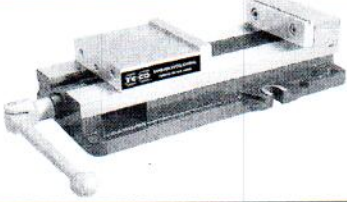






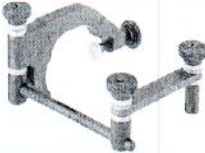
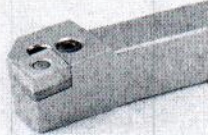

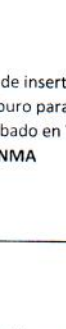
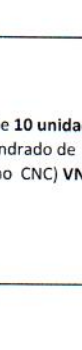
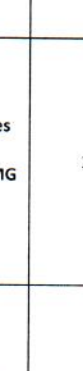



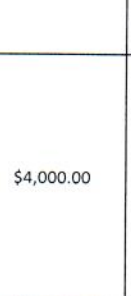













### Listado de herramientas y equipos para el Laboratorio de Manufactura

| No. | Artículo   | Cantidad | Foto de Referencia  | Precio Unitario Estimado | TOTAL       |
|-----|--|----------|---|--------------------------|-------------|
| 1   | Prensa para Fresadora CNC y Convencional; Mordazas de 6" de ancho intercambiables y sin base giratoria.        | 1        |    | \$44,000.00              | \$44,000.00 |
| 2   | Dispositivo para afilado de Fresas Frontales (Sharpen End Mills on a Surface Grinder)                          | 1        |    | \$8,000.00               | \$8,000.00  |
| 3   | Set de Brocas en pulgadas High-Speed Steel (HSS) 115 Piezas (Fracciones 1/16"-1/2", Letras A-Z y Números 1-60) | 1        |    | \$4,600.00               | \$4,600.00  |
| 4   | Moleteador para Torno Triple con patron de diamante.   | 2        |   | \$3,000.00               | \$6,000.00  |
| 5   | Muelas Abrasivas Blanca de oxido de aluminio para la Rectificadora 8" x 1/2" x 1-1/4" Grano Medio.             | 4        |  | \$1,400.00               | \$5,600.00  |
| 6   | Muelas Abrasivas para la Electroafiladora de 8" X 1" X 5/8" de oxido de aluminio grano 60.                     | 4        |  | \$450.00                 | \$1,800.00  |
| 7   | Palpador busca Borde de Fresadoras   | 4        |  | \$650.00                 | \$2,600.00  |
| 8   | Soporte universal para comparador (Indicor)  | 2        |  | \$2,000.00               | \$4,000.00  |
| 9   | Portaherramientas de desbaste TORNO CNC (Tool Holder) MWLNR 16-3D  | 2        |  | \$11,000.00              | \$22,000.00 |

|          |   |    |  |             |             |
|----------|---|----|--|-------------|-------------|
| 10       | Portaherramientas de Acabado TORNO CNC (Tool Holder) MVJNR 16-3D                              | 2  |     | \$11,000.00 | \$22,000.00 |
| 11       | Portaherramientas de Ranurado y Trozado TORNO CNC (Base) 6-895-6256                           | 2  |    | \$2,500.00  | \$5,000.00  |
| 12       | Barras Portaherramientas de Acabado TORNO CNC (Tool Holder) Boring Bar SI-SDUCR 08-2          | 2  |    | \$4,000.00  | \$8,000.00  |
| 13       | Barras Portaherramientas de Acabado TORNO CNC (Tool Holder) Boring Bar SI-STUCR 08-2          | 2  |    | \$4,000.00  | \$8,000.00  |
| 14       | Set de insertos 10 unidades de carburo para cilindrado de desvaste en Torno CNC) WNMG - VNMA  | 2  |    | \$4,000.00  | \$8,000.00  |
| 15       | Set de insertos de 10 unidades carburo para cilindrado de Acabado en Torno CNC) VNMG - VNMA   | 2  |    | \$4,000.00  | \$8,000.00  |
| 16       | Set de insertos de 10 unidades carburo para Ranurado en Torno CNC) GTN-4                      | 2  |    | \$3,000.00  | \$6,000.00  |
| 17<br>16 | Hoja de sierra de cinta al cobalto HSS, para cortar acero de 1" de dientes de 3/16" (25 pies) | 25 |  | \$220.00    | \$5,500.00  |
| 18<br>16 | Barra cuadrada de Aluminio 6061 de 3" X 3" (Diez Pies)  | 1  |  | \$28,320.00 | \$28,320.00 |
| 19<br>16 | Barra cilíndrica de Aluminio 6061 de 2 1/2" (Diez Pies)                                       | 1  |  | \$15,000.00 | \$15,000.00 |

|              |    |   |    |   |            |                     |
|--------------|----|---|----|---|------------|---------------------|
| 20           | 16 | Barra cilíndrica de Acero<br>Coll Rollet de 2" (Diez Pies)                                  | 1  |    | \$7,000.00 | \$7,000.00          |
| 21           | 16 | Cuchilla de torno de Cobalto Hss<br>de 3/8" X 3"  | 10 |    | \$235.00   | \$2,350.00          |
| 22           |    | Penetrante WD-40 (11 Oz.)   | 20 |    | \$255.00   | \$5,100.00          |
| 23           |    | Aceite Shell Turbo T-68<br>(Hidraulico 68)  | 1  |    | \$2,500.00 | \$2,500.00          |
| 24           |    | Aceite Hidraulico ISO 32 (en<br>presentacion de 5 galones)                                  | 1  |  | \$2,500.00 | \$2,500.00          |
| 25           |    | Aceite Soluble en Agua (Heavy<br>Duty Water Soluble Oil) (en<br>presentacion de 20 galones) | 4  |  | \$5,500.00 | \$22,000.00         |
| 26           |    | Fluido de corte para<br>Machuelado de 4 onzas   | 5  |  | \$665.00   | \$3,325.00          |
| <b>TOTAL</b> |    |   |    |   |            | <b>\$257,195.00</b> |