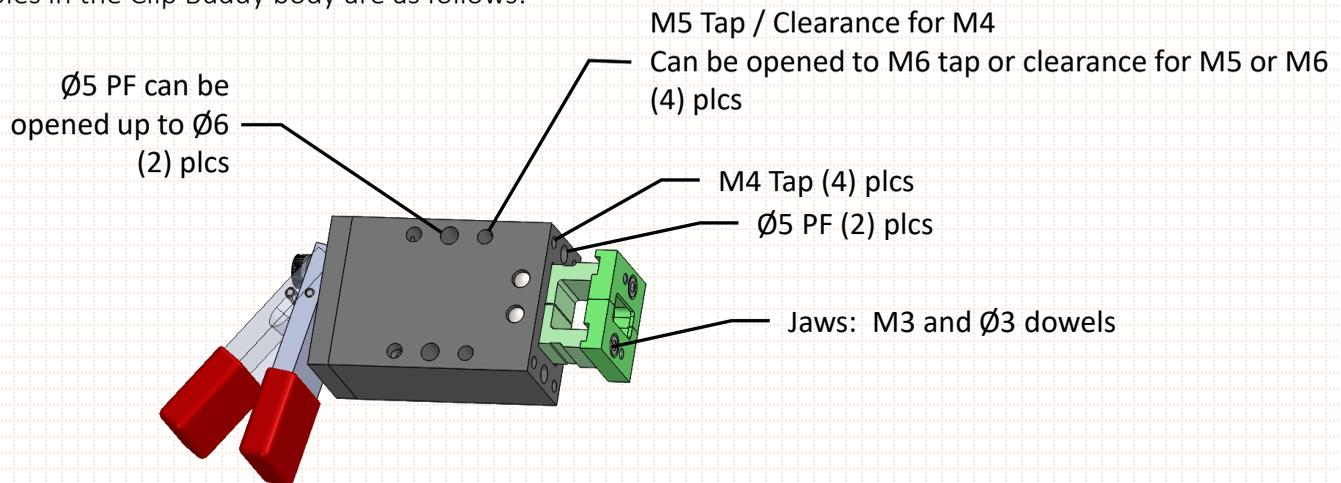


- 1) Cad files are provided for all individual items (CB4B, CB4MF, etc.) which can be assembled in cad as needed.
- 2) Some internal features of the clip buddy assembly (springs, internal components, etc...) are not included in cad for clarity and reduced complexity.
- 3) Cad files include levers and optional mounting brackets in all potential orientations. Unused orientations can be deleted as desired.
- 4) All options and accessories include fasteners to attach the item to the Clip Buddy body. Fasteners for attaching to a fixture are not included. Optional levers and mounting brackets are shipped pre-assembled whenever possible.

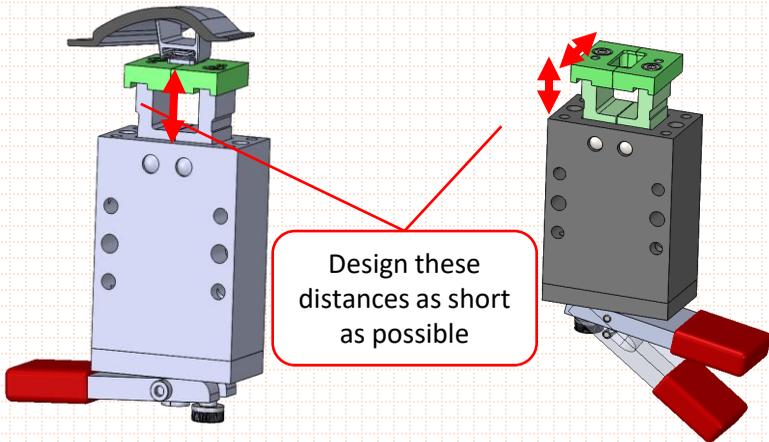
- 5) Holes in the Clip Buddy body are as follows:



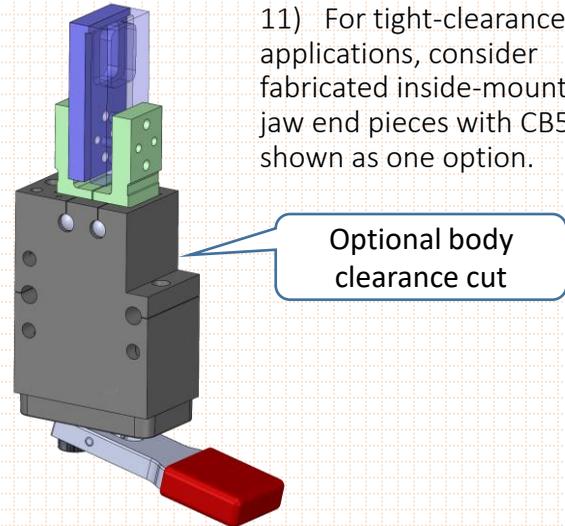
- 6) All optional mounting brackets have M5 tapped holes and Ø5 PF dowel holes for mounting to the fixture
- 7) Jaw end piece anvils are constructed from 1045 unhardened steel, except for "xxxxSS" versions which have SS420 end pieces. The main body is 1045 steel. Other components are 1045 steel or die cast metal.
- 8) When using the cable remote actuation option, order one CB4CBL (or CB4CBL-3M) for each Clip Buddy to be cable actuated. The CB4CBL option includes cable adapter items attached to the back end of the Clip Buddy, and a separate 2 meter cable assembly (3 meter for CB4CBL-3M) which connects to the CBRA12 actuator box. Also order CBRA12 unit(s) as needed. Each CBRA12 will actuate 1-12 Clip Buddy units which have the cable option.
- 9) When using the CB4CYL pneumatic option, air pressure can be provided by one of 2 methods. 1) Shop air with a pressure regulator and gage can be used. 2) Pneumatic actuators can be used: CBPA6 for 1-6 units, and CBPA10 for 1-10 units. There are separate information documents for each of these methods.



10) Position the Clip Buddy body as close as possible to the feature mating surfaces to provide rigidity.



11) For tight-clearance applications, consider fabricated inside-mounted jaw end pieces with CB5X as shown as one option.

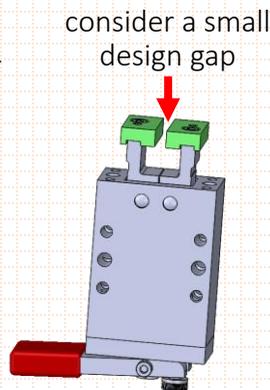


12) In general it is suggested to use Clip Buddy versions with jaw end pieces included (CB3B, CB4A, CB4B, CB5B, CB5C) whenever possible to avoid the need to fabricate, attach, and adjust jaw end pieces.

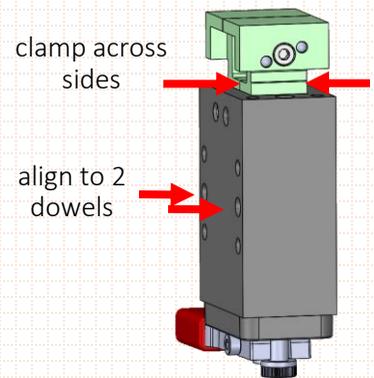
13) For situations where custom jaw end pieces are necessary (CB3L, CB3X, CB4X, CB5L, CB5X), it is recommended to plan for grinding the top faces and possibly the side surfaces of the jaw end pieces after assembly to ensure flatness, squareness, and matched surfaces.

14) When installing custom jaw end pieces that are designed to contact each other, it is critical that the jaw end pieces make contact at the same time that the jaw arms naturally close. If the jaw end pieces prevent the jaw arms from closing to their natural closed position, there may be jaw motion in the closed assembly. (also see no. 15 below)

15) When custom jaw end pieces are required, consider using designs wherein the jaw end pieces do not contact each other, but have a small gap. This will eliminate the need to fine-tune the closing of the jaw end pieces to match the internal jaw closing positions.



16) For machining assembled units, it is recommended to align to 2 side dowel holes and clamp the jaws across the sides for added rigidity. (for all versions, with or without jaw end pieces)



17) If disassembly is necessary, mark the jaw locations relative to the block. Then carefully punch out (2) dowels $\text{Ø}5$ taking care not to scrape the sides of the holes. Then slide the 2 jaws together with the small spring between them out of the front of the block. To reassemble, reverse the steps making sure to reinstall all components in the original positions and orientations. Hold the lever open for reassembly.

