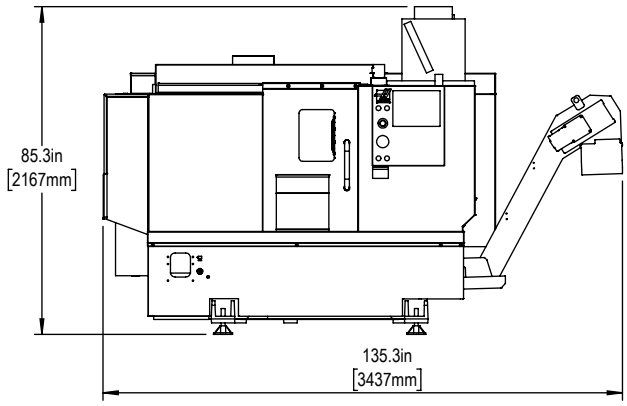
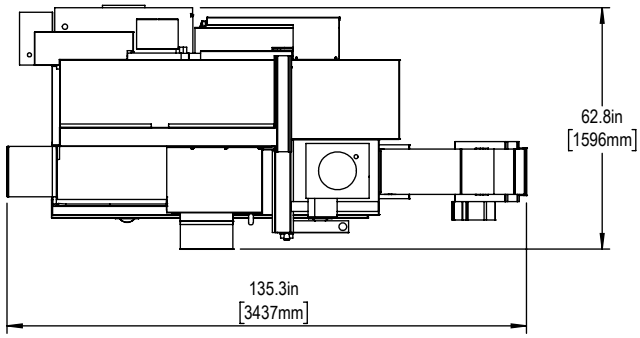
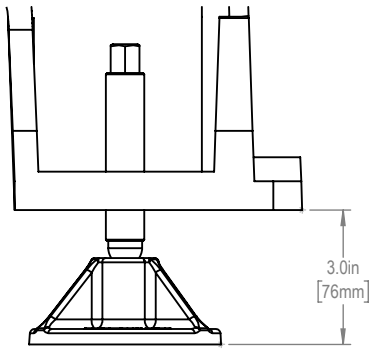
Installed Dimensions



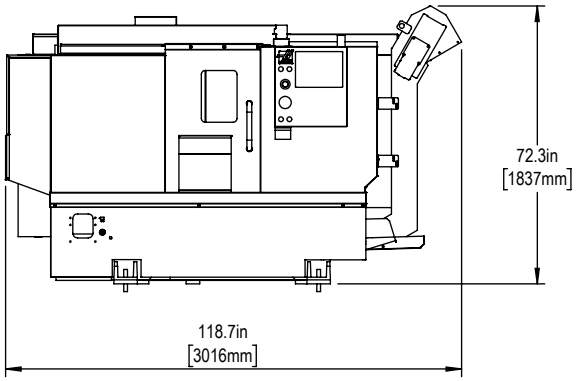


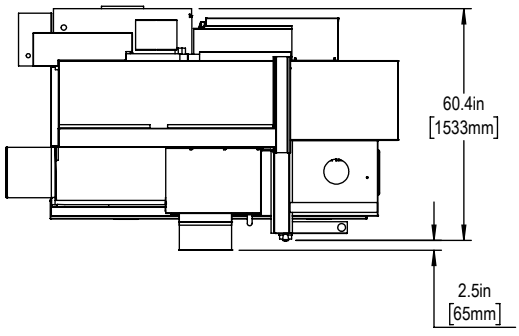
Leveling Pad Height



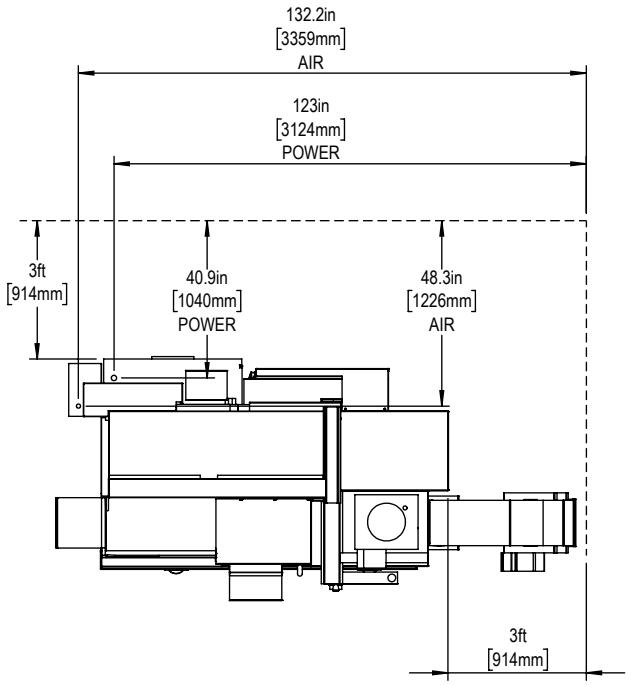
*All Height Dimensions Based on Suggested Leveling Pad Height

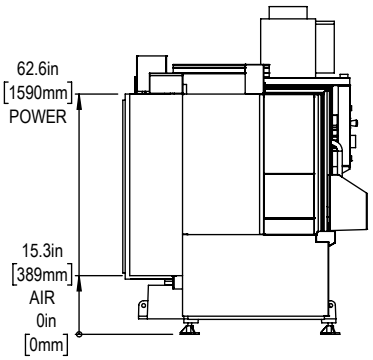
Shipping Dimensions





Air & Power

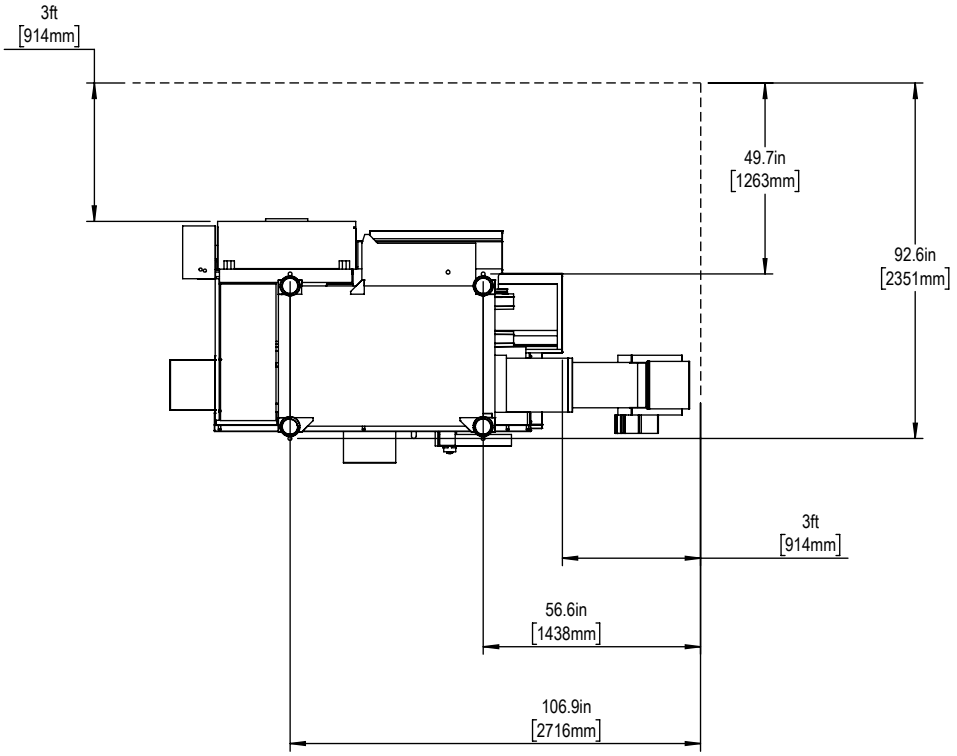




Maintain 3 feet [915mm] clearance to the nearest obstruction around all sides of machine perimeter for maintenance access

Note:
Machine must be placed on one continous concrete slab. Slab should extend 12in [305mm] beyond anchor holes in all directions

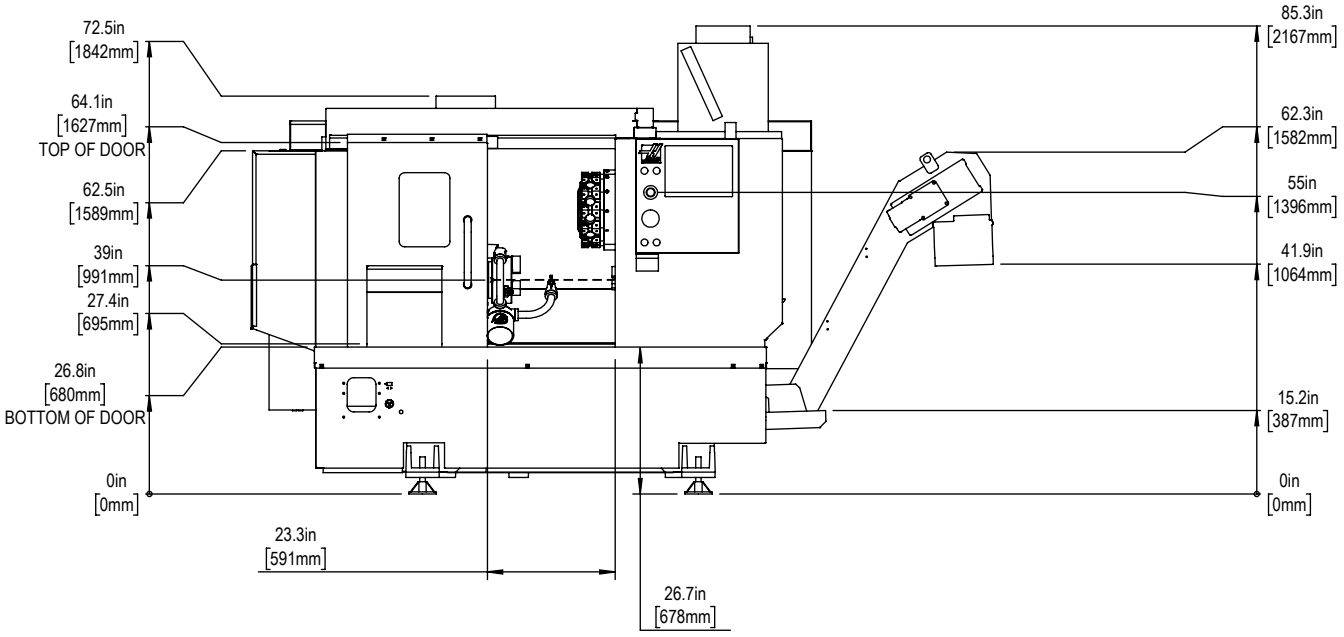
Anchor Pattern



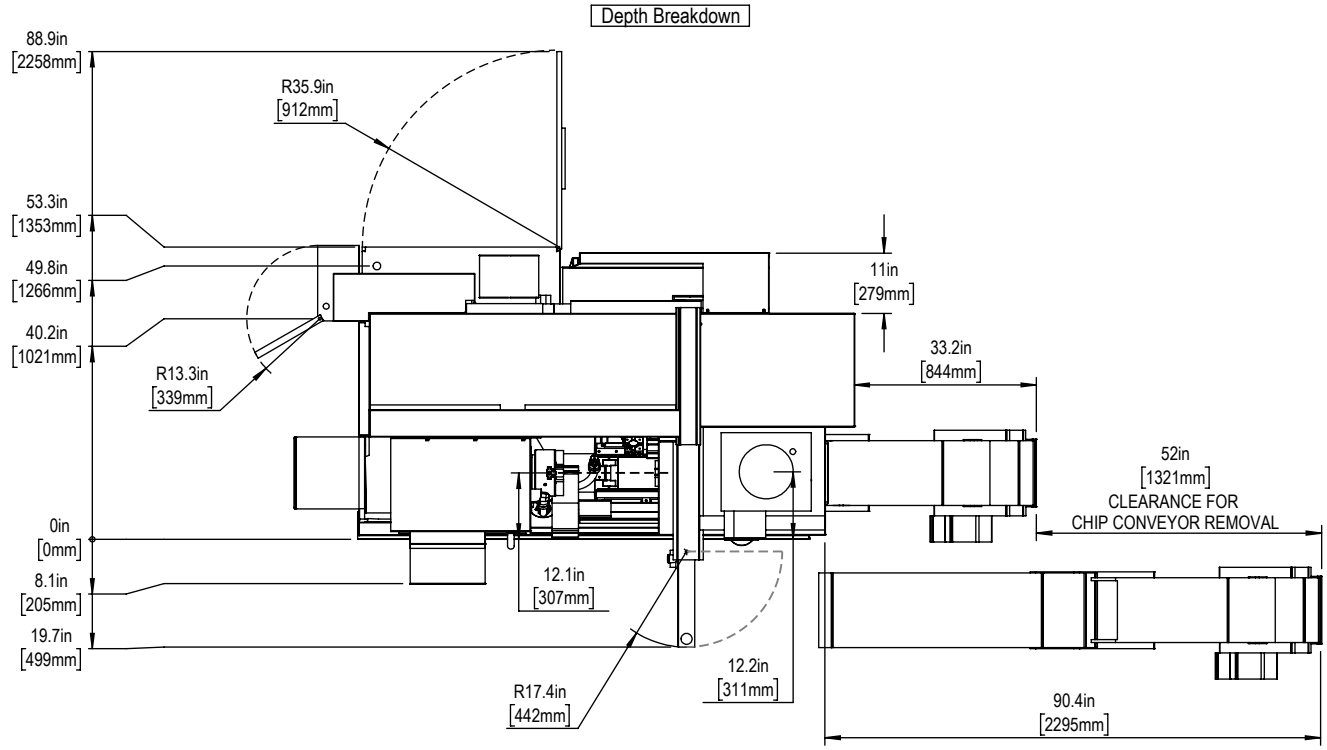
Anchor Hole Detail
⌀0.625in[16mm]
↧2.0in[50mm]-
↧2.25in[57mm]

For precise locations and specifications please use template in Anchoring Kit found at Haascnc.com

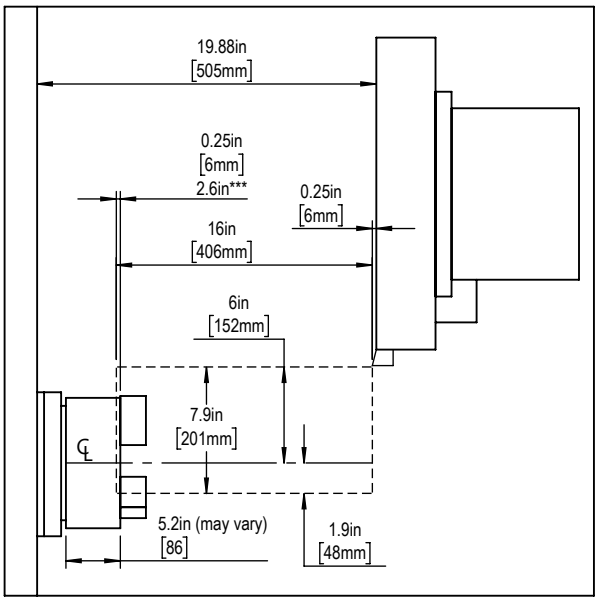
Height Breakdown



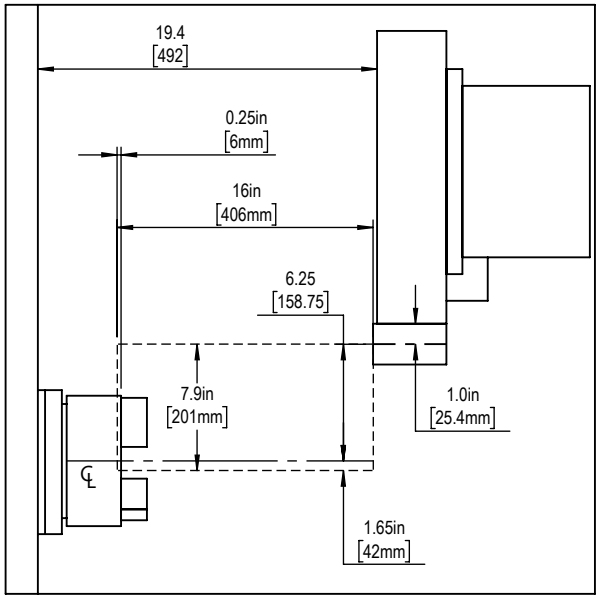
Depth Breakdown



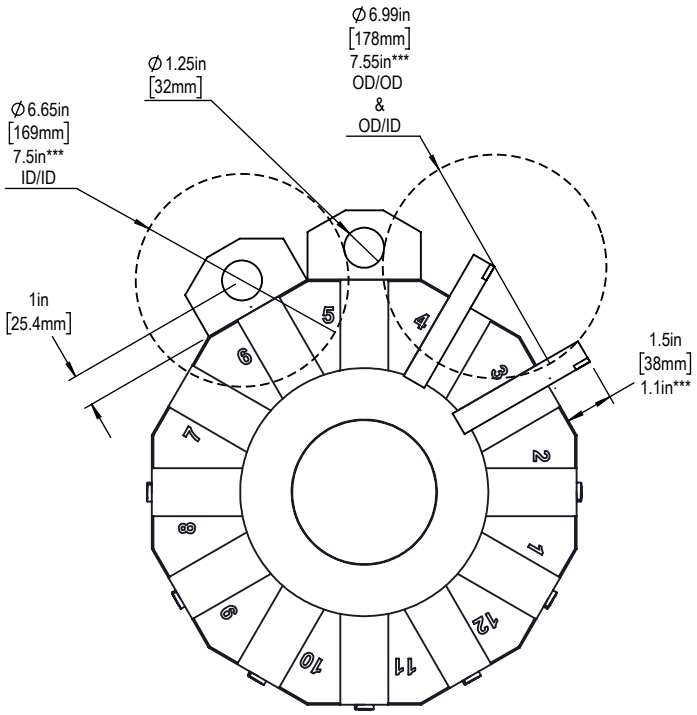
***NEW TURRET HOUSING DIMENSION



BOT OD*



BOT ID / Drill / Bore

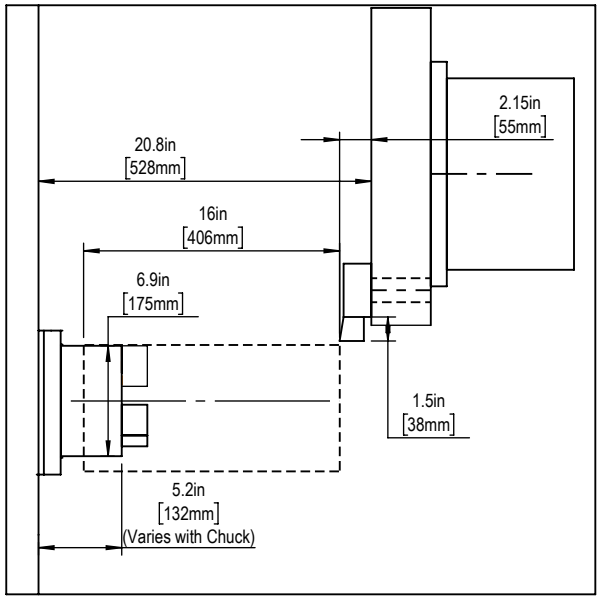


* Shift the work envelope in X by the tool protrustion length

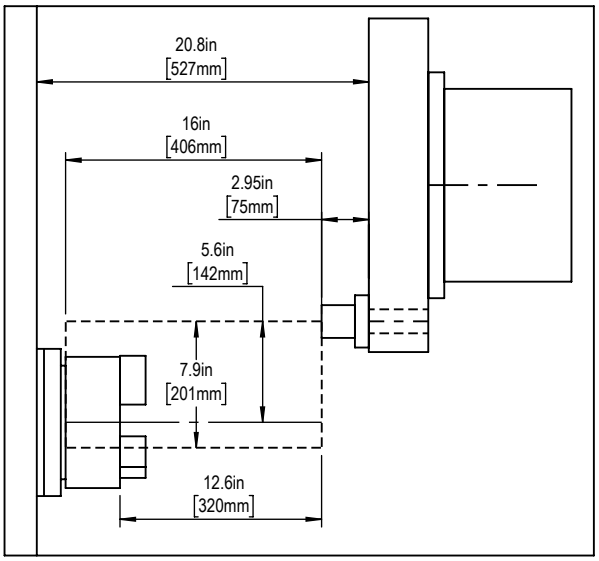
** Shift the work envelope in Z by the tool protrustion length

Note - Sub Spindle not compatible with BOT Turret

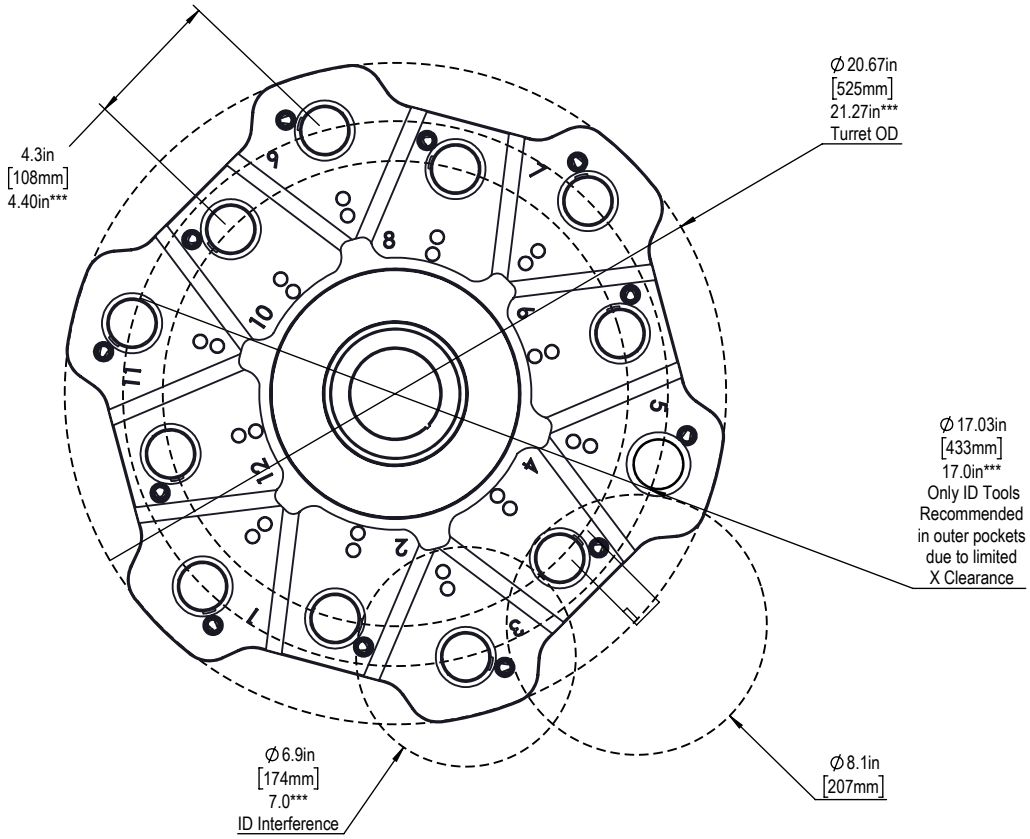
***NEW TURRET HOUSING DIMENSION



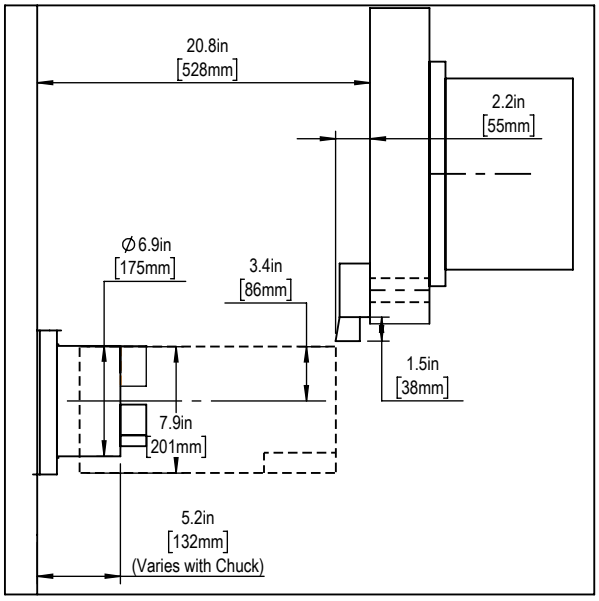
VDI OD
Short Holder
Even # Pockets (Inner Circle)



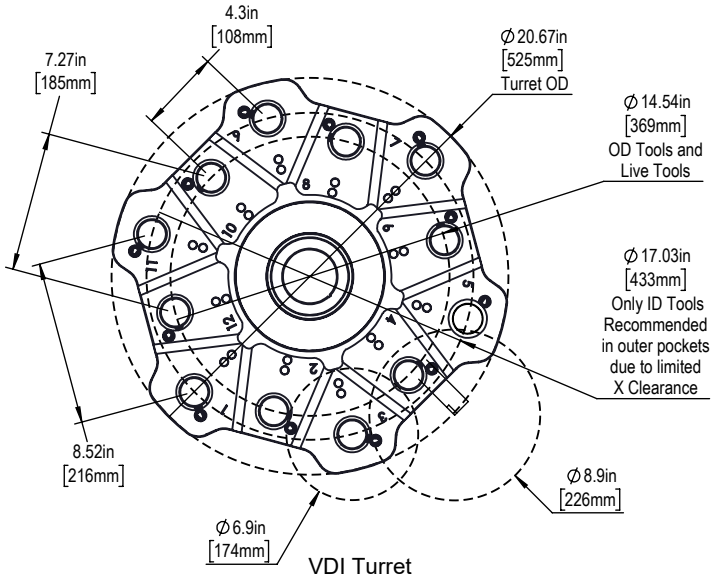
VDI ID
Odd # Pockets (Outer Circle)



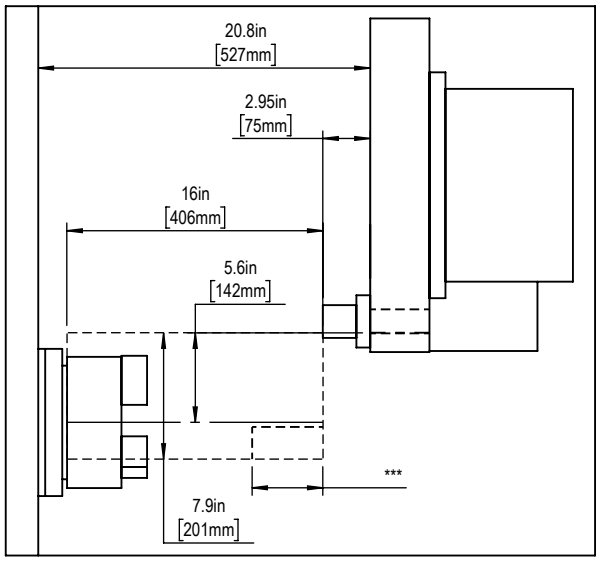
Note
1. Live tools (optional) **must** be installed on the inner pockets
2. If live tooling is not needed, the BOT turret offers a larger turning diameter
3. ID Tools such as drills or boring bars are recommended on the outer pockets, but may be placed in any pocket
4. Outside turning tool holders are only recommended on the **inner** ring of pockets (due to limited X Axis clearance if installed on the outer pockets)



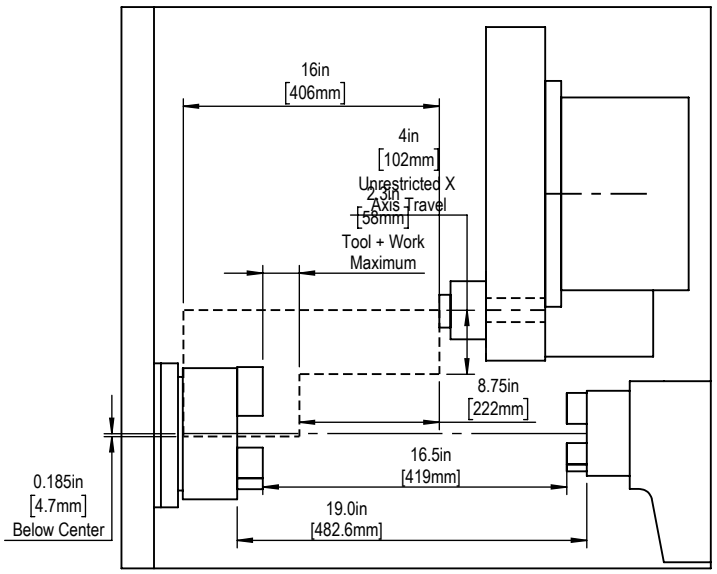
VDI OD, Short Holder, Inner Pocket



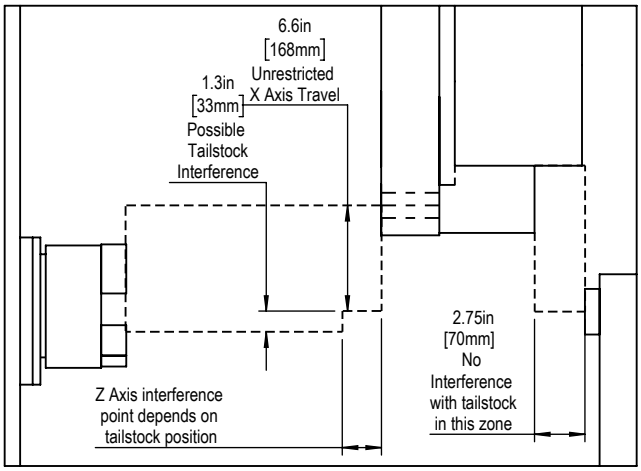
VDI Turret



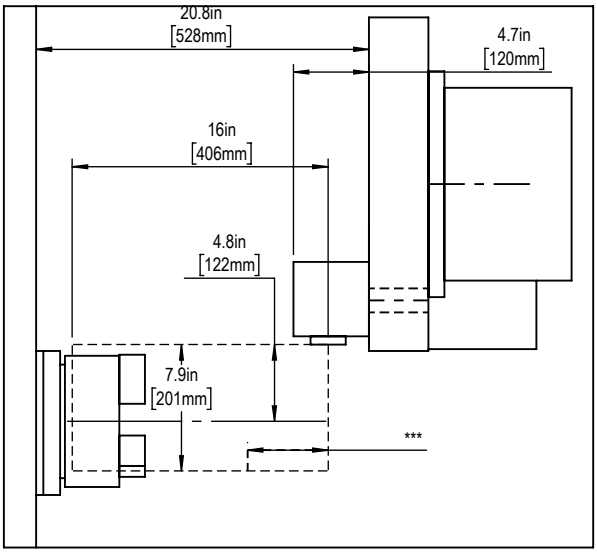
VDI ID Holder (Outer Pocket) */**



Axial Live Tool



Turret / Tailstock interference zone common to all tools



Radial Live Tool (Inner Pocket) */**

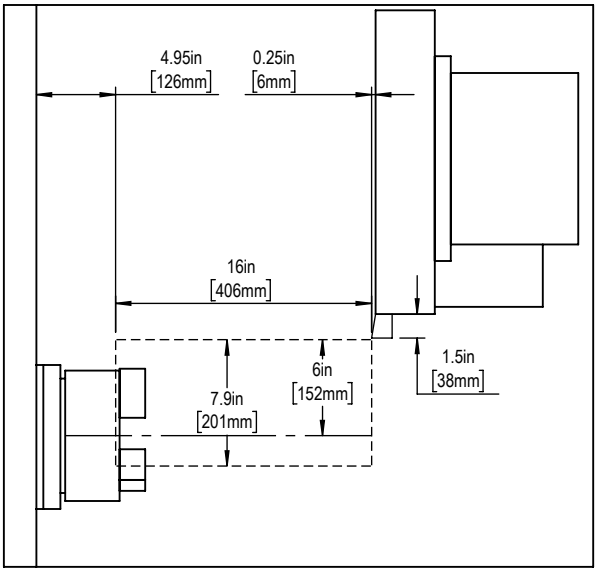
Note

1. Live tools (optional) **must** be installed on the inner pockets
2. If live tooling is not needed, the BOT turret offers a larger turning diameter
3. Outside turning tool holders are only recommended on the inner ring of pockets
4. ID Tools such as drills or boring bars are recommended on the outer pockets, but may be placed in any pocket

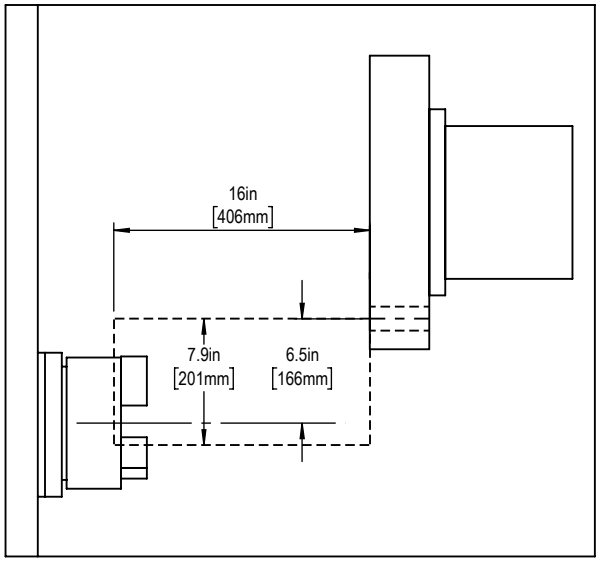
* Shift the work envelope in X by the tool protrusion length

** Shift the work envelope in Z by the tool protrusion length

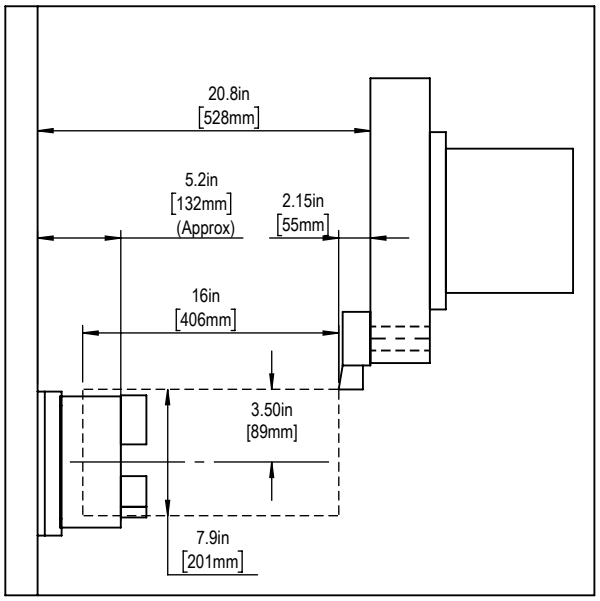
***Possible Tailstock Interference zone - see interference diagram



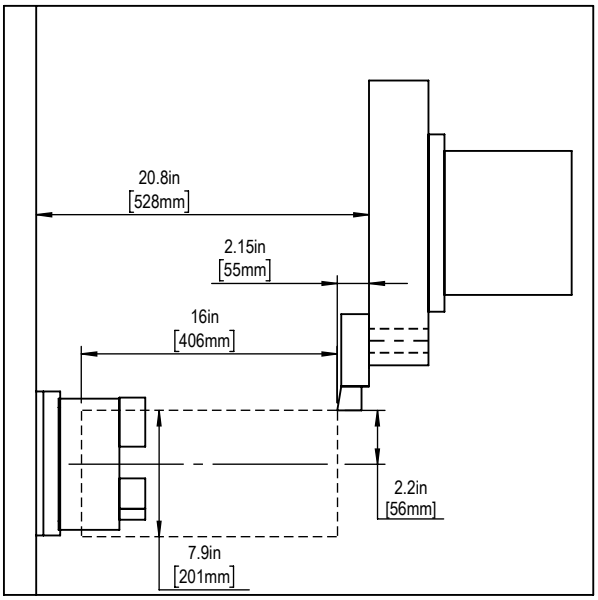
OD Stick Tool Slots on Face
Hybrid Turret*



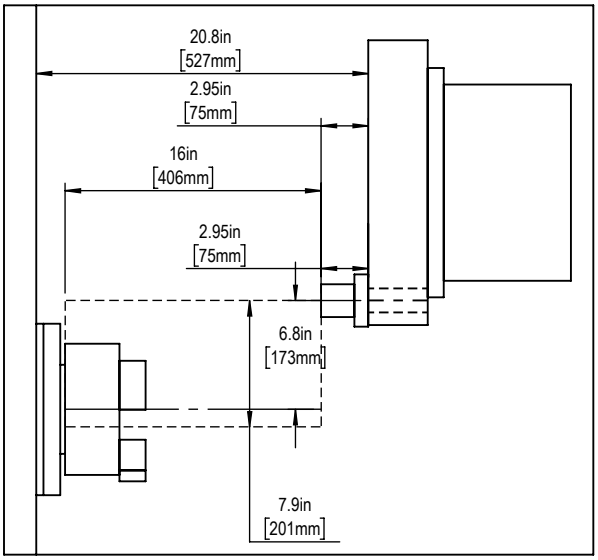
BOT ID */**



VDI OD Short



VDI OD Long

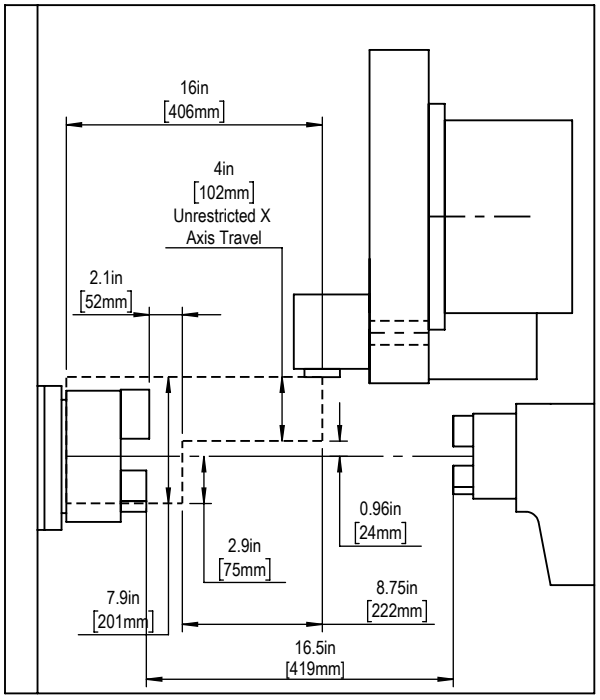


VDI ID */**

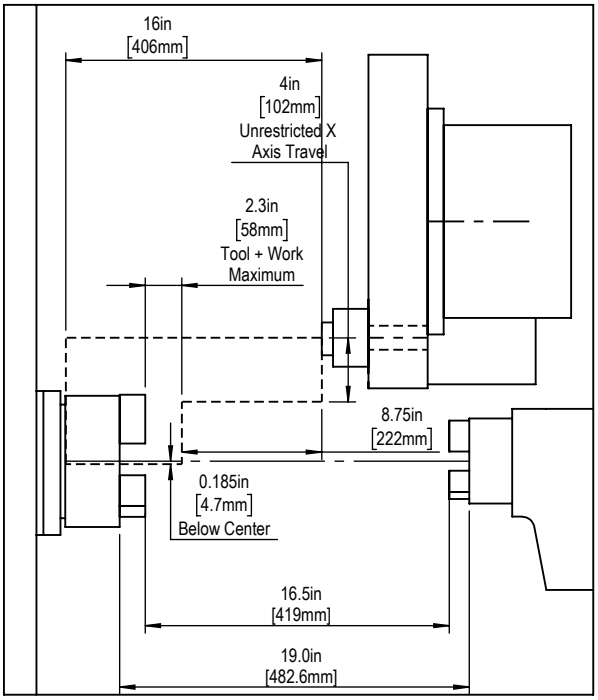
Note - Hybrid Turret travel diagrams do not show interference zone created by the combination of machine options. If Sub Spindle or Tailstock with Live Tool options are both selected, see next page for turret interference zone

* Shift the work envelope in X by the tool protrusion length

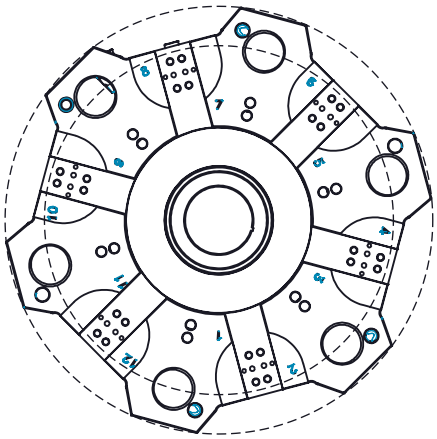
** Shift the work envelope in Z by the tool protrusion length

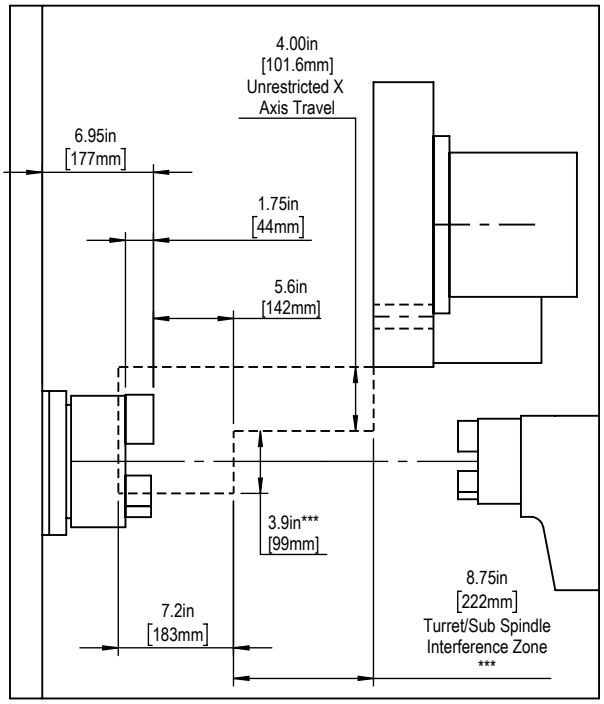


RADIAL TOOL - HYBRID TURRET



AXIAL TOOL - HYBRID TURRET

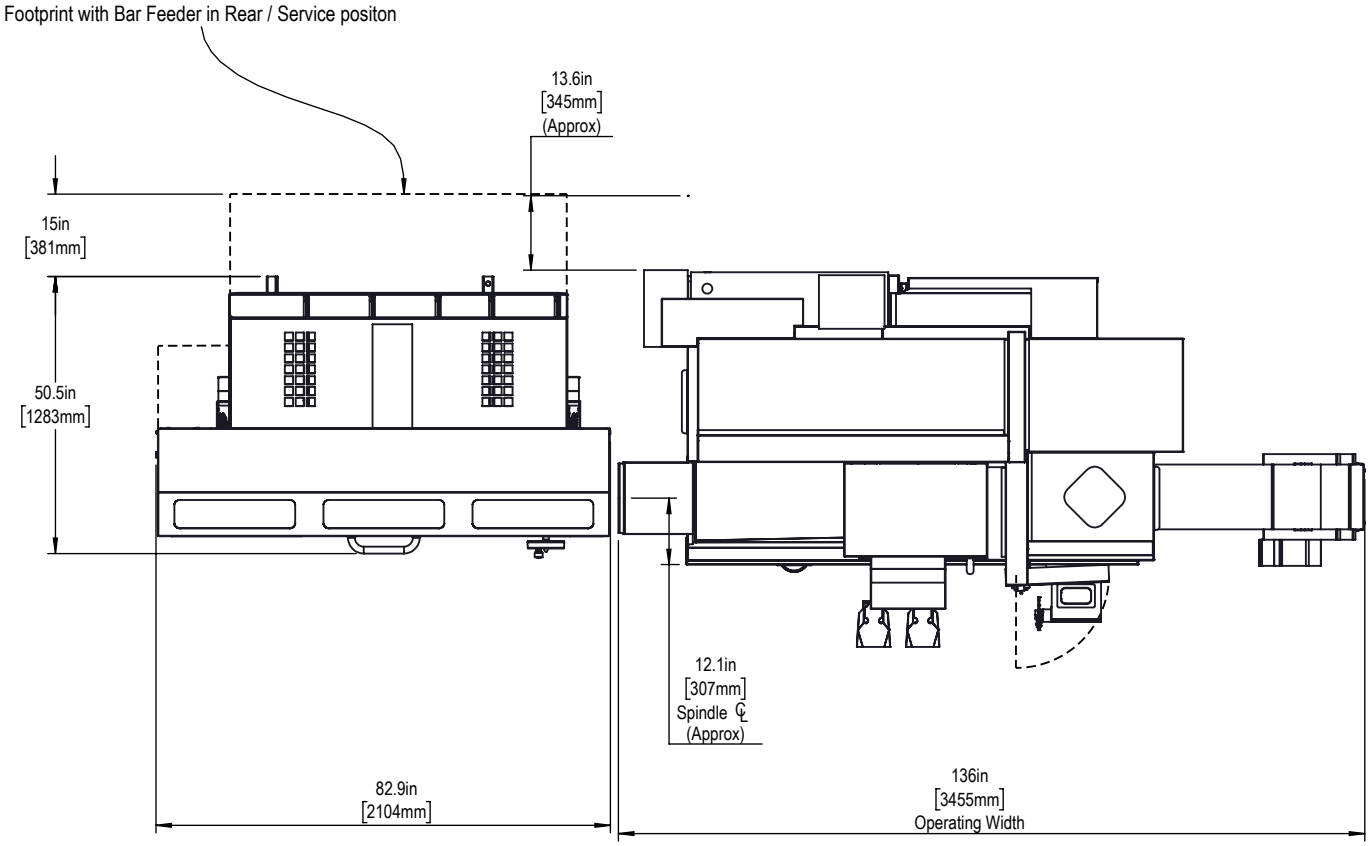


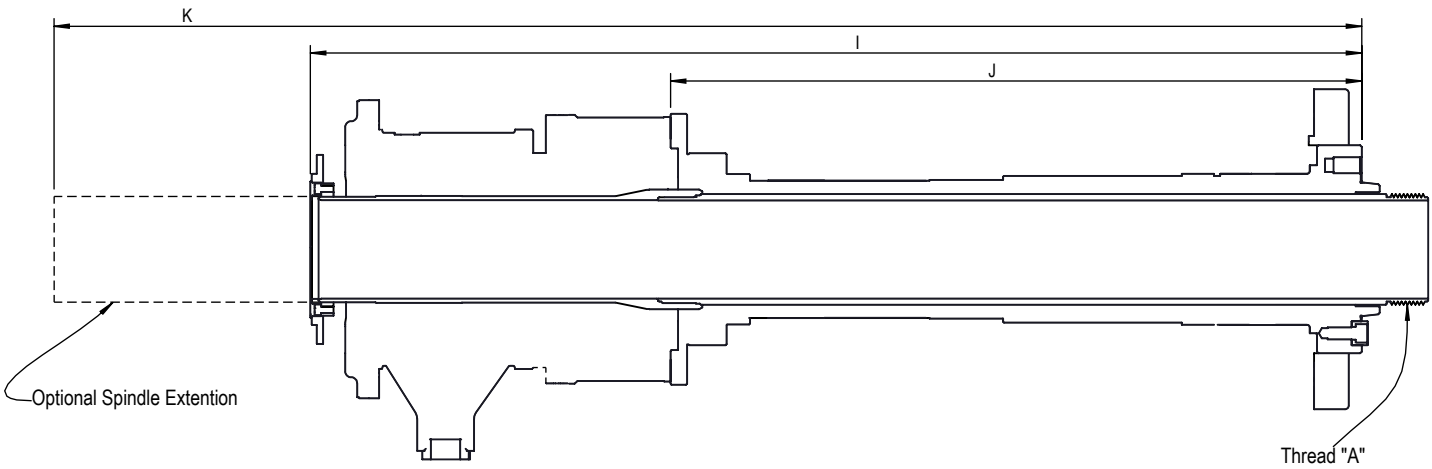


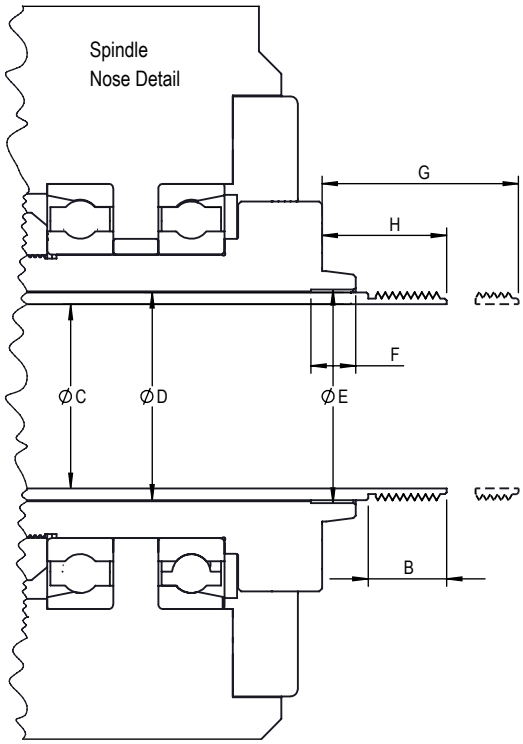
Sub Spindle / Live Tool interference zone

***To enter the interference zone, the Z axis must be Z-8.75" [222mm] from home position before the X axis can enter the lower 3.9in [99mm] of travel. This results in approximately 5.6in [142mm] clearance between the standard jaw face and the turret face.
The interference zone only applies to machines with both the Sub Spindle and Live Tool options

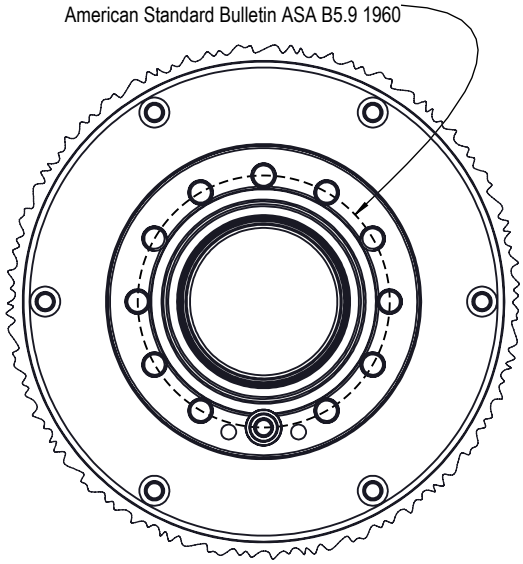
Barfeeder Layout





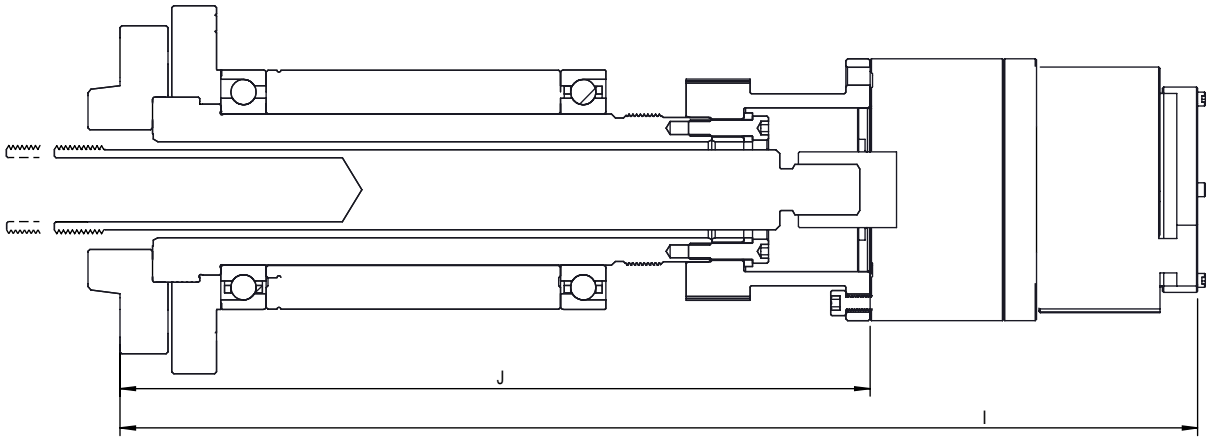


BHC and Spindle Nose dimensions per
American Standard Bulletin ASA B5.9 1960

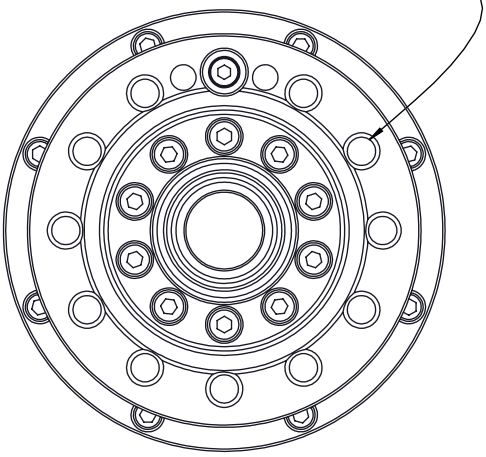


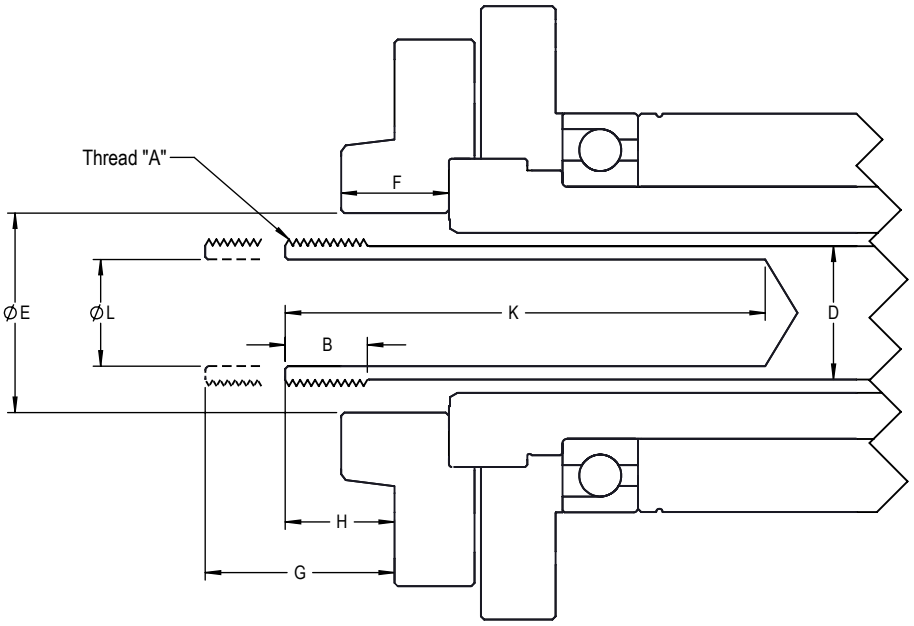
The following dimensions should be used as a reference only. Haas uses many different vendors for our drawtube assemblies. If any custom workholding is required Haas recommends you retrieve the exact dimensions from your delivered machine.

MAIN OR SUB SPINDLE & TYPE		Main / **A2-5**		Main / **A2-6**	
DIAMETER OF THREAD	A	2.165"	55 MM	2.95"	75 MM
THREAD PITCH	A	0.0787"	2.0 MM	0.0787"	2.0 MM
INTERNAL OR EXTERNAL	A	External		External	
LENGTH OF THREAD	B	0.70"	17.78 MM	1.36"	34.54 MM
DRAWTUBE INNER DIAMETER	C	1.81"	45.98 MM	2.56"	65 MM
DRAWTUBE OUTER DIAMETER	D	2.25"	57.15 MM	3.03"	76.96 MM
COUNTERBORE INNER DIAMETER	E	2.50"	63.5 MM	3.52"	89.4 MM
COUNTERBORE DEPTH	F	0.620"	15.75 MM	0.75"	19.05 MM
DRAWTUBE EXTENDED DISTANCE	G	1.52"	38.6 MM	2.50"	63.5MM
DRAWTUBE RETRACTED DISTANCE	H	0.93"	23.6 MM	1.52"	38.6MM
SPINDLE FACE TO BACK OF UNION	I	30.78"	781.8 MM	33.53"	851.67 MM
SPINDLE FACE TO UNION ADAPTOR	J	22.75"	578 MM	22.53"	572.3 MM
TO BACK OF EXTENTION (OPTION)	K	48.0"	1219MM	48.0"	1219MM



BHC and Spindle Nose dimensions per
American Standard Bulletin ASA B5.9 1960





The following dimensions should be used as a reference only. Haas uses many different vendors for our drawtube assemblies. If any custom workholding is required Haas recommends you retrieve the exact dimensions from your delivered machine.

SUB-SPDL-A2-5 for ST-10 to ST-25/ST-28			
DESCRIPTION	DIMENSION	SAE	METRIC
MAIN OR SUB SPINDLE & TYPE		Sub-Spindle / A2-5	
DIAMETER OF THREAD	A	1.378"	35 MM* or 40 MM
THREAD PITCH	A	0.059"	1.5 MM
INTERNAL OR EXTERNAL	A	External	
LENGTH OF THREAD	B	0.78"	19.8 MM
DRAWTUBE INNER DIAMETER	C	N/A - SOLID DRAWBAR	
DRAWTUBE OUTER DIAMETEER	D	N/A - SOLID DRAWBAR	
COUNTERBORE INNER DIAMETER	E	1.870"	47.5 MM
COUNTERBORE DEPTH	F	1.01"	25.65 MM
EXTENDED DISTANCE TO NOSE	G	1.42"	36 MM
RETRACTED DISTANCE TO NOSE	H	0.827"	21 MM
FROM SPINDLE FACE TO BACK OF UNION	I	18.46"	469 MM
FROM SPINDLE FACE TO UNION ADAPTOR	J	11.69"	297 MM
EJECTOR POCKET DEPTH	K	4.5"	114.3MM
EJECTOR POCKET DIAMETER	L	1.0"	25.4MM
*M35 applies to Sub-Spindles made after July 2019 - M40 applies to older vintages			