The Gemcor Drivmatic G200BCHX-72 and Craco 3-0068 are automatic riveting machines, which are capable of high quality and pressure/fuel tight rivet installation per PPS 2.01 and PPS 2.38. The sequential steps are as follows:

1. Clamp structure.

2. One shot drill and countersink.

3. Insert and install rivet.

4. Unclamp.

The panels are usually suspended on hoists or tables and manually advanced to the next rivet location. Riveting through fay surface seals is done routinely.

Generally this is a high productivity, low cost method, however, efficiency is greatly enhanced by adhering to the following guidelines to the extent practical:

1. Use protruding head rivets where possible (simplified machine set-up).

2. Use same diameter as much as possible on any given assembly (fewer set-up changes).

3. Consider basic machine reach (refer to Figures 3 and 4) and frame envelope dimensions.

4. Consider tool access capabilities and limitations (refer to Figures 6, 7 and 8).

5. Consider spacing limitations (refer to Figure 7).

6. Avoid use of tapered flanges to provide a flat surface for proper machine clamp up and uniform button thickness (refer to Figure 1).

7. Keep manufactured head on the same side on any given assembly to avoid panel turnover.

8. Provide for constant rivet spacing in any given pattern to avoid need for hand layout of riveting pattern.

9. CONSULT WITH MANUFACTURING ENGINEERING FOR ADVANCES IN TECHNOLOGY DEVELOPMENT OR ADDITIONAL INFORMATION.

* This DS is similar to Boeing Design Standards 81B3, Section 476.3 with the exception of different equipment.

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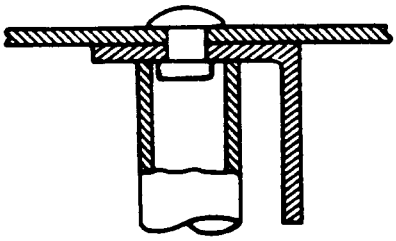
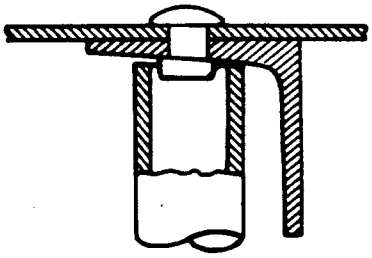


FLAT COMPONENT
RECOMMENDED



TAPERED COMPONENT
NOT RECOMMENDED

FIGURE 1

EQUIPMENT △1	THROAT CLEARANCE	ALUMINUM RIVET CAPABILITY	MAX. SQUEEZE CAPABILITY
Gemcor G-200BCHX-72	72"	3/32 to 1/4	12,000 lbs.
Craco 3-0068	61"	3/32 to 1/4	12,000 lbs.

TABLE 2 - MACHINE CAPABILITIES

△1 Figures 3 and 4 show machine access envelopes

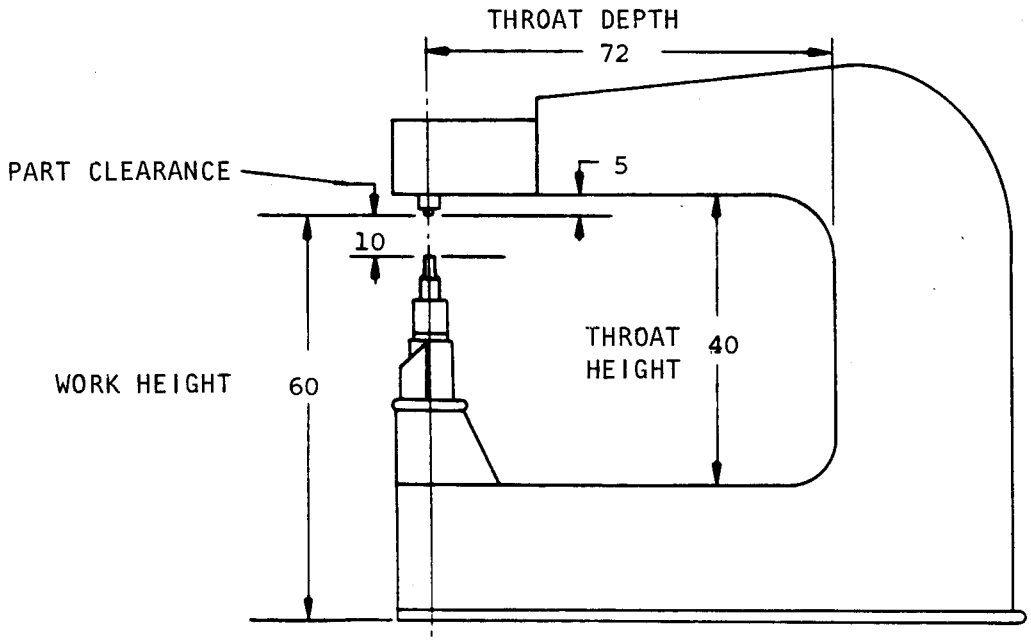


FIGURE 3: ENVELOPE DIMENSIONS FOR DRIVMATIC G200BCHX-72

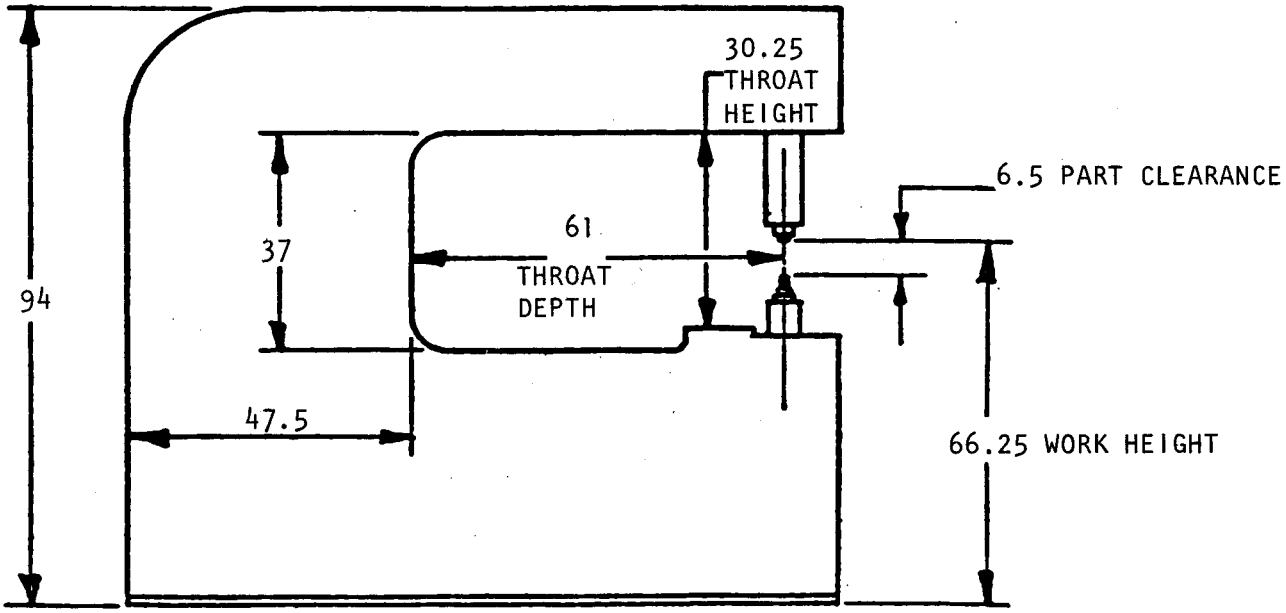


FIGURE 4: ENVELOPE DIMENSIONS FOR CRACO 3-0068

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STRESSED			
APPROVED	[illegible] 8 JULY 88		

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Tool Access Requirements

Straight on access is required from the top surface to allow drilling. Figure 5 illustrates the basic components of Drivmatic tooling.

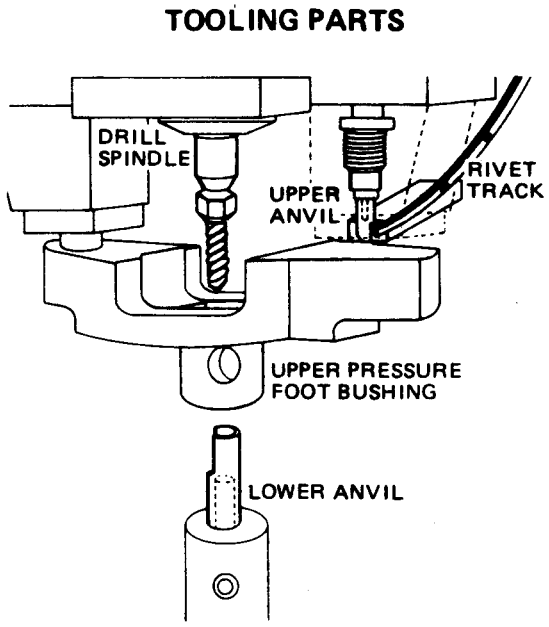


FIGURE 5: BASIC DRIVMATIC TOOLING COMPONENTS

Drivmatic riveting of angle or TEE components to the top surface of a sheet is possible within the limitations of Figure 6.

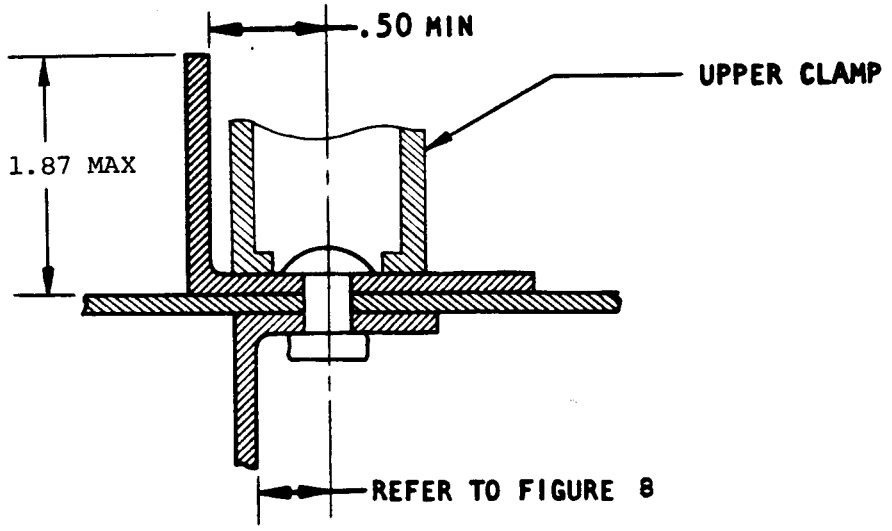
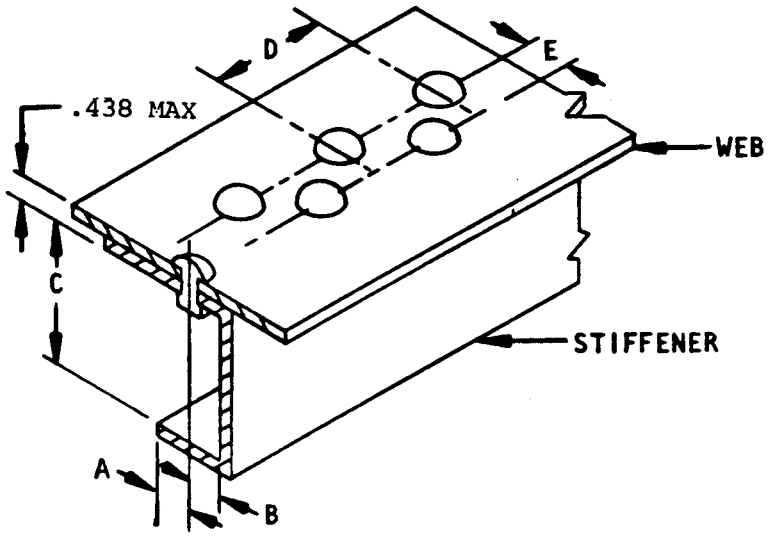


FIGURE 6: UPPER SURFACE TOOL ACCESS LIMITATIONS

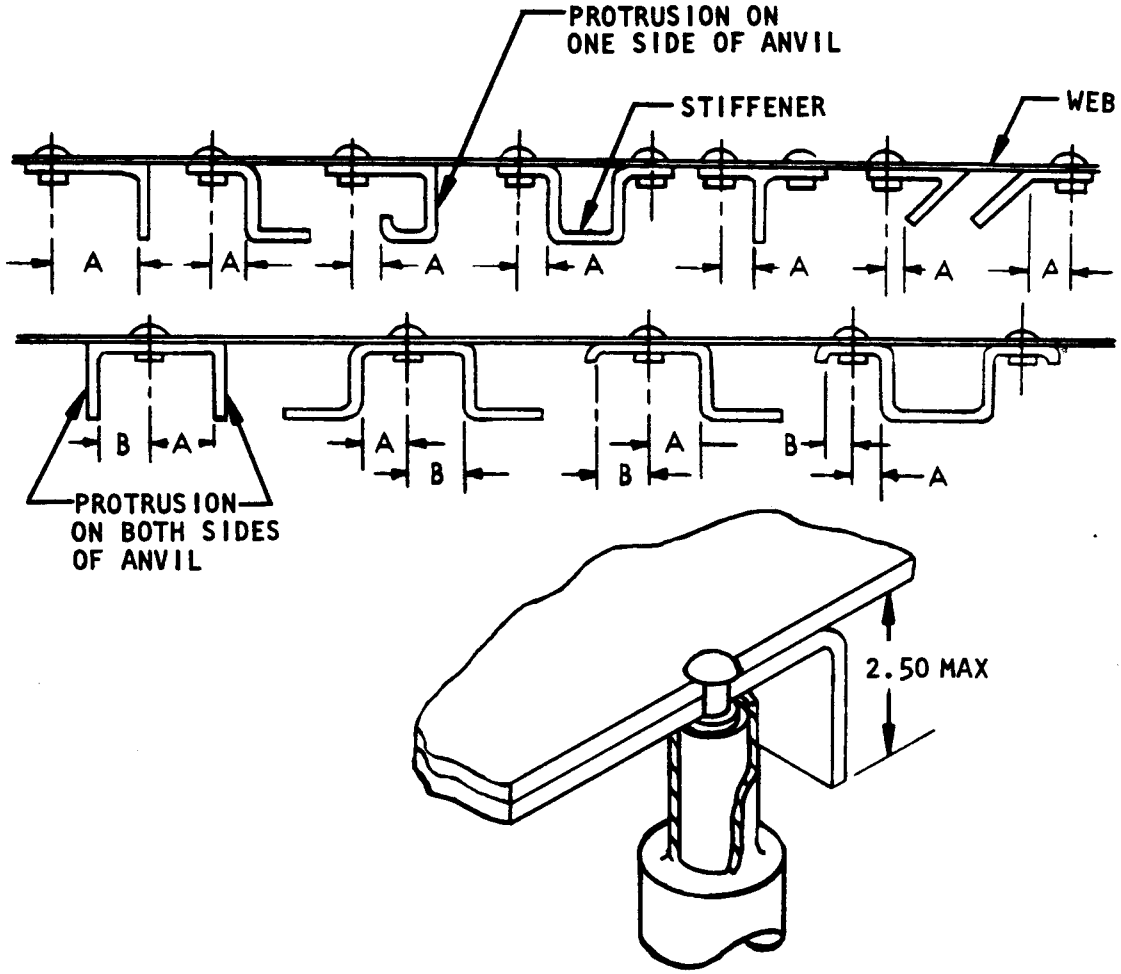
Rivet and row spacing limitations as well as maximum offset capability are shown in Figure 7.



RIVET DIAMETER	A MAX.	B MIN.	C MIN.	C MAX.	D MIN.	E MIN.
1/8	.75	.25	.97	3.25	.80	.47
5/32	.81	.31	.97	3.25	.80	.47
3/16	.81	.34	.97	3.25	.88	.47
1/4	.81	.44	.97	3.25	.94	.59

FIGURE 7: RIVET SPACING LIMITATIONS

Lower surface tool access must be within the constraints of Figure 8.



RIVET DIAMETER	1/8	5/32	3/16	1/4
A Min.	.25	.25	.28	.34
B Min.	.38	.38	.41	.47

FIGURE 8: LOWER SURFACE STRAIGHT TOOL ACCESS REQUIREMENTS

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