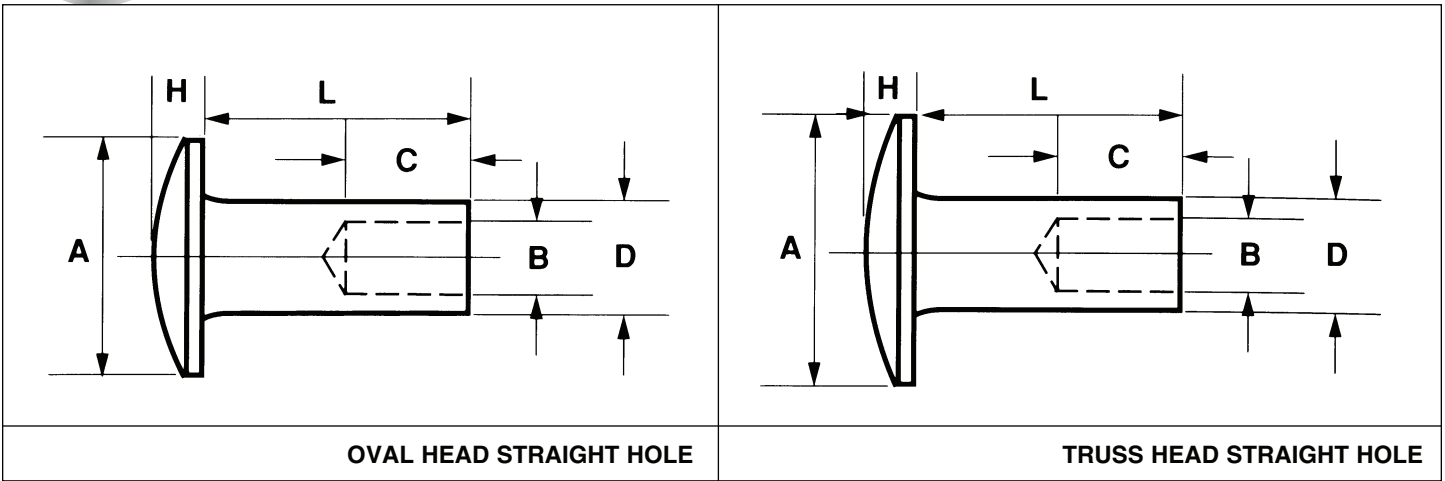




SEMI-TUBULAR RIVETS



“L” DIMENSION DETERMINED BY APPLICATION

| Nominal Shank Diameter | Shank Diameter D | | Head Style | Head Diameter A | | Head Thickness H | | Hole Diameter B | | Hole Depth C | Suggested Clinch Allowance | Hole Dia. in Assembly |
|------------------------|------------------|------|------------|-----------------|--------|------------------|--------|-----------------|------|--------------|----------------------------|-----------------------|
| | Min. | Max. | | Basic | Tol. | Basic | Tol. | Min. | Max. | | | |
| 1/16 | .058 | .061 | Oval | .109 | ± .005 | .017 | ± .002 | .039 | .044 | 0.046 | 0.040 | 0.067 |
| 1/16 | .058 | .061 | Truss | .125 | ± .005 | .017 | ± .002 | .039 | .044 | 0.046 | 0.040 | 0.067 |
| 3/32 | .085 | .089 | Oval | .147 | ± .005 | .023 | ± .003 | .062 | .068 | 0.064 | 0.045 | 0.093 |
| 3/32 | .085 | .089 | Truss | .187 | ± .005 | .023 | ± .003 | .062 | .068 | 0.064 | 0.045 | 0.093 |
| 3/32 | .095 | .099 | Oval | .156 | ± .005 | .023 | ± .003 | .070 | .076 | 0.077 | 0.050 | 0.100 |
| 3/32 | .095 | .099 | Truss | .187 | ± .005 | .029 | ± .003 | .070 | .076 | 0.077 | 0.050 | 0.100 |
| 1/8 | .118 | .123 | Oval | .218 | ± .005 | .034 | ± .004 | .084 | .090 | 0.094 | 0.075 | 0.128 |
| 1/8 | .118 | .123 | Truss | .281 | ± .005 | .034 | ± .004 | .084 | .090 | 0.094 | 0.075 | 0.128 |
| 9/64 | .141 | .146 | Oval | .234 | ± .005 | .040 | ± .005 | .100 | .107 | 0.126 | 0.092 | 0.152 |
| 9/64 | .141 | .146 | Truss | .312 | ± .006 | .040 | ± .005 | .100 | .107 | 0.126 | 0.092 | 0.152 |
| 5/32 | .151 | .156 | Oval | .312 | ± .006 | .046 | ± .005 | .110 | .117 | 0.155 | 0.096 | 0.165 |
| 5/32 | .151 | .156 | Truss | .328 | ± .006 | .046 | ± .005 | .110 | .117 | 0.155 | 0.096 | 0.165 |
| 3/16 | .182 | .188 | Oval | .312 | ± .006 | .060 | ± .005 | .134 | .141 | 0.155 | 0.120 | 0.196 |
| 3/16 | .182 | .188 | Truss | .375 | ± .006 | .060 | ± .005 | .134 | .141 | 0.155 | 0.120 | 0.196 |
| 7/32 | .213 | .220 | Oval | .375 | ± .006 | .063 | ± .005 | .158 | .165 | 0.187 | 0.137 | 0.228 |
| 7/32 | .213 | .220 | Truss | .437 | ± .006 | .080 | ± .005 | .158 | .165 | 0.187 | 0.137 | 0.228 |
| 1/4 | .244 | .252 | Oval | .437 | ± .007 | .068 | ± .007 | .176 | .184 | 0.219 | 0.157 | 0.265 |
| 1/4 | .244 | .252 | Truss | .500 | ± .007 | .078 | ± .007 | .176 | .184 | 0.219 | 0.157 | 0.265 |
| 9/32 | .281 | .289 | Oval | .437 | ± .007 | .068 | ± .007 | .187 | .195 | 0.219 | 0.172 | 0.297 |
| 9/32 | .281 | .289 | Truss | .500 | ± .007 | .078 | ± .007 | .187 | .195 | 0.219 | 0.172 | 0.297 |
| 5/16 | .302 | .310 | Oval | .500 | ± .008 | .093 | ± .007 | .211 | .219 | 0.243 | 0.188 | 0.328 |
| 5/16 | .302 | .310 | Truss | .562 | ± .008 | .093 | ± .007 | .211 | .219 | 0.243 | 0.188 | 0.328 |
| 3/8 | .370 | .380 | Oval | .500 | ± .008 | .125 | ± .007 | .276 | .286 | 0.281 | 0.219 | 0.390 |
| 3/8 | .370 | .380 | Truss | .750 | ± .010 | .156 | ± .007 | .276 | .286 | 0.281 | 0.219 | 0.390 |
| 7/16 | .437 | .442 | Oval | | | | | | | | 0.250 | 0.443 |
| 7/16 | .437 | .442 | Truss | | | | | | | | 0.250 | 0.443 |
| 1/2 | .478 | .520 | Oval | | | | | | | | 0.281 | 0.516 |
| 1/2 | .478 | .520 | Truss | | | | | | | | 0.281 | 0.516 |

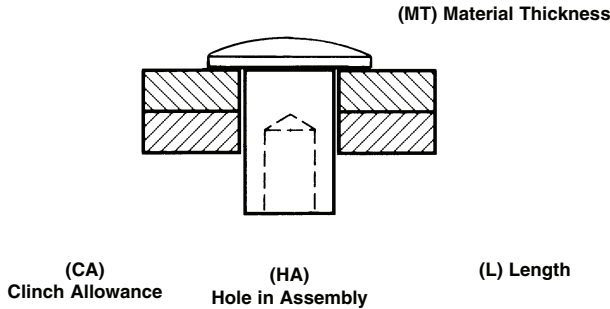
AS REQUIRED



SEMI-TUBULAR RIVET DATA

The LENGTH (L) of rivet to be used is determined by adding the MATERIAL THICKNESS (MT) and the CLINCH ALLOWANCE (CA). Specify the length to the nearest fraction (not less than 64ths).

EXAMPLE: to determine the length of a 1/8 diameter for two parts each of which are .093" thick.



Total work thickness (2 x .093") 186
 Clinch allowance for 1/8" diameter..... 075
 Total 261
 Rivet length (nearest fraction = .265) 17/64"

GENERAL DATA:

Bearing surface for the oval and truss head rivets shall be at right angles with the body within 2 degrees.

Eccentricity of the rivet head to the shank, unevenness of the tubular end, surface seams or other imperfections shall not be such that the usability of the rivet will be impaired.

Radius of the fillet under the head of oval and truss head rivets shall not exceed the values in standards shown in table 2.

Materials of semi-tubular rivets shall be low carbon steel (0.1 of 1 percent carbon or less), commercial yellow brass, copper, aluminum and other materials as agreed upon between purchaser and supplier.

NOTES:

1. All dimensions are in inches.
2. Rivet length is measured from the under side of rivet head.
3. The hole depth to point of apex shall not be greater than shank length.
4. Because the heads of these rivets are not machined or trimmed the circumference may be somewhat irregular and edges may be rounded or flat.

TABLE 2 / LENGTH INCREMENTS, LENGTH TOLERANCES AND FILLET RADIUS STANDARDS

| Body Diameter Limits | Length Increment | Minimum Length | Length Tolerances | | | Maximum Fillet Radius |
|----------------------|------------------|----------------|---|--|----------------------------|-----------------------|
| | | | Up To And Including 4 Times Body Diameter | Over 4 Times Body Diameter And Up To And Including 8 Times Body Diameter | Over 8 Times Body Diameter | |
| .118 - .123 | 1/64" | 1/8" | ± .007 | ± .010 | ± .015 | .020 |
| .140 - .146 | 1/32" | 1/8" | ± .010 | ± .012 | ± .015 | .025 |
| .149 - .156 | 1/32" | 5/32" | ± .010 | ± .012 | ± .015 | .025 |
| .181 - .188 | 1/32" | 3/16" | ± .010 | ± .012 | ± .015 | .035 |
| .213 - .220 | 1/16" | 3/16" | ± .010 | ± .015 | ± .020 | .030 |
| .243 - .250 | 1/16" | 7/32" | ± .010 | ± .015 | ± .020 | .030 |
| .273 - .281 | 1/16" | 1/4" | ± .010 | ± .015 | ± .020 | .030 |
| .303 - .312 | 1/16" | 1/4" | ± .010 | ± .015 | ± .020 | .030 |
| .375 - .500 | 1/16" | 3/8" | ± .010 | ± .015 | ± .020 | .030 |

FORMULA NEEDED FOR UPSETTING, STEEL SEMI-TUBULAR RIVETS

$$\left[\left((\text{DIA.}^2 \times \pi) \div 4 \right) - \left((\text{ID. of SHANK}^2 \times \pi) \div 4 \right) \right] \times 250,000$$