



Howmet Fastening Systems
 Carson Operations
 900 E. Watson Center Road
 Carson, California 90745 U.S.A.

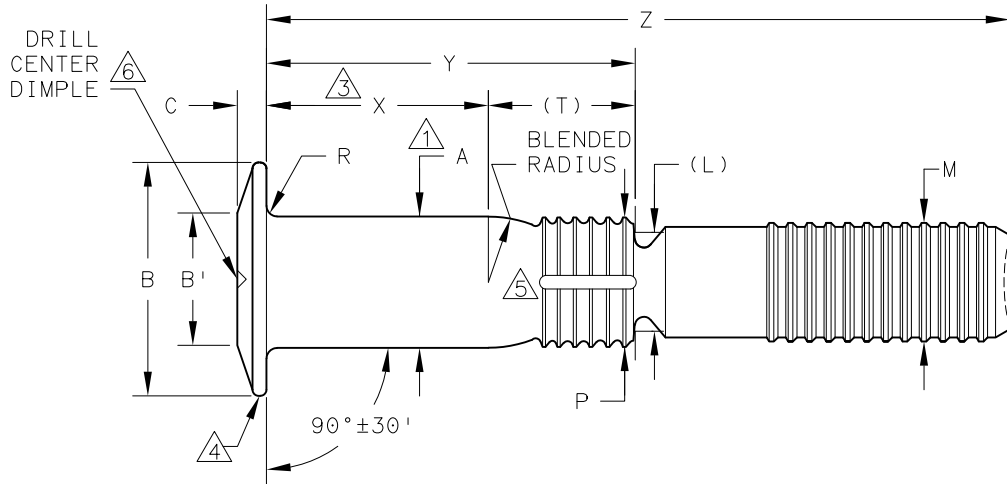
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Howmet Fastening Systems
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LGP®
 Composite
**ENGINEERING
 STANDARD**

THIS DRAWING, THE STRUCTURAL DESIGN DISCLOSED THEREIN AND THE TECHNICAL DATA AND ENGINEERING SERVICE REPRESENTED THEREBY ARE THE EXCLUSIVE PROPERTY OF HUCK INTERNATIONAL INCORPORATED.



| LGP PIN FAMILY NUMBER | NOM SIZE | A SHANK DIA | | B HEAD DIA ±.010 | B' FLAT DIA ±.010 | C HEAD HEIGHT | (L) DIA REF | M MAX | P DIA MAX | R RAD ±.005 | S Δ | (T) REF |
|------------------------|----------|---------------------|---------------|------------------|-------------------|---------------|-------------|-------|-----------|-------------|------------|---------|
| | | BARE +.0005 - .0000 | COATED ±.0005 | | | | | | | | | |
| (H)LGPL9SP-V05B() () | .1640 | .1630 | .1630 | .334 | .214 | .048 .038 | .126 | .156 | .156 | .020 | .0045 | .175 |
| (H)LGPL9SP-V06B() () | .1900 | .1890 | .1890 | .377 | .242 | .062 .047 | .150 | .184 | .184 | .020 | .0045 | .176 |
| (H)LGPL9SP-V07B() () | .2187 | .2177 | .2177 | .427 | .273 | .069 .054 | .173 | .213 | .213 | .020 | .0045 | .244 |
| (H)LGPL9SP-V08B() () | .2500 | .2490 | .2490 | .477 | .303 | .076 .061 | .187 | .244 | .244 | .020 | .0045 | .244 |
| (H)LGPL9SP-V10B() () | .3125 | .3115 | .3115 | .599 | .381 | .086 .071 | .244 | .306 | .306 | .025 | .0045 | .313 |
| (H)LGPL9SP-V12B() () | .3750 | .3740 | .3740 | .715 | .452 | .101 .086 | .298 | .370 | .370 | .025 | .0060 | .374 |
| (H)LGPL9SP-V14B() () | .4375 | .4365 | .4365 | .778 | .500 | .123 .108 | .312 | .431 | .431 | .025 | .0060 | .437 |
| (H)LGPL9SP-V16B() () | .5000 | .4990 | .4990 | .848 | .562 | .140 .125 | .375 | .492 | .492 | .025 | .0060 | .503 |

- ① CONCENTRICITY: CONICAL SURFACE OF PROTRUDING HEAD TO "A" SHANK DIAMETER TO BE WITHIN .008 TIR.
- ② SHANK STRAIGHTNESS: WITHIN "S" VALUES TIR PER INCH OF SHANK LENGTH.
- ③ GRIP LENGTH IS MEASURED FROM THE UNDERSIDE OF THE HEAD TO THE END OF THE FULL CYLINDRICAL PORTION OF THE SHANK.
- ④ PERMISSIBLE NATURAL FLOW OF MATERIAL. MUST BE FREE FROM SHARP CORNERS.
- ⑤ SEALANT ESCAPE GROOVE.
- ⑥ DRILL CENTER DIMPLE IN TOP OF HEAD .035 REF DIA., .010 MAX DEPTH AND CONCENTRIC TO "A" WITHIN .008

PROCUREMENT SPECIFICATION: C2022

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DIMENSIONS IN INCHES

| | | |
|------------|----|---------------------------------|
| DRAWN BY | DH | FSCM (Cage Code) 17446 - Carson |
| CHECKED BY | MM | FSCM (Cage Code) F6167 - France |

| | | | | |
|--------|----------|--|-------------------------|----------|
| ISSUED | 07/08/81 | PIN, COMPOSITE APPLICATIONS, LIGHTWEIGHT HUCKCOMP LGP, SHEAR TYPE, PROTRUDING HEAD, SWAGE LOCKING, 6AL-4V TITANIUM. (95 KSI SHEAR) | (H)LGPL9SP-V()B() () | |
| | REVISD | | | 08/06/21 |
| | PAGE | | | 1 OF 5 |

F₁₂



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F₁₂

MATERIAL: 6AL-4V TITANIUM ALLOY PER AMS4967.

SHEAR STRENGTH: 95 KSI MINIMUM.

SURFACE TEXTURE: R_a MAX PER ANSI/ASME B46.1 BEFORE COATING. CONICAL SURFACE OF HEAD, HEAD TO SHANK FILLET RADIUS, SHANK AND TRANSITION RADIUS, -32, OTHER SURFACES -125.

FINISH SUFFIX:

- AC = ALUMINUM COATING KAL-GARD 2240C (EU ONLY) / HI-KOTE™ 1 PER NAS4006 OR KAL-GARD 2242 / HI-KOTE™ 1 NC PER NAS4006NC, OPTIONAL ON PINTAIL END. PLUS CETYL ALCOHOL LUBE PER AS87132.
- AD = ALUMINUM COAT (KAL-GARD 2245) PER NAS4006 OPTIONAL TO COLOR PINTAIL END WHITE, PLUS CETYL ALCOHOL LUBE PER AS87132.
- AS = SULFURIC ACID ANODIZE (BLUE) PER ISO 8080 PLUS CETYL ALCOHOL LUBE PER AS87132.
- B = UNCOATED PIN AND NO LUBRICATION.
- D = ION VAPOR DEPOSITED ALUMINUM COATING PER MIL-DTL-83488 TYPE II CLASS3, OPTIONAL TO COLOR PINTAIL END BLACK, PLUS CETYL ALCOHOL LUBE PER AS87132.
- EP = PHOSPHATE FLUORIDE TREAT PER AMS2486.
- EPR = PHOSPHATE FLUORIDE PER BAC5861 WITH RED IDENTIFICATION DYE ON PINTAIL END, PLUS CETYL ALCOHOL LUBE PER AS87132.
- PB = POWDER BLASTED TOP SURFACE OF HEAD PLUS CETYL ALCOHOL LUBE PER AS87132 (R_a 50/80 SURFACE ROUGHNESS).
- NONE = UNCOATED PIN PLUS CETYL ALCOHOL LUBE PER AS87132.

HEAD MARKING: HEADS SHALL BE MARKED WITH THE MANUFACTURER'S SYMBOL, THE BASIC PART NUMBER "LGP9" AND "VB," DEPRESSED .006 MAX DEPTH, ARRANGEMENT OPTIONAL. FOR PINS WITH A SEALANT ESCAPE GROOVE, AN "H" WILL BE INCLUDED ON THE HEAD IDENTIFICATION CALLOUT.

CODING: THE FIRST SET OF LETTERS DESIGNATES THE FAMILY OF LIGHTWEIGHT LGP PINS FOR SHEAR APPLICATIONS (LGPL).

THE SECOND SET OF NUMBER AND LETTERS DESIGNATES HEAD SIZE, LOAD APPLICATION, AND STYLE.

THE NEXT LETTER "V" IS THE MATERIAL DESIGNATOR FOR 6AL-4V TITANIUM ALLOY PIN "V" MINIMUM SHEAR STRENGTH 95 KSI.

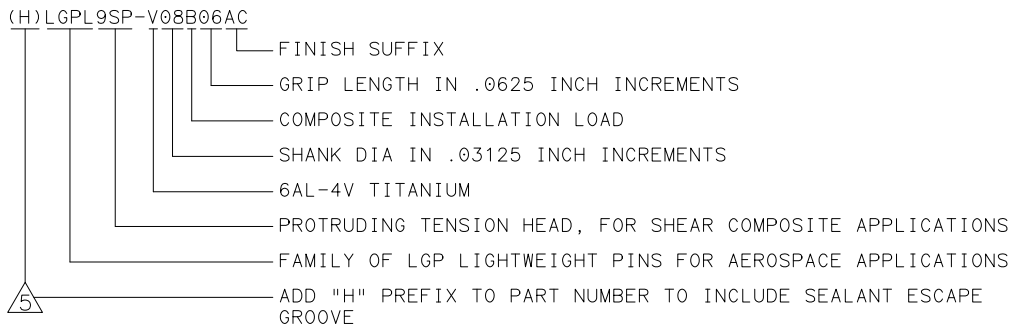
THE NUMBERS FOLLOWING THE MATERIAL DESIGNATE THE NOMINAL PIN SHANK DIAMETER IN .03125 INCH INCREMENTS.

THE LETTER "B" REPRESENTS COMPOSITE INSTALLATION LOAD.

THE FINAL NUMBERS DESIGNATE THE GRIP LENGTH NUMBER OR THE NOMINAL PIN SHANK LENGTH IN .0625 INCH INCREMENTS.

IF APPLICABLE A FINISH SUFFIX DESIGNATES FINISH OPTION.

PART NO. EXAMPLE:



| | | | |
|-----------------|--|--|-------------------------|
| F ₁₂ | REVISED COMPANY LOGO & UPDATED TRADEMARK INFORMATION. CHANGED "KALGARD" TO "KAL-GARD" ON PAGE 2. (REF. ECR2779) | | |
| ISSUED | 07/08/81 | PIN, COMPOSITE APPLICATIONS, LIGHTWEIGHT HUCKCOMP LGP, SHEAR TYPE, PROTRUDING HEAD, SWAGE LOCKING, 6AL-4V TITANIUM. (95 KSI SHEAR) | (H)LGPL9SP-V()B() () |
| REVISED | 08/06/21 | | |
| PAGE | 2 OF 5 | | COM102 |



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| MECHANICAL PROPERTIES | | | | | | STANDARD COMPOSITE APPLICATIONS |
|-----------------------|----------|-------------------------------|--------------------|--|-------------------------|---------------------------------|
| LGP PIN FAMILY NUMBER | NOM SIZE | MIMUMUM DOUBLE SHEAR (POUNDS) | COLLAR PART NUMBER | MIN ULTIMATE TENSILE WITH LISTED COLLAR (POUNDS) | PIN POSITION SWAGE GAGE | |
| (H)LGPL9SP-V05B() | .1640 | 4,010 | SLFC-MV05 | 1,500 | HG118-05 | |
| (H)LGPL9SP-V06B() | .1900 | 5,380 | SLFC-MV06 | 1,900 | HG118-06 | |
| (H)LGPL9SP-V07B() | .2187 | 7,200 | SLFC-MV07 | 2,250 | HG118-07 | |
| (H)LGPL9SP-V08B() | .2500 | 9,300 | SLFC-MV08 | 3,450 | HG118-08 | |
| (H)LGPL9SP-V10B() | .3125 | 14,600 | SLFC-MV10 | 6,000 | HG118-10 | |
| (H)LGPL9SP-V12B() | .3750 | 21,000 | SLFC-MV12 | 8,000 | HG118-12 | |
| (H)LGPL9SP-V14B() | .4375 | 28,600 | SLFC-MV14 | 12,100 | HG118-14 | |
| (H)LGPL9SP-V16B() | .5000 | 37,300 | SLFC-MV16 | 15,300 | HG118-16 | |

| MECHANICAL PROPERTIES | | | | | | OPTIONAL COMPOSITE/METALLIC APPLICATIONS |
|-----------------------|----------|-------------------------------|--------------------|--|-------------------------|--|
| LGP PIN FAMILY NUMBER | NOM SIZE | MIMUMUM DOUBLE SHEAR (POUNDS) | COLLAR PART NUMBER | MIN ULTIMATE TENSILE WITH LISTED COLLAR (POUNDS) | PIN POSITION SWAGE GAGE | |
| (H)LGPL9SP-V05B() | .1640 | 4,010 | 3SLC-C05 | 1,400 | HG131-05 | |
| (H)LGPL9SP-V06B() | .1900 | 5,380 | 3SLC-C06 | 1,600 | HG131-06 | |
| (H)LGPL9SP-V07B() | .2187 | 7,200 | 3SLC-C07 | 2,250 | HG131-07 | |
| (H)LGPL9SP-V08B() | .2500 | 9,300 | 3SLC-C08 | 3,000 | HG131-08 | |
| (H)LGPL9SP-V10B() | .3125 | 14,600 | 3SLC-C10 | 5,000 | HG131-10 | |
| (H)LGPL9SP-V12B() | .3750 | 21,000 | 3SLC-C12 | 7,000 | HG131-12 | |
| (H)LGPL9SP-V14B() | .4375 | 28,600 | 3SLC-C14 | 9,500 | HG131-14 | |
| (H)LGPL9SP-V16B() | .5000 | 37,300 | 3SLC-C16 | 12,500 | HG131-16 | |

DIMENSIONS IN INCHES

| | | | | |
|------|--|----------|--|-------------------|
| F12 | REVISED COMPANY LOGO & UPDATED TRADEMARK INFORMATION. CHANGED "KALGARD" TO "KAL-GARD" ON PAGE 2. (REF. ECR2779) | | PIN, COMPOSITE APPLICATIONS, LIGHTWEIGHT HUCKCOMP LGP, SHEAR TYPE, PROTRUDING HEAD, SWAGE LOCKING, 6AL-4V TITANIUM. (95 KSI SHEAR) | (H)LGPL9SP-V()B() |
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| GRIP NUMBER TABULATION FOR 05Ø THRU 08Ø | | | | | | | | | | | | | |
|---|--|----------------------|-------|--|------------|------------|---------------------|------------|---------------------|------------|---------------------|------------|---------------------|
| GRIP DASH NO. | PERMIS- SIBLE MINIMUM GRIP OVERLAP | DESIGN GRIP RANGE | | PERMIS- SIBLE MAXIMUM GRIP OVERLAP | X ±.005 | 05 | | 06 | | 07 | | 08 | |
| | | MIN. | MAX. | | | Y ±.010 | Z +.060 -.000 | Y ±.010 | Z +.060 -.000 | Y ±.010 | Z +.060 -.000 | Y ±.010 | Z +.060 -.000 |
| | | | | | | | | | | | | | |
| 02 | .047 | .063 | .125 | .141 | .125 | .300 | .827 | .301 | .899 | .369 | .969 | .369 | 1.022 |
| 03 | .109 | .126 | .188 | .203 | .188 | .363 | .890 | .364 | .962 | .432 | 1.032 | .432 | 1.085 |
| 04 | .172 | .189 | .250 | .266 | .250 | .425 | .952 | .426 | 1.024 | .494 | 1.094 | .494 | 1.147 |
| 05 | .234 | .251 | .312 | .328 | .312 | .487 | 1.014 | .488 | 1.086 | .556 | 1.156 | .556 | 1.209 |
| 06 | .297 | .313 | .375 | .391 | .375 | .550 | 1.077 | .551 | 1.149 | .619 | 1.219 | .619 | 1.272 |
| 07 | .359 | .376 | .438 | .453 | .438 | .613 | 1.140 | .614 | 1.212 | .682 | 1.282 | .682 | 1.335 |
| 08 | .422 | .439 | .500 | .516 | .500 | .675 | 1.202 | .676 | 1.274 | .744 | 1.344 | .744 | 1.397 |
| 09 | .484 | .501 | .562 | .578 | .562 | .737 | 1.264 | .738 | 1.336 | .806 | 1.406 | .806 | 1.459 |
| 10 | .547 | .563 | .625 | .641 | .625 | .800 | 1.327 | .801 | 1.399 | .869 | 1.469 | .869 | 1.522 |
| 11 | .609 | .626 | .688 | .703 | .688 | .863 | 1.390 | .864 | 1.462 | .932 | 1.532 | .932 | 1.585 |
| 12 | .672 | .689 | .750 | .766 | .750 | .925 | 1.452 | .926 | 1.524 | .994 | 1.594 | .994 | 1.647 |
| 13 | .734 | .751 | .812 | .828 | .812 | .987 | 1.514 | .988 | 1.586 | 1.056 | 1.656 | 1.056 | 1.709 |
| 14 | .797 | .813 | .875 | .891 | .875 | 1.050 | 1.577 | 1.051 | 1.649 | 1.119 | 1.719 | 1.119 | 1.772 |
| 15 | .859 | .876 | .938 | .953 | .938 | 1.113 | 1.640 | 1.114 | 1.712 | 1.182 | 1.782 | 1.182 | 1.835 |
| 16 | .922 | .939 | 1.000 | 1.016 | 1.000 | 1.175 | 1.702 | 1.176 | 1.774 | 1.244 | 1.844 | 1.244 | 1.897 |
| 17 | .984 | 1.001 | 1.062 | 1.078 | 1.062 | 1.237 | 1.764 | 1.238 | 1.836 | 1.306 | 1.906 | 1.306 | 1.959 |
| 18 | 1.047 | 1.063 | 1.125 | 1.141 | 1.125 | 1.300 | 1.827 | 1.301 | 1.899 | 1.369 | 1.969 | 1.369 | 2.022 |
| 19 | 1.109 | 1.126 | 1.188 | 1.203 | 1.188 | 1.363 | 1.890 | 1.364 | 1.962 | 1.432 | 2.032 | 1.432 | 2.085 |
| 20 | 1.172 | 1.189 | 1.250 | 1.266 | 1.250 | 1.425 | 1.952 | 1.426 | 2.024 | 1.494 | 2.094 | 1.494 | 2.147 |
| 21 | 1.234 | 1.251 | 1.312 | 1.328 | 1.312 | 1.487 | 2.014 | 1.488 | 2.086 | 1.556 | 2.156 | 1.556 | 2.209 |
| 22 | 1.297 | 1.313 | 1.375 | 1.391 | 1.375 | 1.550 | 2.077 | 1.551 | 2.149 | 1.619 | 2.219 | 1.619 | 2.272 |
| 23 | 1.359 | 1.376 | 1.438 | 1.453 | 1.438 | 1.613 | 2.140 | 1.614 | 2.212 | 1.682 | 2.282 | 1.682 | 2.335 |
| 24 | 1.422 | 1.439 | 1.500 | 1.516 | 1.500 | 1.675 | 2.202 | 1.676 | 2.274 | 1.744 | 2.344 | 1.744 | 2.397 |
| 25 | 1.484 | 1.501 | 1.562 | 1.578 | 1.562 | 1.737 | 2.264 | 1.738 | 2.336 | 1.806 | 2.406 | 1.806 | 2.459 |
| 26 | 1.547 | 1.563 | 1.625 | 1.641 | 1.625 | 1.800 | 2.327 | 1.801 | 2.399 | 1.869 | 2.469 | 1.869 | 2.522 |
| 27 | 1.609 | 1.626 | 1.688 | 1.703 | 1.688 | 1.863 | 2.390 | 1.864 | 2.462 | 1.932 | 2.532 | 1.932 | 2.585 |
| 28 | 1.672 | 1.689 | 1.750 | 1.766 | 1.750 | 1.925 | 2.452 | 1.926 | 2.524 | 1.994 | 2.594 | 1.994 | 2.647 |
| 29 | 1.734 | 1.751 | 1.812 | 1.828 | 1.812 | 1.987 | 2.514 | 1.988 | 2.586 | 2.056 | 2.656 | 2.056 | 2.709 |
| 30 | 1.797 | 1.813 | 1.875 | 1.891 | 1.875 | 2.050 | 2.577 | 2.051 | 2.649 | 2.119 | 2.719 | 2.119 | 2.772 |
| 31 | 1.859 | 1.876 | 1.938 | 1.953 | 1.938 | 2.113 | 2.640 | 2.114 | 2.712 | 2.182 | 2.782 | 2.182 | 2.835 |
| 32 | 1.922 | 1.939 | 2.000 | 2.016 | 2.000 | 2.175 | 2.702 | 2.176 | 2.774 | 2.244 | 2.844 | 2.244 | 2.897 |

DIMENSIONS IN INCHES

| | | | |
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| ISSUED | 07/08/81 | PIN, COMPOSITE APPLICATIONS, LIGHTWEIGHT HUCKCOMP LGP, SHEAR TYPE, PROTRUDING HEAD, SWAGE LOCKING, 6AL-4V TITANIUM. (95 KSI SHEAR) | (H) LGPL9SP-V() B() () |
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| GRIP NUMBER TABULATION FOR 10Ø THRU 16Ø | | | | | | | | | | | | | |
|---|--|----------------------|-------|--|------------|------------|---------------------|------------|---------------------|------------|---------------------|------------|---------------------|
| GRIP DASH NO. | PERMIS- SIBLE MINIMUM GRIP OVERLAP | DESIGN GRIP RANGE | | PERMIS- SIBLE MAXIMUM GRIP OVERLAP | X ±.005 | 10 | | 12 | | 14 | | 16 | |
| | | MIN. | MAX. | | | Y ±.010 | Z +.060 -.000 | Y ±.010 | Z +.060 -.000 | Y ±.010 | Z +.060 -.000 | Y ±.010 | Z +.060 -.000 |
| | | | | | | | | | | | | | |
| 02 | .047 | .063 | .125 | .141 | .125 | - | - | - | - | - | - | - | - |
| 03 | .109 | .126 | .188 | .203 | .188 | .501 | 1.199 | - | - | - | - | - | - |
| 04 | .172 | .189 | .250 | .266 | .250 | .563 | 1.261 | .624 | 1.391 | .687 | 1.559 | .753 | 1.715 |
| 05 | .234 | .251 | .312 | .328 | .312 | .625 | 1.323 | .686 | 1.453 | .749 | 1.621 | .815 | 1.777 |
| 06 | .297 | .313 | .375 | .391 | .375 | .688 | 1.386 | .749 | 1.516 | .812 | 1.684 | .878 | 1.840 |
| 07 | .359 | .376 | .438 | .453 | .438 | .751 | 1.449 | .812 | 1.579 | .875 | 1.747 | .941 | 1.903 |
| 08 | .422 | .439 | .500 | .516 | .500 | .813 | 1.511 | .874 | 1.641 | .937 | 1.809 | 1.003 | 1.965 |
| 09 | .484 | .501 | .562 | .578 | .562 | .875 | 1.573 | .936 | 1.703 | .999 | 1.871 | 1.065 | 2.027 |
| 10 | .547 | .563 | .625 | .641 | .625 | .938 | 1.636 | .999 | 1.766 | 1.062 | 1.934 | 1.128 | 2.090 |
| 11 | .609 | .626 | .688 | .703 | .688 | 1.001 | 1.699 | 1.062 | 1.829 | 1.125 | 1.997 | 1.191 | 2.153 |
| 12 | .672 | .689 | .750 | .766 | .750 | 1.063 | 1.761 | 1.124 | 1.891 | 1.187 | 2.059 | 1.253 | 2.215 |
| 13 | .734 | .751 | .812 | .828 | .812 | 1.125 | 1.823 | 1.186 | 1.953 | 1.249 | 2.121 | 1.315 | 2.277 |
| 14 | .797 | .813 | .875 | .891 | .875 | 1.188 | 1.886 | 1.249 | 2.016 | 1.312 | 2.184 | 1.378 | 2.340 |
| 15 | .859 | .876 | .938 | .953 | .938 | 1.251 | 1.949 | 1.312 | 2.079 | 1.375 | 2.247 | 1.441 | 2.403 |
| 16 | .922 | .939 | 1.000 | 1.016 | 1.000 | 1.313 | 2.011 | 1.374 | 2.141 | 1.437 | 2.309 | 1.503 | 2.465 |
| 17 | .984 | 1.001 | 1.062 | 1.078 | 1.062 | 1.375 | 2.073 | 1.436 | 2.203 | 1.499 | 2.371 | 1.565 | 2.527 |
| 18 | 1.047 | 1.063 | 1.125 | 1.141 | 1.125 | 1.438 | 2.136 | 1.499 | 2.266 | 1.562 | 2.434 | 1.628 | 2.590 |
| 19 | 1.109 | 1.126 | 1.188 | 1.203 | 1.188 | 1.501 | 2.199 | 1.562 | 2.329 | 1.625 | 2.497 | 1.691 | 2.653 |
| 20 | 1.172 | 1.189 | 1.250 | 1.266 | 1.250 | 1.563 | 2.261 | 1.624 | 2.391 | 1.687 | 2.559 | 1.753 | 2.715 |
| 21 | 1.234 | 1.251 | 1.312 | 1.328 | 1.312 | 1.625 | 2.323 | 1.686 | 2.453 | 1.749 | 2.621 | 1.815 | 2.777 |
| 22 | 1.297 | 1.313 | 1.375 | 1.391 | 1.375 | 1.688 | 2.386 | 1.749 | 2.516 | 1.812 | 2.684 | 1.878 | 2.840 |
| 23 | 1.359 | 1.376 | 1.438 | 1.453 | 1.438 | 1.751 | 2.449 | 1.812 | 2.579 | 1.875 | 2.747 | 1.941 | 2.903 |
| 24 | 1.422 | 1.439 | 1.500 | 1.516 | 1.500 | 1.813 | 2.511 | 1.874 | 2.641 | 1.937 | 2.809 | 2.003 | 2.965 |
| 25 | 1.484 | 1.501 | 1.562 | 1.578 | 1.562 | 1.875 | 2.573 | 1.936 | 2.703 | 1.999 | 2.871 | 2.065 | 3.027 |
| 26 | 1.547 | 1.563 | 1.625 | 1.641 | 1.625 | 1.938 | 2.636 | 1.999 | 2.766 | 2.062 | 2.934 | 2.128 | 3.090 |
| 27 | 1.609 | 1.626 | 1.688 | 1.703 | 1.688 | 2.001 | 2.699 | 2.062 | 2.829 | 2.125 | 2.997 | 2.191 | 3.153 |
| 28 | 1.672 | 1.689 | 1.750 | 1.766 | 1.750 | 2.063 | 2.761 | 2.124 | 2.891 | 2.187 | 3.059 | 2.253 | 3.215 |
| 29 | 1.734 | 1.751 | 1.812 | 1.828 | 1.812 | 2.125 | 2.823 | 2.186 | 2.953 | 2.249 | 3.121 | 2.315 | 3.277 |
| 30 | 1.797 | 1.813 | 1.875 | 1.891 | 1.875 | 2.188 | 2.886 | 2.249 | 3.016 | 2.312 | 3.184 | 2.378 | 3.340 |
| 31 | 1.859 | 1.876 | 1.938 | 1.953 | 1.938 | 2.251 | 2.949 | 2.312 | 3.079 | 2.375 | 3.247 | 2.441 | 3.403 |
| 32 | 1.922 | 1.939 | 2.000 | 2.016 | 2.000 | 2.313 | 3.011 | 2.374 | 3.141 | 2.437 | 3.309 | 2.503 | 3.465 |

DIMENSIONS IN INCHES

| | | | |
|--------|----------|--|---------------------------|
| ISSUED | 07/08/81 | PIN, COMPOSITE APPLICATIONS, LIGHTWEIGHT HUCKCOMP LGP, SHEAR TYPE, PROTRUDING HEAD, SWAGE LOCKING, 6AL-4V TITANIUM. (95 KSI SHEAR) | (H) LGPL9SP-V() B() () |
| | 08/06/21 | | |
| | 5 OF 5 | | |

F 12

REVISED COMPANY LOGO & UPDATED TRADEMARK INFORMATION.
 CHANGED "KALGARD" TO "KAL-GARD" ON PAGE 2. (REF. ECR2779)