



JET SPINDLE PROCESS REVIEW

#1 PREREQUISITES

- ✓ **High pressure coolant available
Min 15 BAR with 12 L/Min flow rate**
- ✓ **Small diameter cutting tools used
Max Ø 4mm, Shank Max Ø 6mm**

#2 LIMITATIONS

- ✓ **Finishing and semi-finishing operations
Drilling, engraving, chamfering, slot, profile and shoulder milling**
- ✓ **Minimum operating Jet Spindle RPM
10% less than Jet Spindle RPMs at Idle speed**

#3 CHECKLIST

1. Ensure a minimum tool holder overhang.
2. Check Z-axis limitations.
3. Ensure water-based emulsion or cutting oil, viscosity up to 20 [Cp].
4. Minimum coolant filtration level: 100 microns.
5. Ensure use of anti-foaming additive suitable for emulsion coolant to prevent foaming.

#4 FIRST RUN

- ✓ **Insert a battery into the Jet Spindle unit sensor and connect the unit to the display.**
- ✓ **Review recommended Cutting conditions table for Jet unit.**
- ✓ **Insert 10% rule target conditions - Ae, Ap, Feed into the program.**
- ✓ **Start with 30% of F (Table Feed) , review Speed Display values.**
- ✓ **If speed decreases quicker than expected, decrease the Ap and then increase the Feed.**
- ✓ **Increase till you reach 100% target values.**
- ✓ **Complete the attached form and send it over for technical assistance.**

#5 COMPLETE FORM

1. The form on the back of this page can be filled in using Adobe Acrobat.
2. Insert images in the area marketed IMAGES.
3. Cells marked "Scroll to Select" use the arrows on the right side to scroll.
3. Fill in all parameters for the Original Machine Spindles.
4. Leave open HSM Jet Spindle and Comments for our Technical Support Team.
4. Go to File > Save As.. or use CTRL + SHIFT + S and save the form on your device.
5. Email the saved form to your Jet Spindle Account Manager.
6. Our Technical Support Team will review the details and test data and reply with Options.



COLIBRI
SPINDLES



JET SPINDLE PROCESS REVIEW

JET SPINDLE PROCESS FEEDBACK FORM									
PROCESS FEEDBACK FORM	DETAILS	IMAGES							
Reported by		<div style="border: 1px solid #ccc; padding: 20px; width: fit-content; margin: auto;"> PASTE WORK PIECE, CUTTING TOOL, MACHINE, OTHER IMAGES HERE </div>							
Customer									
Date									
Machine Center									
Brand / Model									
Controller									
Coolant Type									
Coolant Pump Pressure [Bar]									
Flow Rate [Liter/min]									
Workpiece									
Material									
Hardness (HRC)									
Size (L x W x H)									
Machining Process									
Application									
Operation									
TEST DATA	Original Machining					HSM Jet Spindle	Original Machining	HSM Jet Spindle	Comments
Cutting Tool *									
Spindle RPM (Orginal) / Type (Jet)									
Tool Holder Shank									
Collet									
Tool Overhang [mm] *									
Run-out [microns]									
Cutting Tool Diameter - D[mm] *									
No. of Teeth - Z *									
Depth of Cut - Ap [mm] *+									
Total Depth - Tap [mm]									
Cutting Width - Ae [mm] *+									
Pump Pressure [bar]									
Spindle RPM - n (Idle/At Material) *									
Speed Drop - [%]									
Cutting Speed - Vc [M/min] *									
Feed per Tooth - Fz [mm/tooth]+									
Feed - F [mm/min] *									
Operation - Semi / Finish									
RESULTS									
Tool life [min]									
Cutting Time [sec]									
Surface Finish									
Cycle Time Improvement (%)									

* Required parameter. All parameters are important but these parameters are required.

+ Please review to Cutting Condition Tables - [HPC](#) & [GJET](#)

