

MAKING INSERTS

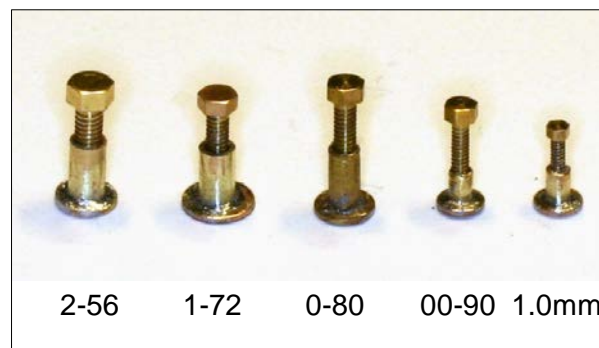
Custom building requires a significant amount of test fitting to ensure everything fits together properly. When bolts are used and screwed into plastic it is easy to strip the threads, particularly if a tight assembly is required. In such circumstances it's helpful to use threaded brass inserts superglued into the plastic part.

Here's how to make inserts for 1.0 mm, 00-90, 0-80, 1-72 and 2-56 bolts.

Some notes from experience:

- Small taps are hard and brittle. It is easy to break them.
- Lubricating the tap (oil or soap) helps reduce the stress on the tap.
- It is better to drill out the inside with a slightly bigger hole, and risk a loose fit, than force the tap.
- For very tight assemblies, adding a flange, by soldering a washer to the end of the insert, will reduce the possibility of pulling the insert out of the part.
- Pocher typically used 2 mm dia bolts and screws. A 2-56 insert will work with Pocher hardware.

Typical Inserts



1.00 mm

Shaft Dia: 1.00 mm

- Brass Tube 1/16 OD 1.59 mm
1/32 ID 0.79 mm
- Tap carefully
- Drill out 00-90 washer 1/16" for end plate
- Solder washer to end plate

00-90

Shaft Dia: 1.19 mm

- Brass Tube 1/16 OD 1.59 mm
1/32 ID 0.79 mm
- Drill out #62 drill 0.96 mm
- Oil inside & tap carefully
- Solder 1-72 washer to tube as end plate

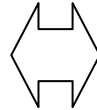
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0-80, 1-72 and 2-56 bolts.

0-80

Shaft Dia: 1.52 mm

- Thin wall brass tube
1/16 OD 1.59 mm
3/64 ID 1.19 mm
- For greater strength, over-sleeve with
Brass Tube 3/32 OD 2.38 mm
1/16 ID 1.59 mm
- Solder tubes together
- Oil inside & tap carefully
- Drill out 2-56 washer 3/32" for end plate
- Solder end plate to tubes



0-80 Alternative

- Thin wall brass tube: OD 2.50 mm
ID 2.05 mm
- Thin wall brass tube: OD 2.00 mm
ID 1.55 mm
- Solder tubes together
- Drill out to 3/64" 1.19 mm
- Oil inside & tap carefully
- Drill out 1-72 washer 5/64" for end plate
- Solder end plate to tubes

1-72

Shaft Dia: 1.85 mm

- Brass Tube 3/32 OD 2.38 mm
1/16 ID 1.59 mm
- Tap
- Drill out 2-56 washer 3/32" for end plate
- Solder end plate to tube

2-56

Shaft Dia: 2.13 mm

- Brass Tube 1/8 OD 3.18 mm
3/32 ID 2.38 mm
- Then sleeve with brass tube
3/32 OD 2.38 mm
1/16 ID 1.59 mm
- Solder tubes together
- Drill out with #50 drill 1.79 mm
- Oil inside & tap