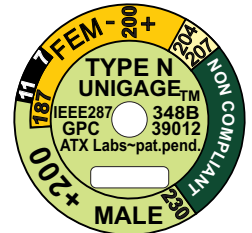


VINYL OVERLAY ON BEZEL GLASS WITH STANDARDS BOUNDARIES WELL DEFINED FOR ERROR FREE AND FAST GAGING
OVERLAY USES LOW ENERGY TAC FOR EASY REPLACEMENT OR REMOVAL.



MASTER GAGE: FOR MALE GAGING ELIMINATES THE TRADITIONAL SECOND GAGE AND MAKES PROBE SEATING QUICK AND ERROR FREE.

BENEFIT: THE TYPE N GAGE KIT USES A STEP FEATURE MACHINED INTO A PRECISION BUSHING TO MATCH THE GEOMETRY OF BOTH MALE AND FEMALE TYPE N CONNECTORS. THIS RESULTS IN A TRUE UNIVERSAL N GAGE THAT WITH ONE HOST INDICATOR CAN MEASURE THE INTERFACE DIMENSIONS OF EITHER GENDER TYPE N AND OF ANY STANDARD INCLUDING UNPUBLISHED INDUSTRIAL STANDARDS. THIS FURTHER MEANS THAT THE ACQUISITION COST IS SHARPLY REDUCED SINCE MULTIPLE MASTER GAGES CUT TO THE DIFFERENT STANDARDS LIKE MIL-STD-348B, MIL-C-39012, IEEE287GPC AND IEEE287LPC ARE NOT REQUIRED. COMPLIANCE DATA IS GIVEN IN THE FORM OF TOLERANCE ZONES ON THE BEZEL LENS AND NUMERICAL DATA ON A CUSTOM MACHINED PLATE IN ON THE BACK.

GENERAL SPECIFICATION

- ~SURFACE FINISH OF Ra4 - Ra16 ON WORKING SLIDABLE SURFACE; BETTER THAN Ra32 IN REGIONS OF NON-CONTACT.
- ~MASTER GAGE FINISH OF Ra 8 OR BETTER.
- ~PRECISION SWISS TURNED AND MILLED STAINLESS STEEL.
- ~CRITICAL TOLERANCES OF 0.0005.
- ~DIAL ACCURACY OF +/- 0.0005
- ~ALL STAINLESS COMPONENTS PASSIVATED PER ASTM-A967.
- ~DIAL FASCIA AND DIAL BACKS WITH STANDARDS DELINEATION.

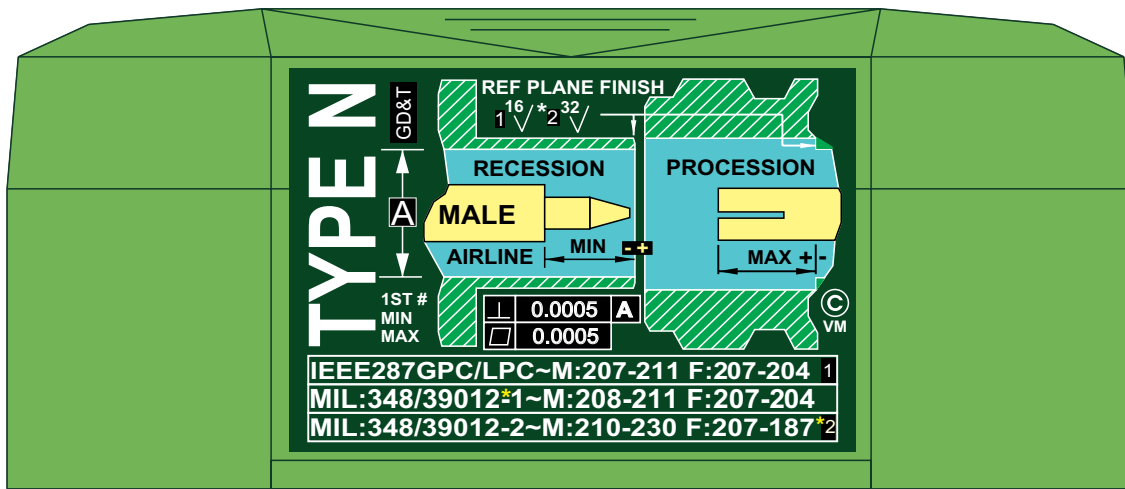
WARRANTY: ALL PERFORMANCE SERIES GAGES COME WITH A TEN YEAR WARRANTY ON STAINLESS COMPONENTS AND A ONE YEAR WARRANTY ON THE HOST INDICATOR.

PRECISION GAGE KITS

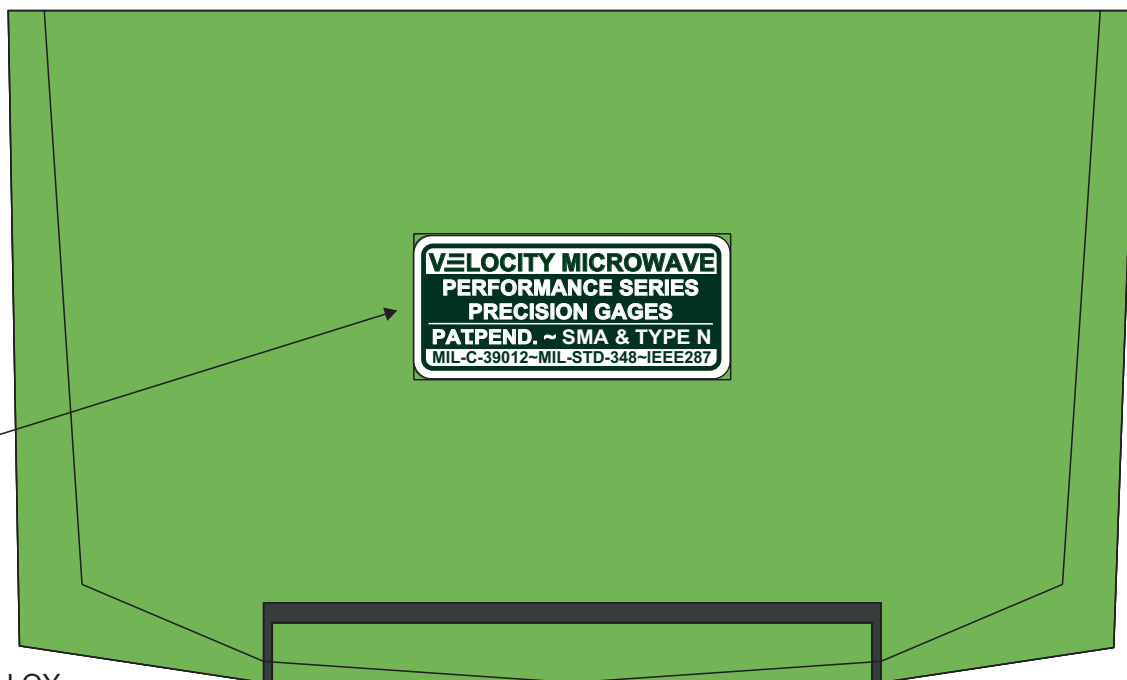
✱ TYPE N~PERFORMANCE SERIES ✱

MALE & FEMALE PIN

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ALL PERFORMANCE SERIES SMA AND N GAGES CARRY A CUSTOM PRINTED VINYL GRAPHIC THAT ILLUSTRATES THE INTERFACE COMPLIANCE DATA RELATIVE TO THE CONNECTOR SERIES UNDER TEST INCLUDING MIL-STD-348, MIL-C-39012 AND IEEE287GPC. FOR REFERENCE K (2.92mm) IS ALSO INCLUDED. THIS GRAPHIC COMPLEMENTS THE BEZEL LENS OVERLAY WHICH EXPRESSES THE TOLERANCE ZONE IN A LITERAL MANNER TO REDUCE COMPLIANCE INTERPRETATION.



ALUMINUM ALLOY
INSCRIPTION PLATE

GENERAL SPECIFICATION

- ~SURFACE FINISH OF Ra4 - Ra16 ON WORKING SLIDABLE SURFACE; BETTER THAN Ra32 IN REGIONS OF NON-CONTACT.
- ~MASTER GAGE FINISH OF Ra 8 OR BETTER.
- ~PRECISION SWISS TURNED AND MILLED STAINLESS STEEL.
- ~CRITICAL TOLERANCES OF 0.0005.
- ~DIAL ACCURACY OF +/- 0.0005
- ~ALL STAINLESS COMPONENTS PASSIVATED PER ASTM-A967.
- ~DIAL FASCIA AND DIAL BACKS WITH STANDARDS DELINEATION.

WARRANTY: ALL PERFORMANCE SERIES GAGES COME WITH A TEN YEAR WARRANTY ON STAINLESS COMPONENTS AND A ONE YEAR WARRANTY ON THE HOST INDICATOR.

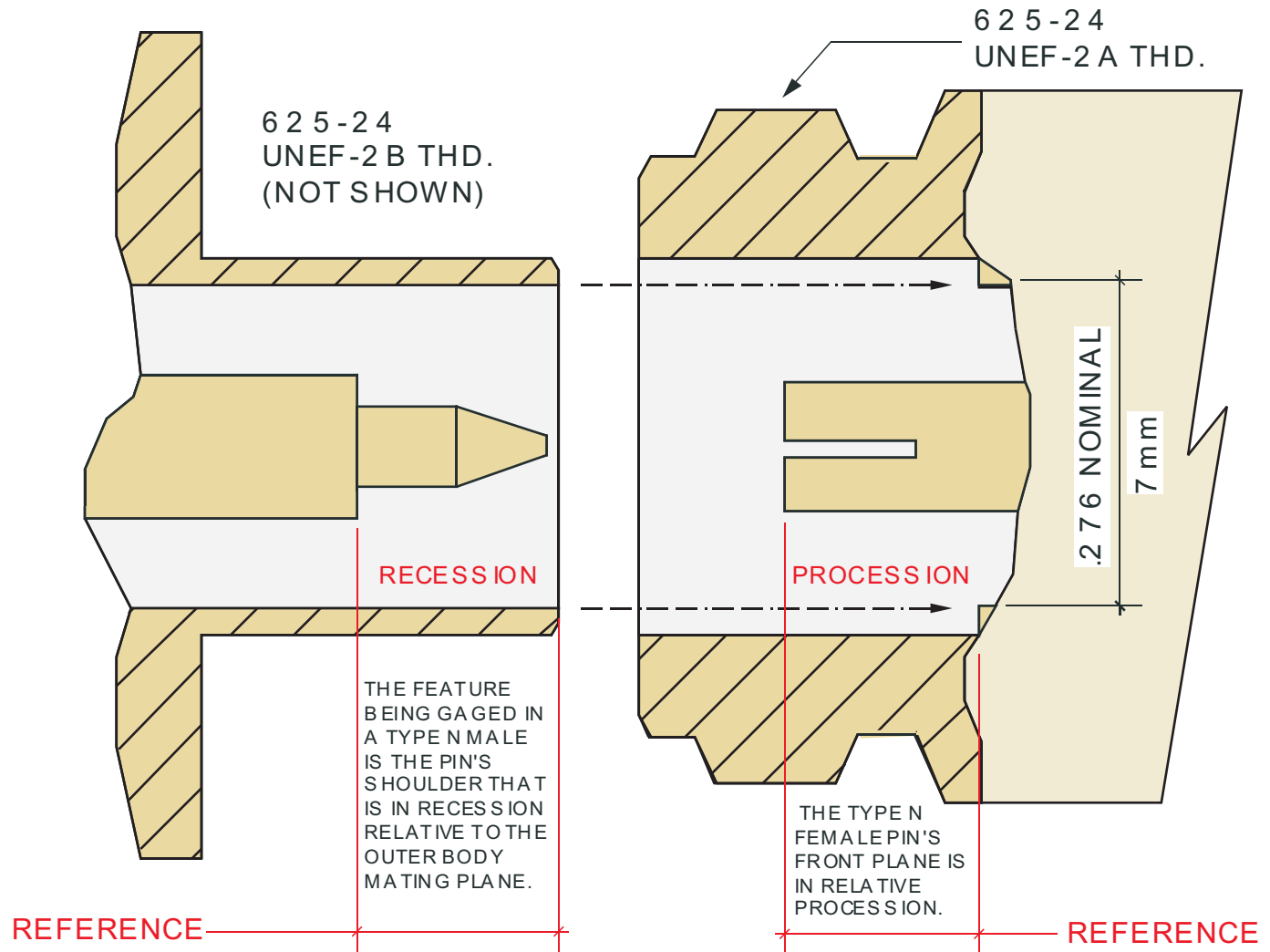
PRECISION GAGE KITS

* TYPE N~PERFORMANCE SERIES *

MALE & FEMALE PIN

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TYPE N INTERFACE & GAGING METRICS



N MALE

IEEE287 GPC: 207 - 211 *
MIL-STD-348 B TEST: 208 - 211
MIL-STD-348 B GENERAL: 210 - 230
MIL-C-39012 CROSSES TO 348 B**

* DIMENSION GIVEN IN MILS

N FEMALE

IEEE287 GPC: 207 - 204 *
MIL-STD-348 B TEST: 207 - 204
MIL-STD-348 B GENERAL: 207 - 187
MIL-C-39012 CROSSES TO 348 B

** MIL-C-39012 AND MIL-STD-348 A/B SPECIFY SIMILAR RECESSION AND PROCESSION STANDARDS FOR TYPE N. BOTH IDENTIFY A "TEST" STANDARD AND A GENERAL STANDARD WHERE THE FORMER CARRIES TIGHTER TOLERANCES THAN THE LATTER. VM GAGES HAVE A BACK PLATE THAT IDENTIFIES THESE DIFFERENT REQUIREMENTS WITH ILLUSTRATIVE GEOMETRY.

GENERAL SPECIFICATION

- ~SURFACE FINISH OF Ra4 - Ra16 ON WORKING SLIDABLE SURFACE; BETTER THAN Ra32 IN REGIONS OF NON-CONTACT.
- ~MASTER GAGE FINISH OF Ra 8 OR BETTER.
- ~PRECISION SWISS TURNED AND MILLED STAINLESS STEEL.
- ~CRITICAL TOLERANCES OF 0.0005.
- ~DIAL ACCURACY OF +/- 0.0005
- ~ALL STAINLESS COMPONENTS PASSIVATED PER ASTM-A967.
- ~DIAL FASCIA AND DIAL BACKS WITH STANDARDS DELINEATION.

WARRANTY: ALL PERFORMANCE SERIES GAGES COME WITH A TEN YEAR WARRANTY ON STAINLESS COMPONENTS AND A ONE YEAR WARRANTY ON THE HOST INDICATOR.

PRECISION GAGE KITS

* TYPE N~PERFORMANCE SERIES *

MALE & FEMALE PIN

Velocity Microwave ~ div. ATX Labs
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GAGING A MICROWAVE CONNECTOR IS A RELATIVE MEASUREMENT BETWEEN TWO PLANES OR FEATURES: ONE IS ASSOCIATED WITH A PIN - LIKE THE SHOULDER ON THE MALE PIN OR THE FRONT PLANE OF THE FEMALE PIN - AND THE OTHER IS ASSOCIATED WITH THE FRONT MATING PLANE OF THE OUTER COAXIAL BODY OF THE CONNECTOR. THE RELATIONSHIP BETWEEN THE PIN AND THE OUTER COAXIAL BODY, IN TERMS OF THE RATIO OF THE ID OF THE LATTER AND THE OD OF THE FORMER, DETERMINES THE IMPEDANCE OF THE CONNECTOR - TYPICALLY 50 OHMS.

TO ACCOMPLISH THIS A MEASUREMENT IS MADE THAT IS NOT UNLIKE MEASURING THE DEPTH OF A TIRE'S TREAD. A CONVENTIONAL DIAL INDICATOR WITH A FIXED BUSHING AND A MOVABLE RACK IS MADE TO REST ON THE SURFACE TO BE GAGED IN SUCH A MANNER THAT THE FIXED BUSHING RESTS ON THE OUTER COAXIAL BODY AND THE MOVABLE RACK - SHAPED TO MATCH THE GEOMETRY OF THE SURFACE - IS ALLOWED TO REST ON THE PIN FEATURE OF INTEREST.

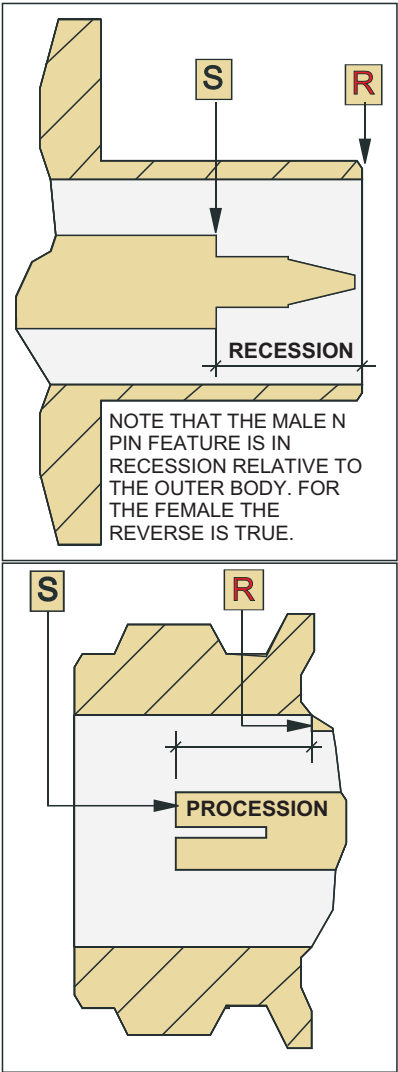
VM PATENT PENDING APPROACH

THE ABOVE APPROACH, COMMON FOR THE LAST HALF DECADE, TYPICALLY INVOLVES USING TWO GAGES. THIS MAY EITHER TAKE THE FORMER ON ONE HOST INDICATOR WITH A CHANGE IN BUSHINGS, OR TWO DIAL INDICATORS WITH SEPARATE BUSHINGS AND FEATURES. IT ALWAYS INVOLVES MULTIPLE MASTER GAGES USED TO ZERO THE INSTRUMENT, WHERE EACH GAGE IS MACHINED TO HAVE A DIFFERENT BORED DEPTH FOR MALE ZEROING RELATIVE TO STANDARD. HENCE TO HAVE A UNIVERSAL TYPE N GAGING PLATFORM ADDITION INVESTMENT MUST BE MADE IN SEVERAL MASTER GAGES IN ADDITION TO THE CORE INSTRUMENT.

THE VM APPROACH IS BASED ON A NOVEL STEP FEATURE IN A BUSHING THAT ATTACHES TO THE HOST INDICATOR. THIS FEATURES MATCHES THE GEOMETRY OF BOTH THE N MALE AND FEMALE. MOREOVER, SINCE THE FEATURE NOW MATCHES THE GEOMETRY OF BOTH GENDERS RELATIVE TO A COMMON PLANE, THERE IS NO LONGER ANY NEED FOR MULTIPLE MASTER GAGES.

THE VM APPROACH IS THEREFORE THE ONLY TRULY UNIVERSAL APPROACH IN TERMS OF BOTH GENDER AND STANDARD. HENCE ONLY ONE GAGE AND ONE MASTER ZEROING COMPONENT IS REQUIRED TO DETERMINE COMPLIANCE WITH STANDARD, WHERE THE LATTER EMBODIES ALL STANDARDS INCLUDING PURELY ARBITRARY ONES THAT MAY BE RELATIVE TO A SPECIFIC INDUSTRIAL APPLICATION OR PREFERENCE. TH VM APPROACH BENDS THE COST CURVE LOWER AND ALSO INCREASES POTENTIAL ACCURACY WITH REGARD TO COMPLIANCE INTERPRETATION.

THE EASE OF COMPLIANCE INTERPRETATION IS ALSO FACILITATED BY THE USE OF RICH GRAPHICS ON THE FRONT AND REAR OF THE INSTRUMENT THAT DEFINES THE TOLERANCE ZONES BOTH NUMERICALLY AND PICTORIALLY FOR THE COMMON STANDARDS.



GENERAL SPECIFICATION

- ~SURFACE FINISH OF Ra4 - Ra16 ON WORKING SLIDABLE SURFACE; BETTER THAN Ra32 IN REGIONS OF NON-CONTACT.
- ~MASTER GAGE FINISH OF Ra 8 OR BETTER.
- ~PRECISION SWISS TURNED AND MILLED STAINLESS STEEL.
- ~CRITICAL TOLERANCES OF 0.0005.
- ~DIAL ACCURACY OF +/- 0.0005
- ~ALL STAINLESS COMPONENTS PASSIVATED PER ASTM-A967.
- ~DIAL FASCIA AND DIAL BACKS WITH STANDARDS DELINEATION.

WARRANTY: ALL PERFORMANCE SERIES GAGES COME WITH A TEN YEAR WARRANTY ON STAINLESS COMPONENTS AND A ONE YEAR WARRANTY ON THE HOST INDICATOR.

PRECISION GAGE KITS

TYPE N~PERFORMANCE SERIES

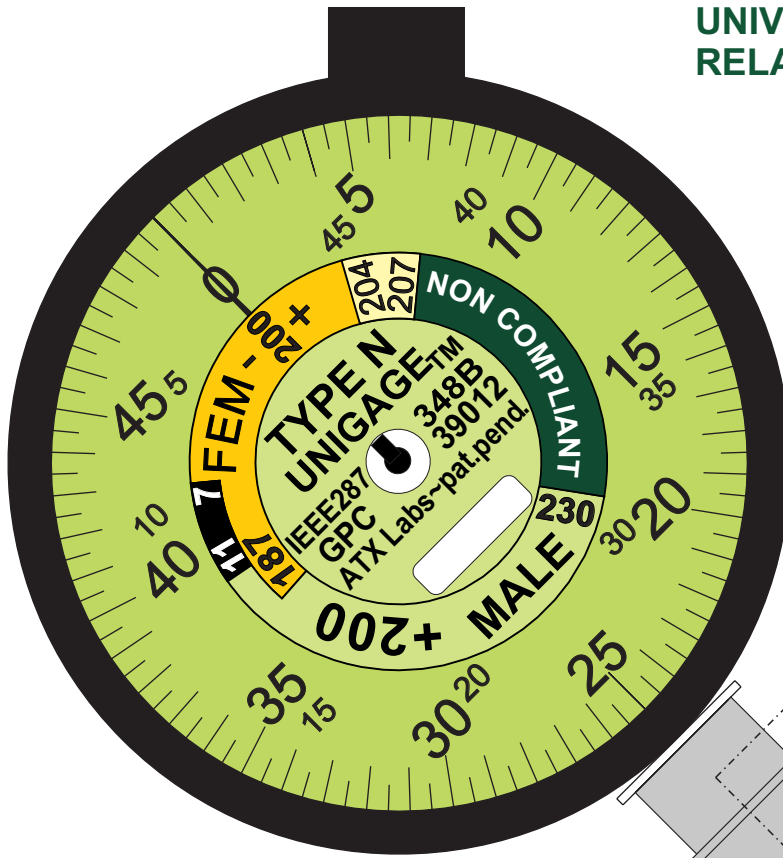
MALE & FEMALE PIN

Velocity Microwave ~ div. ATX Labs

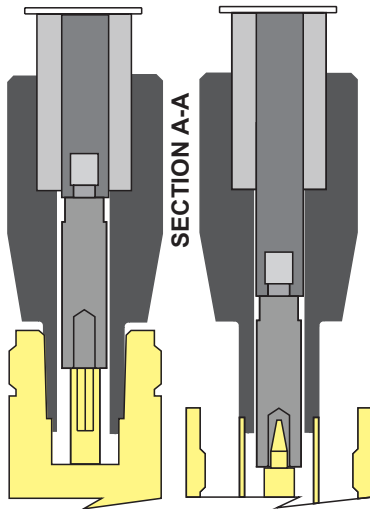
www.velocitymicrowave.com

UNIVERSAL N GAGE RELATIVE TO STANDARDS

VM TYPE N LAB AND PERFORMANCE GRADES FEATURE A PAT. PEND. GEOMETRIC MEANS THAT ALLOWS THE GAGE TO BE USED WITH ANY STANDARD INCLUDING MIL-C-348B, MIL-C-39012, IEEE287GPC AND IEEE287LPC AS WELL AS INDUSTRY STANDARDS. ZEROING THEREFORE USES A NOVEL MEANS THAT RELATES TO ALL STANDARDS.

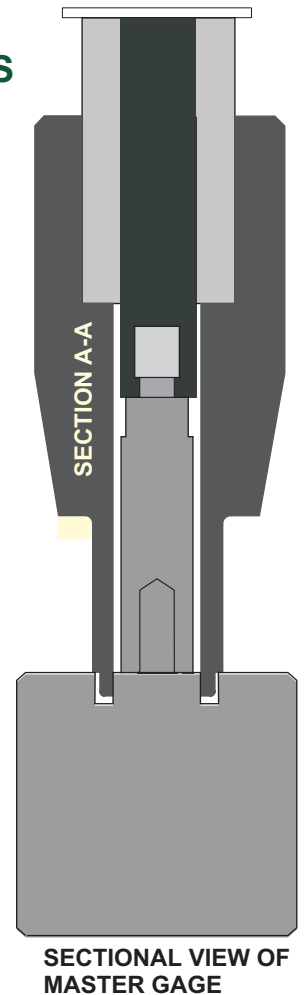
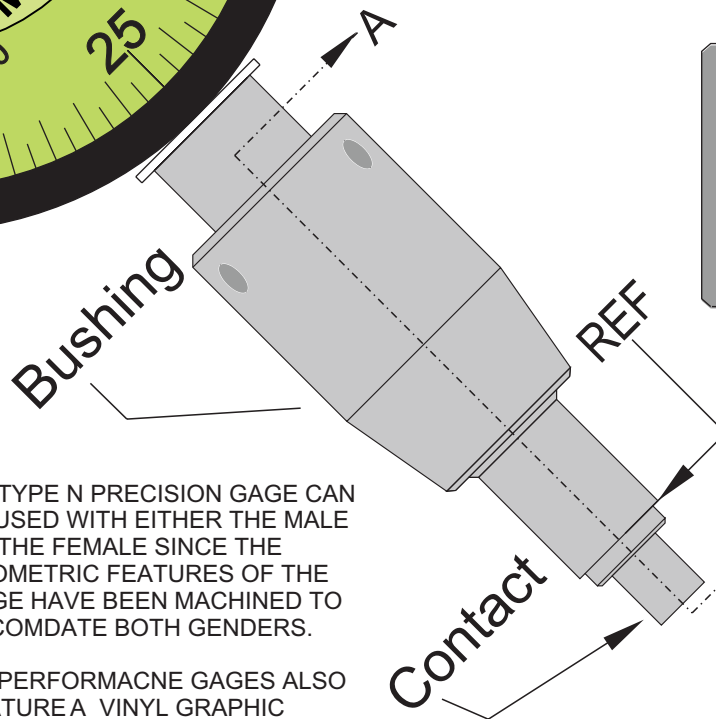


UNIVERSAL N GAGE RELATIVE TO GENDER

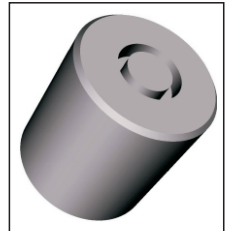


VM TYPE N PRECISION GAGE CAN BE USED WITH EITHER THE MALE OR THE FEMALE SINCE THE GEOMETRIC FEATURES OF THE GAGE HAVE BEEN MACHINED TO ACCOMDATE BOTH GENDERS.

VM PERFORMANCE GAGES ALSO FEATURE A VINYL GRAPHIC OVERLAY ON THE BEZEL LENS THAT PROVIDES THE TOLERANCE ZONES FOR MAJOR STANDARDS TO SIMPLYFY AND EXPEDITE COMPLIANCE INTERPRETATION.



SECTIONAL VIEW OF
MASTER GAGE



TYPE N GAGE PERFORMANCE SERIES

GENERAL SPECIFICATION

- ~SURFACE FINISH OF Ra4 - Ra16 ON WORKING SLIDABLE SURFACE; BETTER THAN Ra32 IN REGIONS OF NON-CONTACT.
- ~MASTER GAGE FINISH OF Ra 8 OR BETTER.
- ~PRECISION SWISS TURNED AND MILLED STAINLESS STEEL.
- ~CRITICAL TOLERANCES OF 0.0005.
- ~DIAL ACCURACY OF +/- 0.0005
- ~ALL STAINLESS COMPONENTS PASSIVATED PER ASTM-A967.
- ~DIAL FASCIA AND DIAL BACKS WITH STANDARDS DELINEATION.

WARRANTY: ALL PERFORMANCE SERIES GAGES COME WITH A TEN YEAR WARRANTY ON STAINLESS COMPONENTS AND A ONE YEAR WARRANTY ON THE HOST INDICATOR.

PRECISION GAGE KITS

✱ TYPE N~PERFORMANCE SERIES ✱

MALE & FEMALE PIN

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