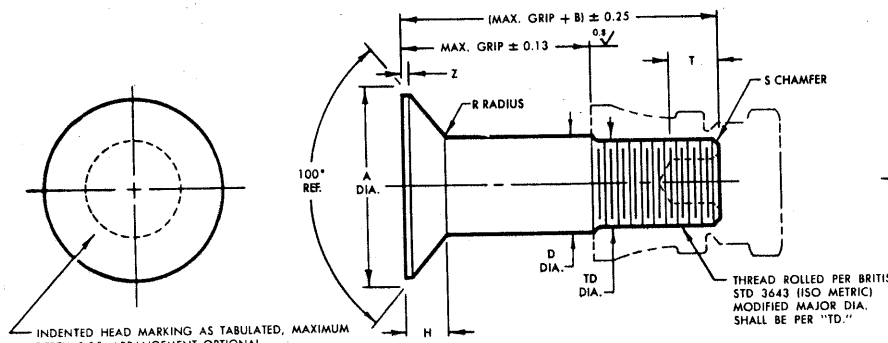
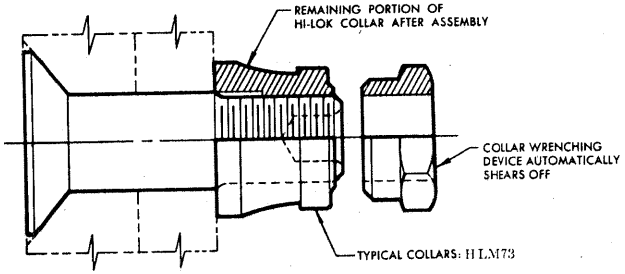
**STANDARDS COMMITTEE FOR HI-LOK® PRODUCTS**
2600 SKYPARK DRIVE, TORRANCE, CALIFORNIA 90509

HI-SHEAR CORPORATION (Patent Holder) — Federal Code Ident. No. 73197
VOI-SHAN DIV., VSI CORP. (Licensee) — Federal Code Ident. No. 92215
STANDARD PRESSED STEEL CO. (Licensee) — Federal Code Ident. No. 56878




HI-LOK PIN (METRIC)




HI-LOK PIN AND COLLAR AFTER ASSEMBLY

SEE COLLAR STANDARDS FOR COLLAR STRENGTHS. LOWER STRENGTH (PIN OR COLLAR) DETERMINES SYSTEM STRENGTH.

| FIRST DASH NO. | HEAD MARKING | NOM. DIA. | A DIA. ① | B REF. | D DIA. | TD DIA. | F [1] | H ① | R RAD. | Z | S CHAMFER REF. | THREAD (MODIFIED) | SOCKET * W HEX. | SOCKET T DEPTH | DOUBLE SHEAR NEWTONS MINIMUM | TENSION NEWTONS MINIMUM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| –04 | HLM29M4 | 4 | 8.13<br>7.99 | 8.35 | 3.990<br>3.965 | 3.91<br>3.86 | 0.11 | 1.74<br>1.68 | 0.65<br>0.40 | 0.25<br>0.13 | 0.8 x 45° | M4 x 0.7-4h | 1.64<br>1.61 | 2.05<br>1.65 | 22800 | 13800 |
| –05 | HLM29M5 | 5 | 10.13<br>9.99 | 8.65 | 4.990<br>4.965 | 4.90<br>4.84 | 0.13 | 2.16<br>2.10 | 0.75<br>0.50 | 0.38<br>0.13 | 0.8 x 45° | M5 x 0.8-4h | 2.05<br>2.01 | 2.55<br>2.00 | 35700 | 22000 |
| –06 | HLM29M6 | 6 | 12.13<br>11.99 | 10.70 | 5.990<br>5.965 | 5.88<br>5.81 | 0.16 | 2.58<br>2.52 | 0.75<br>0.50 | 0.38<br>0.13 | 0.8 x 45° | M6 x 1.0-4h | 2.46<br>2.40 | 2.80<br>2.25 | 51400 | 31300 |
| –08 | HLM29M8 x 1 | 8 | 16.13<br>15.99 | 12.95 | 7.987<br>7.962 | 7.88<br>7.80 | 0.18 | 3.42<br>3.36 | 1.00<br>0.75 | 0.38<br>0.13 | 1.2 x 45° | M8 x 1.0-4h | 3.29<br>3.22 | 3.35<br>2.80 | 91500 | 59200 |
| –10 | HLM29M10 x 1 | 10 | 20.13<br>19.99 | 15.20 | 9.987<br>9.962 | 9.88<br>9.80 | 0.21 | 4.26<br>4.20 | 1.00<br>0.75 | 0.38<br>0.13 | 1.2 x 45° | M10 x 1.0-4h | 4.11<br>4.02 | 4.35<br>3.80 | 142900 | 95800 |
| –12 | HLM29M12 x 1.25 | 12 | 24.13<br>23.99 | 18.15 | 11.984<br>11.959 | 11.87<br>11.76 | 0.23 | 5.10<br>5.04 | 1.25<br>1.00 | 0.56<br>0.13 | 1.2 x 45° | M12 x 1.25-4h | 4.90<br>4.81 | 5.10<br>4.55 | 205800 | 141000 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

**GENERAL NOTES:**
1. Head edge out of roundness shall not exceed "F."
2. Concentricity: Conical surface of head to "D" diameter within 0.13 FIR.
3. "H" is dimensioned from maximum "D" diameter.
4. Dimensions to be met after finish.
5. Surface texture per ISO/DR221.
6. Use HLM129 for oversize replacement.

**MATERIAL:** Vacuum melted H-11 steel alloy per AMS6487.

**HEAT TREAT:** 1520-1655 N/mm$^2$ tensile per Spec. AMS6487.

**FINISH:** HLM29-( )-( ) = Diffused nickel-cadmium plating per Spec. AMS2416, and cetyl alcohol lube per Hi-Shear Spec. 305.
HLM29M-( )-( ) = Nickel-zinc alloy plating for AMS2417 and cetyl alcohol lube per Hi-Shear Spec. 305.

**SPECIFICATION:** Hi-Lok Product Specification M342.

**CODE:** First dash number indicates nominal diameter in 1 mm.
Second dash number indicates maximum grip in 1 mm.
See "Finish" note for explanation of code letters.

**HOW TO ORDER EXAMPLES:**

Pin Part Number Only
HLM29-04-8
- 8 mm Maximum Grip Length
- 4 mm Nominal Diameter Pin
- Pin Part Number

Pin and Collar Assembly Part Number Combination
HLM2973-04-8
- Size and Grip Length, See Above Example
- Collar Part Number
- Pin Part Number

* INCH STANDARD HEX.

U.S. patents 2,882,773; 2,927,491; 2,940,495; 3,027,789; 3,138,987; design patent 191,883; other U.S. and Foreign patents granted and pending; property of Hi-Shear Corporation. "Hi-Lok" and "HL" are Registered Trademarks of Hi-Shear Corporation.

| DRAWN | DATE | hi-lok® PIN |
|---|---|---|
| VAN | 12-2-71 | 100° FLUSH TENSION HEAD<br>H-11 STEEL ALLOY<br>1 mm GRIP VARIATION |
| APPROVED | DATE | |
| R.L.G. | 12-2-71 | |
| REVISION | DATE | DRAWING NUMBER |
| ① VAN | | HLM29 |

© 1973, Hi-Shear Corporation

HLM29