

Technical Details



(HJB) Haas Jaw Boring Ring

HJB Features

- Single ring to turn a wide range of diameters for a specific lathe chuck size
- Easy fine jaw adjustment to prevent too much material removal when recutting jaws.
- ID clamping also possible, to allow turning jaw diameters for internal workholding.
- Pin fits perfectly into the counterbore of the Haas lathe jaws for easy placement.

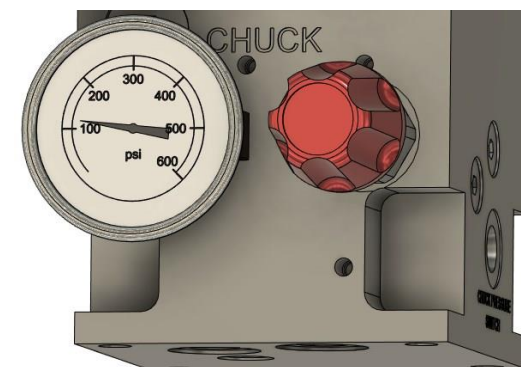


HJB Operating Specifications

Haas Part Number	Haas Description	Matching Chuck	Max Gripping (kgf/cm ²)	Max Gripping (psi)	Max speed (rpm)
05-0510	HJB-05	5	8	113	800
05-0511	HJB-06	6	8	113	800
05-0512	HJB-08	8	8	113	700
05-0513	HJB-10	10	8	113	600
05-0514	HJB-12	12	8	113	500
05-0515	HJB-15	15	8	113	400



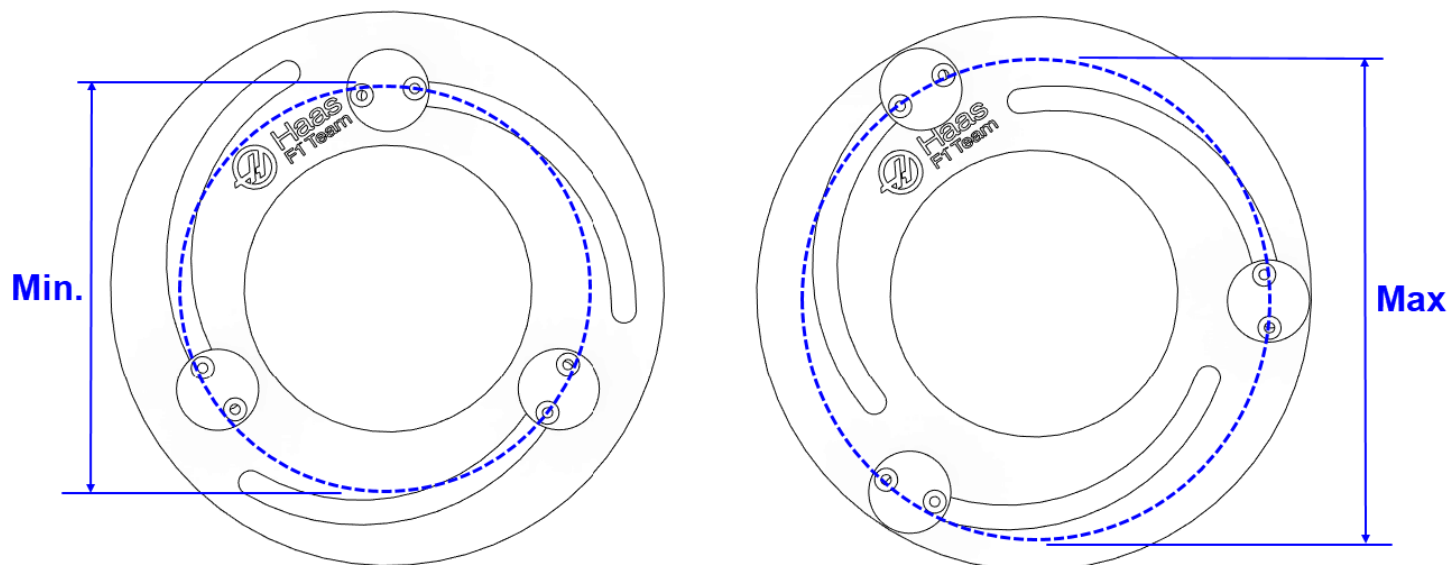
- It is recommended not to exceed 113 psi (8kgf/cm²) chuck pressure.
 - This will extend the life of your pins, and avoid possible deformation, while maintaining uniform pressure on each jaw.
- At this low pressure, it is also recommended not to exceed the max speeds shown in the above table.
 - This will prevent the possibility of the ring being ejected while cutting.



HJB Clamping Ranges

Haas Part Number	Haas Description	matching chuck	Min Gripping Diameter	Max Gripping Diameter
05-0510	HJB-05	5	3.31 in \ 84.0 mm	4.57 in \ 116.0 mm
05-0511	HJB-06	6	4.09 in \ 104.0 mm	5.67 in \ 144.0 mm
05-0512	HJB-08	8	5.74 in \ 145.0 mm	7.4 in \ 188.0 mm
05-0513	HJB-10	10	7.02 in \ 178.0 mm	8.82 in \ 224.0 mm
05-0514	HJB-12	12	8.5 in \ 216.0 mm	10.78 in \ 234.0 mm
05-0515	HJB-15	15	10.86 in \ 276.0 mm	13.14 in \ 334.0 mm

- Some jaw positions on the chuck may not allow the ring pins to fit into the jaw bolt holes.
- Larger or smaller rings can be used in some of these instances.
- Chart shows the ranges of each jaw boring ring.



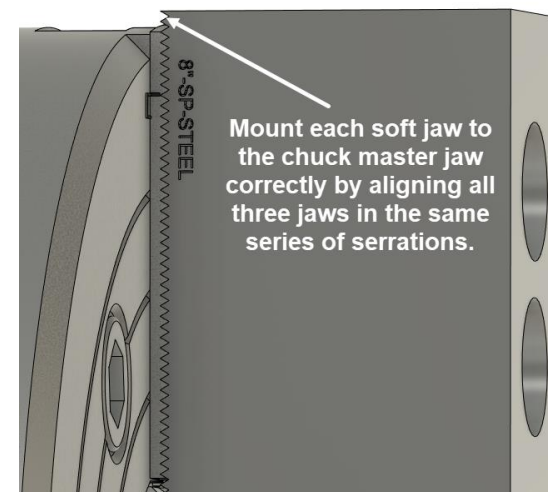
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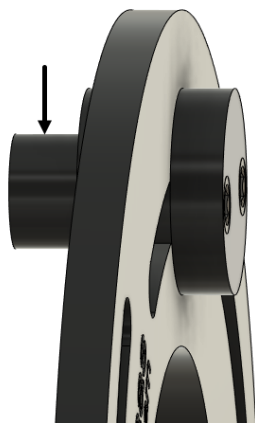
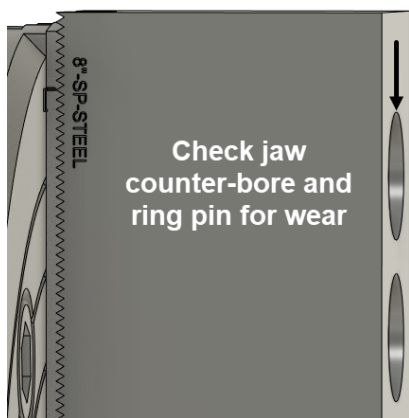
Mounting the Jaw Ring

1. Check each jaw position to make sure they are set to the same serrations.
2. Check the chuck jaw counterbore where the pin locates to make sure there is no elongation. Also check the pin for wear.
3. Place pins evenly against the jaw face.
4. Jog the spindle and make sure the ring rotates with little or no eccentricity.

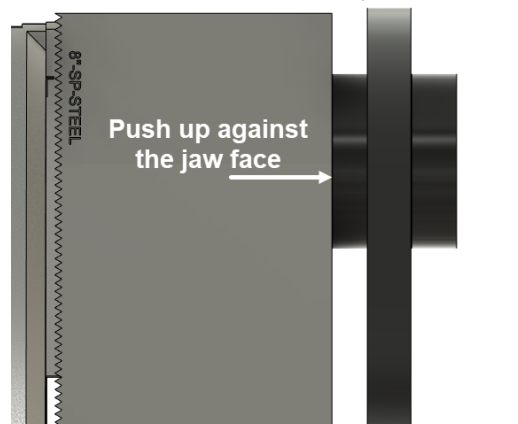
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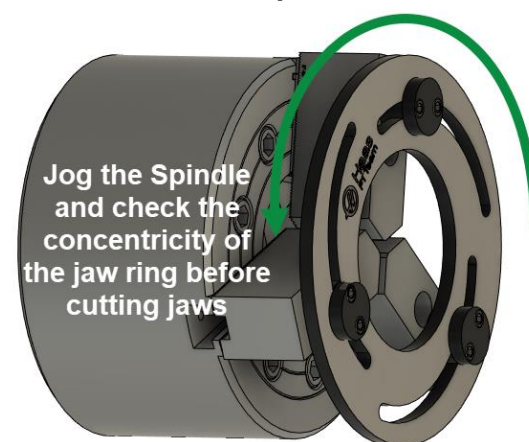
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Tips on Boring Jaws

- Use the Haas Jaw Boring VPS Template to easily generate programs to rough and finish your jaw diameters.
- Form corner reliefs to guarantee material is fully seated to the back of the jaw face.



The screenshot shows the 'JAW BORING CYCLE' template in the Haas Shape Creator. It includes a 3D model of the jaw and a table of variables.

Variable	Value	Ranges
TOOL_NUMBER	9	[1 - 12]
TOOL_OFFSET_NUMBER	9	[1 - 99]
WORK_OFFSET_NUMBER	54	[54 - 59]
MAXIMUM_SPINDLE_RPM	2000	[1 - 2800.0]
SURFACE_SPEED_MINUTE	500	[50 - 2000]
Z_RAPID_APPROACH	2.	[1. - 5.]
CYCLE	F	R F RF
TOOL_TIP_RADIUS	0.0157	[0.001 - 0.125]
STEP_JAWS	1	[1 - 2]
JAW_INNER_DIAMETER	0.0157	[0. - 11.8562]
Z_START	0.1	[0.05 - 1.]
FINISH_DIAMETER	0.1413	[0.0157 - 11.8562]
Z_CUT_LENGTH	0.0314	[0. - 7.6842]
CHAMFER_OR_RADIUS	R	R C
CHAMFER_RADIUS	0.0157	[0. - 0.0157]

Enter the WORK OFFSET NUMBER, G54 to G59



No corner relief

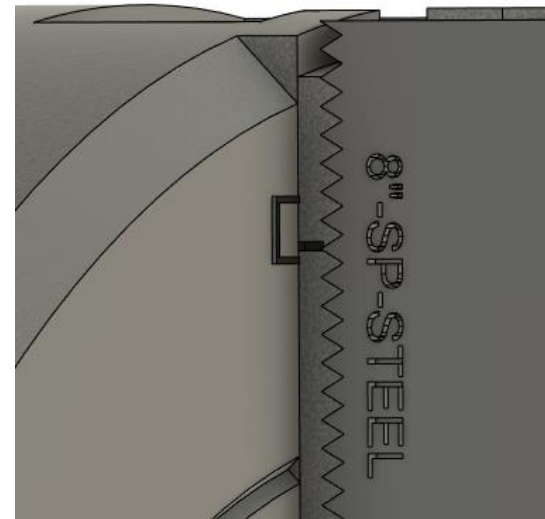
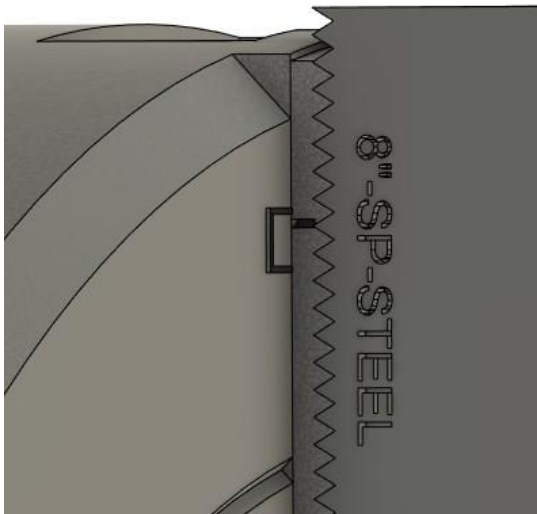


Corner relief



Tips on Boring Jaws: Jaw stroke

- For re-occurring jobs that require frequent minimum re-cutting of the jaws, it is recommended to set the jaw stroke to min travel (top of the master jaw notch)
- For automation (APLs or robots), it is recommended to set the jaw stroke from the middle to the bottom of the master jaw notch
- The extra stroke travel before clamping will provide more clearance to allow for irregularities in the robot load



*It is recommended not to clamp right on or beyond either end of the stroke limits.

*If the master jaw notch does not travel the full range of the chuck mark limits, the chuck-to-drawtube assembly will need adjusting.

Tips on Boring Jaws: Jaw Deflection

- Jaw deflection can occur when boring ID or OD jaws.
- This can be caused when longer jaws are machined, or if increasing the workpiece clamp pressure considerably from the jaw boring pressure.
- The jaw deflection will reduce your clamping strength significantly and may damage your jaws.
- To offset this behavior, a taper will need to be formed on your jaws. See our Haas video on this subject.
- <https://www.youtube.com/watch?v=-AyMQNoaBjc>

