.3.1M, & 6M STANDARDS

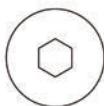
PART NUMBER	SET SCREW SPLINE SIZE	S.H.C.S SPLINE SIZE
9035-084	0,84	
9035-122	1,22	
9035-152	1,52	
9035-182		1,829
9035-243		2,438
9035-244	2,44	
9035-281		2,819
9035-282	2,82	
9035-337		3,378
9035-368	3,68	
9035-405	4,05	
9035-464		4,648
9035-549	5,49	
9035-548		5,486
9035-638	6,38	
9035-739		7,391
9035-954	9,54	
9035-1153	11,53	
9035-1511	15,11	



#9040 METRIC HEXAGON PENETRATION GAGES ASME/ANSI B18.3.6M

FOR HEXAGON SOCKETS, SHOULDER AND SET SCREWS
REFERENCE: ASME/ANSI, ISO, JIS, DIN, BS, AND GB STANDARDS

PART NUMBER	HEXAGON SIZE
9040-0.7	0,7mm
9040-0.9	0,9mm
9040-1.3	1,3mm
9040-1.5	1,5mm
9040-1.6	1,6mm
9040-2.0	2,0mm
9040-2.5	2,5mm
9040-3.0	3,0mm
9040-4.0	4,0mm
9040-5.0	5,0mm
9040-6.0	6,0mm
9040-8.0	8,0mm
9040-10	10mm
9040-12	12mm
9040-14	14mm
9040-16	16mm
9040-17	17mm
9040-19	19mm
9040-22	22mm
9040-24	24mm



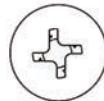
When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible Digital Indicators And Tamper-Proof Style On Sizes 2mm to 46mm Available. Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#9043 OFFSET CRUCIFORM GO NO-GO GAGE

NASM14191 & MS33781

FOR CRUCIFORM RECESS TORQ SET RIBBED SCREWS
REFERENCE: NAS0025, NASM14191 & NASM33781 STANDARDS

PART NUMBER	RECESS SIZE	GAGE TYPE (A) GO	GAGE TYPE (C) NOT GO
9043-00	0	0 A	0 C
9043-01	1	1 A	1 C
9043-03	3	3 A	3 C
9043-04	4	4 A	4 C
9043-06	6	6 A	6 C
9043-08	8	8 A	8 C
9043-10	10	10 A	10 C
9043-25	1/4	1/4 A	1/4 C
9043-31	5/16	5/16 A	5/16 C
9043-37	3/8	3/8 A	3/8 C
9043-43	7/16	7/16 A	7/16 C
9043-50	1/2	1/2 A	1/2 C
9043-56	9/16	9/16 A	9/16 C
9043-63	5/8	5/8 A	5/8 C
9043-75	3/4	3/4 A	3/4 C



When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible Digital Indicators Are Available. Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#9044 OFFSET CRUCIFORM GO NO-GO GAGE

ISO14277 & 14278

FOR CRUCIFORM RECESS TORQ SET RIBBED SCREWS
REFERENCES: ISO14277, ISO14278 & ISO7794 STANDARDS

PART NUMBER	SCREW SIZE	GAGE TYPE (A) GO	GAGE TYPE (C) NOT GO
9044-1.6_	M1,6	R1,6A	R1,6C
9044-2.0_	M2	R2A	R2C
9044-2.5_	M2,5	R2,5A	R2,5C
9044-3.0_	M3	R3A	R3C
9044-3.5_	M3,5	R3,5A	R3,5C
9044-4.0_	M4	R4A	R4C
9044-5.0_	M5	R5A	R5C
9044-6.0_	M6	R6A	R6C
9044-8.0_	M8	R8A	R8C
9044-10_	M10	R10A	R10C
9044-12_	M12	R12A	R12C
9044-14_	M14	R14A	R14C
9044-16_	M16	R16A	R16C
9044-18_	M18	R18A	R18C



When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible Digital Indicators Are Available. Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#9045 OFFSET CRUCIFORM PENETRATION GAGE NASM14191 & 33781

FOR CRUCIFORM RECESS TORQ SET RIBBED SCREWS
REFERENCE: NAS0025, NASM14191 & NASM33781 STANDARDS

PART NUMBER	RECESS SIZE	GAGE TYPE (A) GO
-------------	-------------	------------------

9045-00	0	0 A
9045-01	1	1 A
9045-03	3	3 A
9045-04	4	4 A
9045-06	6	6 A
9045-08	8	8 A
9045-10	10	10 A
9045-25	1/4	1/4 A
9045-31	5/16	5/16 A
9045-37	3/8	3/8 A
9045-43	7/16	7/16 A
9045-50	1/2	1/2 A
9045-56	9/16	9/16 A
9045-63	5/8	5/8 A
9045-75	3/4	3/4 A



When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible Digital Indicators Are Available. Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#9046 OFFSET CRUCIFORM PENETRATION GAGES ISO14277 & 14278

FOR CRUCIFORM RECESS TORQ SET RIBBED SCREWS
REFERENCES: ISO14277, ISO14278 & ISO7794 STANDARDS

PART NUMBER	SCREW SIZE	GAGE TYPE (A) GO
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9046-1.6	M1,6	R1,6A
9046-2.0	M2	R2A
9046-2.5	M2,5	R2,5A
9046-3.0	M3	R3A
9046-3.5	M3,5	R3,5A
9046-4.0	M4	R4A
9046-5.0	M5	R5A
9046-6.0	M6	R6A
9046-8.0	M8	R8A
9046-10	M10	R10A
9046-12	M12	R12A
9046-14	M14	R14A
9046-16	M16	R16A
9046-18	M18	R18A



When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible Digital Indicators Are Available. Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#9047 TRI-SLOT PENETRATION GAGES

NAS4000

FOR TRI-SLOT RECESS THREE-WING RIBBED SCREWS
REFERENCE: NAS4000, STANDARDS

PART NUMBER	RECESS DASH NO.	REFERENCE SIZE
9047-060	0	0
9047-086	1	1
9047-112	2	2
9047-138	3	4
9047-164	4	6
9047-190J	4J	8
9047-190	5	10
9047-250	6	1/4
9047-312	7	5/16
9047-375	8	3/8
9047-437	9	7/16
9047-500	10	1/2
9047-562	11	9/16
9047-625	12	5/8
9047-750	13	3/4
9047-875	14	7/8
9047-100	15	1



When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible Digital Indicators Are Available. Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#9048 TRI-SLOT GO NO-GO GAGES

NAS4000

FOR TRI-SLOT RECESS THREE-WING RIBBED SCREWS
REFERENCE: NAS4000, STANDARDS

PART NUMBER	RECESS DASH NO.	REFERENCE SIZE
9048-060	0	0
9048-086	1	1
9048-112	2	2
9048-138	3	4
9048-164	4	6
9048-190J	4J	8
9048-190	5	10
9048-250	6	1/4
9048-312	7	5/16
9048-375	8	3/8
9048-437	9	7/16
9048-500	10	1/2
9048-562	11	9/16
9048-625	12	5/8
9048-750	13	3/4
9048-875	14	7/8
9048-100	15	1



Gage Probes Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9052 12-POINT PENETRATION GAGES

VW12014 / DIN34824

FOR 12-POINT TYPE RECESS HEAD SCREWS

REFERENCES: DIN34824, & VW01043 NON-STANDARD GAGE

PART NUMBER	DRIVE SIZE
9052-04-DIN	M4
9052-04	M4
9052-05	M5
9052-06	M6
9052-08	M8
9052-10	M10
9052-12	M12
9052-14	M14
9052-16	M16
9052-18-DIN	M18
9052-18	M18



When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible Digital Indicators Are Available. Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#9053 12-POINT GO NO-GO GAGES

VW12014 / DIN34824

FOR 12-POINT TYPE RECESS HEAD SCREWS

REFERENCES: DIN34824, & VW01043 STANDARDS

PART NUMBER	DRIVE SIZE
9053-04-DIN	M4
9053-04	M4
9053-05	M5
9053-06	M6
9053-08	M8
9053-10	M10
9053-12	M12
9053-14	M14
9053-16	M16
9053-18-DIN	M18
9053-18	M18



Gage Probes Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9055 HEXAGON GO NO-GO GAGES

ASME/ANSI B18.3

FOR HEXAGON RECESS SOCKETS, SHOULDER & SET SCREWS
REFERENCES: ASME/ANSI B18.3 STANDARDS

PART NUMBER	HEXAGON SIZE
9055-06	1/16"
9055-07	5/64"
9055-09	3/32"
9055-10	7/64"
9055-12	1/8"
9055-14	9/64"
9055-15	5/32"
9055-18	3/16"
9055-21	7/32"
9055-25	1/4"
9055-31	5/16"
9055-37	3/8"
9055-43	7/16"
9055-50	1/2"
9055-56	9/16"
9055-62	5/8"
9055-75	3/4"
9055-87	7/8"



Tamper-Proof Style On Sizes 5/64" to 7/8" Available. Gage Probes Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9060 SPLINE GO NO-GO GAGES

ASME/ANSI B18.3

FOR SPLINE RECESS SOCKETS, SHOULDER & SET SCREWS
REFERENCES: ASME/ANSI B18.3 STANDARDS

PART NUMBER	SPLINE SIZE
9060-033	0.033
9060-048	0.048
9060-060	0.060
9060-069	0.069
9060-072	0.072
9060-076	0.076
9060-096	0.096
9060-111	0.111
9060-133	0.133
9060-145	0.145
9060-168	0.168
9060-183	0.183
9060-216	0.216
9060-251	0.251
9060-291	0.291
9060-372	0.372
9060-454	0.454
9060-595	0.595
9060-620	0.620
9060-689	0.698
9060-790	0.790



Gage Probes Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9065 METRIC SPLINE GO NO-GO GAGES

ASME/ANSI B18.3.1,6M

FOR SPLINE RECESS SOCKETS, SHOULDER & SET SCREWS
REFERENCES: ASME/ANSI B18.3.1M, & 6M STANDARDS

PART NUMBER	SET SCREW SPLINE SIZE	S.H.C.S. SPLINE SIZE
9065-084	0,84	
9065-122	1,22	
9065-152	1,52	
9065-182		1,829
9065-243		2,438
9065-244	2,44	
9065-281		2,819
9065-282	2,82	
9065-337		3,378
9065-368	3,68	
9065-405	4,05	
9065-464		4,648
9065-549	5,49	
9065-548		5,486
9065-638	6,38	
9065-739		7,391
9065-954	9,54	
9065-1153	11,53	
9065-1511	15,11	



Gage Probes Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9075 METRIC HEXAGON GO NO-GO GAGES

ASME/ANSI B18.3.1M

FOR HEXAGON RECESS SOCKETS, SHOULDER & SET SCREWS
REFERENCES: ASME/ANSI 18.3.1M STANDARDS

PART NUMBER	HEXAGON SIZE
9075-0.7	0,7mm
9075-0.9	0,9mm
9075-1.3	1,3mm
9075-1.5	1,5mm
9075-1.6	1,6mm
9075-2.0	2,0mm
9075-2.5	2,5mm
9075-3.0	3,0mm
9075-4.0	4,0mm
9075-5.0	5,0mm
9075-6.0	6,0mm
9075-8.0	8,0mm
9075-10	10mm
9075-12	12mm
9075-14	14mm
9075-16	16mm
9075-17	17mm
9075-19	19mm
9075-22	22mm
9075-24	24mm



Tamper-Proof Style On Sizes 2mm to 24mm Available. Gage Probes Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9076 METRIC HEXAGON GO NO-GO GAGES

ISO 23429

FOR HEXAGON RECESS SOCKETS, SHOULDER & SET SCREWS
REFERENCES: ISO, JIS, DIN, BS, AND GB STANDARDS

PART NUMBER	HEXAGON SIZE
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9076-0.7	0,7mm
9076-0.9	0,9mm
9076-1.3	1,3mm
9076-1.5	1,5mm
9076-2.0	2,0mm
9076-2.5	2,5mm
9076-3.0	3,0mm
9076-4.0	4,0mm
9076-5.0	5,0mm
9076-6.0	6,0mm
9076-8.0	8,0mm
9076-10	10mm
9076-12	12mm
9076-14	14mm
9076-16	16mm
9076-17	17mm
9076-19	19mm
9076-22	22mm
9076-27	27mm



Tamper-Proof Style On Sizes 2mm to 27mm Available. Gage Probes Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

GAGE CROSS REFERENCE METRIC HEXAGON SIZES

PART NUMBER	HEXAGON NOMINAL SIZE	ISO4762 (DIN912) JIS1176	ISO4762 (DIN7991) JIS1194	ISO 4026/4028 (DIN 913/916) JIS1177
9076-0.7	0.7mm	-	-	M1.4 / M1.6 / M1.8
9076-0.9	0.9mm	-	-	M2
9076-1.3	1.3mm	M1.4	-	M2.5
9076-1.5	1.5mm	M1.6 / M2	-	M3
9076-2.0	2mm	M2.5	M3	M4
9076-2.5	2.5mm	M3	M4	M5
9076-3.0	3mm	M4	M5	M6
9076-4.0	4mm	M6	M6	M8
9076-5.0	5mm	M6	M8	M10
9076-6.0	6mm	M8	M10	M12 / M14
9076-8.0	8mm	M10	M12	M16
9076-10	10mm	M12	M14 / M16	M18 / M20
9076-12	12mm	M14	M18 / M20	M22 / M24
9076-14	14mm	M16 / M18	M22 / M24	-
9076-16	16mm	-	-	-
9076-17	17mm	M20 / M22	-	-
9076-19	19mm	M24 / M27	-	-
9076-22	22mm	M30	-	-
9076-27	24mm	M33	-	-

#9089 SQUARE PENETRATION GAGES

ROBERTSON'S DRIVE

FOR SQUARE TYPE RECESS HEAD SCREWS
REFERENCES: ROBERTSON'S SQUARE DRIVE STANDARDS

PART NUMBER	DRIVE SIZE
9089-00	00
9089-0	0
9089-1	1
9089-2	2
9089-3	3
9089-4	4



When Ordering Specify Inch Or Metric Dial Indicator, SPC-Compatible Digital Indicators Are Available. Gage Probes Are Heat Treated, Thermally Stabilized And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Traceability To (N.I.S.T) National Institute Of Standards & Technology.

#9090 SQUARE PLUG GAGES

ROBERTSON'S DRIVE

FOR SQUARE TYPE RECESS HEAD SCREWS
REFERENCES: ROBERTSON SQUARE DRIVE STANDARDS

PART NUMBER	RECESS SIZE
9090-00	00
9090-0	0
9090-1	1
9090-2	2
9090-3	3
9090-4	4

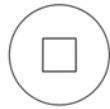


Gage Probes Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9091 SQUARE GO NO-GO RING GAGES

ROBERTSON'S DRIVE

FOR SQUARE RECESS DRIVER BITS & SCREWDRIVERS
REFERENCES: ROBERTSON'S SQUARE DRIVE STANDARDS



PART NUMBER	RECESS SIZE
9052-00	00
9052-0	0
9052-1	1
9052-2	2
9052-3	3
9052-4	4

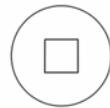


Ring Gages Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

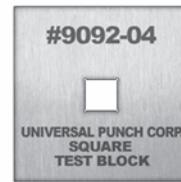
#9092 SQUARE TEST BLOCK

ROBERTSON'S DRIVE

FOR SQUARE RECESS DRIVER BITS & SCREWDRIVERS
REFERENCES: ROBERTSON SQUARE DRIVE STANDARDS



PART NUMBER	RECESS SIZE
9092-00	00
9092-0	0
9092-1	1
9092-2	2
9092-3	3
9092-4	4



Test Blocks Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9095 QUADREX PENETRATION GAGE

ISOTEC QX-001,002

FOR SQUARE RECESS DRIVER BITS & SCREWDRIVERS
REFERENCES: ROBERTSON'S SQUARE DRIVE STANDARDS

PART NUMBER	RECESS SIZE
9052-00	00
9052-0	0
9052-1	1
9052-2	2
9052-3	3
9052-4	4



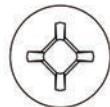
Ring Gages Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

#9096 QUADREX PENETRATION GAGE

ISOTEC QX-001,002

FOR SQUARE RECESS DRIVER BITS & SCREWDRIVERS
REFERENCES: ROBERTSON SQUARE DRIVE STANDARDS

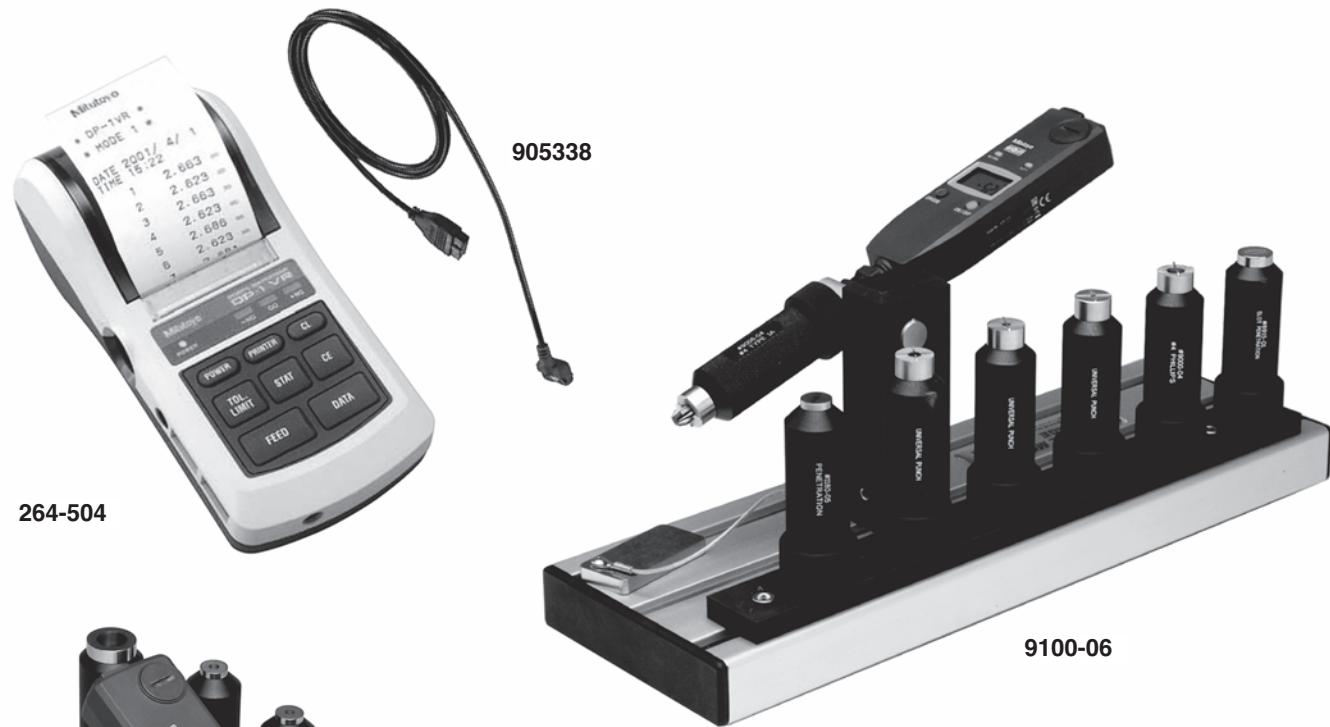
PART NUMBER	RECESS SIZE
9092-00	00
9092-0	0
9092-1	1
9092-2	2
9092-3	3
9092-4	4



Test Blocks Are Heat Treated, Thermally Stabilized, And Surface Treated To Provide Additional Wear To Maximize Gage Life. Long Form Calibration Certificates Provide Dimensions And Tolerances To Specified Standards And Are Traceable To (N.I.S.T) National Institute Of Standards & Technology.

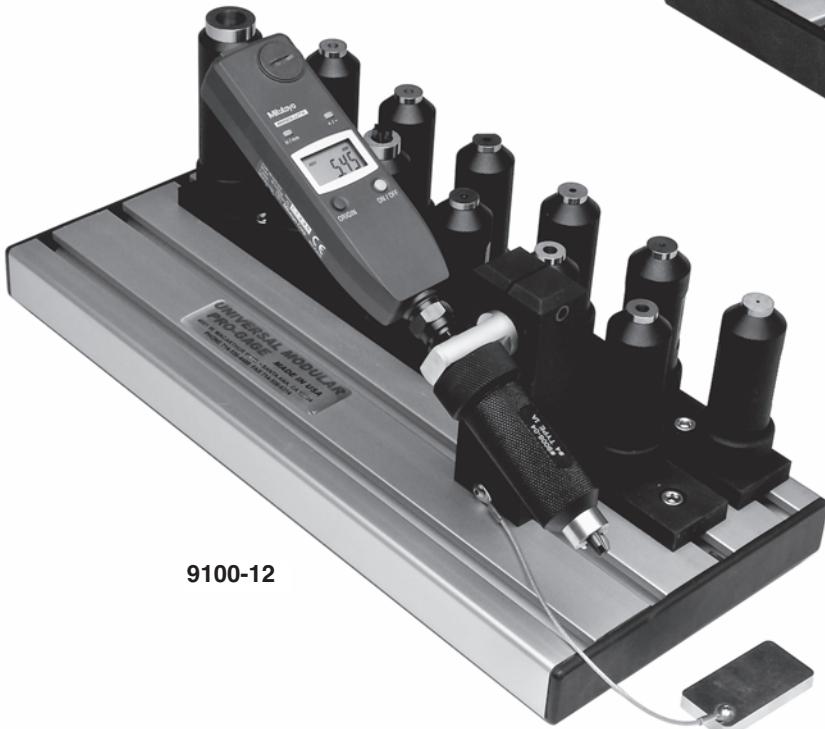
Universal Penetration Gaging Stations Provide Fast Interchangeability Of All Measuring Probes. This Self Contained Organized System Utilizes One Electronic Digital Indicator To Measure The Penetration Depth Of Fastener Recesses. Designed For The Shop Floor Or Inspection Room Use, All Steel Parts Are Hard Chrome Plated For Durability In Harsh Environments. With The Quick-Change Feature You Can Conveniently Change Probe Assemblies Without The Use Of Hand Tools, Reducing Inspection Time. The System Has SPC Output Capability And May Be Attached To Most Data Processors.

PART NUMBER	PART DESCRIPTION
9100-06	PENETRATION GAGING STATION SIX PROBES
9100-12	PENETRATION GAGING STATION TWELVE PROBES
9100-20	QUICK DISCONNECT NUT
575-123	IDU DIGITAL INDICATOR, RG. .50"/12,7MM RES. .0005"/0,01MM
905-338	SPC CONNECTING CABLE (1M)
264-504	DIGIMATIC MINIPROCESSOR RECORDER



264-504

9100-06



9100-12



Specify
Quick Disconnect

Universal Wobble Gage and Gaging Station Provides A Means For Determining The Compatibility Of Cross Recesses In The Heads Of Screws With Companion Screw Drivers And Will Indicate The Point Where Deviation In The Recess Contours Affects Satisfactory Driver Engagement. Recesses Which Exhibit Excessive Wobble Characteristics Will Cause Poor Screw Driveability Because Of Drive Camout Prior To Attaining Normal Torque Level, Damage To Recess, And/Or Accelerated Driver Wear. The Recess Wobble Gage Fixture Requires Plug Gages, Gage Handles And Pointers To Be Specified When Ordering.

PART NUMBER PART DESCRIPTION

9200-00	WOBBLE GAGE
9200-01	PLUG HANDLE 0, 1 & 2 SIZES
9200-02	PLUG HANDLE 3 4 & 5 SIZES
9200-10	CROSS LINE POINTERS FOR 0, 1 & 2 SIZES
9200-15	CROSS LINE POINTERS FOR 3, 4 & 5 SIZES
9200-20	WOBBLE GAGING STATION BASE
9200-21	PROBE HOLDERS FOR TYPE I
9200-22	PROBE HOLDERS FOR TYPE IA
9200-23	PROBE HOLDERS FOR TYPE II
9200-24	PROBE HOLDERS FOR TYPE III

Size Of Recess Gage	Gaging Limits For Type I & IA Type II & III Recesses			
	Type I	Type IA	Type II	Type III
No. 00	-	-	-	-
No. 0	15°	12°	12°	6°
No. 1	15°	12°	12°	5°
No. 2	12°	10°	10°	4°
No. 3	10°	8°	8°	4°
No. 4	10°	8°	6°	3°
No. 5	10°	8°	-	-



9200-00



9200-20



Universal Torsional Strength Testing Fixture Meets The Testing Performance Requirements For Tapping And Machine Screws Covered By ANSI/ASME, SAE, GM, FORD, CHRYSLER, JIS, ISO And Other Standards. These Standards Require That Fastener Screws Must Be Tested For Ductility, Torsional Strength, Drive Test, Drive Torque, And Hydrogen Embrittlement. We Provide All Of The Testing Attachments And Accessories That Are Needed To Perform These Tests Including Standard Or Electronic Torque Wrenches For Digital Output Of Data.

PART NUMBER PART DESCRIPTION

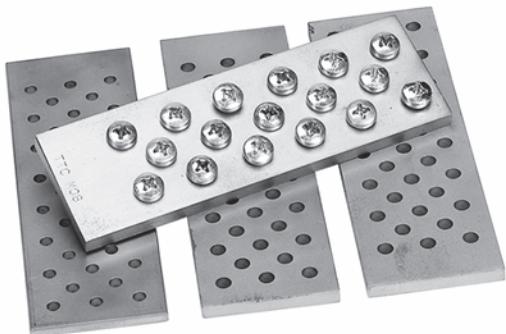
9300-375	3/8" TORSIONAL STRENGTH TESTING FIXTURE, 3/8" DRIVE, 0-900 IN/LBS. / 0-101 NM.
930101	1"/25MM COLLET HOLDERS
930102	2"/51MM COLLET HOLDERS
932000	SPLIT COLLETS FOR MACHINE SCREWS 1/4" (6MM) AND SMALLER (SPECIFY THREAD SIZES)
933000	SPLIT COLLETS FOR SHEET METAL SCREWS 1/4" (6MM) AND LARGER (SPECIFY THREAD SIZES)
933200	SOCKET DRIVER BIT HOLDERS
933300	DRIVER BITS
933600	TEST PLATE HOLDERS
933700	TEST PLATES (SPECIFY HOLE SIZES)



264-504-5A



9300-375



933700



933000

932000



930101

930102

Universal NAS Torsional Strength Testing Fixture Meets The Testing Performance Requirements For Aerospace Screws Covered By MIL-S-87114A Standards. This Fixture Requires That Fastener Screws Must Be Tested For Ductility, Torsional Drive Torque, And Hydrogen Embrittlement. We Provide All Of The Testing Attachments And Accessories That Are Needed To Perform These Tests Including Standard Or Electronic Torque Wrenches For Digital Output Of Data.

PART NUMBER	PART DESCRIPTION
9400-375	3/8" NAS TORSIONAL STRENGTH TESTING FIXTURE, 3/8" DRIVE, 0-900 IN/LBS. / 0-101 NM.
940000	PIVOTING WEIGHT SYSTEM NAS STANDARDS
943200	SOCKET DRIVER BIT HOLDERS
943325	WEIGHT SET 5LB OR 10LB POUND INCREMENTS
943500	ELECTRONIC TORQUE WRENCHES
943700	MECHANICAL TORQUE WRENCHES

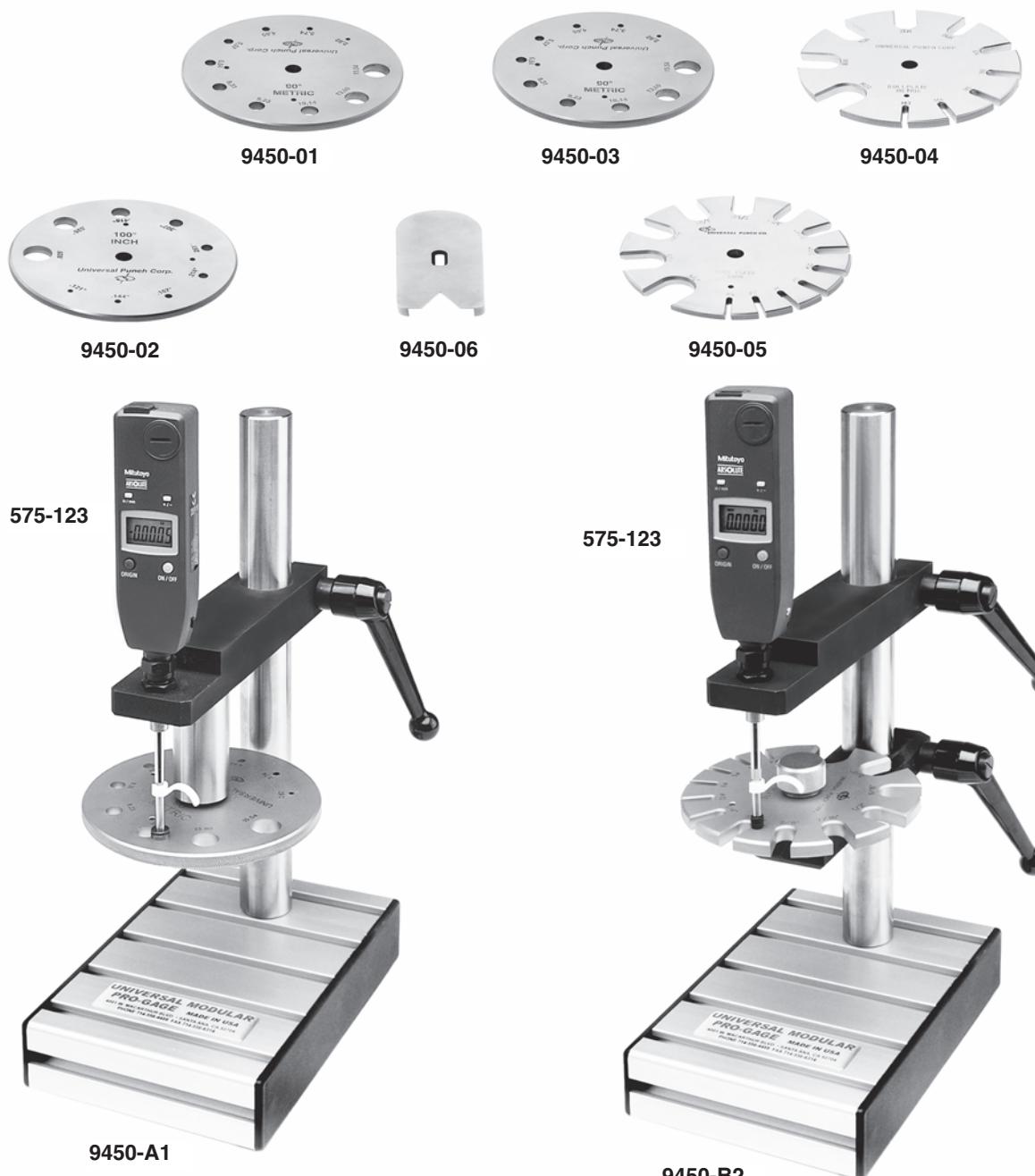
9400-375	3/8" NAS TORSIONAL STRENGTH TESTING FIXTURE, 3/8" DRIVE, 0-900 IN/LBS. / 0-101 NM.
940000	PIVOTING WEIGHT SYSTEM NAS STANDARDS
943200	SOCKET DRIVER BIT HOLDERS
943325	WEIGHT SET 5LB OR 10LB POUND INCREMENTS
943500	ELECTRONIC TORQUE WRENCHES
943700	MECHANICAL TORQUE WRENCHES

943500



This Protrusion Height Gaging Fixture Can Be Set-Up To Measure All Types Of Fastener Attributes Such As Head Heights, Body Diameters, Across Flats, Across Corners, And Lengths. The Interchangeable Gaging Plates Are Offered In Both Inch And Metric Sizes, Certified Hole sizes That Conform To ANSI/ASME, ISO, JIS, DIN, BS, & GB Standards. The Gaging Plates Are Stainless Steel, Heat Treated, And Thermally Stabilized.

PART NUMBER	PART DESCRIPTION
9450-A1	UNIVERSAL PROTRUSION HEIGHT GAGE
9450-B2	UNIVERSAL PROTRUSION HEIGHT GAGE WITH DETENT STOP
9450-01	ANSI/ASME 82° GAGING PLATE: #2 THROUGH 3/8"
9450-02	ANSI/ASME 100° GAGING PLATE: #2 THROUGH 3/8"
9450-03	ISO 90° GAGING PLATE: M2 THROUGH M10
9450-04	INCH BOLT GAGING PLATE: #4 THROUGH 3/4"
9450-05	METRIC BOLT GAGING PLATE: M3 THROUGH M20
9450-06	SEMS CHECK PLATE FOR MEASURING HEAD HEIGHTS & LENGTHS

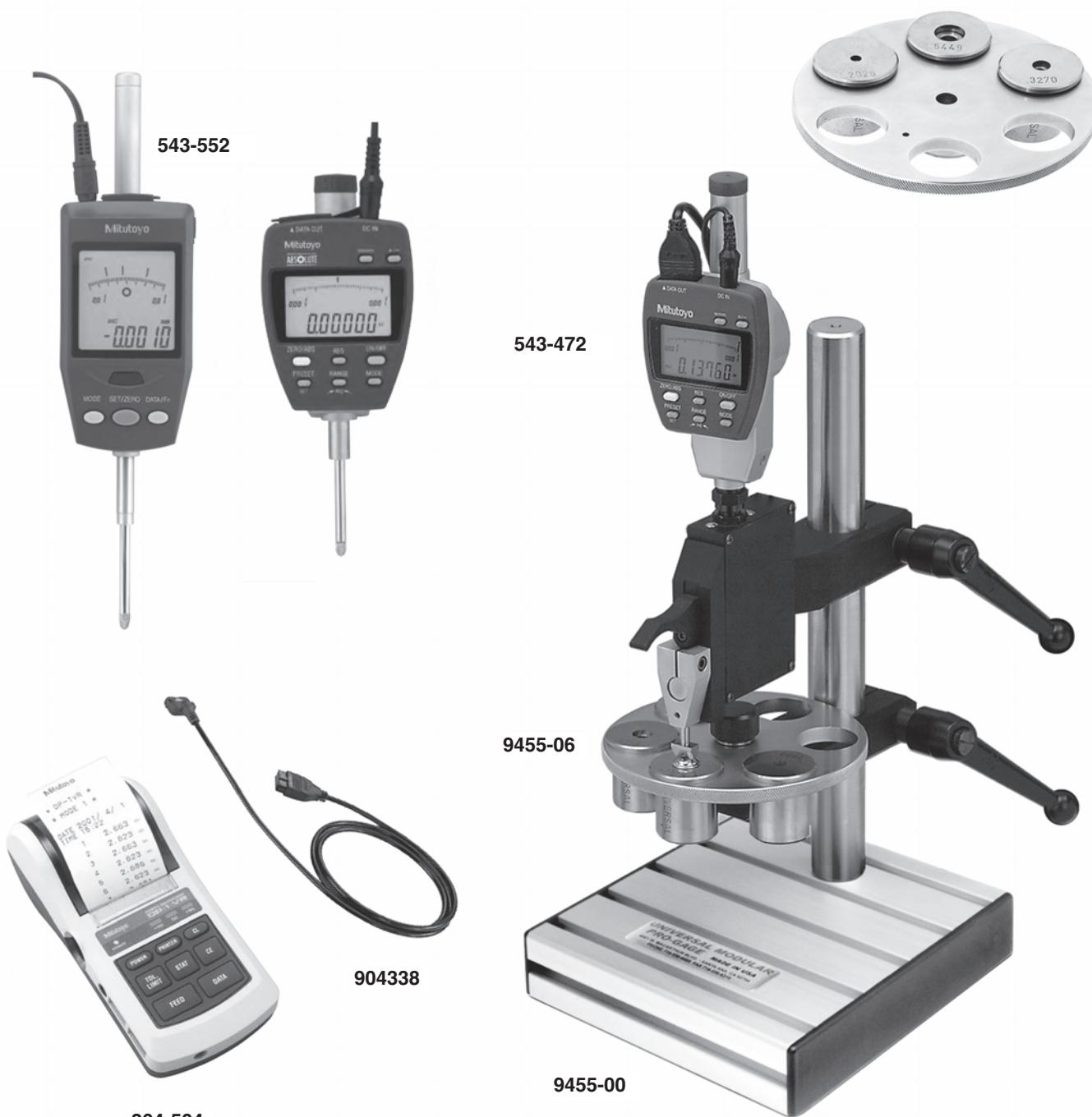


#9455 PRECISION PROTRUSION HEIGHT GAGES NAS AEROSPACE

Universal's Precision Protrusion Height Gage Fixtures Can Be Set-Up To Measure All Types Of Aerospace And Special Fasteners. The Interchangeable Gaging Bushings Offered In Both Inch And Metric Sizes, Certified And Conforming To ANSI/ASME, ISO, And NAS Standards. The Gaging Bushing Dies Are Made From Heat Treated High Speed Steel Or Carbide Gaging Bushing Hole Sizes Are Measured By The "Height Over Ball" Method And Calculated To The Actual Sizes.

PART NUMBER PART DESCRIPTION

9455-00	PRECISION NAS PROTRUSION HEIGHT GAGE (2.5 MM)
9455-06	INSERT GAGE PLATE (6 BUSHING STATION)
9455-##	INTERCHANGEABLE GAGE BUSHING DIE(S)
9455-##	NAS526, NAS9800 STYLUS #1, #2, #3, & #4
543-552	MITUTOYO DIGIMATIC INDICATOR RANGE 1"/25.4MM RESOLUTION .00005"/0,001MM
543-452	MITUTOYO ANALOG AND DIGIMATIC INDICATOR RANGE 1"/25.4MM RESOLUTION .00005"/0,001MM
904338	CABLE 1M
264-504	DIGIMATIC MINIPROCESSOR SPC RECORDER

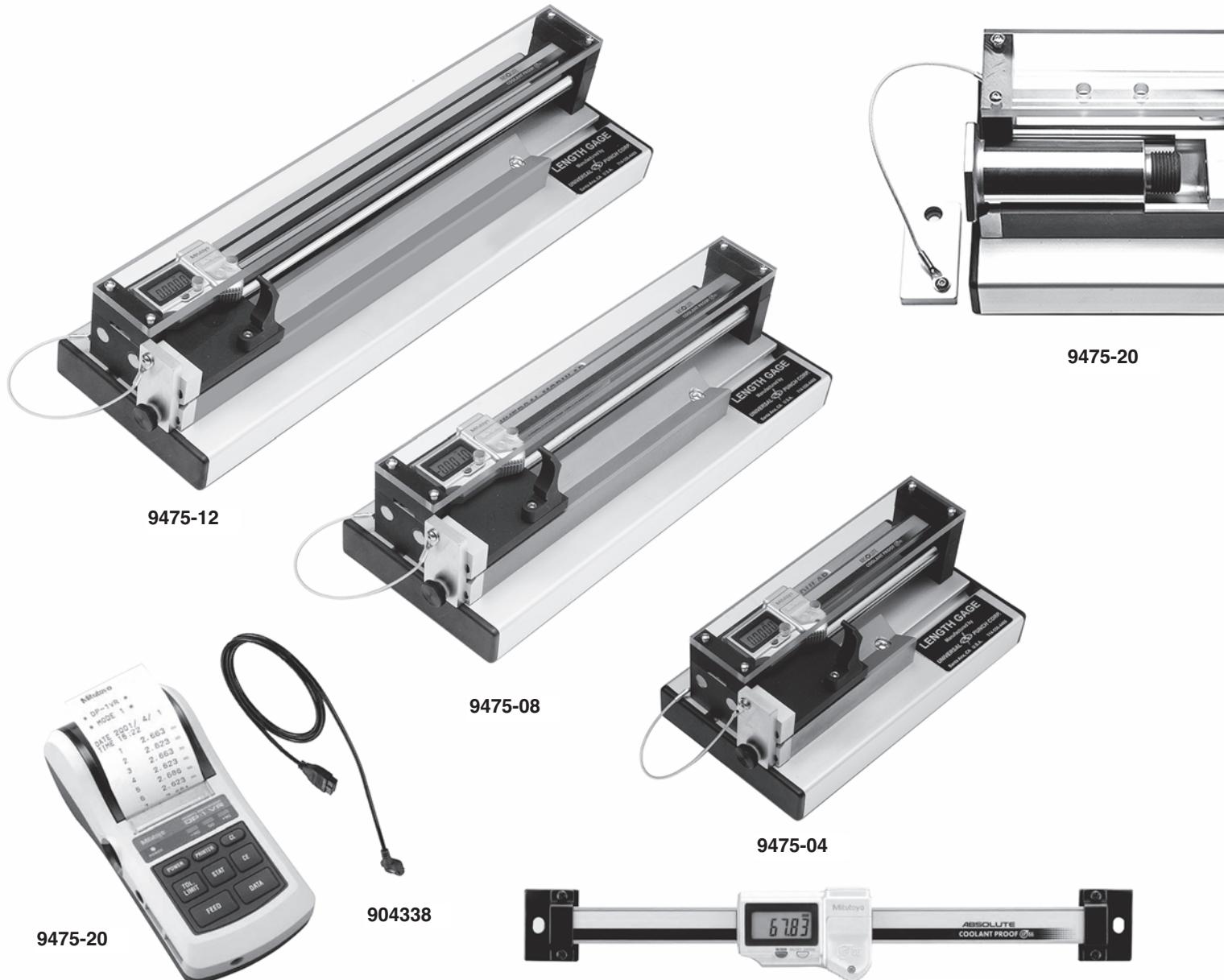


#9475 DIGITAL LENGTH GAGES

Universal Digital Length Gages Are Lightweight, Yet Very Durable Units That Provide A Fast, Accurate, And Repeatable Means To Measuring Products. The Slide Rod Assembly Ensures Close Alignment Throughout The Entire Measuring Range. This System Concentrates Load Force Onto Supported Bearing Surfaces Thereby Minimizing Any Load Transfer To The Scale Unit And Increasing Its Service Life. The length Gage Is Designed For The Shop Floor Or Inspection Room Use. Included Is A Lexan Guard That Maximizes The Protection Of The Slectronic Scale From Operator Abuse. This System Offers An AlternativeTo Calipers, Scales, And Other Devices And Has SPC Output Capability.

PART NUMBER PART DESCRIPTION

9475-04	4"/100MM DIGITAL LENGTH GAGE RESOLUTION .0005"/.0127MM / WEIGHT 6LBS/3KGS
9475-08	8"/200MM DIGITAL LENGTH GAGE RESOLUTION .0005"/.0127MM / WEIGHT 9LBS/4KGS
9475-12	12"/300MM DIGITAL LENGTH GAGE RESOLUTION .0005"/.0127MM / WEIGHT 13LBS/6KGS
9475-24	24"/600MM DIGITAL LENGTH GAGE RESOLUTION .0005"/.0127MM / WEIGHT 25LBS/12KGS
9475-20	SHOULDER BOLT LENGTH ATTACHMENT
572-613	OPTIONAL 4"/100MM ABSOLUTE WATER RESISTANT DIGITAL DISPLAY
572-614	OPTIONAL 6"/150MM ABSOLUTE WATER RESISTANT DIGITAL DISPLAY
572-615	OPTIONAL 8"/200MM ABSOLUTE WATER RESISTANT DIGITAL DISPLAY

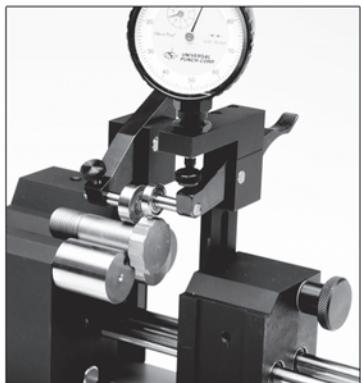


#9500 DIGITAL RUNOUT RECESS CHECKER GAGES

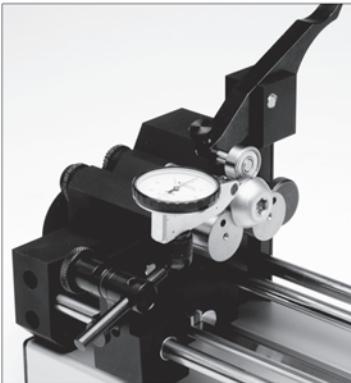
This Gage Model Has Been Specifically Designed To Measure Misalignment And Eccentricity For Both External And Internal Fastener Drive Systems. This Gage Offers A Quick, Accurate, And Repeatable Way To Measure Fastener Recess Runout And Recess Punch Tooling Without Using Collets. The Single Element Probes Use One Carrier With An Indicator To Inspect All Types Of Fastener Drive Recesses From #4/ M2 To 1/2"/ M12. An Optional External Drive Checker Attachment Can Be Purchased Separately For Inspecting External Drives. This Item Can Be Installed For Inspection Applications Requiring Larger Motions Of Travel, Such As Across Flats And Across Corners Of Hexagon Bolts.

PART NUMBER PART DESCRIPTION

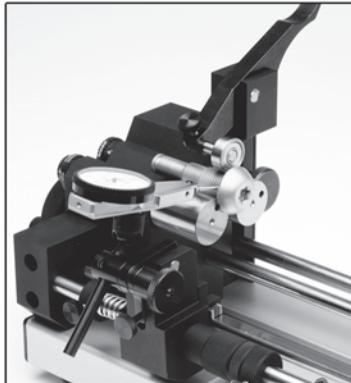
9500-10	CONCENTRICITY GAGE MODEL F-10 LENGTHS UP TO 4"/100MM, MAX DIAMETERS 1"/25MM
9500-20	CONCENTRICITY GAGE MODEL F-20 LENGTHS UP TO 6"/150MM, MAX DIAMETERS 2"/50MM
301-00	FASTENER RECESS CHECKING ATTACHMENT
302-00	EXTERNAL BOLT CHECKING ATTACHMENT
303-00	O.D. DIAMETER CHECKING ATTACHMENT
304-00	SQUARENESS CHECKING ATTACHMENT
600-J080	METRIC INDICATOR 0,01MM
600-J520	INCH INDICATOR .001"
543-472B	DIGITAL DIAL INDICATOR SPC, TIR OUTPUT



302-00 EXTERNAL BOLT CHECKING ATTACHMENT

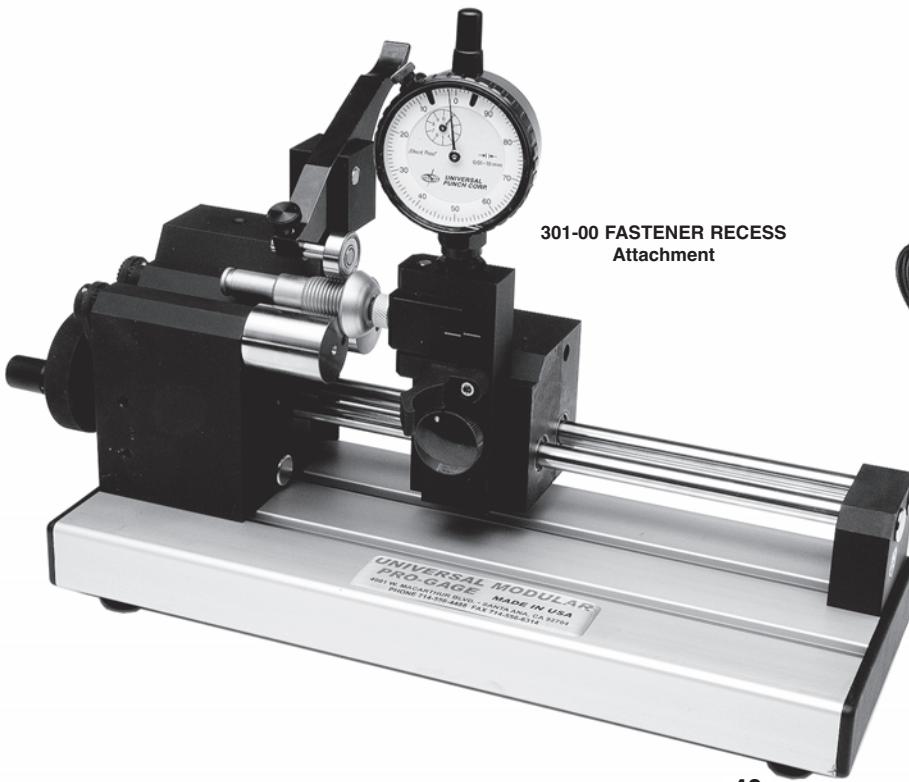
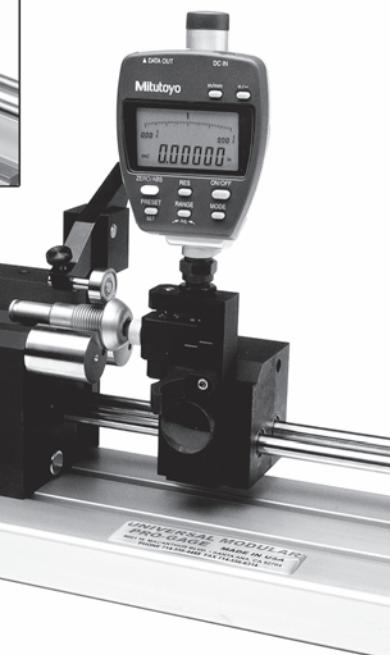


303-00 O.D. DIAMETER CHECKING ATTACHMENT



304-00 SQUARENESS CHECKING ATTACHMENT

SPC/TIR
543-472
543-263



301-00 FASTENER RECESS Attachment



904338

264-504

#9600 DRILL POINT WEB THICKNESS GAGE

This Drill Point Web Thickness Gage Provides A Fast, Accurate, And Repeatable Way To Measure The Drill Point Dimensions Of Self Drilling Screws. Specifically Designed For Mechanical Or Digital Indicators, This Gage Has A Range Of 0" to 3/8"/ 9.5mm. This Gage Is Portable, Yet Durable, To Be Used In Harsh Manufacturing Environments. Standard Protected Precision Stroke Bearings And A Repeatable Spring Force Ensure Precise Measurements Throughout The Entire Range Of Travel.

PART NUMBER PART DESCRIPTION

9600-01	WEB THICKNESS GAGE
9600-02	BASE PLATE AND MOUNTING POST
9600-05	CARBIDE SHARP POINTS
9600-31	CARBIDE BALL POINTS .031/0,78MM
9600-46	CARBIDE BALL POINTS .046/1,16MM
9600-62	CARBIDE BALL POINTS .062/1,57MM
600010	DIAL INDICATOR .500" RANGE / .001" GRAD.
600020	DIAL INDICATOR 0,002MM RANGE / 12MM GRAD.
543683	DIGITAL INDICATOR FOR SPC .0005"/0,01MM
905338	SPC CONNECTING CABLE
264503	DPIHS MINIPROCESSOR/RECORDER



#9700 TRI-LOBE TAPTITE GAGE

TRI-LOBE™ Gage Provides A Fast, Accurate And Repeatable Way To Measure The "C" Dimensions Of Taptite® Screws. Specifically Designed For A Mechanical Or Digital Dial For SPC, This Gage Has A Diameter Range From #4 Through 3/4" (M3 - M19). This Gage is Portable, Yet Durable To Be Used In Harsh Manufacturing Environments. Protected Precision Stroke Bearing Assembly And A Repeatable Spring Force Ensure Precise Measurements Throughout The Entire Range Of Travel.

PART NO. PART DESCRIPTION

9700-01	TRI-LOBE GAGE FRAME
9700-03	SINGLE STAND
9700-05	60 DEGREE TRI-LOBE™ ELEMENTS
543-287	MITUTOYO DIGITAL INDICATOR WITH SPC .0001"/0,01MM
905338	SPC CONNECTING CABLE
264503	DPIHS MINIPROCESSOR/RECORDER

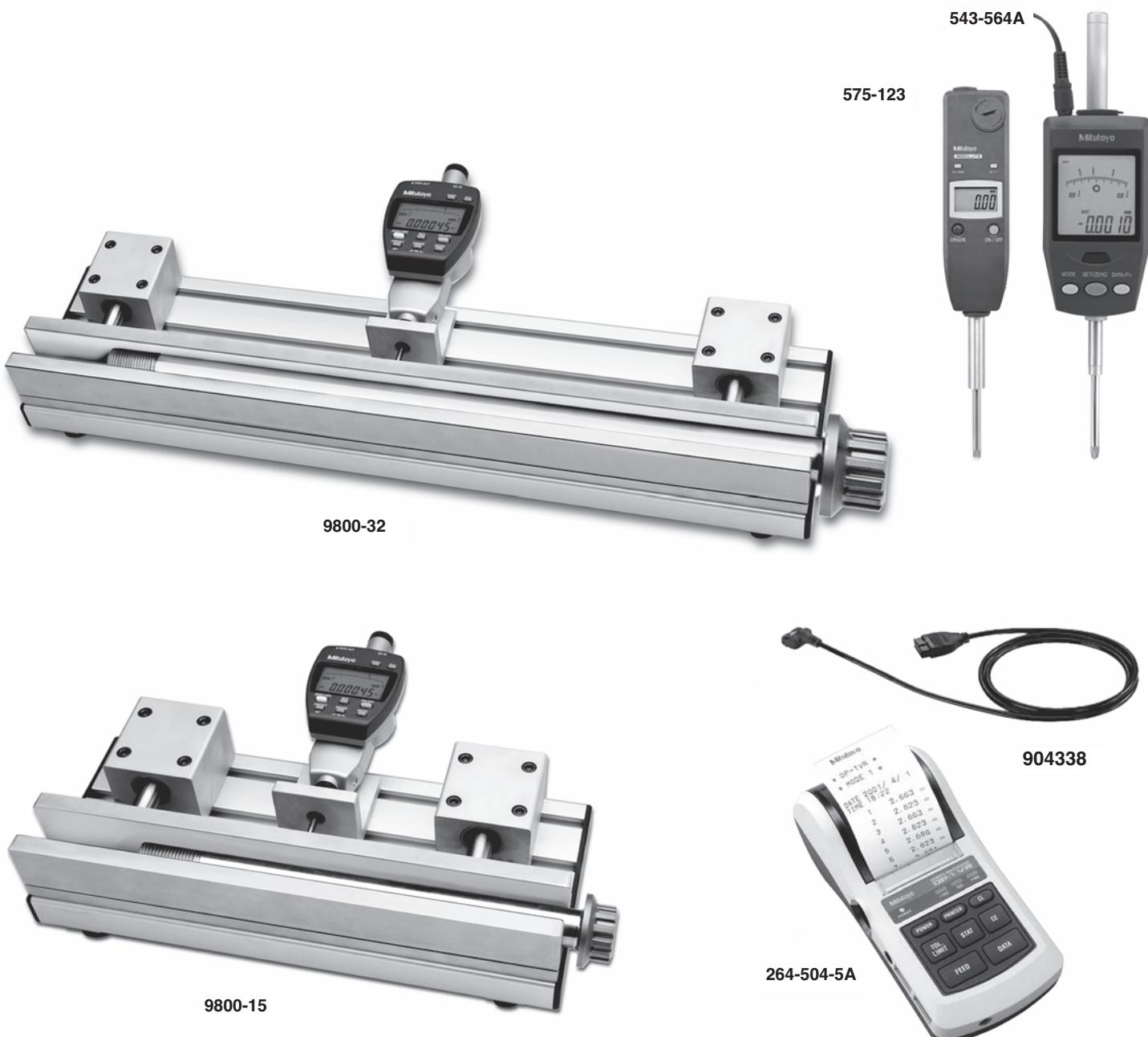


#9800 DIGITAL STRAIGHTNESS GAGES

Universal Straightness Gages Provides A Fast, Accurate And Repeatable Way To measure Straightness And Camber Of Shaft, Or Bolt Type Products. Specifically Designed With A Mechanical Or Digital For SPC, These Gages Are Portable, Yet Durable, To Be Used In Harsh Manufacturing Environments. The Stroke Bearing Assembly, Incline Angle Ensure Constant Measuring Force Throughout The Entire Measurement. This Gaging Fixture Can Be Used For Measuring Straightness, Camber, Diameters, Flanges, And Tapers Sizes.

PART NUMBER PART DESCRIPTION

9800-10	DIGITAL STRAIGHTNESS GAGE LENGTHS UP TO 10"/250MM, DIAMETERS 0"- 1"/25MM
9800-15	DIGITAL STRAIGHTNESS GAGE LENGTHS UP TO 15"/400MM, DIAMETERS 0"- 2"/50MM
9800-32	DIGITAL STRAIGHTNESS GAGE LENGTHS UP TO 32"/800MM, DIAMETERS 0"- 4"/100MM
543-564	MITUTOYO DIGIMATIC ID-H INDICATOR RANGE 2"/50.8MM RESOLUTION .00002"/0.5MM
575-123	MITUTOYO DIGIMATIC IDU INDICATOR RANGE 1"/25.4MM RESOLUTION .0005"/0.01MM
264-504	DIGIMATIC MINIPROCESSOR RECORDER WITH SPC CONNECTING CABLE
905338	SPC CABLE FOR MINIPROCESSOR RECORDER (40"/1M)
9800-10	MASTER SETTING BLOCK .5"/15MM WITH TRACEABLE CERTIFICATE
9800-20	MASTER SETTING BLOCK 1"/25MM WITH TRACEABLE CERTIFICATE



#12000 EXTERNAL 3-POINT THREAD GAGE

3-POINT™ GAGE FRAME- Has a Self-Contained Alignment System That Eliminates The Need For Setting Templates Or Micrometers To Achieve Perfect 120° Spacing. The Frame Design Reduces The Inspection Space And Additional Expense Normally Required By Other Systems Using Numerous Gage Frames For Different Sizes.

GAGE RANGE- The 3-POINT™ Thread Frames from #4 (3mm) to 1-1/2" (40mm) With Two Adjustable Frames

12000-1 Frame; #4 (3mm) to 3/4" (20mm)

12000-2 Frame; 13/16" (22mm) to 1-1/2" (40mm)

GAGE PERFORMANCE- The Gage Roll Sets Are Easily Changed From One Size To Another. The Lower Rolls Are Mounted In A Fixed Position to support the workpiece. The upper roll arm assembly Exerts A Consistent force and actuates the indicator providing accurate readings.

GAGE DURABILITY- Thread rolls are designed to revolve with the workpiece, distributing wear evenly. (Optional) TITANIUM-NITRIDE (TiN) coatings protects the gage roll surface and provides additional hardness that extends gage roll life.

SPC COMPATIBLE- Universal gages provide the ideal system for data collection. Adjustments can be made at the machine before scrap is created, resulting in improved productivity and quality.

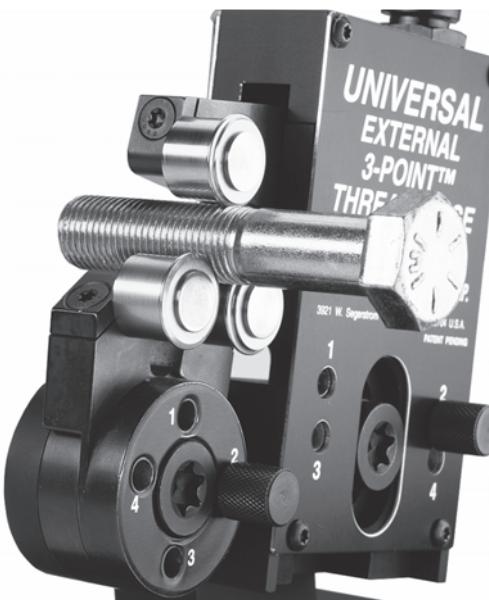


EXTERNAL GAGE ROLLERS

BEST WIRE ROLLS

Pitch Diameter

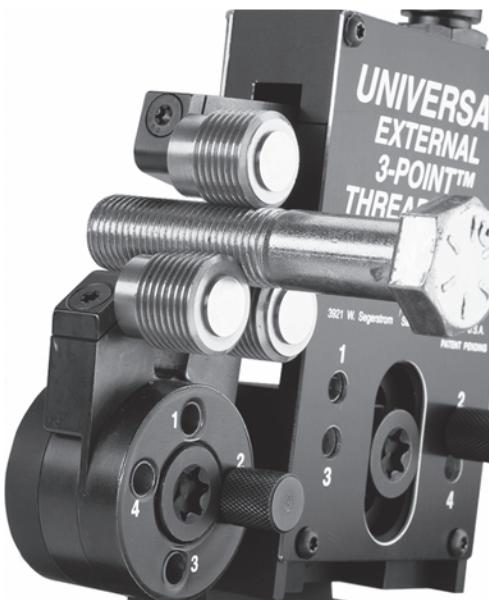
(Minimum Material Condition)



FULL FORM ROLLS

Functional Diameter

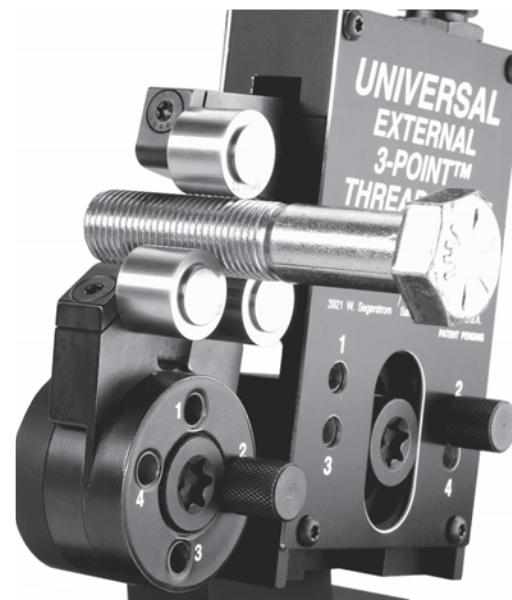
(Maximum Material Condition)



PLAIN ROLLS

Major Diameter

(Multi Lobe Out-Of-Roundness)



GAGING ROLLS- There are interchangeable gage rolls available for standard thread gaging applications. Each set of three rolls corresponds to one particular thread size. For measuring Pitch Diameter use Best Wire Rolls or Cone & Vee. For measuring Functional Size use Full Form rolls. For measuring Major Diameter use Plain Rolls. For measuring Minor Diameter (not shown) use included Angle Rolls. For Special Thread Rolls priced on request.

#20000 INTERNAL 2-POINT™ THREAD GAGE

INTERNAL THREAD GAGE FRAME- Utilizes advanced state of the art precision linear bearings ensuring zero deflection and accurate movement. Consistent gaging force and smooth gage action guarantee repeatable readings throughout the entire measuring range.

GAGE RANGE- The Internal 2-POINT™ Frames from #4 (3mm) to 1-1/2" (40mm) with two adjustable frames.

20000-01 Size Range; #4 (3mm) to 3/4" (20mm)

20000-02 Size Range; 13/16" (22mm) to 1-1/2" (40mm)

GAGE PERFORMANCE- The internal thread gaging elements are easily set-up to use. With precision frame alignment, Thread Elements are easily changed from one size to another.

GAGE DURABILITY- Universal internal thread gage frames have a three year limited warranty. All internal gaging elements are Titanium-Nitride (TiN) coated for maximum wear. This coating protects the surface and provides additional hardness that extends gage element life.

EFFICIENT AND COST EFFECTIVE- With a master thread setting ring gage adjustments are made in seconds to the actual size. This process reduces inspection time to a third of that required for inspecting parts with "GO-NOT GO" plug gages.



INTERNAL GAGING ELEMENTS

"CONE & VEE" ELEMENTS

Pitch Diameter
(Minimum Material Condition)



FULL FORM ELEMENTS

Functional Diameter
(Maximum Material Condition)



PLAIN ELEMENTS

Minor Diameter
(Taper & Out-Of-Roundness)



INTERNAL GAGING ELEMENTS- For measuring Pitch Diameter use single gaging elements "Cone & Vee" design. For measuring Functional Size use full form elements. For measuring Minor Size and Circularit y use plain elements. For Special Thread Elements priced on request.



AUTOMATED PRODUCTION



PRODUCTION GRINDING

- **High Precision Gages** Universal Punch Corp. incorporates 40 years of manufacturing experience into the production of our Fastener Gages for the Automotive, Aerospace, Medical, Commercial and other industries. We manufacture many popular drive systems with worldwide inventories, such as Phillips, Type 1A, 12-Point, Hexalobular, Torx, 6-Lobe (TX), 6-Lobe Extra (TXP), Hexagon Sockets, Square Sockets, Cruciform, and Star. In addition to Penetration and Plug-type Gages, we also offer Wobble, Driver Bit, Protrusion Height, Thickness, Straightness, Screw Testing Fixtures, Concentricity, SPC Data Collection Systems and Gage Calibration Service. Our capabilities include producing custom and modified Gages to your specifications.



PRECISION CRAFTSMANSHIP

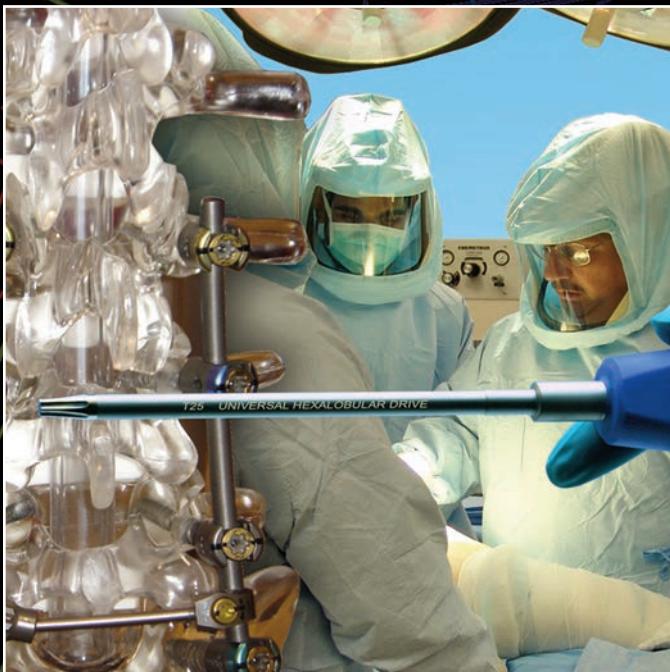


HIGH PRECISION PROCESSES

- **Continuous Improvement** Universal Punch Corp. is a global supplier for the fastener industry with proven quality that is second to none. We are continually working on improvements to our existing product offerings through new processes and technologies, which will expand our capabilities into new markets and applications. We strive to be innovative in design and always attentive to the needs of our customers.



Universal Punch Corp., an ISO 9001 registered company, has been a leader in the tooling, gaging and medical industries for 40 years. As part of our continuing commitment to providing precision and excellence in all of our products, we have expanded into a new state-of-the-art manufacturing facility. Our spacious new plant is equipped with modern machining processes, expanded heat treating facilities, increased inventory capacity, and calibration and inspection laboratory. Our certified quality management system ensures that all products sold conform to the required standards and specifications. All measuring equipment and gaging masters are directly traceable to N.I.S.T. (National Institute of Standards & Technology). All certification processes and procedures conform to ISO 17025 standards.



MEDICAL INSTRUMENTS



AEROSPACE FASTENERS



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