

# Aluminum Die Sets

Danly IEM

800-243-2659

## Aircraft Quality Aluminum, Made In The U.S.A.

Any die set offered by **Danly** in steel can also be manufactured from aluminum. And, for some applications the advantages of light weight aluminum are worth looking into. For example, aluminum die sets weigh only about one third as much as their steel counterparts. That makes them much easier to handle, transport and store. Some feel that less weight in the die can reduce stress and wear on presses. Others report that the reduced weight of aluminum die sets can speed changeovers. For a variety of reasons, there is growing interest in aluminum.

## Machined To Your Specifications In Any Size Or Style

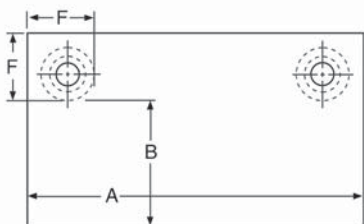
Aluminum die sets can be ground and EDM'd, as well as drilled, planed, milled, reamed, and tapped. There's really no limitation to the machining which can be performed. Today's aluminum is surprisingly strong too. **Danly** uses only aircraft quality plate for its die sets. Tests show that

aircraft aluminum outperforms 1020 hot rolled steel in both thermal conductivity and strength characteristics, as illustrated in the chart on the reverse side

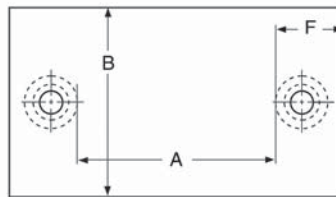
## Variety Of Material And Thicknesses Available

**Danly** die sets are usually made from QC-10™, but they are also available in 6061 or 7075 material in a variety of configurations. Plate thicknesses are available in 1, 1½, 2, 2½, 3, 3½, 3<sup>5</sup>/<sub>8</sub>, 4, 4<sup>5</sup>/<sub>8</sub>, 5, 5½, and 6 inches.

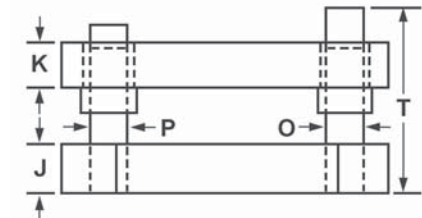
The combination of performance and value offered by steel is mighty tough to beat and there are certainly many applications where aluminum would not be the best choice. Because of the increased material expense, even with its easier machinability, aluminum die sets can be considerably more expensive than steel. And the greater malleability of aluminum could be a concern for some applications. Still, the overall benefits are worth looking into.



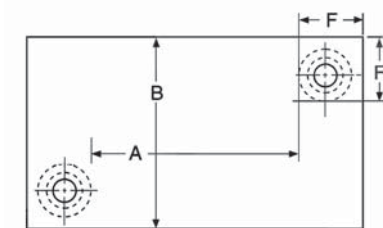
AS-33 Back Post Series



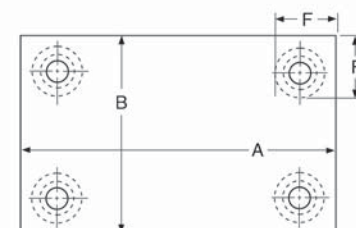
AS-34 Center Post Series



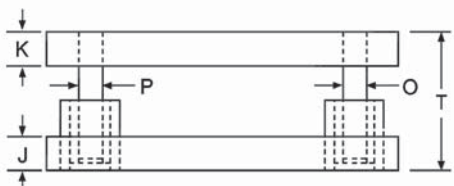
Plain Bearing Die Set



AS-35 Diagonal Post Series



AS-37 Four Post Series



Ball Bearing Die Set

Note: Dimension "P" required on AS-34 and AS-35 only.  
Locate shank on plan view when required.  
Locate lift holes when required.

Note: "O", "P" and "F" Dimensions per catalog unless otherwise specified.  
**Plain Bearing Sets "F" from Guide Post**  
**Ball Bearing Die Sets "F" from Bushing**

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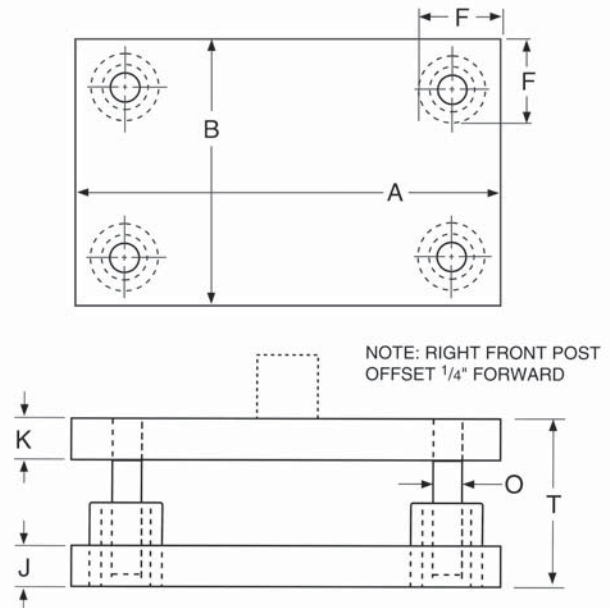
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## Fast Delivery, Convenient Service

Aluminum or steel, one thing's for sure. You can get great turnaround and great service from a single source: **Danly IEM**.

Special orders are welcome, too. Call us about special needs anytime. You can also fax a drawing to 1-800-833-2659, or email your CAD files to us at [quotes@danly.com](mailto:quotes@danly.com).



## COMPARABLE TECHNICAL DATA

PROPERTIES	1020 H R STEEL	4140 ALLOY STEEL	QC-10™ ALUMINUM	6061T651 ALUMINUM	7075T651 ALUMINUM
TENSILE STRENGTH	64	95	85	46	75
YIELD STRENGTH	50	60	77	40	65
DENSITY	.283	.282	.103	.098	.101
ELASTICITY	30 x 10 <sup>6</sup>	30 x 10 <sup>6</sup>	10.4 x 10 <sup>6</sup>	9.9 x 10 <sup>6</sup>	10.3 x 10 <sup>6</sup>
BRINNELL	135	197	165–170	90–95	140–150
COEFFICIENT OF EXPANSION	6.3 x 10 <sup>-6</sup>	6.2 x 10 <sup>-6</sup>	13.7 x 10 <sup>-6</sup>	13.1 x 10 <sup>-6</sup>	13.1 x 10 <sup>-6</sup>
THERMAL CONDUCTIVITY	20	24	92	95	75
WELDABILITY	GOOD	MODERATE	MODERATE	BEST	BETTER