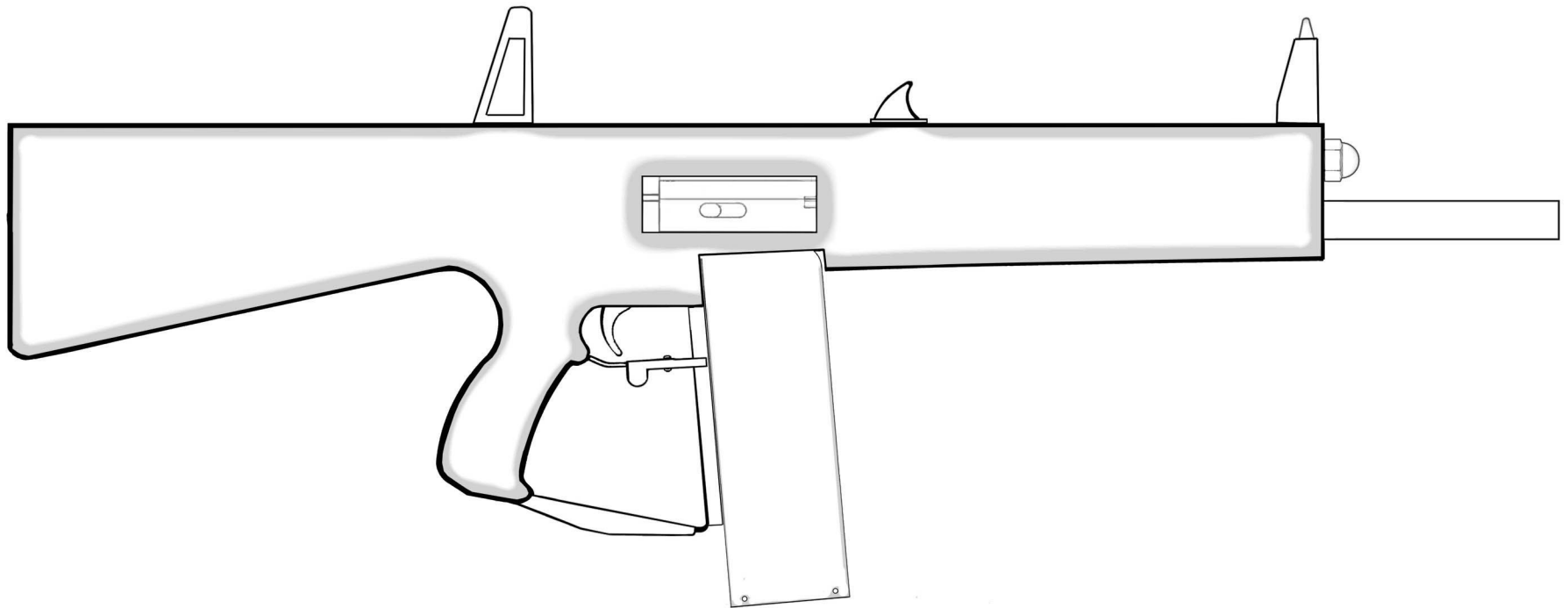


AA-12 CONSTRUCTION PLANS

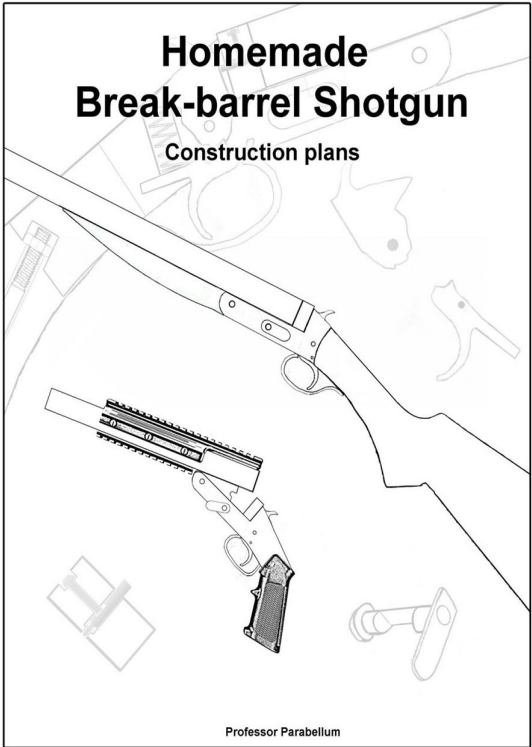
FULL AUTO OPEN-BOLT / SEMI AUTO CLOSED-BOLT

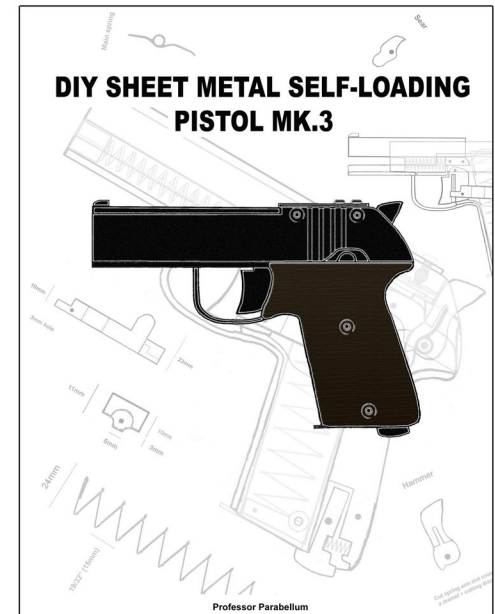
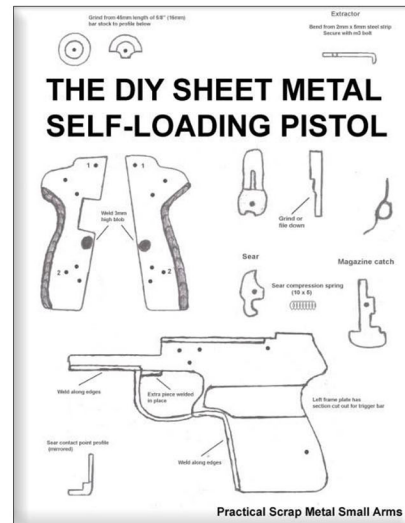
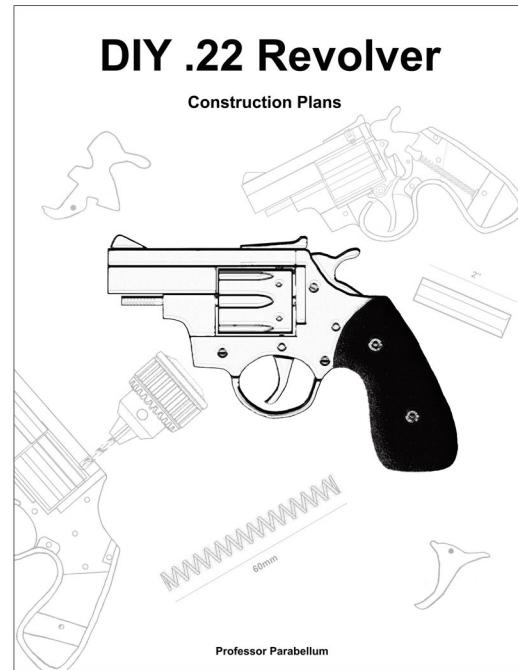
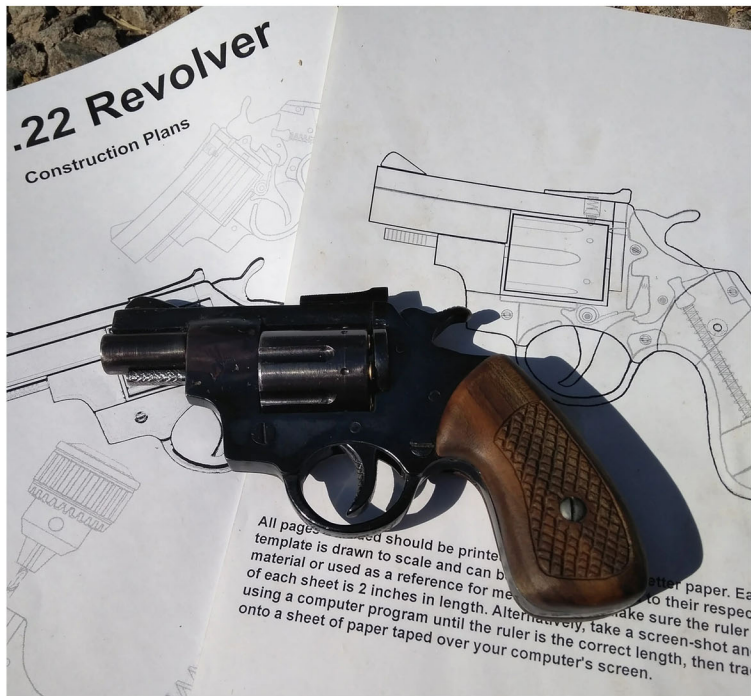


PRACTICAL SCRAP METAL SMALL ARMS VOL.26

Professor Parabellum

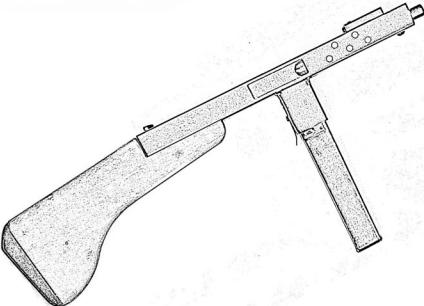
What readers have built:







BUILD YOUR OWN
IMPROVED SPECIAL PURPOSE SUBMACHINE GUN



- HIGHLY CONCEALABLE
- QUICK & EASY TO BUILD
- MINIMAL NUMBER OF PARTS
- MADE FROM STANDARD SIZES OF SQUARE TUBING

Hardware store materials (USA, Imperial):

Receiver and Gas Tube: **1" ID steel tube (OD: 33.4mm - 26.79mm)**

Barrel, Bolt and Piston: **3/4" ID steel tube (OD: 26.67mm - ID: 20.93mm)**

Reducer tube: **1/2" ID steel tube**

Bolt Key Plate, Gas Block : **5/16" mild steel plate**

Bolt Locking Peg and Spring Guide Rod: **1/2" steel round bar**

Precision Steel Tube (Europe, Metric):

Receiver and Gas Tube: **30mm x 2.5mm steel tube**

Barrel, Bolt and Piston: **25mm x 2.5mm steel tube**

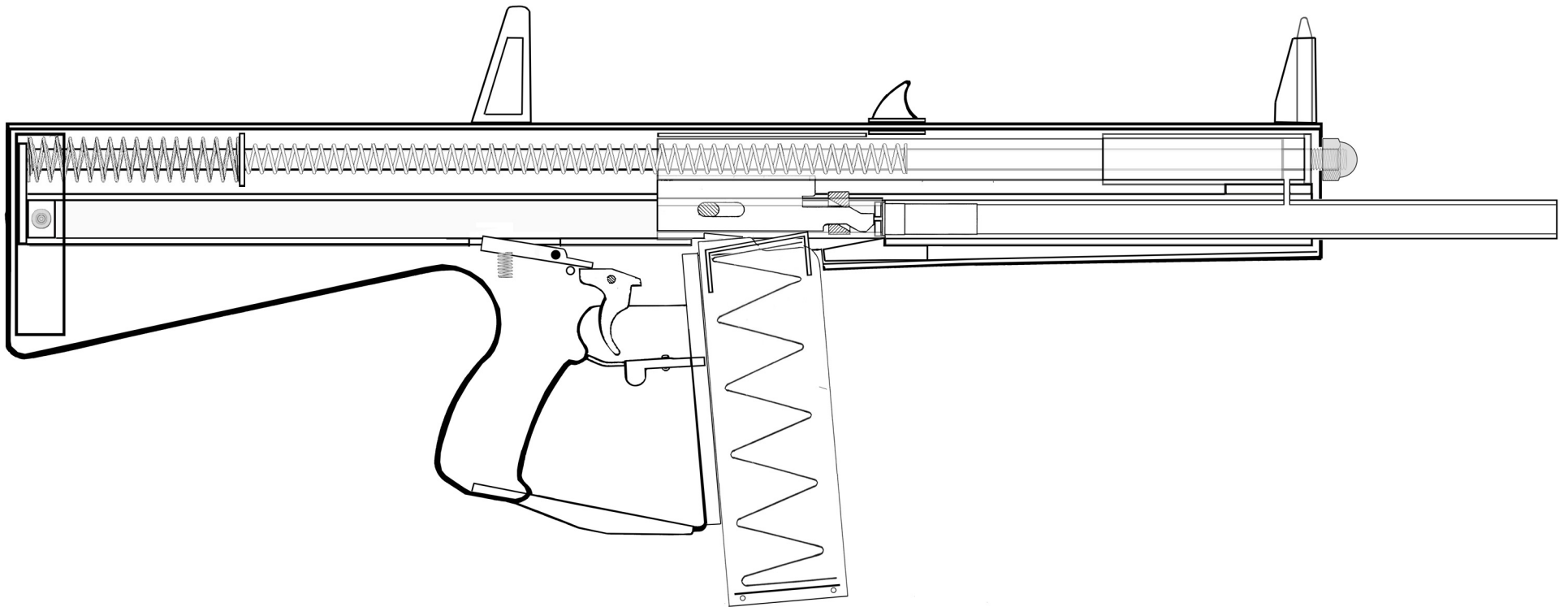
Reducer Tube: **19mm x 2mm**

Bolt Key Plate, Gas Block : **8mm steel plate**

Bolt Locking Peg and Spring Guide Rod: **12mm steel round bar**

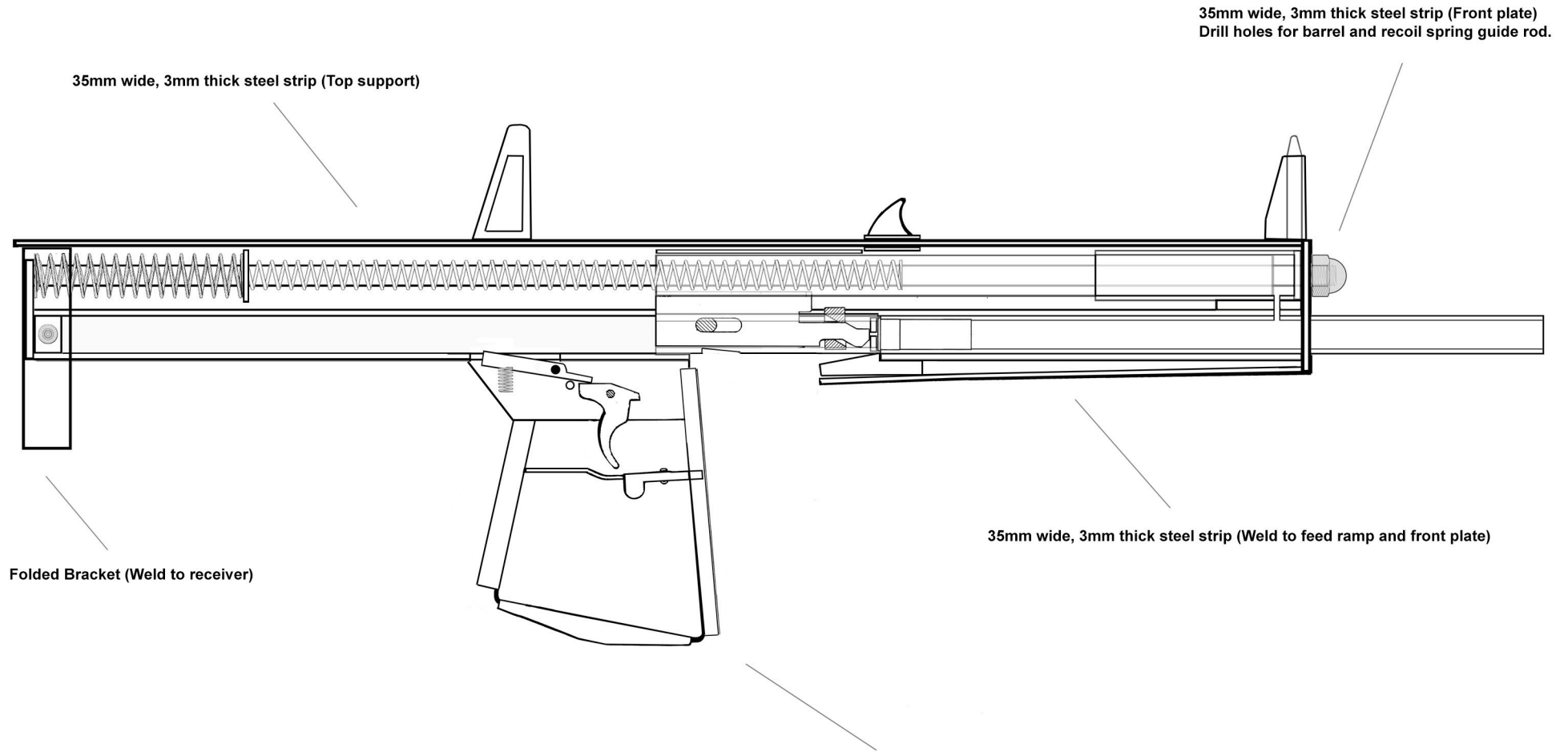
In most cases it will be easiest to find a suitable length of tubing for the barrel first. By measuring the outside diameter of your barrel you can more easily find a second length of tubing which will be a sliding fit over it. Sanding of the outside of the barrel tube using a flap disc may be required to achieve this.

Open-Bolt Fully Automatic



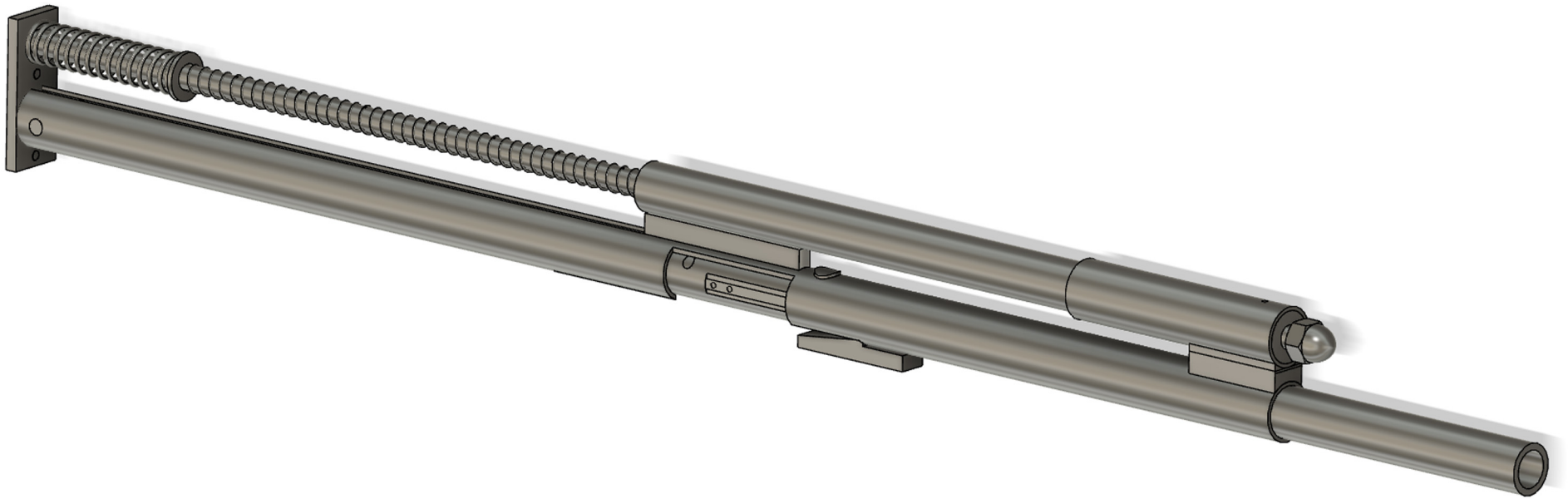
Steel internal structure

(ABS Side Plates are bolted to either side)

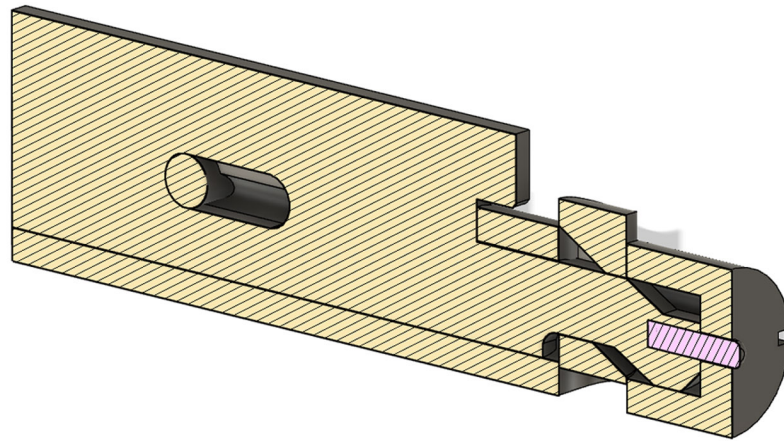
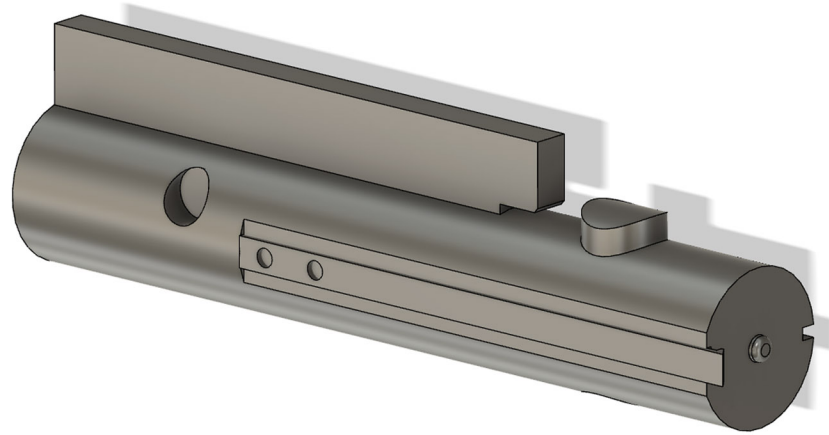


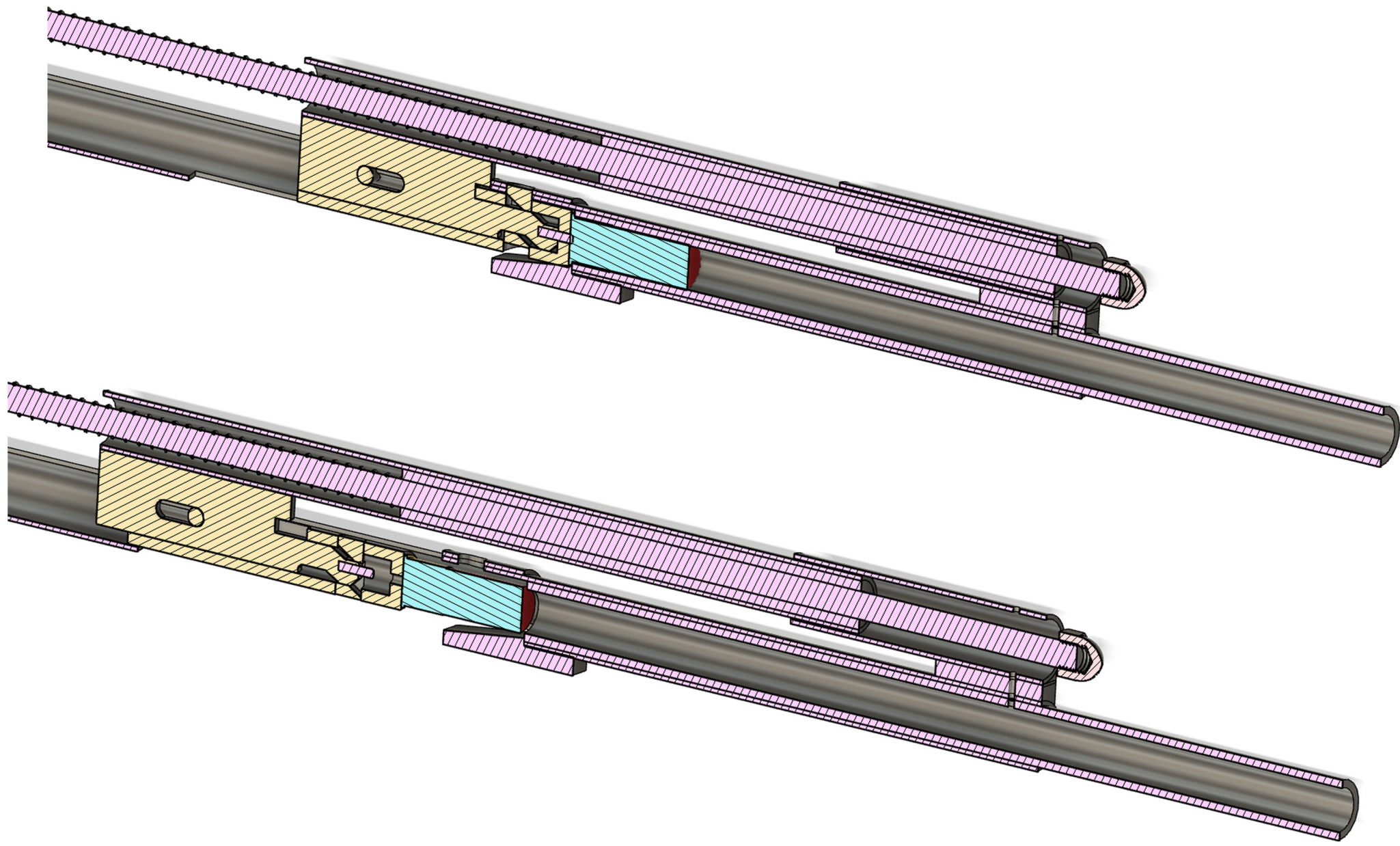
- Recoil spring:** Custom wound. 700mm long, 14mm ID, 17-18mm OD.
19 Gauge Music Wire.
- Buffer spring:** 150mm long, 25mm OD.
- Washer:** 25mm OD, 13mm hole.

Folded sheet steel magazine support bracket



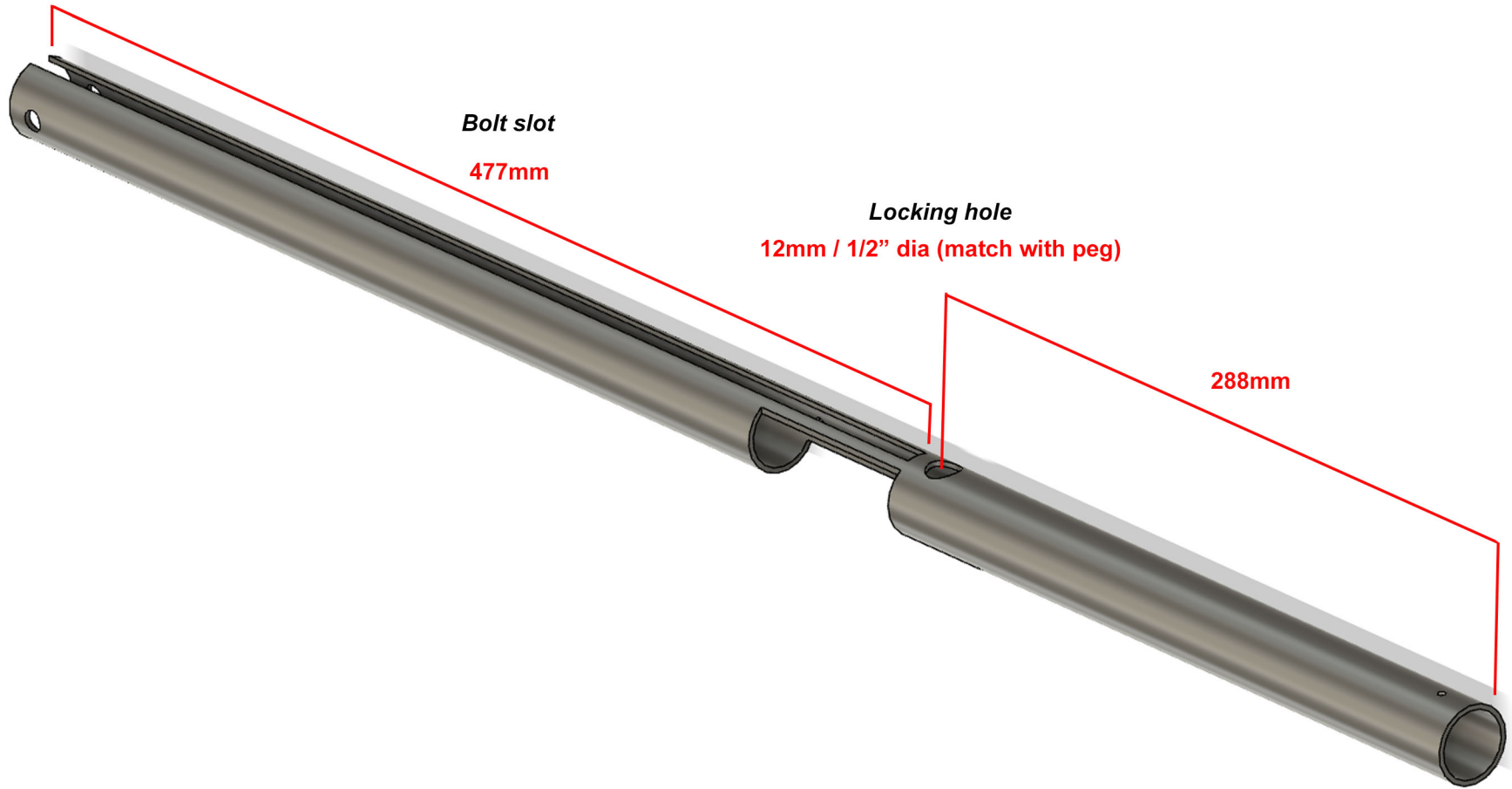
Bolt

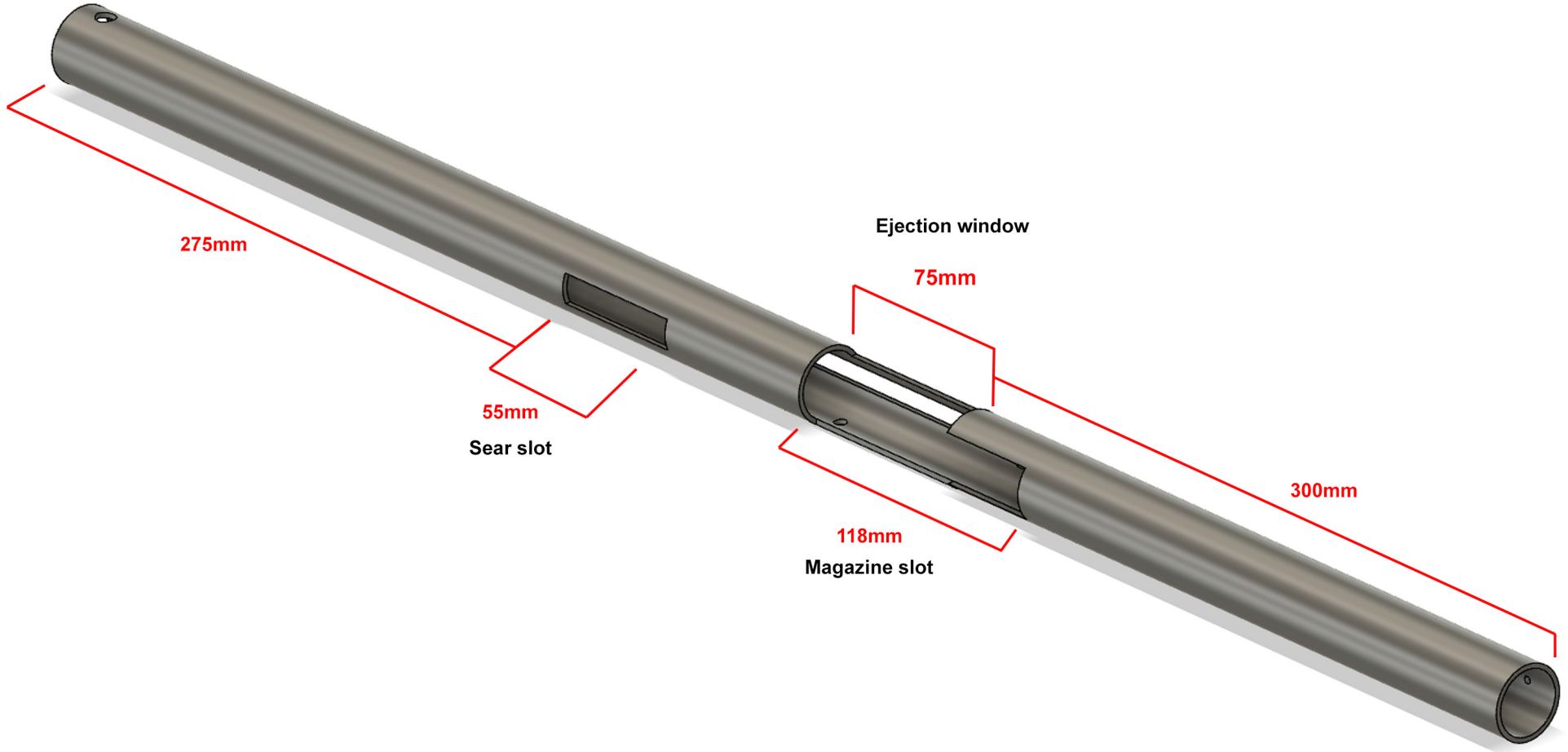




Receiver tube

780mm long





275mm

Ejection window

75mm

55mm

Sear slot

118mm

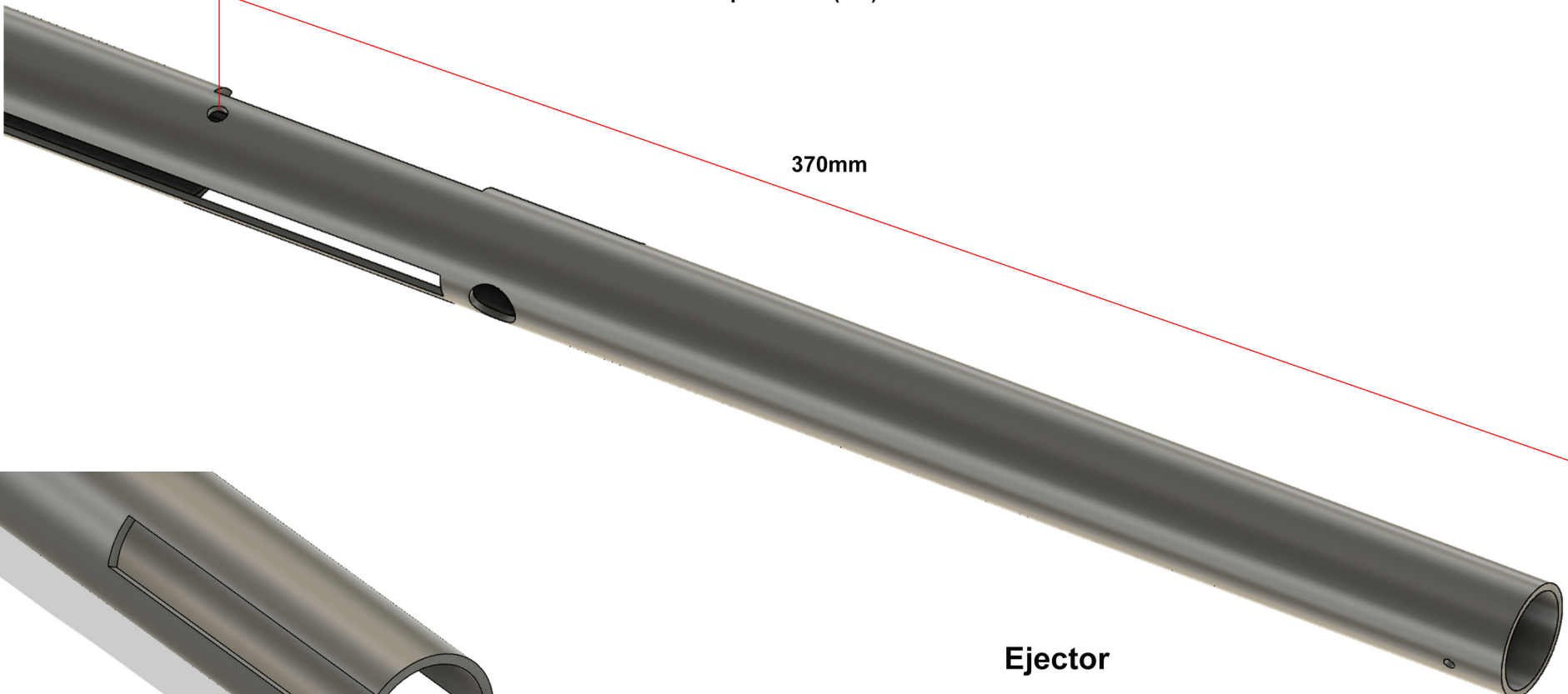
Magazine slot

300mm

Ejector hole

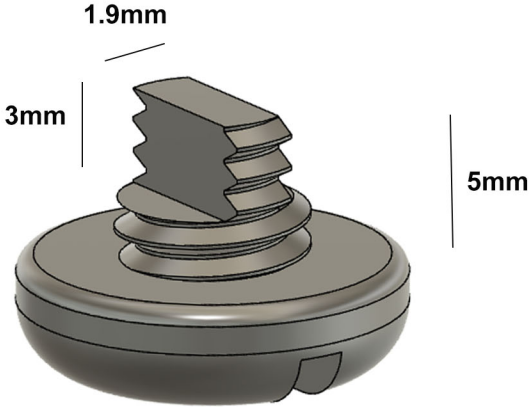
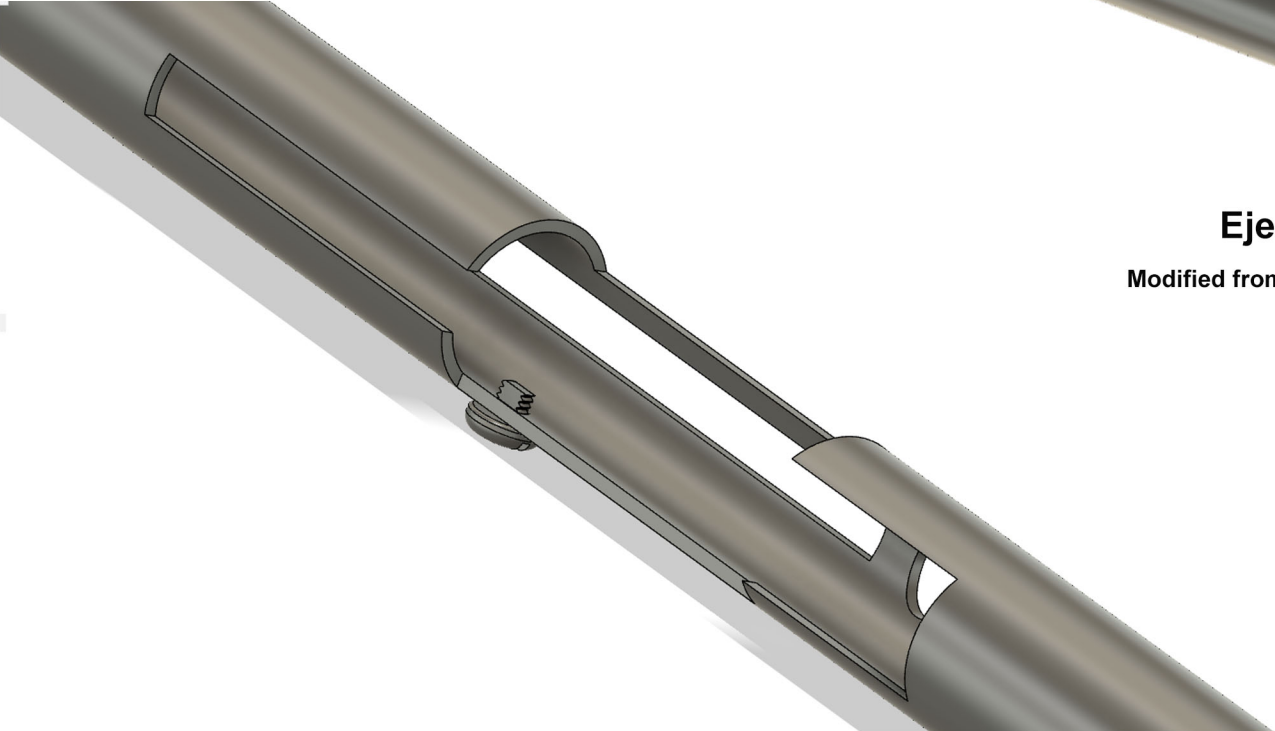
Drill & tap for bolt (M6)

370mm



Ejector

Modified from M6 x 5mm bolt

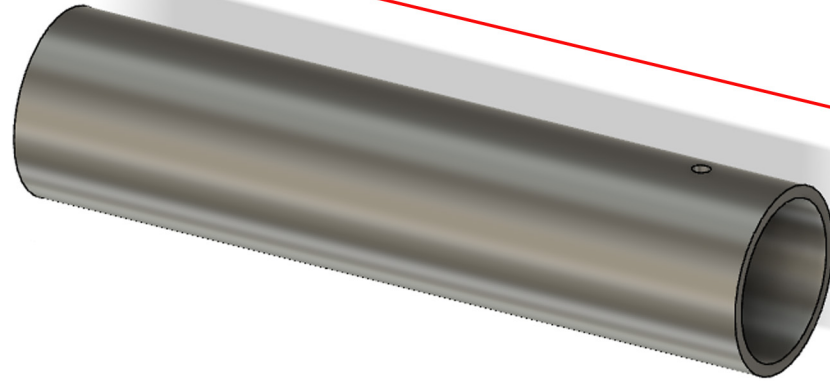


Gas tube assembly

Gas tube

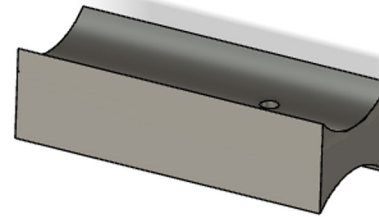
30mm x 2mm steel tube

125mm



Washer

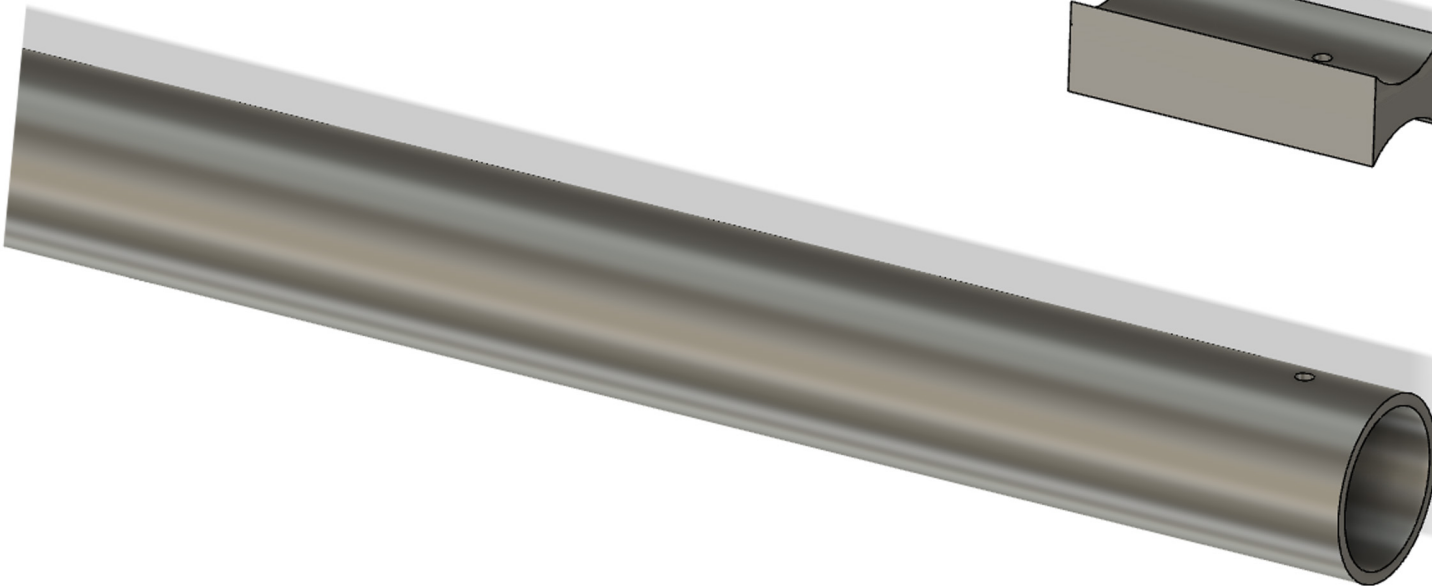
12mm ID
25mm OD



Gas block

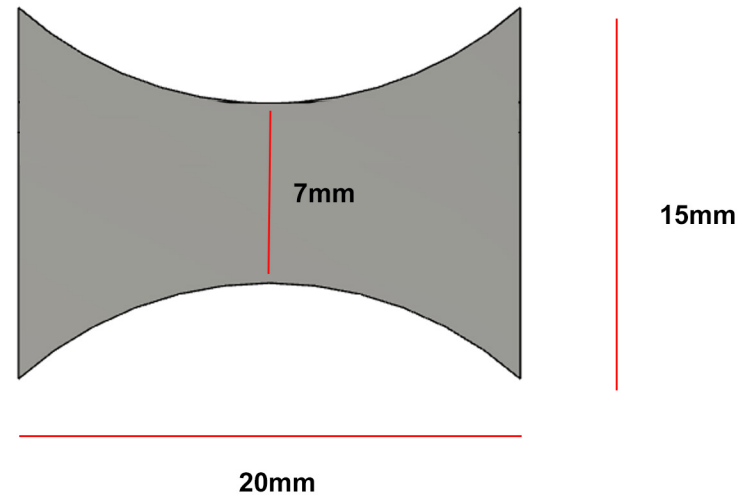
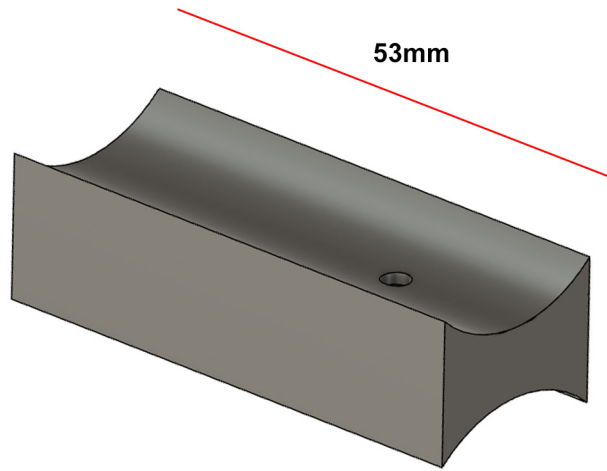
15mm thick steel bar

Receiver tube

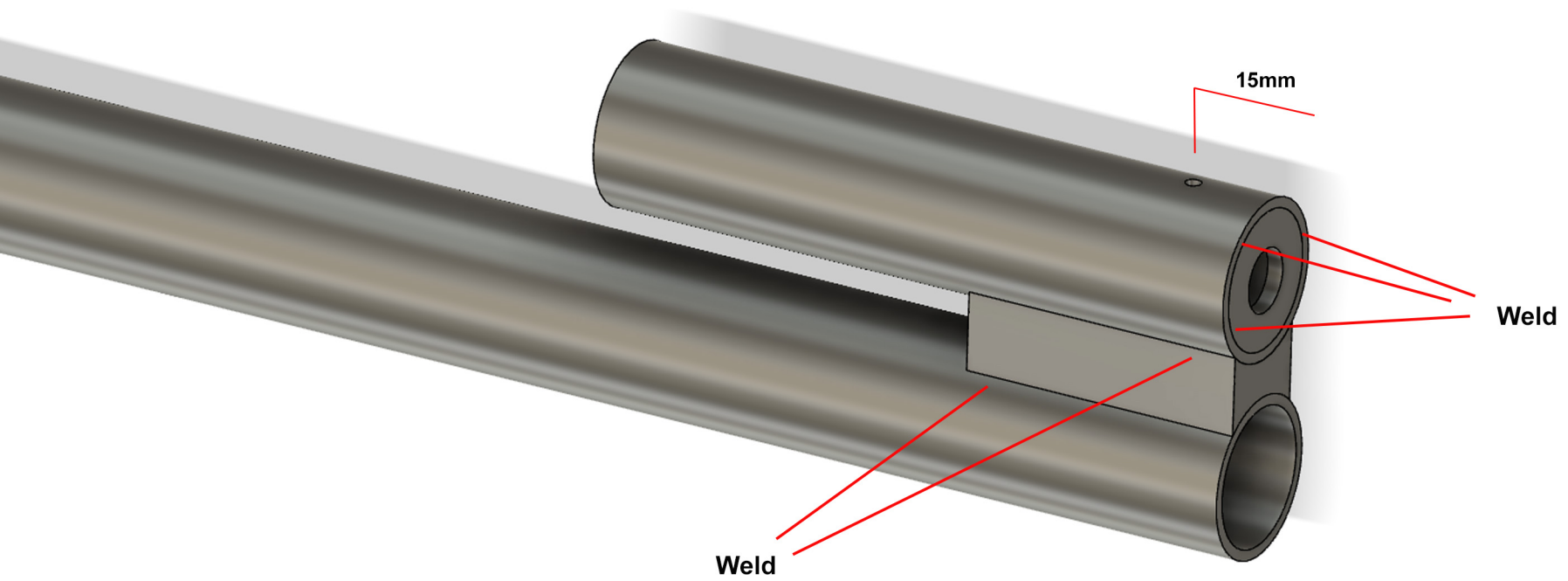


Gas block

15mm x 20mm steel bar



Once welded together, drill a 5mm diameter hole, 15mm from the front through gas tube and block until entering barrel.



Gas tube

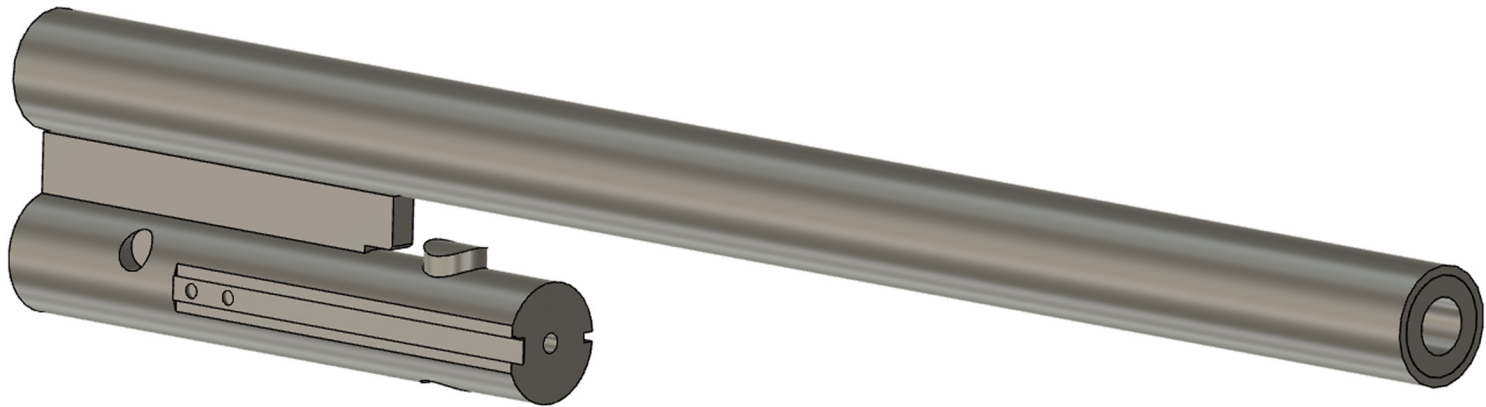
1" ID tube

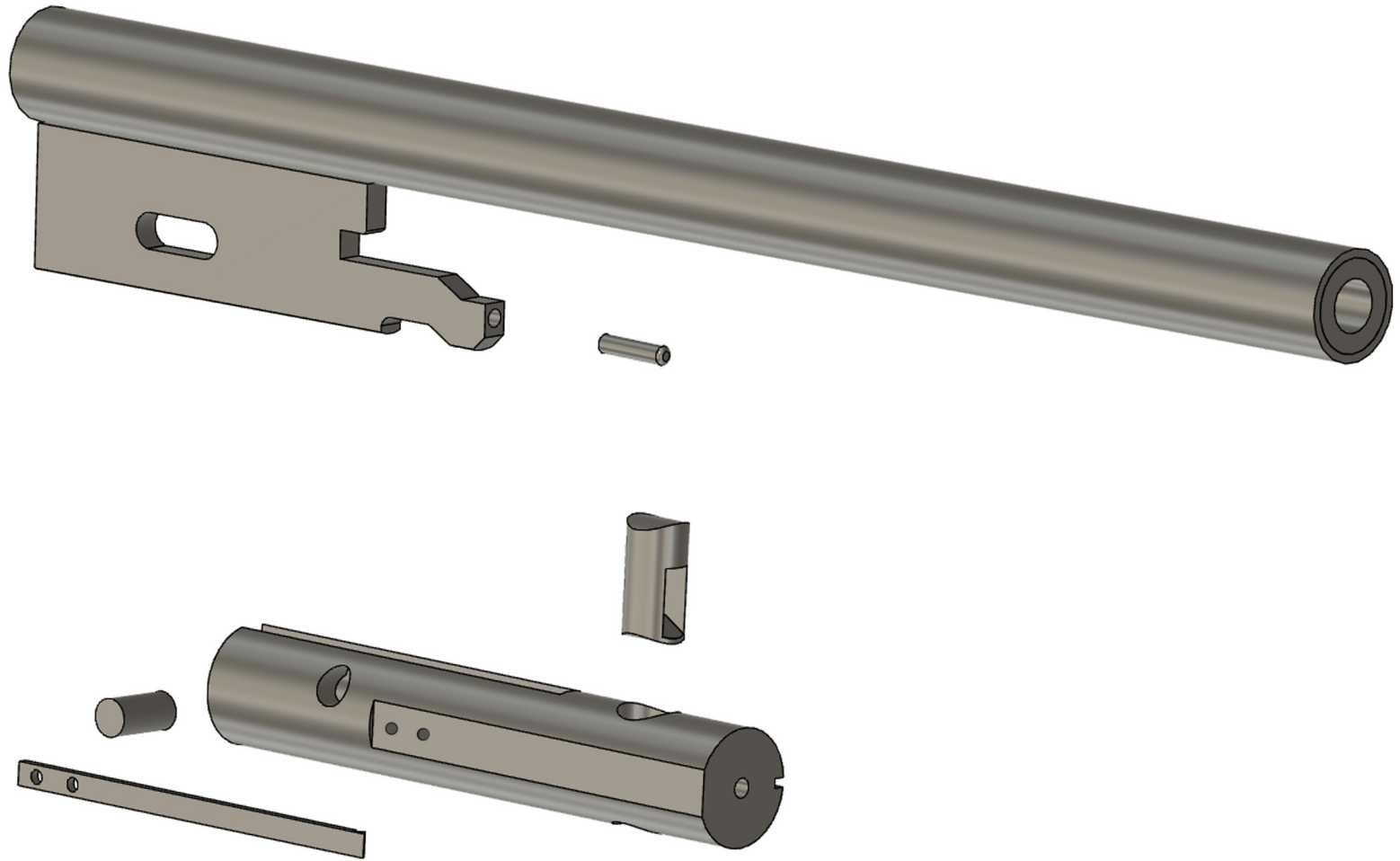
End of Main Spring Guide Rod
is threaded for take-down nut.



1" ID tube

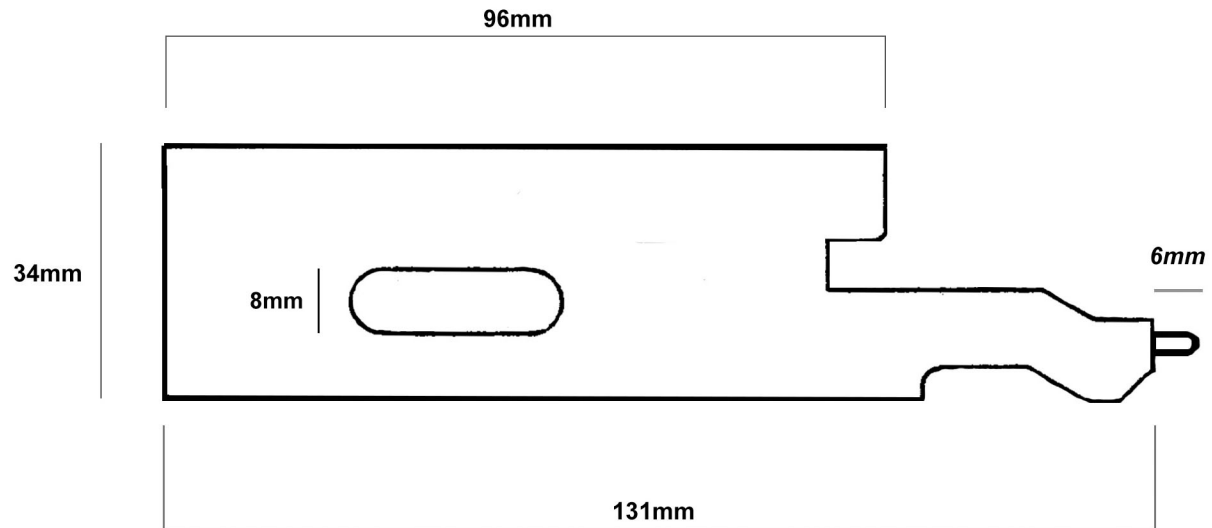
Bolt Assembly





Bolt key section

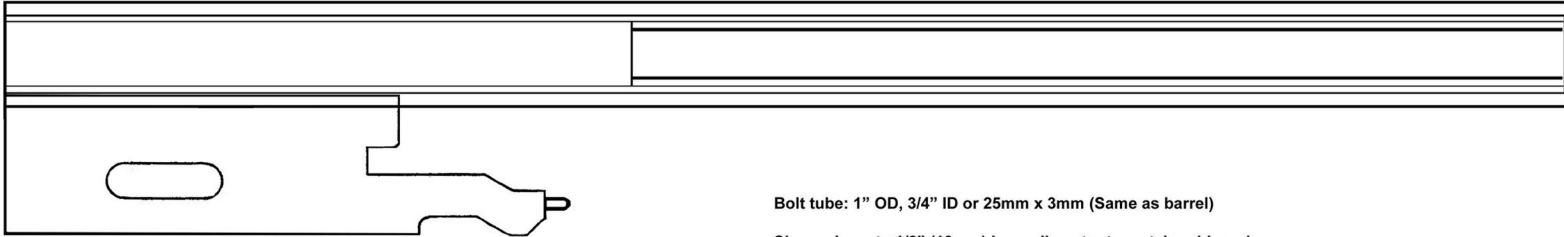
6mm (1/4") steel plate



Drill a 14mm deep, 3mm dia hole to accommodate a 20mm long fixed firing pin made from a length of 3mm silver steel bar which protrudes 6mm. Thread or epoxy in place.

Open bolt version

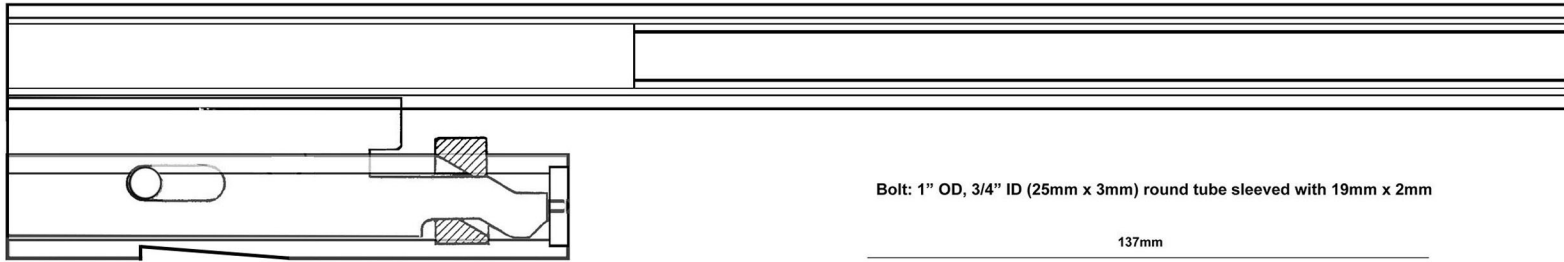
380mm



Bolt tube: 1" OD, 3/4" ID or 25mm x 3mm (Same as barrel)

Sleeve down to 1/2" (13mm) inner diameter to match guide rod

Slot rear and insert key plate section at wall depth. Weld in place.



Bolt: 1" OD, 3/4" ID (25mm x 3mm) round tube sleeved with 19mm x 2mm

137mm

15mm

25mm / 1"

131mm

35mm

Sear contact point

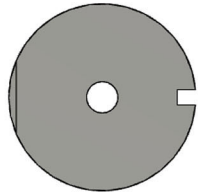
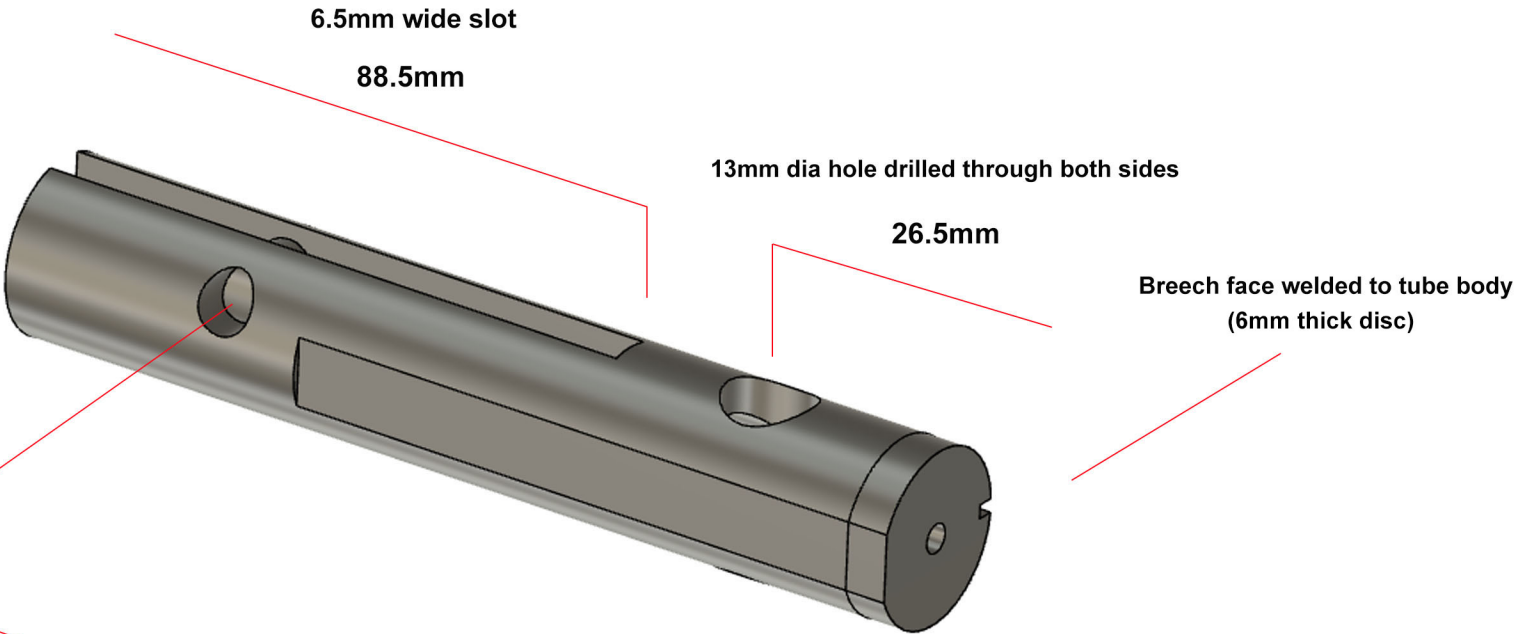
1/2"

1"

2 inches

Bolt body

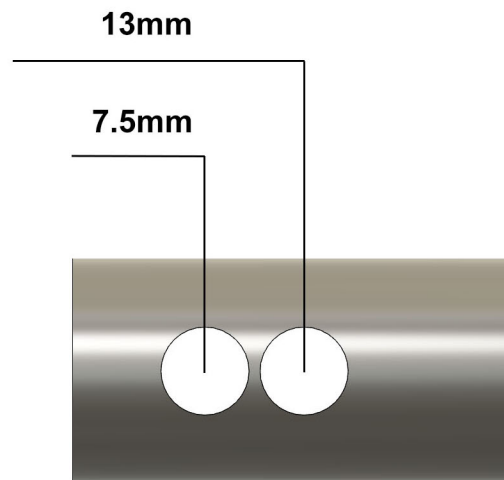
1" OD, 3/4" ID (25mm x 3mm) round tube sleeved with 19mm x 2mm (3/4" OD) tube



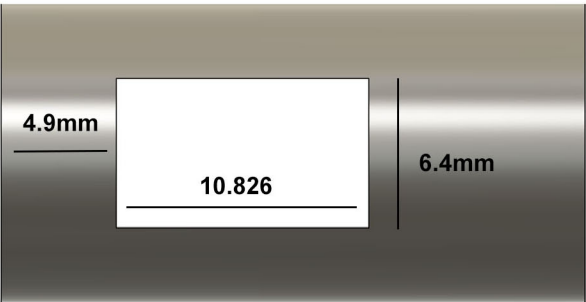
Locking peg



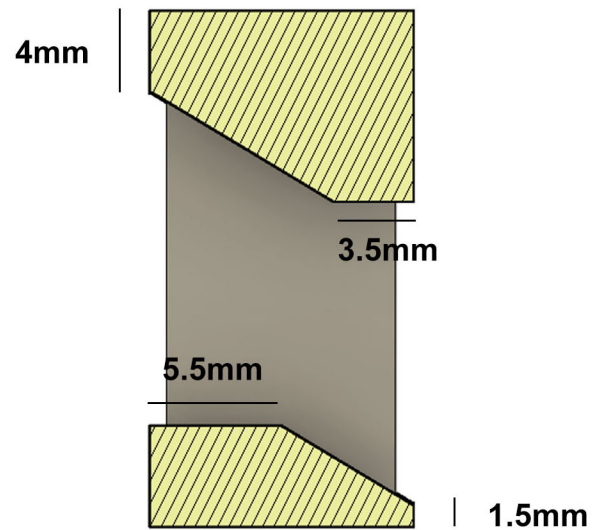
The locking peg is made from 13mm dia steel bar, 25mm in length. To cut the internal track two holes are first drilled through using a 5mm dia drill bit.



Next a rectangular window is formed by grinding through the wall formed by each hole using a dremel tool and a selection of small tungsten carbide grinding bits and finished with the aid of a set of jeweler's files to match the dimensions below.



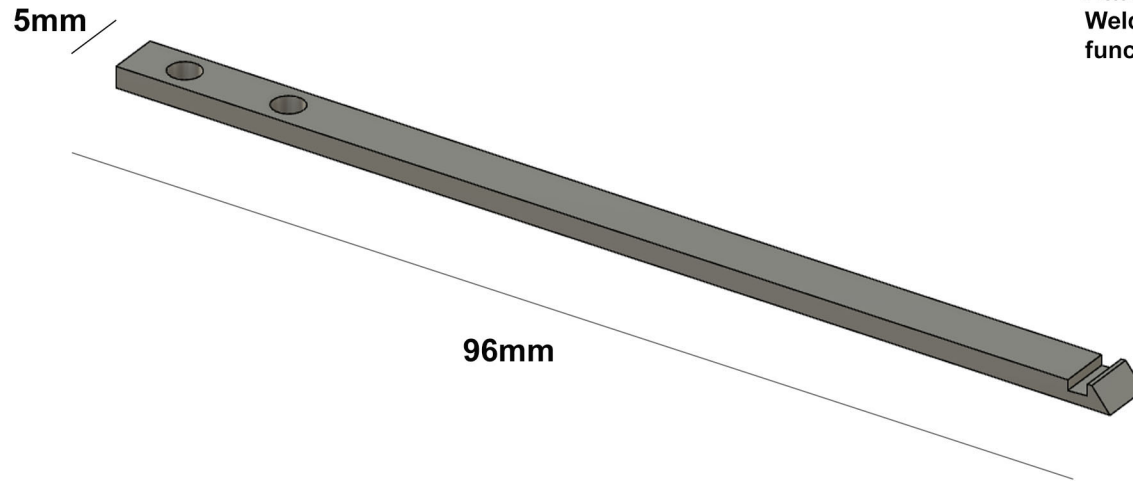
In order to be raised or lowered by the Bolt Key, ramps are cut into both the top and bottom of each side of the window. This would be best achieved using a Jeweler's / Needle file.



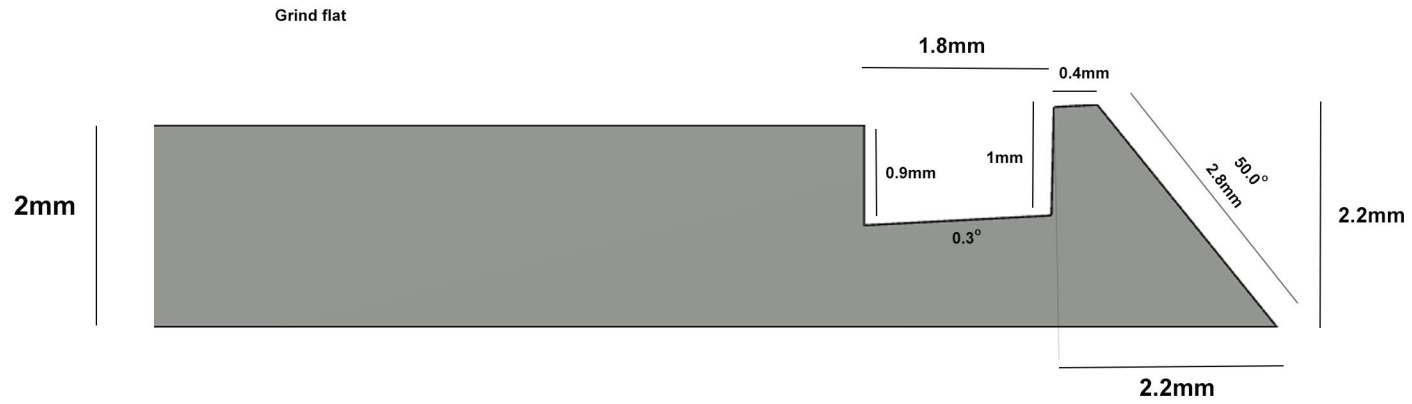
Grind top and bottom to match profile of bolt body when lowered.

Extractor

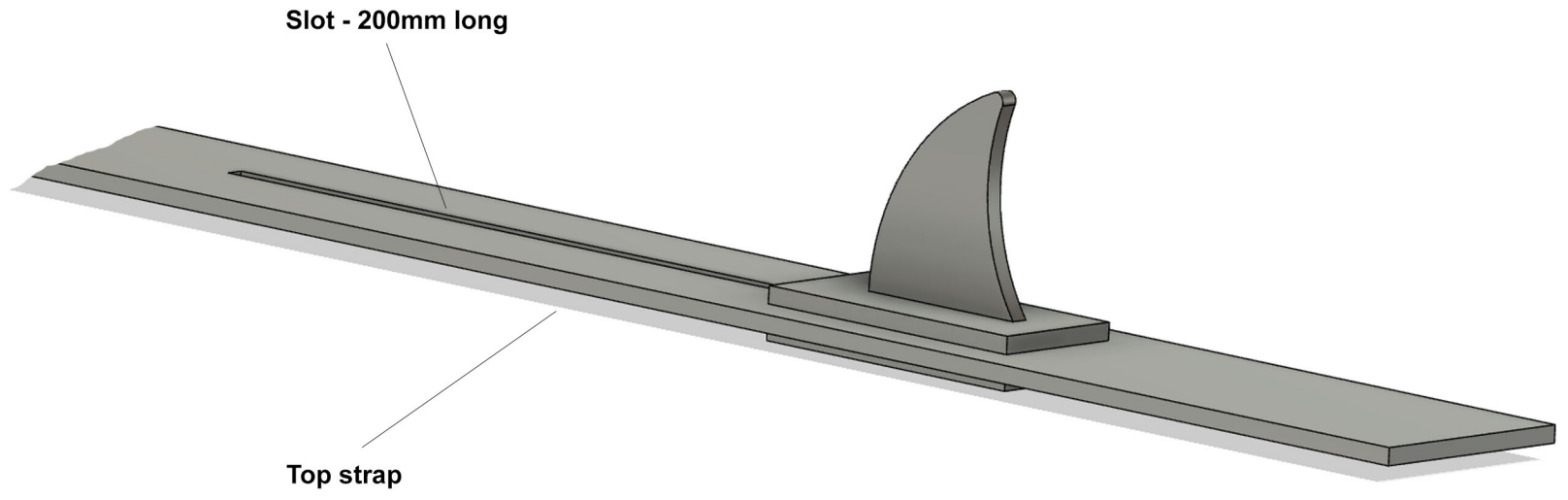
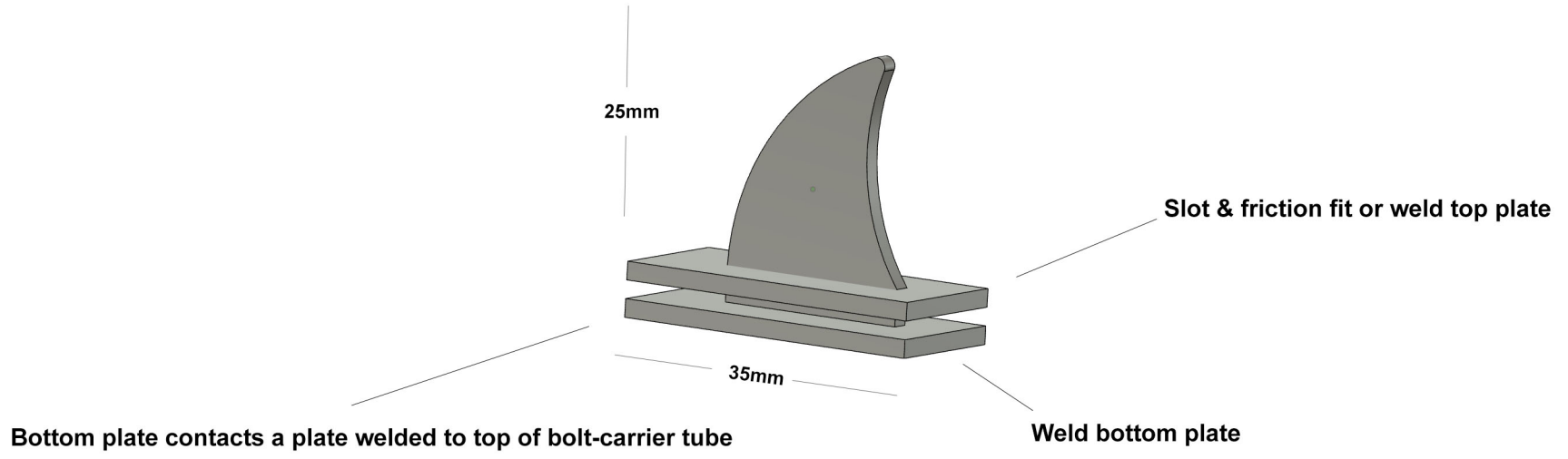
2.5mm flat stock



Attach to bolt via x2 M4 Grub Screws.
Weld over screws and grind flush once
function is established.

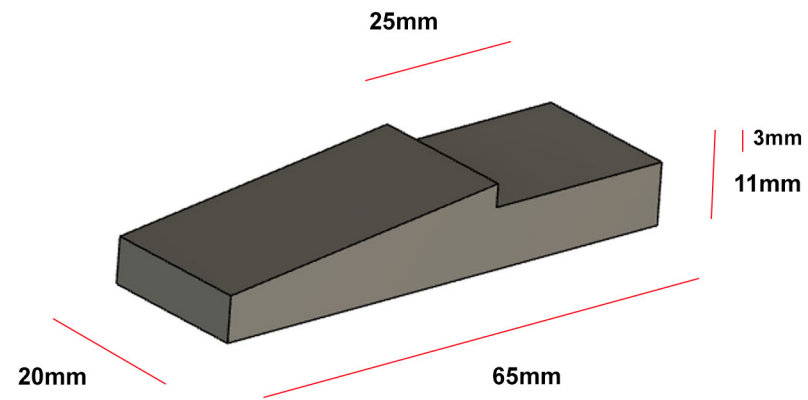


Cocking handle (Non-reciprocating)



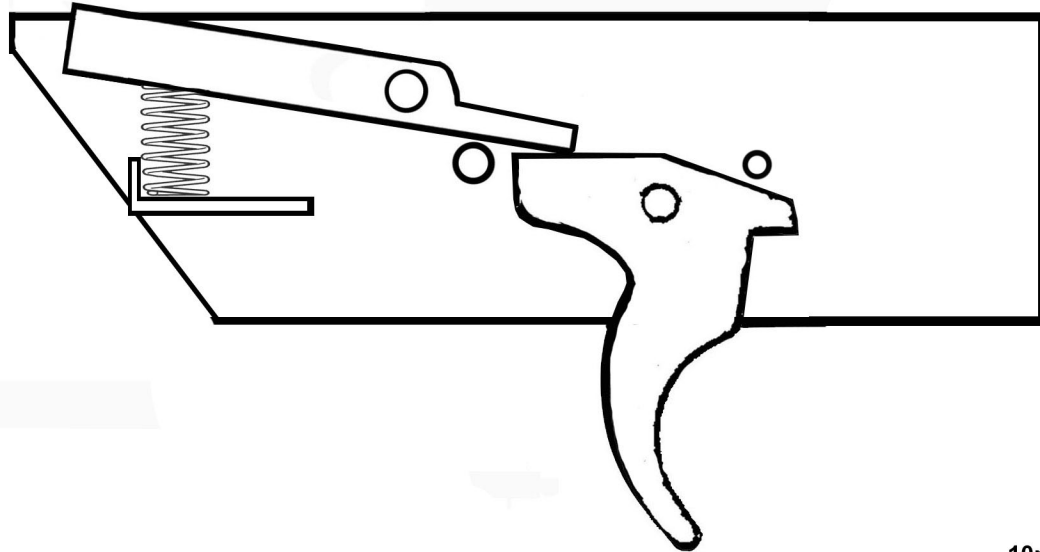
Feed Ramp

Mild steel plate / bar stock



Open Bolt Trigger group

The trigger group should be contained in a housing consisting of two 3mm thick steel plates welded directly to the receiver tube.

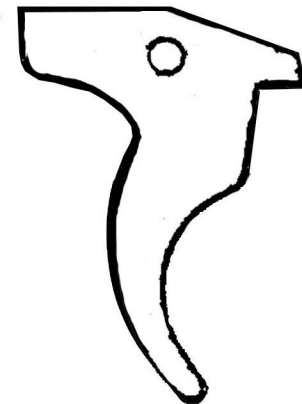


Trigger

10mm thick steel plate

Sear

Cut from a 15mm wide length of 10mm thick steel plate.

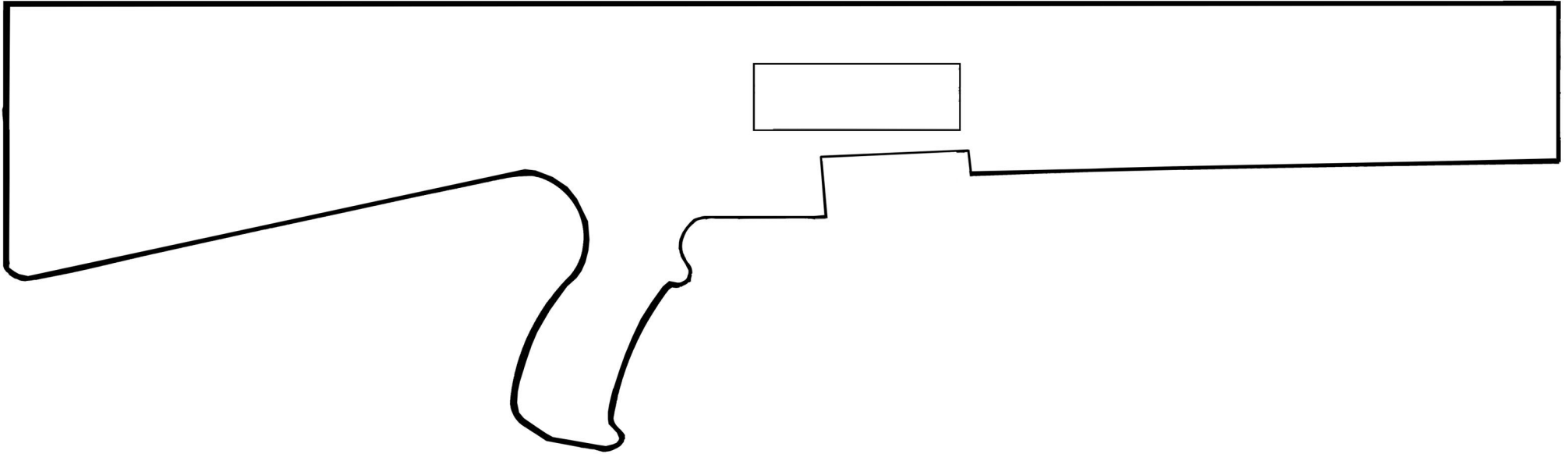


Both accept a 25mm / 1" long 6mm dia pin

Side panels

Enlarge template until it measures 815mm in overall length. Cut from 4mm (1/4") ABS plate.

815mm

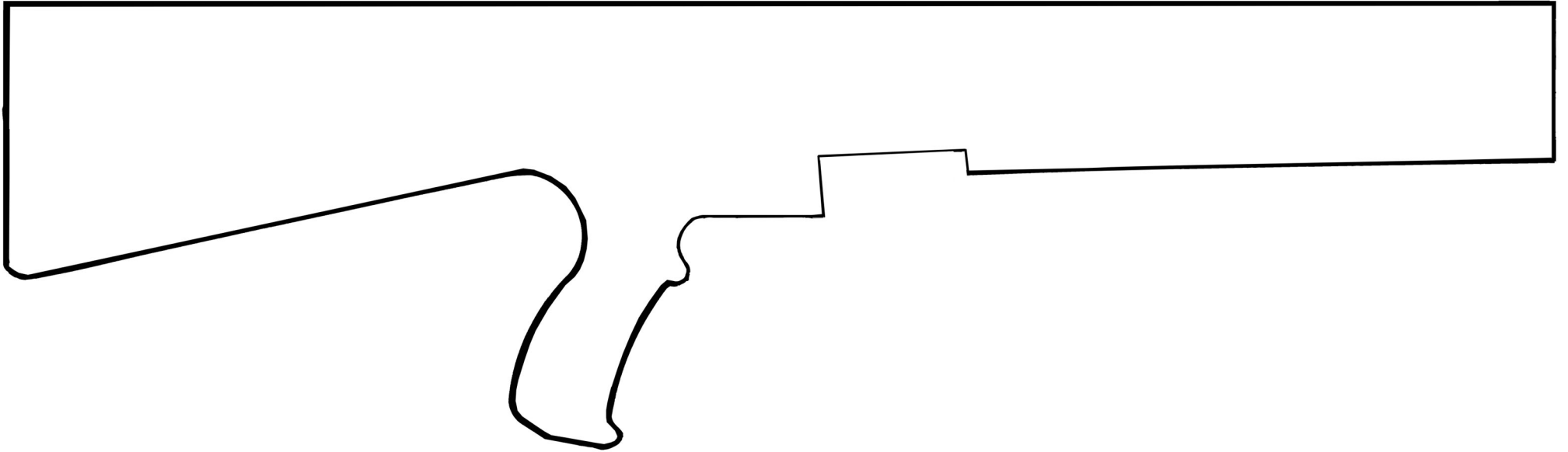


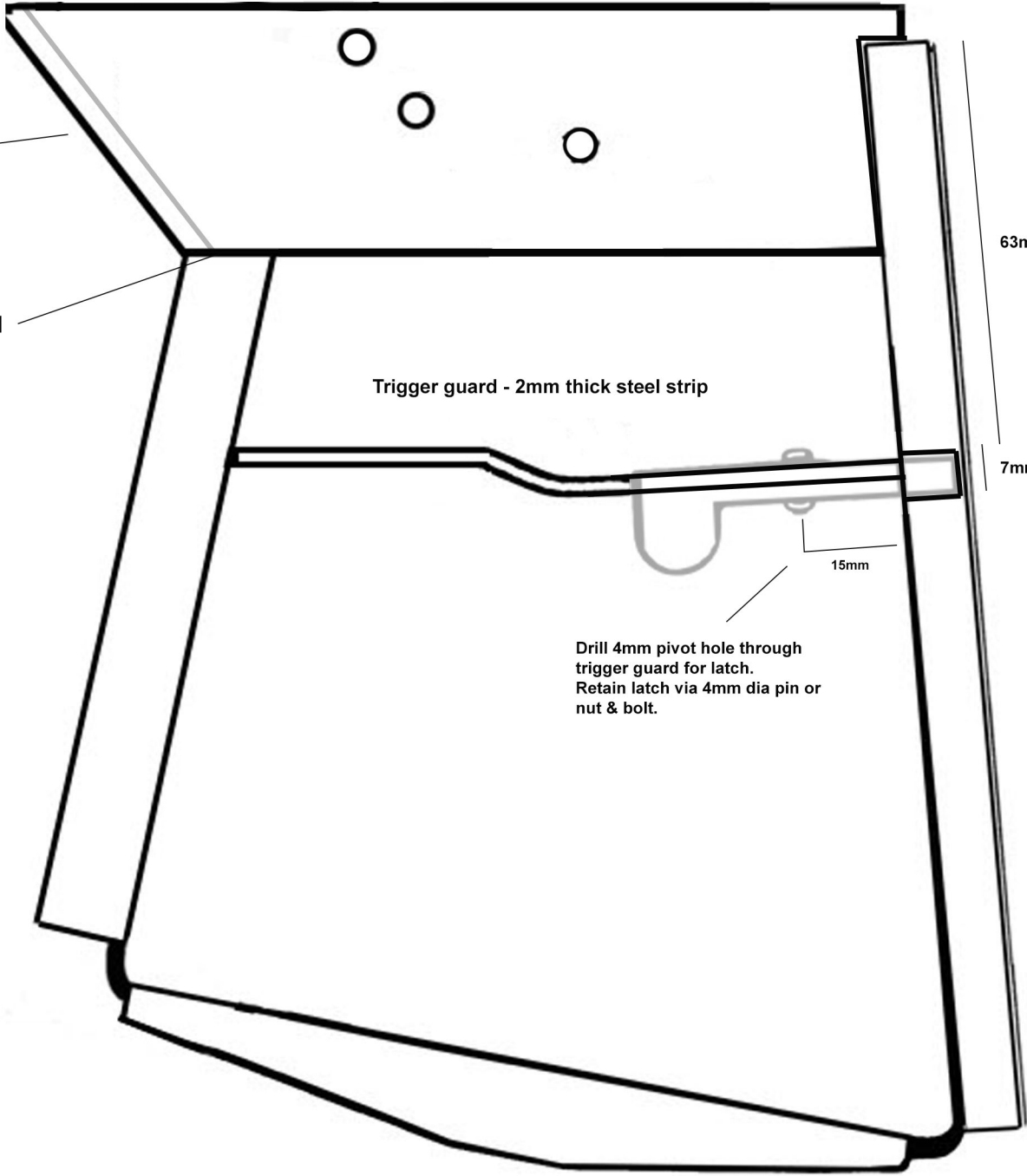
Both side panels are secured to the steel frame via multiple screws located at the front, middle, rear and pistol grip areas.

Side plates

Left

815mm





Cut out section in trigger pack to profile of Mag Bracket. Weld in place.

63mm

7mm

Cut slot through Mag Bracket to allow latch to freely pass through.

15mm

Drill 4mm pivot hole through trigger guard for latch. Retain latch via 4mm dia pin or nut & bolt.

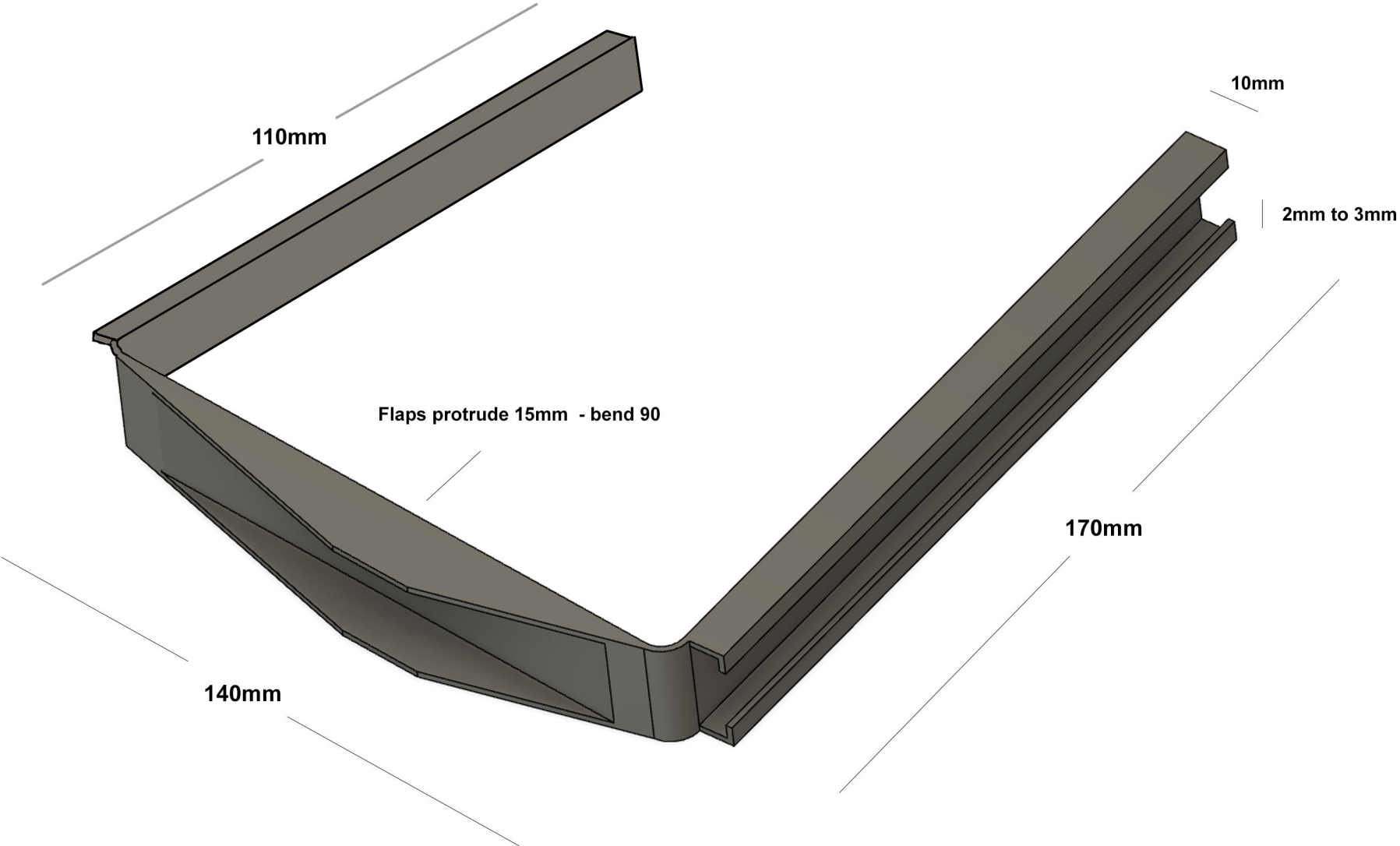
Trigger guard - 2mm thick steel strip

Weld

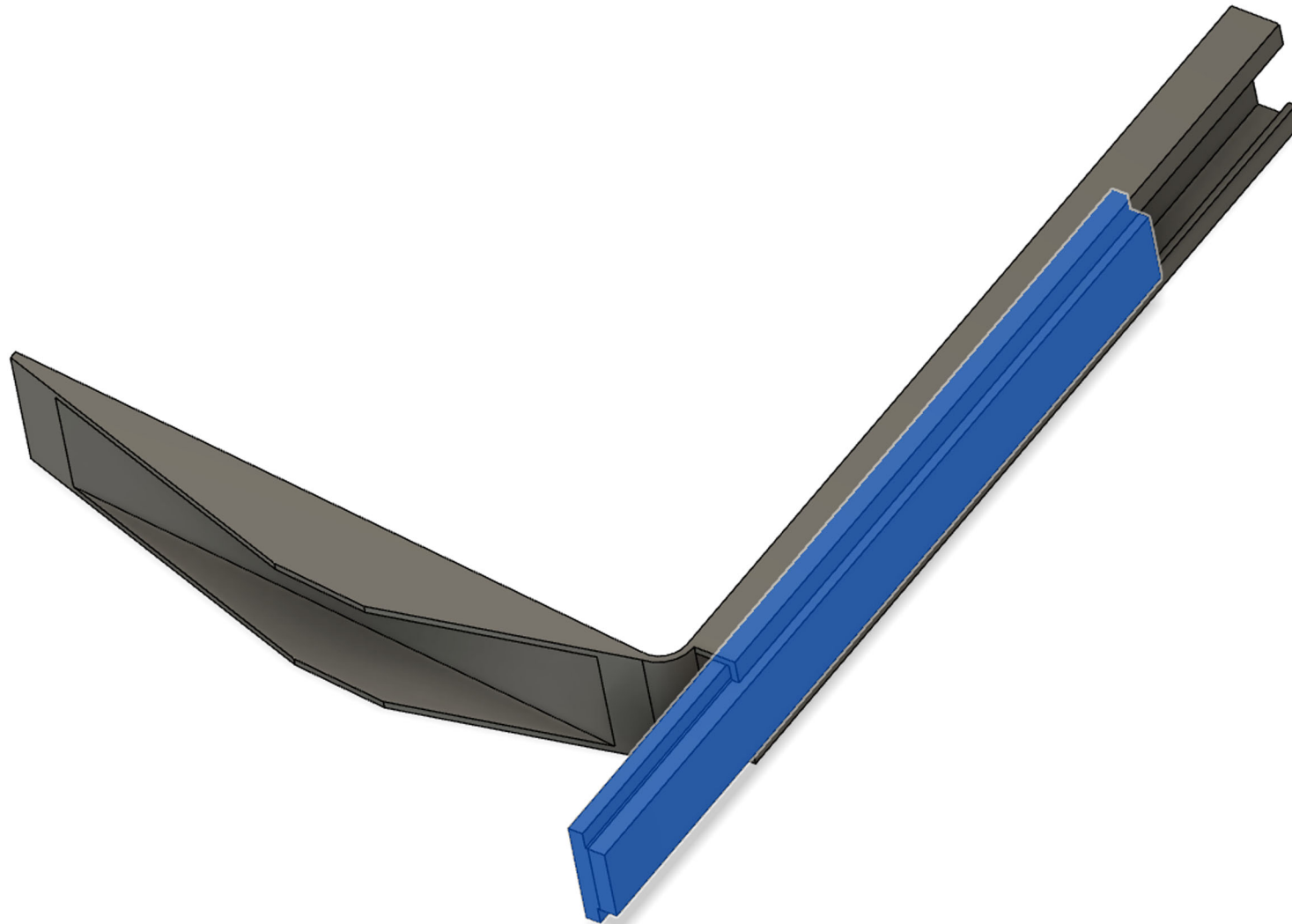
Rear strap (weld)

2 INCHES

A 400mm length of 1.5mm thick, 60mm wide mild steel plate is bent to form the magazine support bracket.

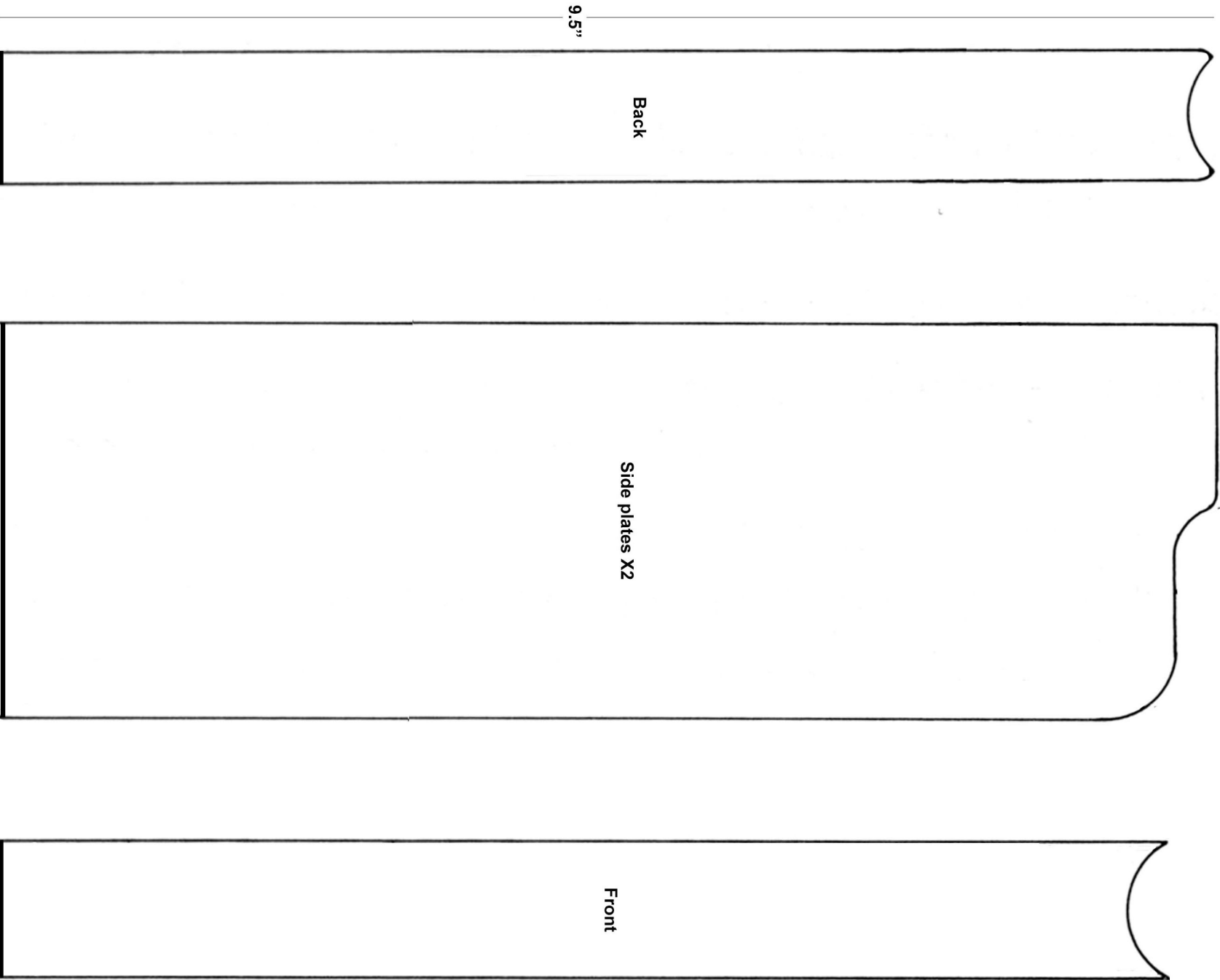


Two lengths of steel strap matching the inner dimensions of the bent 'track' are welded or brazed to the back of the magazine.



10 round magazine (Body)

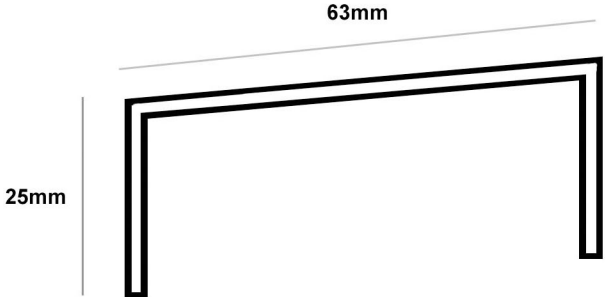
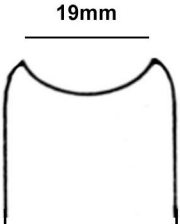
Weld together from 4 pieces



2 INCHES

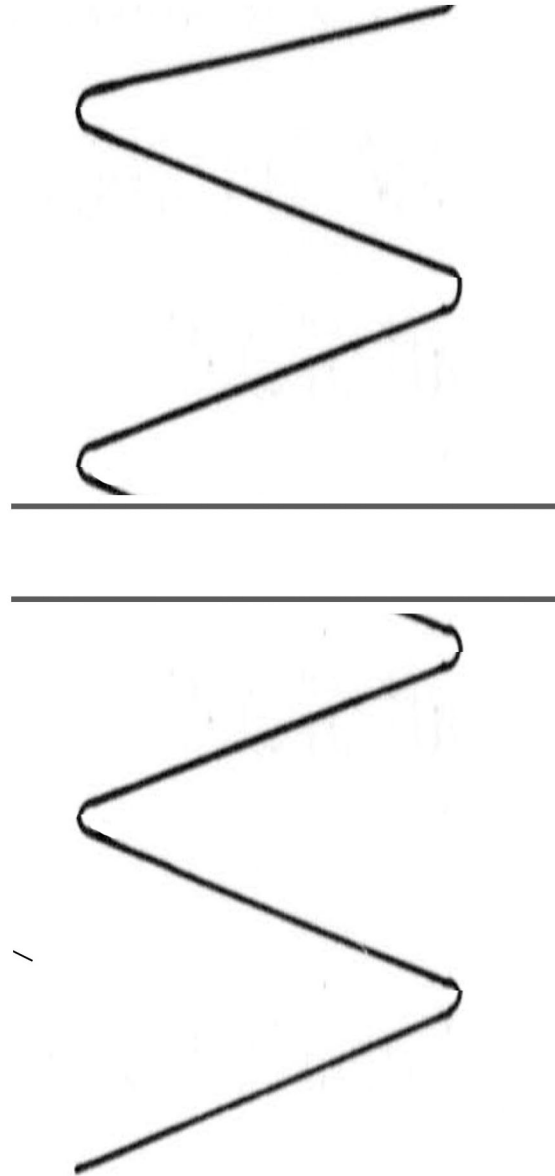
Bend from 3mm thick, 20mm wide steel strip

Bend lips inwards



Form from .025 flat spring steel strip, 3/4" wide

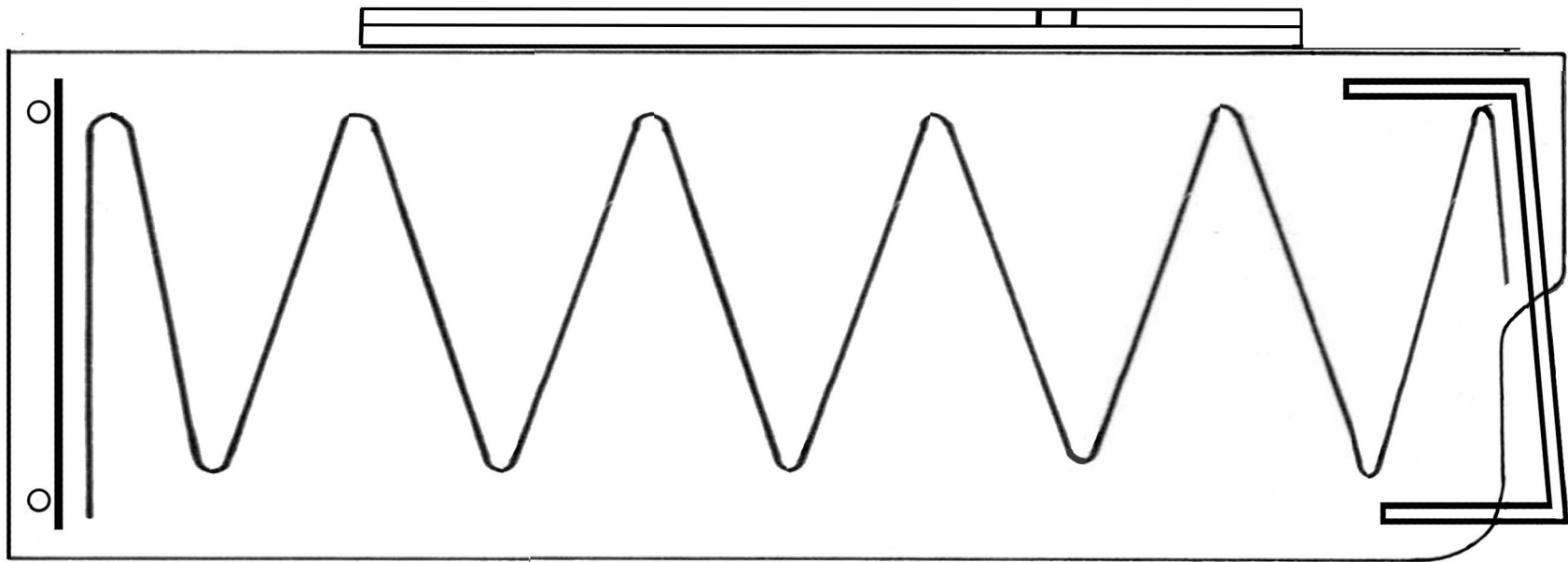
12" long



Magazine catch contact slot (File into top plate)

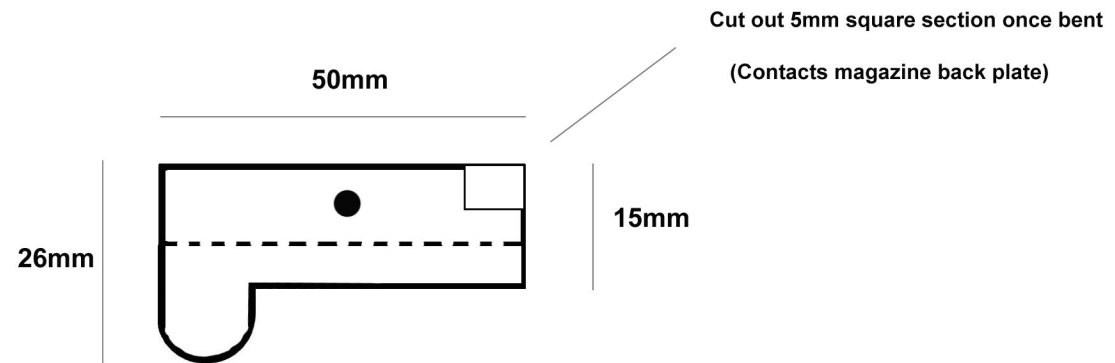
32mm

38mm



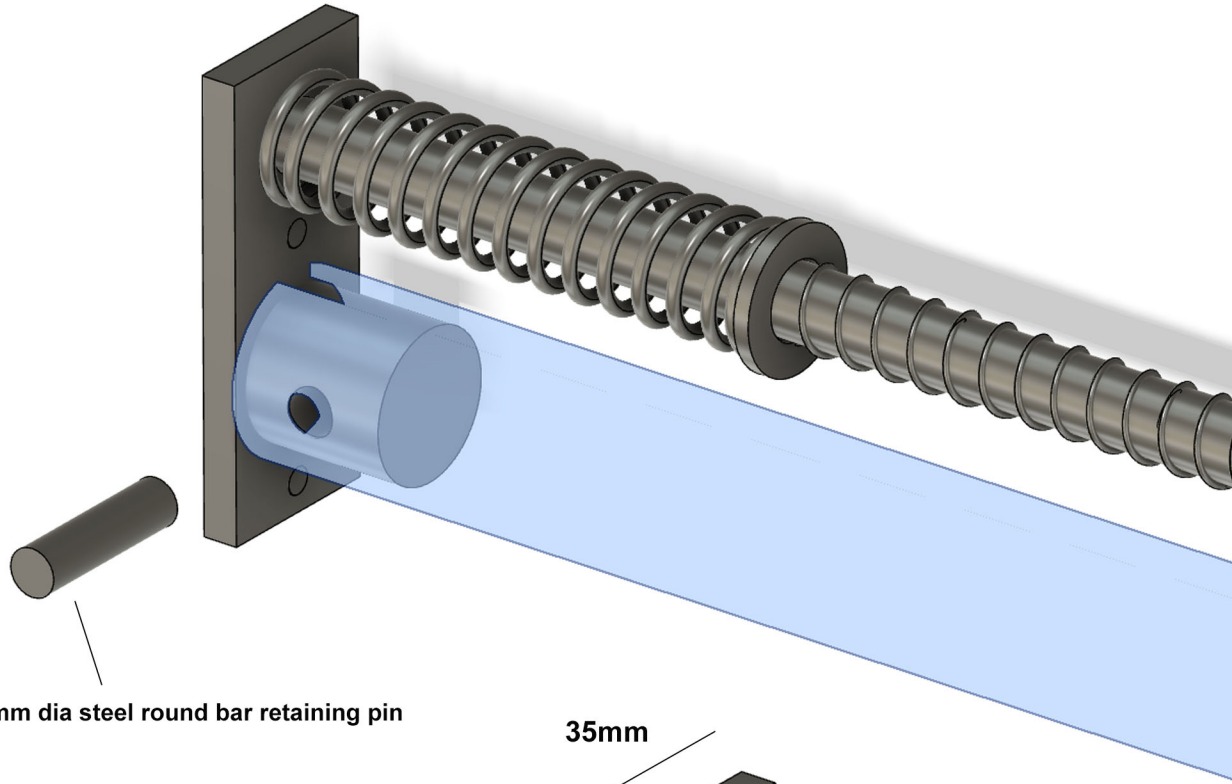
Magazine latch

Bend from 1.5mm thick mild steel sheet



Coil spring arms push between button tab and trigger guard while held by M4 nut & bolt. Bend coil spring from 19 gauge Music Wire.

Rear plug / back plate assembly



8mm dia steel round bar retaining pin

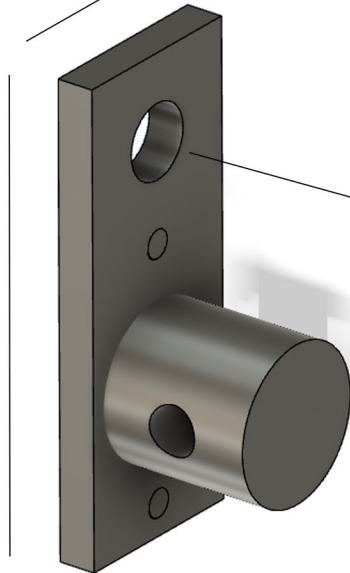
35mm

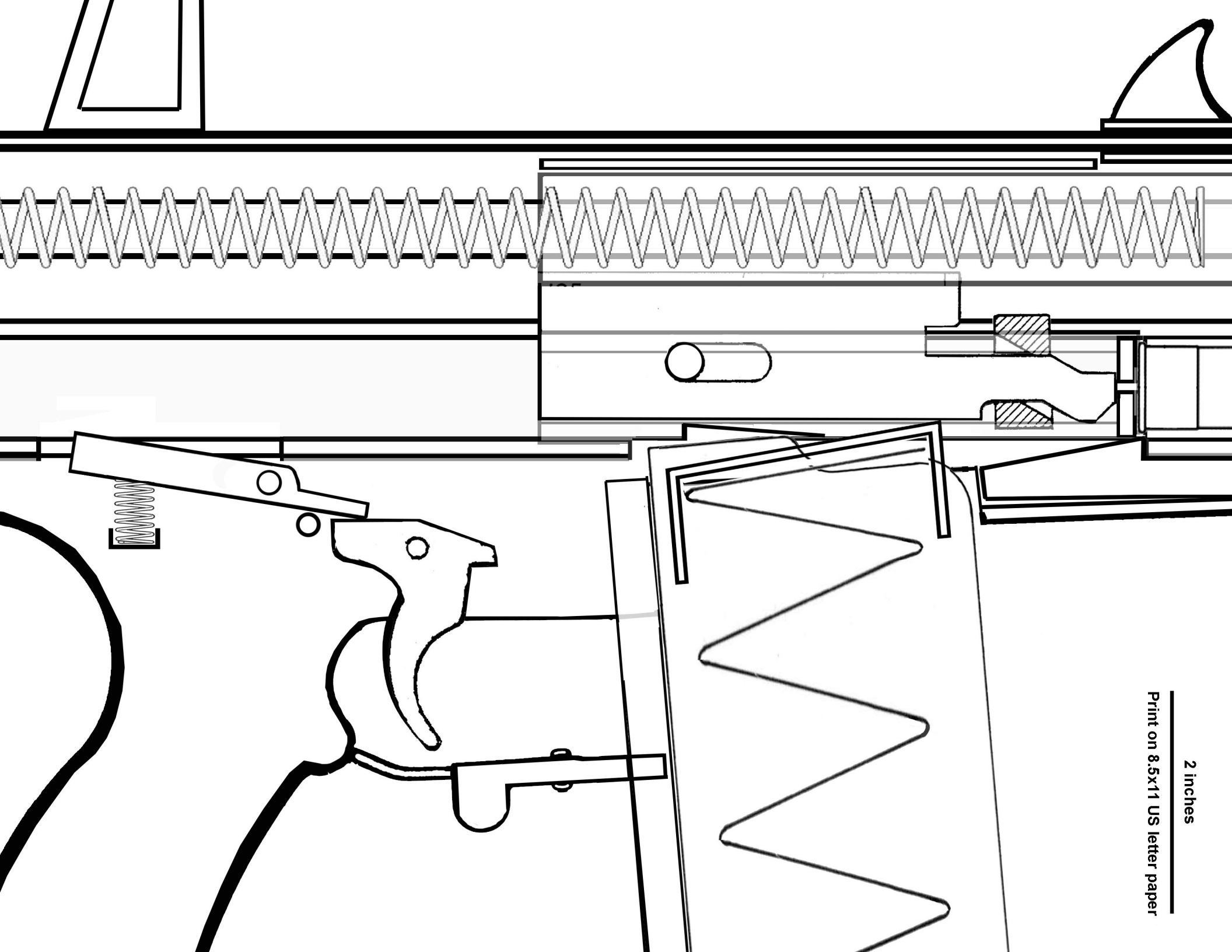
Back plate
6mm thick mild steel plate

12mm dia hole (Weld recoil spring guide rod in place from rear).

75mm

Plug: 25mm (1") mild steel round bar, 25mm long
Weld in place.



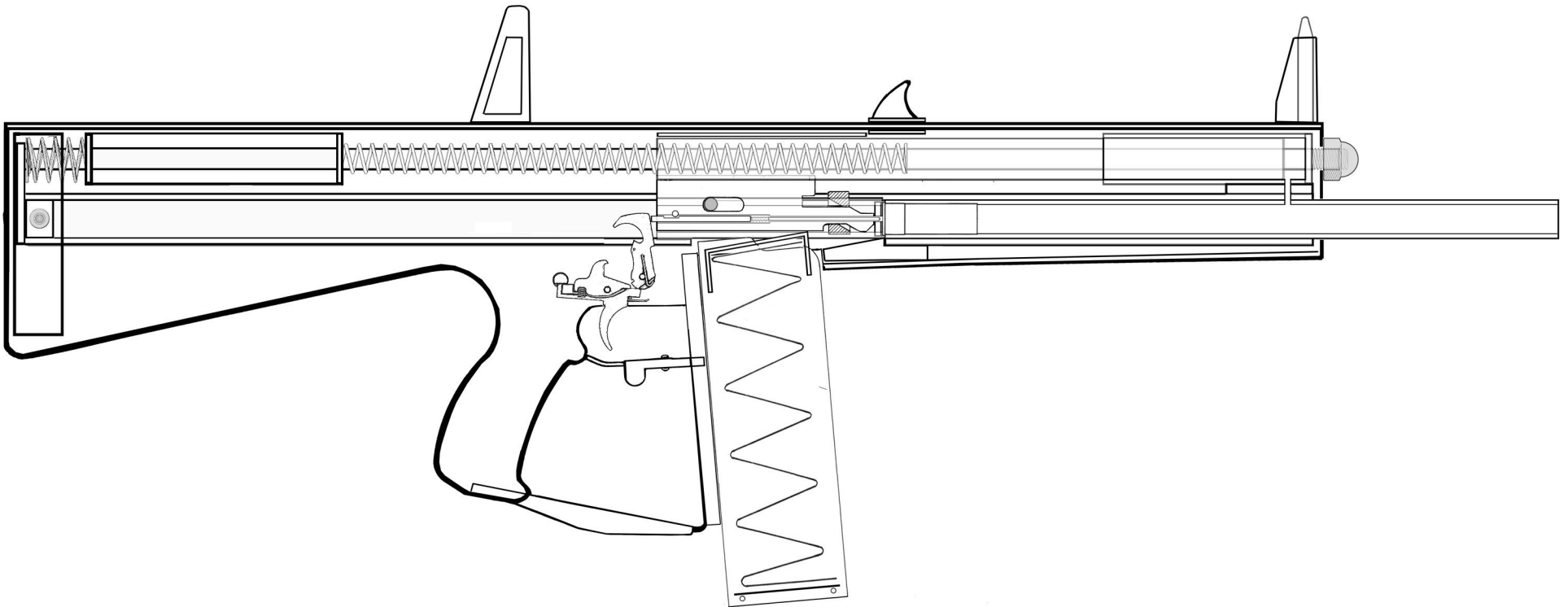


2 inches

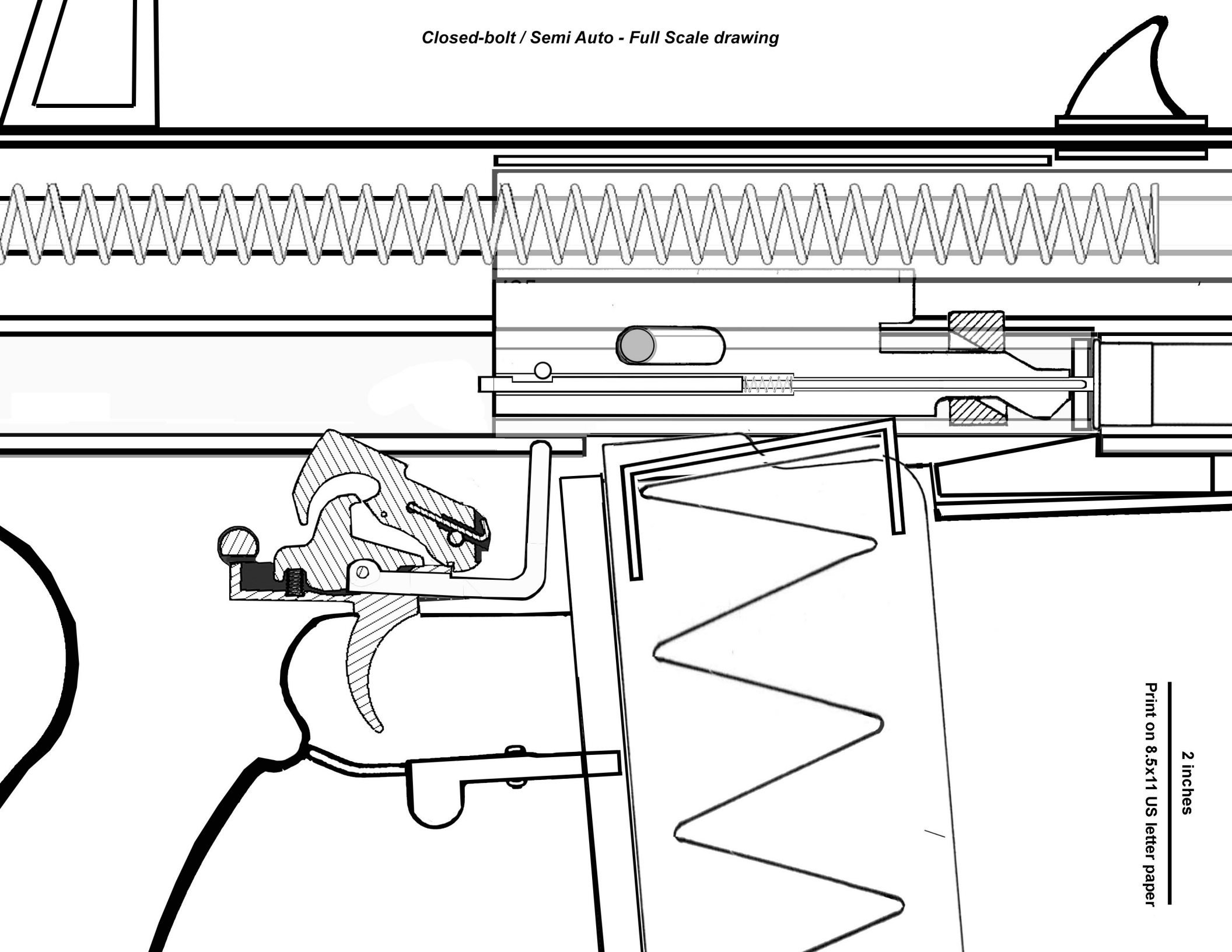
Print on 8.5x11 US letter paper

Closed-Bolt Semi Automatic

When using a standard AR15 Fire Control Group, a 170mm long section of 1" tubing with a washer welded at each end should be added to restrict rearward bolt travel.



Closed-bolt / Semi Auto - Full Scale drawing

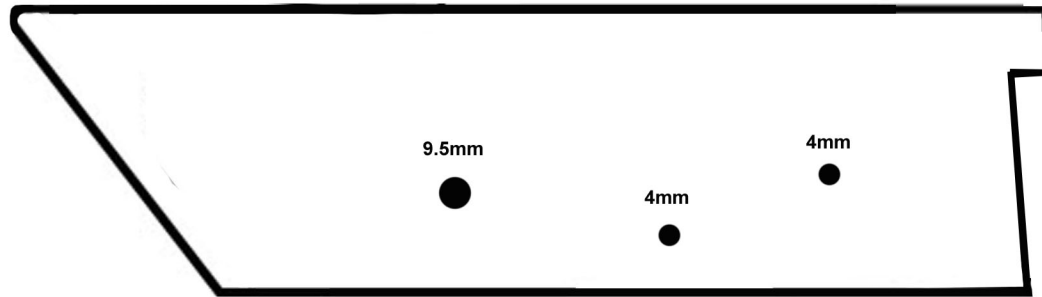
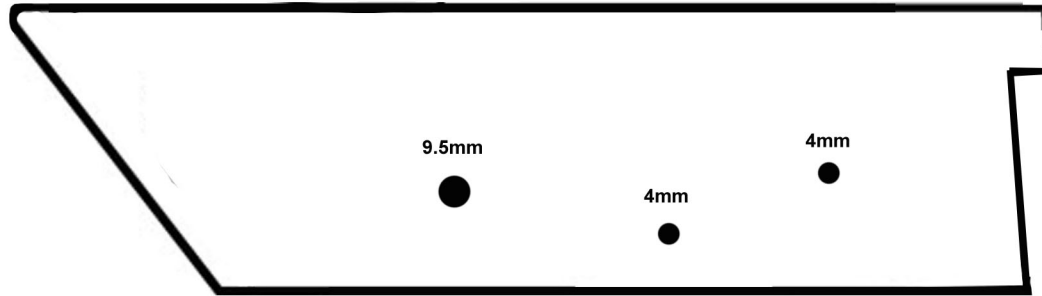


2 inches

Print on 8.5x11 US letter paper

AR15 Fire Control Group side plates

3mm thick mild steel plate



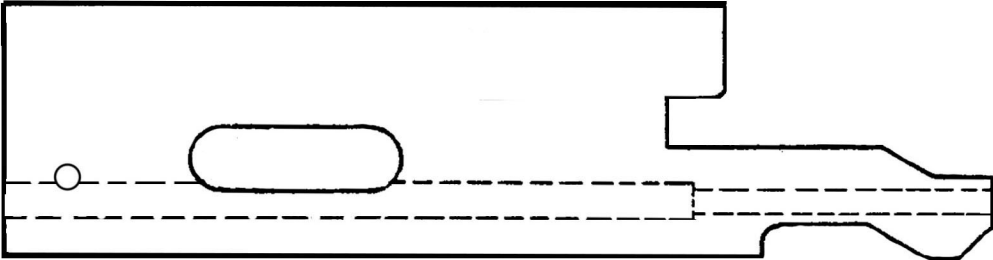
2 INCHES

Print on US Letter Paper

Closed bolt version

Increase plate thickness / slot in Receiver Tube to 8mm

FP retained via 4mm pin



74mm

131mm

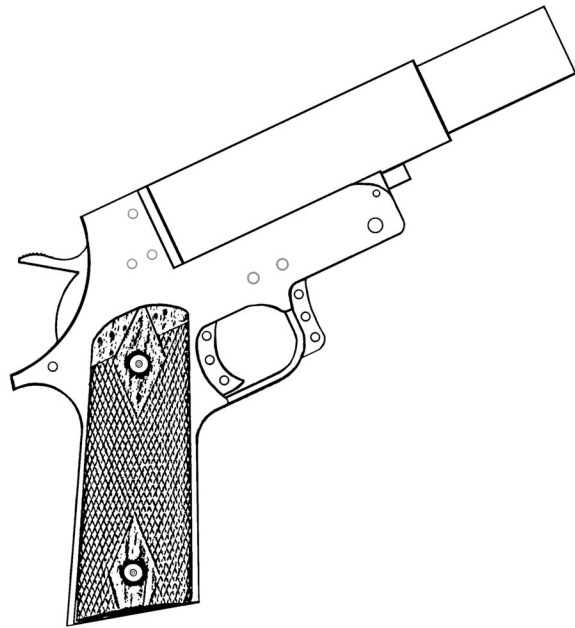
5mm x 1mm stainless tube (secure using JB weld)

3mm dia silver steel bar

2 inches



12 Gauge Shotgun Pistol



Construction Plans

