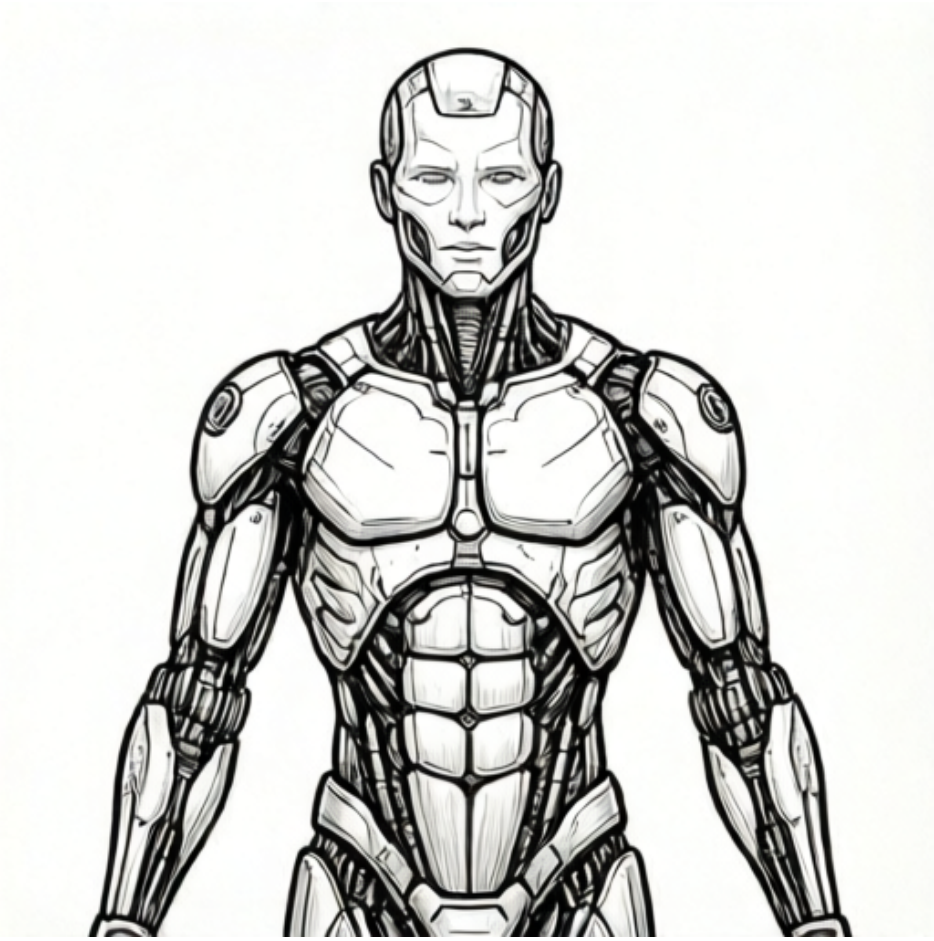
# Cyborg Drawing: Mechanical Joints and Panel Lines

Topic reference / ordinary illustration



Ordinary topic reference. Hypothetical dimensions in the four tasks are supplied in their own text; this illustration is not their measured answer.

# Cyborg Drawing: Mechanical Joints and Panel Lines

Worked example / complete source key

Draw a cyborg forearm with a mechanical elbow hinge and three panel lines. Use a human upper arm and a mechanical forearm. The elbow joint should show an axle, a housing, and one piston. The forearm should have two lengthwise panel lines and one curved line near the wrist. Label the axle and housing.

Answer: First draw a human upper arm from shoulder to elbow, using a light skeleton line. At the elbow, draw a circle for the axle with a diameter about one third of the forearm width. Around the axle, draw a rounded housing that extends slightly above and below the joint. Connect the housing to the upper arm with a short bracket and to the forearm with another bracket. Add a straight piston line from the upper arm bracket to the forearm bracket, crossing near the axle but not touching it. For the forearm, draw a tapered cylinder from elbow to wrist. Add two lengthwise panel lines running from the housing edge to near the wrist, leaving a small gap at both ends. Add one curved panel line around the forearm about one finger width from the wrist. Label the axle circle and the housing shape. Check that the axle is centered, the piston does not cross the axle, and the panel lines stop short of the housing.