A large aerospace manufacturer is having production pauses while drilling 40-45HRC Inconel 718 in a two-step process. Reduce cycle time, spindle load, and increase tool life utilizing 1 tool rather than 2.

OSG brought in an A Brand ADO 5D drill to take on the opportunity. The self-centering technology of the OSG ADO allowed us to eliminate the spot drill reducing the number of tools for this application from 2 to 1. The ADO also features an R-Gash on its cutting edge. The R-Gash granted an acceptable spindle load for continuous machining with the ability to increase feed by a considerable margin.

![A BRAND ADO](image)

<table>
<thead>
<tr>
<th>Tool Diameter</th>
<th>Original Process</th>
<th>NEW Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.625 SD Drill</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SFM</th>
<th>75</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPM</td>
<td>458</td>
</tr>
<tr>
<td>IPM</td>
<td>0.92</td>
</tr>
<tr>
<td>Hole Depth</td>
<td>2.75</td>
</tr>
<tr>
<td>Cycle Time (Seconds)</td>
<td>263</td>
</tr>
</tbody>
</table>

OVER $27,000 ANNUAL SAVINGS!

THE STRATEGY

<table>
<thead>
<tr>
<th>Cycle Time Per Part (Seconds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old Process</td>
</tr>
<tr>
<td>NEW Process</td>
</tr>
</tbody>
</table>

BACKGROUND

GOALS

DETAILS

INDUSTRY
Aerospace

PART
Pin

MATERIAL
Inconel 718 40-45HRC

MACHINE
Okuma | Water Soluble 10%

SPINDLE
CAT40 Mill Turn

ORIGINAL TOOLING
Competitor Replaceable Tip Drill 8D
0.625 | 2 Flute | TiAlCrSi Multi Layer

NEW TOOLING
A Brand ADO 5D
0.625 | 2 Flute | EgiAs
THE RESULTS
OSG was successful in increasing tool life and being more productive than the old process by reducing the tools required from 2 to 1 with the OSG A Brand ADO!

- Parts per drill increased from \textbf{5 to 16}.
- Cycle time was \textbf{reduced by 174 seconds per part!} (263sec to 89sec)
- Tools required \textbf{reduced from 2 to 1}.
- \textbf{A total savings of $27,728}

\begin{tabular}{|l|c|}
\hline
\textbf{Cycle Time Saved per Part (Seconds)} & \textbf{174} \\
\hline
\textbf{Number of Parts Per Year} & \textbf{4,000} \\
\hline
\textbf{Cycle Time Saved Annually (hours)} & \textbf{193.91} \\
\hline
\textbf{Cost to Machine (Per Hour)} & \textbf{125} \\
\hline
\textbf{Annual Mill Cost Savings} & \textbf{7,969} \\
\hline
\textbf{Total Machining Cost Saved Annually} & \textbf{$27,728} \\
\hline
\end{tabular}

THE CONCLUSION
OSG was able to reduce drill usage from 800 to 250 utilizing the A Brand ADO! This alone \textbf{saves $7,629 a year!}

\begin{center}
\textbf{SNAPSHOT}
\end{center}

\textbf{BACKGROUND}
A large aerospace manufacturer is having production pauses while drilling 40-45HRC Inconel 718 in a two-step process.

\textbf{GOALS}
Reduce cycle time, spindle load, and increase tool life utilizing 1 tool rather than 2.

\textbf{DETAILS}
\begin{description}
\item[INDUSTRY] Aerospace
\item[PART] Pin
\item[MATERIAL] Inconel 718 40-45HRC
\item[MACHINE] Okuma | Water Soluble 10%
\item[SPINDLE] CAT40 Mill Turn
\end{description}

\begin{description}
\item[ORIGINAL TOOLING] Competitor Replaceable Tip Drill 8D 0.625 | 2 Flute | TiAlCrSi Multi Layer
\item[NEW TOOLING] A Brand ADO 5D 0.625 | 2 Flute | EgiAs
\end{description}

\begin{center}
\textbf{OVER $27,000 ANNUAL SAVINGS!}
\end{center}

\begin{center}
\textbf{FIND OUT MORE}
Click or scan for stock, features & benefits, videos and more! osgtool.com/a-brand-ado
\end{center}