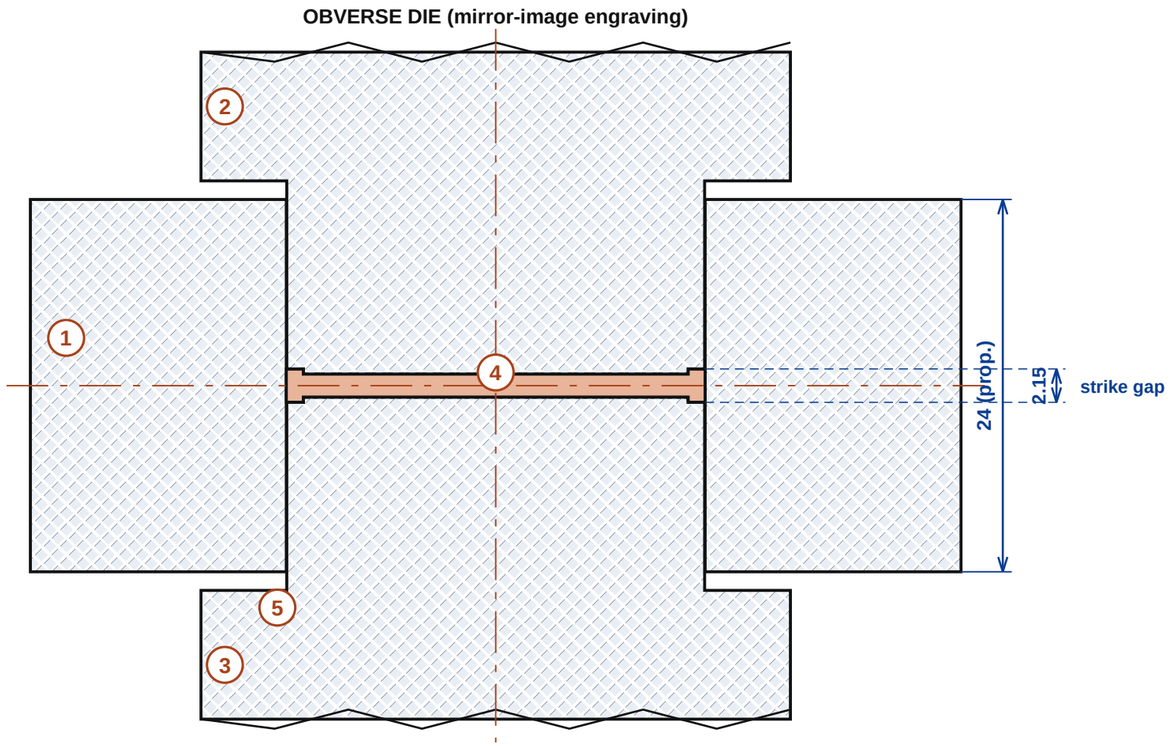
STRUCK ROUTE (A): OBVERSE DIE, REVERSE DIE AND REEDED COLLAR

Recommended for coin quality. Dimensions in mm. (prop.) = proposed starting value for the die-maker to confirm.

SECTION A–A · closed (strike) position · 4 = planchet, 22K rose, annealed

Scale 2.6:1 · die lengths shortened (break lines)



OBVERSE DIE FACE (plan, mirror image)



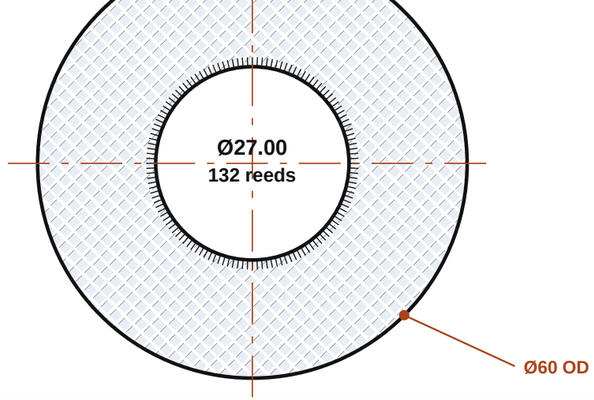
REVERSE DIE FACE (plan, mirror image)



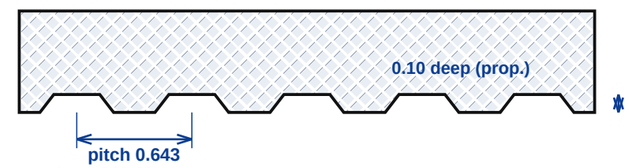
Rim groove 1.10 wide × 0.33 deep, relief cut ≤0.28 below field, cell walls cut 0.20 (prop.)
Laser/CNC-engrave or EDM, then hand-finish; harden; polish field to mirror Ra ≤0.05 µm (prop.).

COLLAR (RING), PLAN

reeds exaggerated · 1.2:1



DETAIL C · collar bore reed grooves · 30:1



Groove depth 0.10, flank ≈ 45° (prop.).
132 grooves: Ø27.00 × π ÷ 132 = 0.643 pitch.

1. Collar (ring): bore Ø27.00 +0.02/−0.00 (prop.), OD Ø60, height 24; 132 reed grooves in bore (see detail C)
2. Obverse die (upper): nose Ø26.94 −0.01/−0.03 (prop.), working face = mirror of coin front incl. enamel cell walls
3. Reverse die (lower): same nose Ø26.94; face = mirror of coin back (“1/2 OZ”, “22KT GOLD”)
4. Planchet: Ø26.80–26.85 (prop.) before strike, 22K rose, annealed, finished weight ≥16.966 g
5. Rim groove in each die face: width 1.10, depth 0.33 below field plane; field to rim step 0.33 per side

PROJECT	DRAWING	SHEET / SCALE
Proof of Panda · P.O.P coin	**P.O.P COIN MOLD BLUEPRINT Rev A — struck die set**	**1 of 2 · as noted**

COIN MATERIAL	FINE / GROSS WEIGHT	COIN Ø × RIM THICKNESS	EDGE	FINISH
22K rose gold, Au 91.67% (0.9167)	15.552 g / 16.966 g	27.00 ±0.05 × 2.15 ±0.05 mm	Reeded, 132 reeds	Proof; hard enamel in cells

DIE / COLLAR STEEL	DIE HARDNESS	CAST OVERSIZE	TOLERANCES (TOOLING)	DATE / REV
Cold-work tool steel (proposed)	≈58–62 HRC (proposed)	+1.35% (proposed, range 1.2–1.5)	Cavity Ø ±0.01 · depths ±0.01 mm	Nov 26, 2026 · Rev A

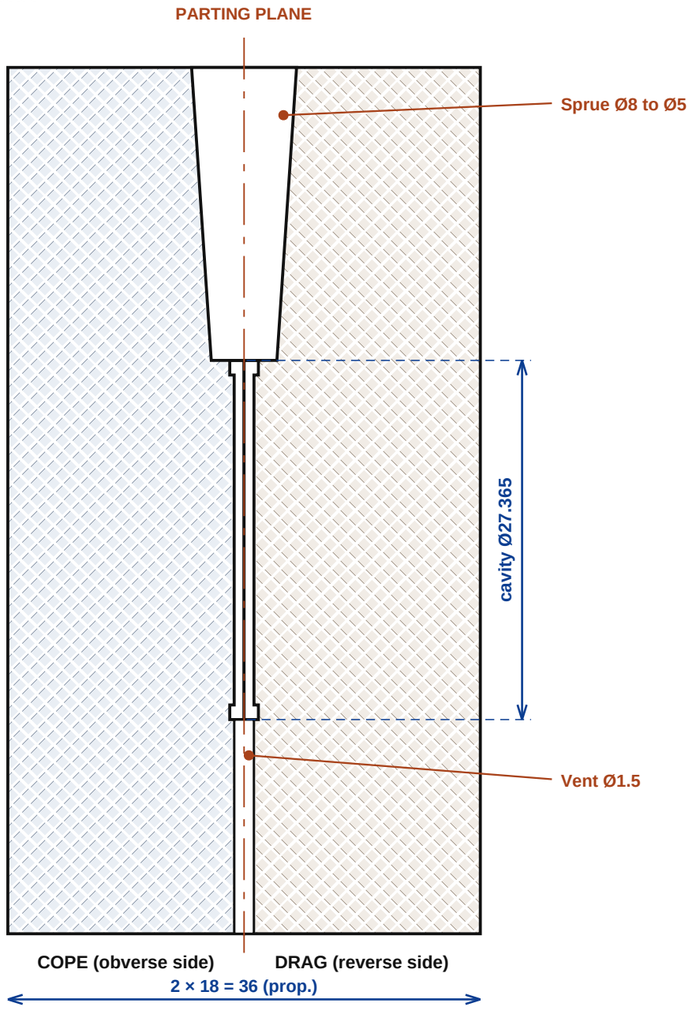
P.O.P COIN MOLD BLUEPRINT Rev A — FOR QUOTATION / TO BE CONFIRMED BY DIE-MAKER OR CASTER. Proposed values are marked. Coin is planned, not yet made.

CASTING ROUTE (B): TWO-PART SPLIT MOLD, SPRUE AND VENTS

Small runs only. Cavity and 3D-printed/CNC master are made oversize to offset casting shrinkage. All dimensions mm. Marked (prop.) = proposed.

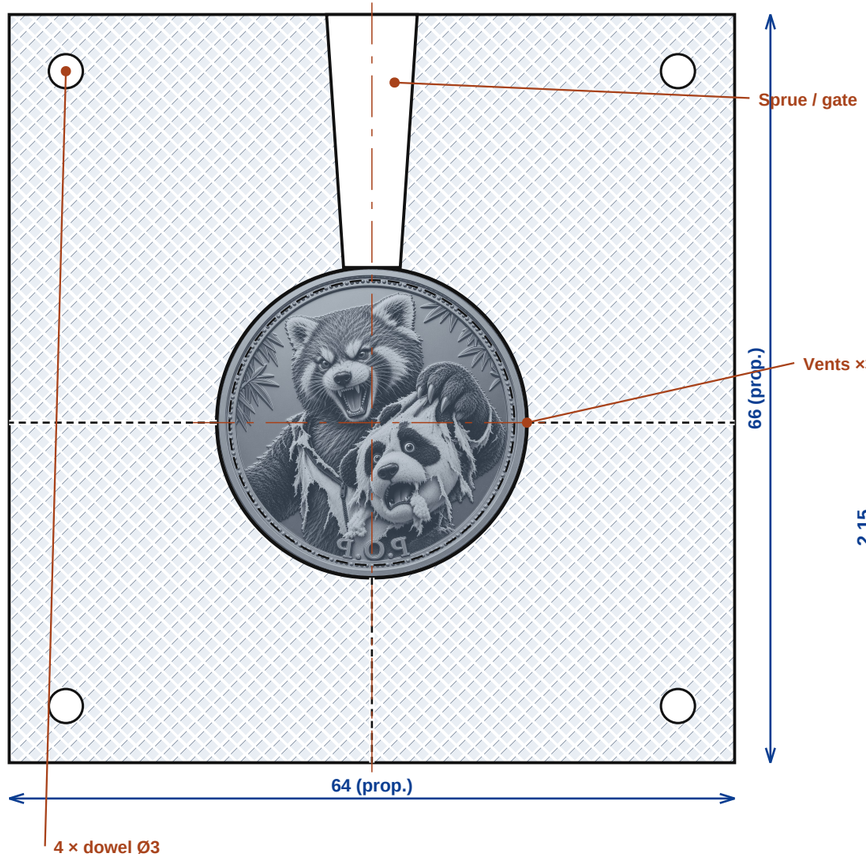
SECTION D–D · coin stands on edge, gate at the rim (12 o'clock)

Scale 2.2:1



PLAN E · cope half, parting face

Scale 1.9:1 · drag half is the mirror, with the reverse cavity



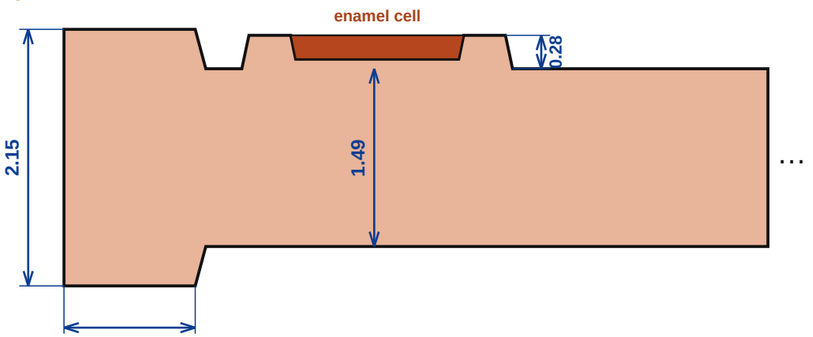
CAVITY / MASTER SIZES · coin × 1.0135 (prop.)

Feature	Final coin	Cavity / master
Diameter	27.00	**27.365**
Rim thickness	2.15	**2.179**
Field thickness	1.49	**1.510**
Rim width	1.10	**1.115**
Relief (max)	0.28	**0.284**
Enamel recess depth	≈0.20	**0.203**
Reed pitch (132)	0.643	**0.652**

Gold alloys shrink about 1.25–1.65 % on casting.
Use 1.2–1.5 %, fix by test casts (prop.).

DETAIL F · coin section, rim and relief · 20:1

Draft: relief walls 10–15°, rim wall 15° (prop.)



Enamel recess 0.20 below line tops, flat floor, no undercuts (prop.)

1. Dies/collar (sheet 1): cold-work tool steel, about 58–62 HRC; reeds by EDM/broach. (prop.) values are starting points.
2. Cast route: master and cavity at +1.35 % (1.2–1.5 %); leave ≈0.03 mm per face to polish.
3. Coin on edge, sprue Ø8 to 5 at 12 o'clock, vents at 3, 6, 9; vacuum or pressure assist; test-cast first (prop.).
4. Pour 22K rose ≈1,050–1,150 °C into a mold at ≈550–650 °C (supplier data); scrap reuse ≤50 %.
5. Check Ø27.00 ±0.05, 2.15 ±0.05, gross ≥16.966 g, fine gold ≥15.552 g.

PROJECT	DRAWING	SHEET / SCALE
Proof of Panda · P.O.P coin	**P.O.P COIN MOLD BLUEPRINT Rev A — casting mold**	**2 of 2 · as noted**

COIN MATERIAL	FINE / GROSS WEIGHT	COIN Ø × RIM THICKNESS	EDGE	FINISH
22K rose gold, Au 91.67% (0.9167)	15.552 g / 16.966 g	27.00 ±0.05 × 2.15 ±0.05 mm	Reeded, 132 reeds	Proof; hard enamel in cells

DIE / COLLAR STEEL	DIE HARDNESS	CAST OVERSIZE	TOLERANCES (TOOLING)	DATE / REV
Cold-work tool steel (proposed)	≈58–62 HRC (proposed)	+1.35% (proposed, range 1.2–1.5)	Cavity Ø ±0.01 · depths ±0.01 mm	Nov 26, 2026 · Rev A

P.O.P COIN MOLD BLUEPRINT Rev A — FOR QUOTATION / TO BE CONFIRMED BY DIE-MAKER OR CASTER. Proposed values are marked. Coin is planned, not yet made.