

| <br>El Tornillo |  | Document                                                                | Machine type & model                                  |          | Revision : A                   |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------|-------------------------------------------------------|----------|--------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                 |                                                                                   | ETMINJ-1.0 BOM                                                          | El Tornillo Motored Injection Machine 1.0             |          | Revision date : 26/04/2023     |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                 |                                                                                   |                                                                         |                                                       |          | Revision changes : First issue |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Category                                                                                        | Brand / Material                                                                  | Ref.                                                                    | Item                                                  | Quantity | Unit price                     | Total Price | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Motoreducer                                                                                     | Nylon                                                                             | 320/28 X<br>Acme Lead Screw, 3/4<br>2100.02<br>DIN 6885 A 5 X 5 X 16 mm | motor 0,75kW - 1800RPM -110V - 1/10 - output = 180RPM | 1        | € 260.00                       | € 260.00    | <a href="https://www.invermotor.com/producto/motores-monofasicos-1800-dixus/">https://www.invermotor.com/producto/motores-monofasicos-1800-dixus/</a>                                                                                                                                                                                                                                                                                                                                                                                                              |
| Transmission                                                                                    |                                                                                   |                                                                         | transmisson band V-belt type A - 740mm                | 1        | € 2.00                         | € 2.00      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Piston                                                                                          |                                                                                   |                                                                         | aluminium pulley 76mm                                 | 1        | € 5.00                         | € 5.00      | <a href="https://www.123bearing.com/bearings-320-28">https://www.123bearing.com/bearings-320-28</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Piston                                                                                          |                                                                                   |                                                                         | aluminium pulley 152mm                                | 1        | € 9.00                         | € 9.00      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Piston                                                                                          |                                                                                   |                                                                         | single row tapered roller bearing 52x28mm             | 2        | € 6.00                         | € 12.00     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Piston                                                                                          |                                                                                   |                                                                         | ACME threded bar 19mm / 3/4" - 5TPI - 610mm           | 1        | € 24.00                        | € 24.00     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Piston                                                                                          |                                                                                   |                                                                         | slider - 46x46x30mm                                   | 1        | € 2.00                         | € 2.00      | <a href="https://www.596687916-gato-hidraulico-tipo-botella-2-toneladas-profesional-JM?quantity=1&amp;layout=stack&amp;type=item&amp;tracking_id=c38c748d-af43-45a1-921c-7d70294b8ec0">https://www.596687916-gato-hidraulico-tipo-botella-2-toneladas-profesional- JM?quantity=1</a><br><a href="https://www.596687916-gato-hidraulico-tipo-botella-2-toneladas-profesional-JM?quantity=1&amp;layout=stack&amp;type=item&amp;tracking_id=c38c748d-af43-45a1-921c-7d70294b8ec0">layout=stack&amp;type=item&amp;tracking_id=c38c748d-af43-45a1-921c-7d70294b8ec0</a> |
| Piston                                                                                          |                                                                                   |                                                                         | feather key                                           |          |                                |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Frame                                                                                           |                                                                                   |                                                                         | spring L 170mm / D 20mm / C 2mm                       | 2        | € 5.00                         | € 10.00     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Frame                                                                                           |                                                                                   |                                                                         | car jack 2 tons - 180 to 350mm                        | 1        | € 18.00                        | € 18.00     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Frame                                                                                           |                                                                                   |                                                                         | wheel D75mm                                           | 4        | € 6.00                         | € 24.00     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                 |                                                                                   |                                                                         |                                                       |          |                                | € 366.00    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Piston                                                                                          | S235 steel                                                                        | 2300.01                                                                 | disk 12,7mm - 145mm                                   | 1        | € 8.00                         | € 8.00      | price after machining                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Barrel                                                                                          | S235 steel                                                                        | 3100.03                                                                 | disk 7,9mm - 145mm                                    | 1        | € 7.00                         | € 7.00      | price after machining                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Barrel                                                                                          | S235 steel                                                                        | 3100.01                                                                 | round tube 35x25mm - 510mm                            | 1        | € 44.00                        | € 44.00     | price after machining                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Barrel                                                                                          | S235 steel                                                                        | 3000.02                                                                 | round bar 31,8mm - 35mm                               | 1        | € 19.00                        | € 19.00     | price after machining                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Piston                                                                                          | S235 steel                                                                        | 2100.01                                                                 | round bar 25mm - 50mm                                 | 1        | € 4.00                         | € 4.00      | price after machining                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Piston                                                                                          | S235 steel                                                                        | 2110.01                                                                 | round bar 19mm - 610mm                                | 1        | € 6.00                         | € 6.00      | price after machining                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Barrel                                                                                          | S235 steel                                                                        | 3000.03                                                                 | round bar 19mm - 72mm                                 | 1        | € 19.00                        | € 19.00     | price after machining                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Piston                                                                                          | Bronze                                                                            | 2200.01                                                                 | round bar 35mm - 80mm                                 | 1        | € 54.00                        | € 54.00     | price after machining                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                                 |                                                                                   |                                                                         |                                                       |          |                                | € 161.00    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Frame                                                                                           | S235 steel                                                                        | 1320.02                                                                 | angle beam 19x19mm - 300mm                            | 2        |                                |             | total angle beam 19x19mm = 600mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Frame                                                                                           | S235 steel                                                                        | 1100.01                                                                 | angle beam 25,4x25,4mm - 300mm                        | 2        |                                |             | angle beam 25,4x25,4mm = 9039mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Frame                                                                                           | S235 steel                                                                        | 1100.02                                                                 | angle beam 25,4x25,4mm - 110mm                        | 2        |                                |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Frame                                                                                           | S235 steel                                                                        | 1100.03                                                                 | angle beam 25,4x25,4mm - 500mm                        | 2        |                                |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Frame                                                                                           | S235 steel                                                                        | 1100.04                                                                 | angle beam 25,4x25,4mm - 500mm                        | 1        |                                |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Frame                                                                                           | S235 steel                                                                        | 1100.05                                                                 | angle beam 25,4x25,4mm - 337mm                        | 1        |                                |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Frame                                                                                           | S235 steel                                                                        | 1100.06                                                                 | angle beam 25,4x25,4mm - 65mm                         | 1        |                                |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Frame                                                                                           | S235 steel                                                                        | 1100.07                                                                 | angle beam 25,4x25,4mm - 65mm                         | 1        |                                |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Frame                                                                                           | S235 steel                                                                        | 1100.08                                                                 | angle beam 25,4x25,4mm - 388mm                        | 1        |                                |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Frame                                                                                           | S235 steel                                                                        | 1210.01                                                                 | angle beam 25,4x25,4mm - 300mm                        | 2        |                                |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Frame                                                                                           | S235 steel                                                                        | 1210.02                                                                 | angle beam 25,4x25,4mm - 110mm                        | 2        |                                |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Frame                                                                                           | S235 steel                                                                        | 1210.04                                                                 | angle beam 25,4x25,4mm - 384mm                        | 4        |                                |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Frame                                                                                           | S235 steel                                                                        | 1310.01                                                                 | angle beam 25,4x25,4mm - 300mm                        | 2        |                                |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Frame                                                                                           | S235 steel                                                                        | 1310.02                                                                 | angle beam 25,4x25,4mm - 110mm                        | 2        |                                |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Frame                                                                                           | S235 steel                                                                        | 1310.03                                                                 | angle beam 25,4x25,4mm - 492mm                        | 2        |                                |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Frame                                                                                           | S235 steel                                                                        | 1310.04                                                                 | angle beam 25,4x25,4mm - 493mm                        | 2        |                                |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Frame                                                                                           | S235 steel                                                                        | 1310.05                                                                 | angle beam 25,4x25,4mm - 187mm                        | 1        |                                |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

|             |            |                  |                                            |   |              |                 |                                                                                                   |
|-------------|------------|------------------|--------------------------------------------|---|--------------|-----------------|---------------------------------------------------------------------------------------------------|
| Frame       | S235 steel | 1310.06          | angle beam 25,4x25,4mm - 111mm             | 1 |              |                 |                                                                                                   |
| Frame       | S235 steel | 1310.07          | angle beam 25,4x25,4mm - 55mm              | 2 |              |                 |                                                                                                   |
| Frame       | S235 steel | 1310.08          | angle beam 25,4x25,4mm - 310mm             | 1 |              |                 |                                                                                                   |
| Frame       | S235 steel | 1210.03          | angle beam 50,8x50,8mm - 300mm             | 2 |              |                 |                                                                                                   |
| Frame       | S235 steel | 1210.05          | angle beam 50,8x50,8mm - 104mm             | 2 |              |                 | total angle beam 50,8x50,8mm= 1028mm                                                              |
| Frame       | S235 steel | 1210.06          | angle beam 50,8x50,8mm - 110mm             | 2 |              |                 |                                                                                                   |
| Frame       | S235 steel | 1300.01          | square tube 19x19mm - 70mm                 | 1 |              |                 | total square tube 19x19mm = 250mm                                                                 |
| Frame       | S235 steel | 1310.01          | square tube 19x19mm - 90mm                 | 2 |              |                 |                                                                                                   |
| Frame       | S235 steel | 1220.03          | square tube 25,4x25,4mm - 95mm             | 2 |              |                 | total square tube 25,4x25,4mm = 190mm                                                             |
| Piston      | S235 steel | 2300.02          | square tube 51x51mm - 510mm                | 1 |              |                 | total square tube 51x51mm = 510mm                                                                 |
| Frame       | S235 steel | 1220.02          | round tube 25,4x21,4mm - 10mm              | 1 |              |                 | total round tube 25,4x21,4mm = 10mm                                                               |
| Frame       | S235 steel | 1310.09          | sheet 1,2mm - 330mm x 260mm                | 1 |              |                 | total sheet 1,2mm = 465mm x 260mm                                                                 |
| Barrel      | S235 steel | 3000.01          | sheet 1,2mm - 213mm x 135mm                | 1 |              |                 |                                                                                                   |
| Frame       | S235 steel | 1220.01          | sheet 6,35mm - 240mm x 150mm               | 1 |              |                 | total sheet 6,35mm = 240mm x 150mm                                                                |
| Frame       | S235 steel | 1100.09          | flat bar 25,4x3,2mm - 57mm                 | 2 |              |                 |                                                                                                   |
| Piston      | S235 steel | 2110.02          | flat bar 25,4x3,2mm - 46mm                 | 1 |              |                 | total flat bar 25,4x3,2mm = 340mm                                                                 |
| Barrel      | S235 steel | 3100.02          | flat bar 25,4x3,2mm - 90mm                 | 2 |              | € 120.00        | total for frame parts and equivalent                                                              |
| Paint       | /          | /                | spray paint to the color of your choice    | 3 | € 7.00       | € 21.00         |                                                                                                   |
|             |            |                  |                                            |   |              | <b>€ 141.00</b> |                                                                                                   |
| Electronics |            |                  | electric box - L210xW210xD120              | 1 | € 27.00      | € 27.00         | <a href="#">8153-controlador-de-temperatura-pid-rex-c100-con-sonda-y-ssr- JM?quantity=2</a>       |
| Electronics |            |                  | kit PID REX-C100 + SSR + thermocouple      | 2 | € 27.00      | € 54.00         |                                                                                                   |
| Electronics |            |                  | heat band 35mm x 50mm - 110V               | 4 | € 5.00       | € 20.00         |                                                                                                   |
| Electronics |            |                  | ON/OFF switch - 110V                       | 1 | € 10.00      | € 10.00         |                                                                                                   |
| Electronics |            |                  | 3 position switch - 110V                   | 1 | € 15.00      | € 15.00         |                                                                                                   |
| Electronics | S235 steel | 2000.01          | contactors 25A, 110VAC + 1NC               | 1 | € 14.00      | € 14.00         | <a href="#">h_layout=stack&amp;type=item&amp;tracking_id=c568d8ad-a963-43ec-89fb-59c1aff9899a</a> |
| Electronics |            |                  | end of race spring cable - rod 2mm x 230mm | 1 | € 1.00       | € 1.00          |                                                                                                   |
| Electronics |            |                  | various cables, cable ends and connectors  | 1 | € 19.00      | € 19.00         |                                                                                                   |
|             |            |                  |                                            |   |              | <b>€ 160.00</b> |                                                                                                   |
| Fasteners   |            | ISO 4762 - M4x40 | screw M4 - 40mm                            | 2 |              |                 |                                                                                                   |
| Fasteners   |            | ISO 7040 - M4    | nut M4                                     | 2 |              |                 |                                                                                                   |
| Fasteners   |            | ISO 4017 - M6x15 | screw M6 - 15mm                            | 4 |              |                 |                                                                                                   |
| Fasteners   |            | ISO 7040 - M6    | nut M6                                     | 4 |              |                 |                                                                                                   |
| Fasteners   |            | ISO 4014 - M8x65 | screw M8 - 65mm                            | 2 |              |                 |                                                                                                   |
| Fasteners   |            | ISO 7040 - M8    | nut M8                                     | 2 |              |                 |                                                                                                   |
| Fasteners   |            | ISO 7089 - M8    | washer M8                                  | 4 |              |                 |                                                                                                   |
| Fasteners   |            | ISO 7040 - M10   | nut M10                                    | 4 |              |                 |                                                                                                   |
| Fasteners   |            | ISO 7089 - M10   | washer M10                                 | 4 |              | € 20.00         | total for fasteners                                                                               |
|             |            |                  |                                            |   |              | <b>€ 20.00</b>  |                                                                                                   |
|             |            |                  |                                            |   | <b>TOTAL</b> | <b>€ 848.00</b> | Price varies depending on where you live                                                          |