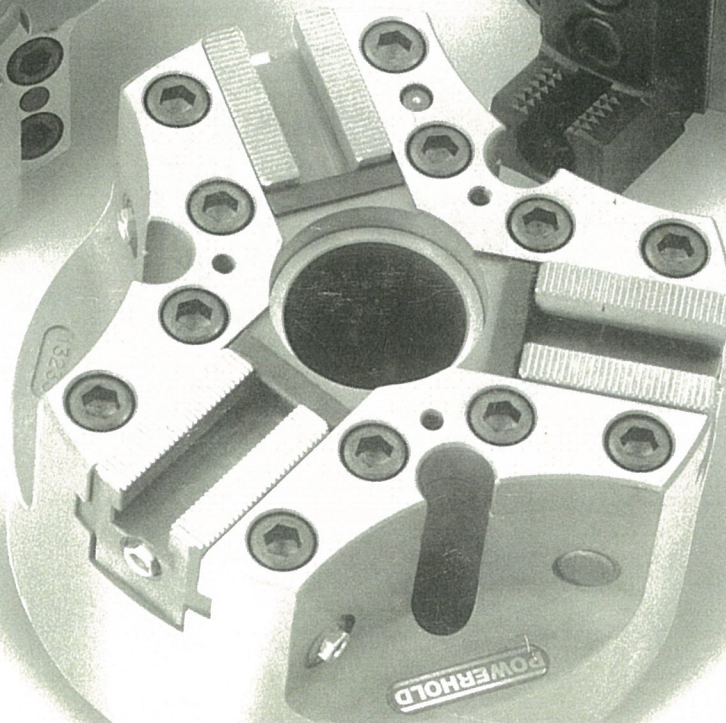
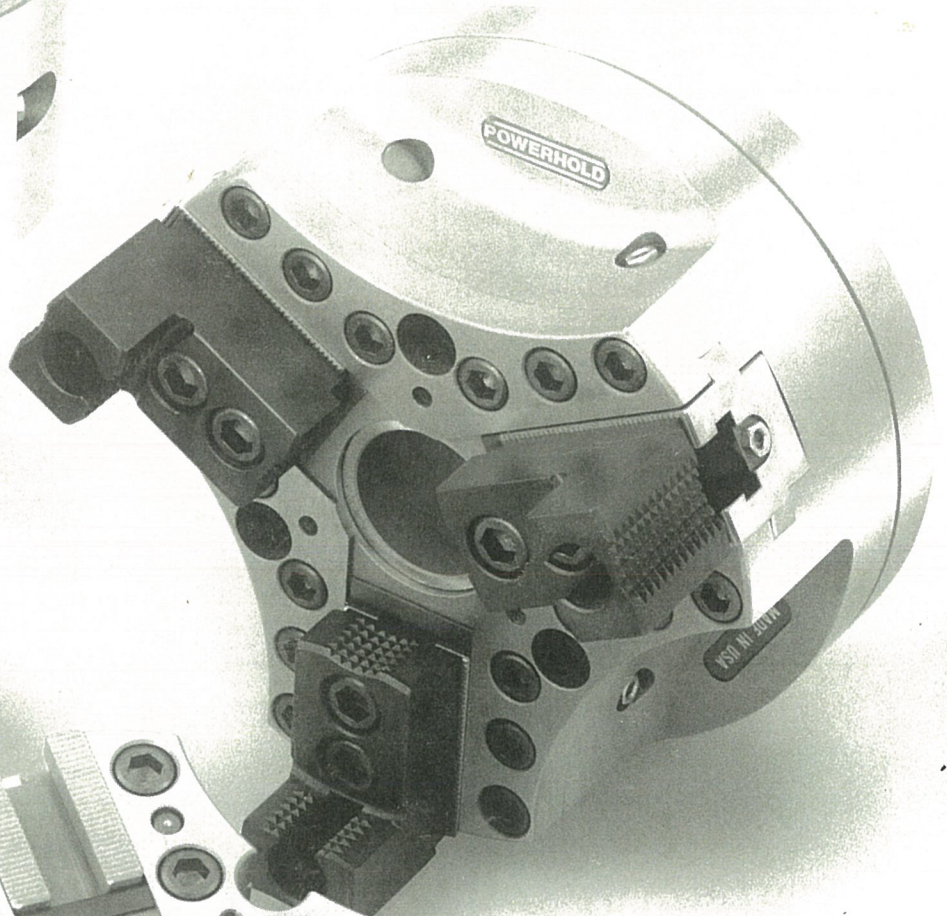
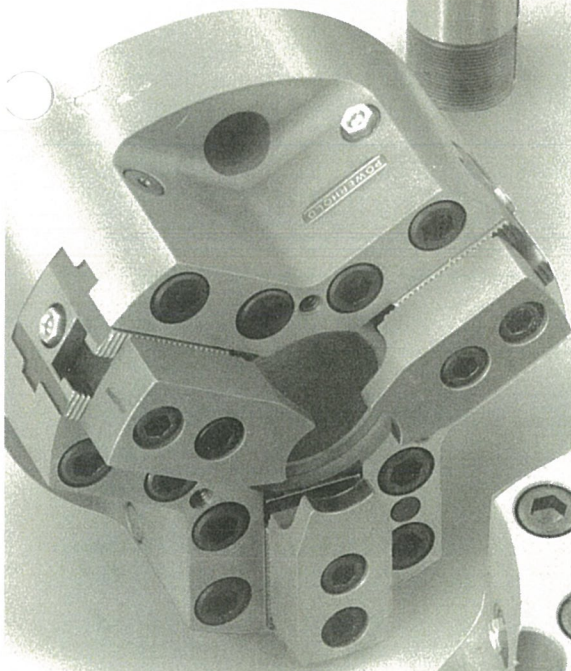
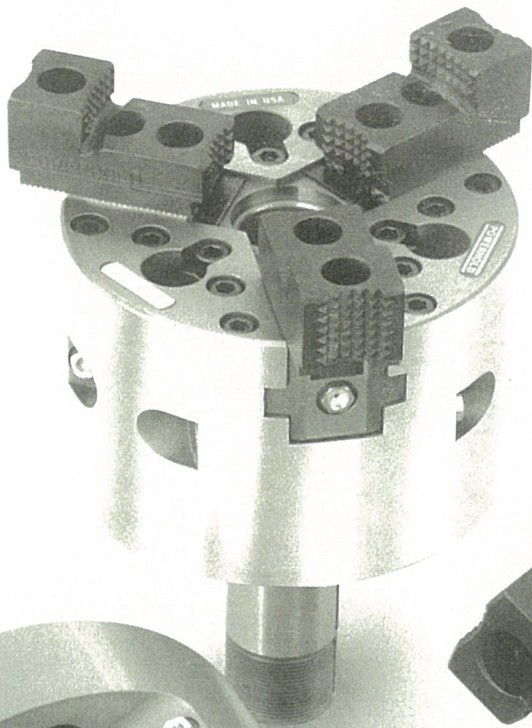


Precision High Speed Chucks



POWERHOLD
POWERHOLD, INC.

To realize the full benefits of your CNC high speed turning centers, you need chucking systems designed and manufactured to withstand intensive centrifugal forces, with minimal gripping force loss or gain. Our line of high speed chucks meets your requirements. Each unit is tested and certified for accuracy, repeatability, concentricity, and perpendicularity within 0.0005 T.I.R.

Each unit is balanced for maximum speed.

Our unique counterbalance design limits jaw force loss at maximum rpm to within 30% of initial jaw force with qualified top jaws. That is 30% better than the international standard which many chuck manufacturers use as their guideline. Jaw force increase at run-down is held to less than 5% of initial jaw force.

Powerhold precision high speed chucks mount directly to the machine spindle nose.

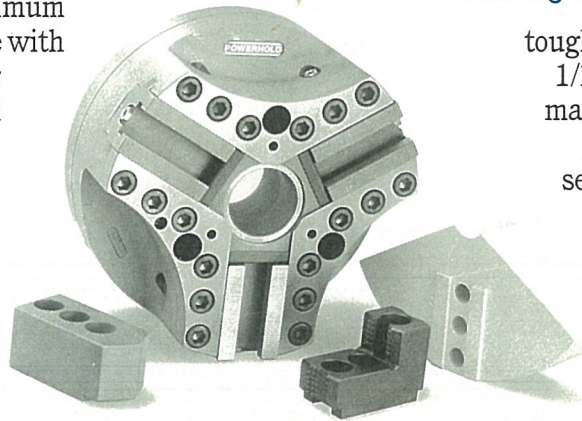
The bodies of these high rpm chucks are constructed of oil hardening high alloy steel, hardened and stress-relieved to resist the stresses resulting from centrifugal forces. They are precision ground for accuracy and wear-resistance. Our two-piece body construction provides durability and enables rebuilding to new certification standards within 24 hours.

"The Powerhold jaw chuck is one of the most accurate, universal three-jaw chucks available in the industry today."

Hardinge Brothers, Inc.

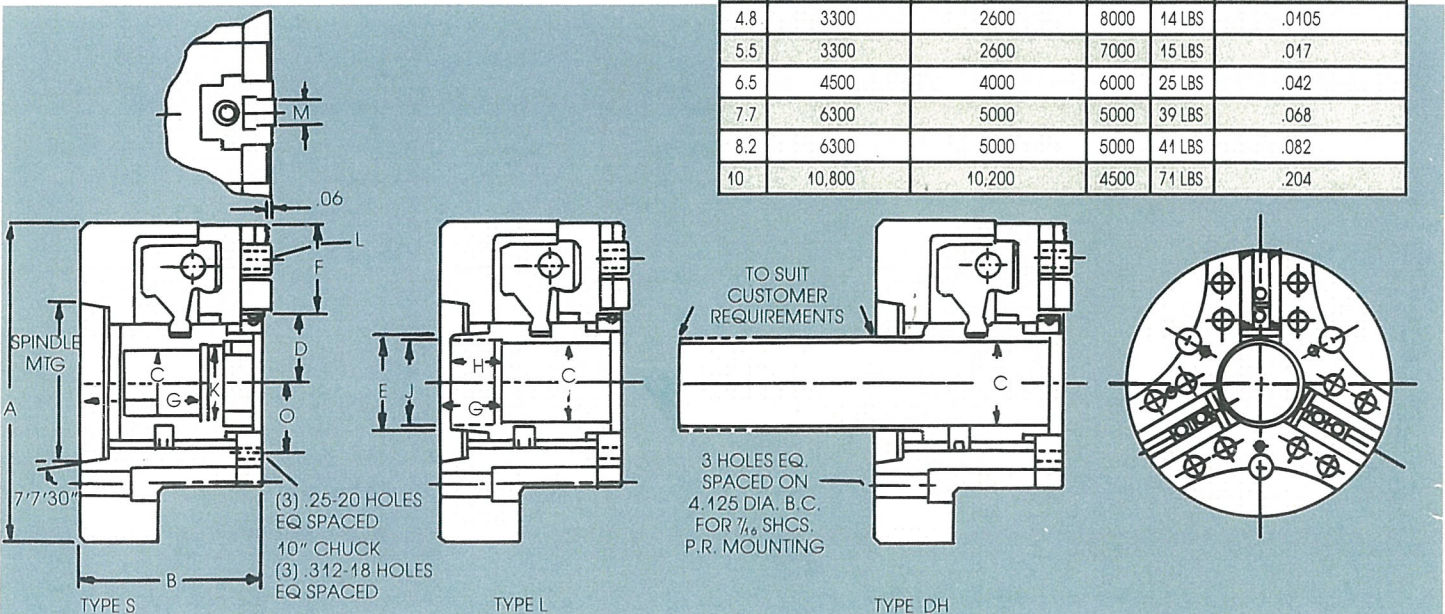
Our master jaws are produced with a carburizing grade of alloy steel for maximum core

toughness and stability. Serrations of 1/16" x 90 degrees, combined with maximum jaw travel allow wide top jaw adjustment. Powerhold hard serrated, soft blank, high strength aluminum, and quick-change top jaws are available for your specific work requirements. We also design custom jaws for special applications.



Specifications

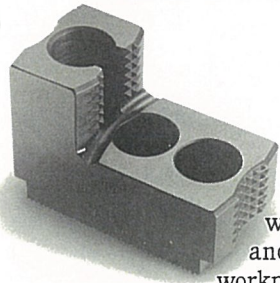
CHUCK SIZE	MAX PERMISSIBLE DRAWTUBE PULL	GRIP PER JAW AT MAX DRAWTUBE PULL	MAX SPEED	APPROX WGT	MOMENT OF INERTIA LB.-FT-SEC ²
4.8	3300	2600	8000	14 LBS	.0105
5.5	3300	2600	7000	15 LBS	.017
6.5	4500	4000	6000	25 LBS	.042
7.7	6300	5000	5000	39 LBS	.068
8.2	6300	5000	5000	41 LBS	.082
10	10,800	10,200	4500	71 LBS	.204



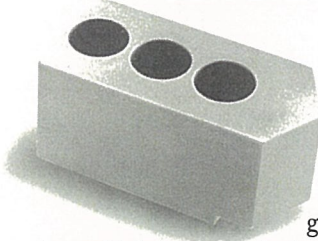
Top Jaws

Soft Blank

Hard Serrated

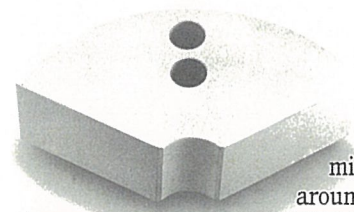


If the chuck is to be used for bar work infrequently, and most of your workpieces are rough forgings or castings, standard hard serrated top jaws may be ideal for your workholding needs. They can be positioned in the master jaw to hold any diameter within their range as detailed on back page. Because the casting or forging surface to be gripped is rough, this type of serrated jaw is used to penetrate the actual gripping surface.

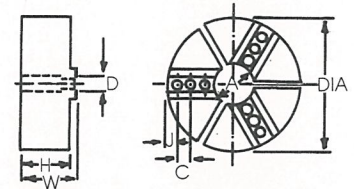
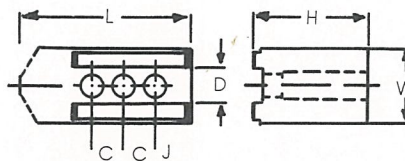
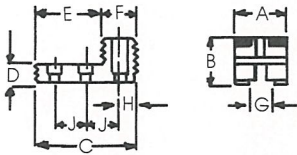


When a workpiece must be gripped on a surface which has already been machined or ground, soft blank steel top jaws must be used, since serrated jaws will mar the machined surface. The jaws, when closed on the part, must hold it concentric with the center line of the spindle within a specified tolerance. Most commonly, soft blank top jaws are bored in place to the diameter to be held for best results.

Aluminum Wrap-Type



Our aluminum wrap-around type top jaw are constructed of 6061-T6 high strength aluminum. Like standard soft blanks, these aluminum jaws are designed for secondary operations in which a serrated top jaw would mar the pre-machined surface. Because of their wide applicability, and the ease with which they may be bored to size, these aluminum top jaws are among the most popular we produce.



Chuck	A	B	C	D	E	F	G	H	J
4.8	1.00	1.06	1.94	0.65	1.05	0.89	$\frac{.433}{.434}$	0.47	0.65
5.5	1.00	1.06	2.32	0.65	1.38	0.95	$\frac{.433}{.434}$	0.53	0.65
6.5	1.25	1.34	2.56	0.67	1.53	0.93	$\frac{.550}{.551}$	0.40	0.787
7.7	1.38	1.87	2.75	0.95	1.72	1.00	$\frac{.671}{.670}$	0.56	.810
8.2	1.38	1.87	2.75	0.95	1.72	1.00	$\frac{.671}{.670}$	0.56	.810
10.0	1.73	1.99	4.09	1.20	3.23	0.86	$\frac{.829}{.828}$	1.18	1.02

Chuck	L	W	H	D	C	J
4.8	2.18	1.00	1.12	$\frac{.433}{.434}$	0.709	0.39
5.5	2.62	1.00	1.12	$\frac{.433}{.434}$	0.709	0.39
6.5	3.12	1.25	1.50	$\frac{.550}{.551}$	0.709	0.28
7.7	3.25	1.50	1.50	$\frac{.671}{.670}$	0.810	0.41
8.2	3.25	1.50	1.50	$\frac{.671}{.670}$	0.810	0.41
10.0	4.68	1.73	1.77	$\frac{.829}{.828}$	1.26	0.63

Chuck	Dia.	W	H	D	C	J	*A
4.8	4.87	1.28	1.13	$\frac{.433}{.434}$	0.65	0.50	1.00
5.5	5.5	1.38	1.25	$\frac{.433}{.434}$	0.65	0.50	1.00
6.5	6.5	2.16	2.00	$\frac{.550}{.551}$	0.709	0.28	1.00
7.7	7.87	2.00	1.86	$\frac{.671}{.670}$	0.810	0.41	1.00
8.2	8.25	2.00	1.86	$\frac{.671}{.670}$	0.810	0.41	1.25
10.0	10.00	2.39	2.25	$\frac{.829}{.828}$	1.02	0.63	1.50

*Minimum diameter-machine to part diameter after jaws are positioned on the chuck.

Dimensions

Chuck Model No. Derivation 6.5 L -3- A5 FS
 6½" DIA TYPE L 3 JAW A5 MOUNTING FINE SERRATED JAWS

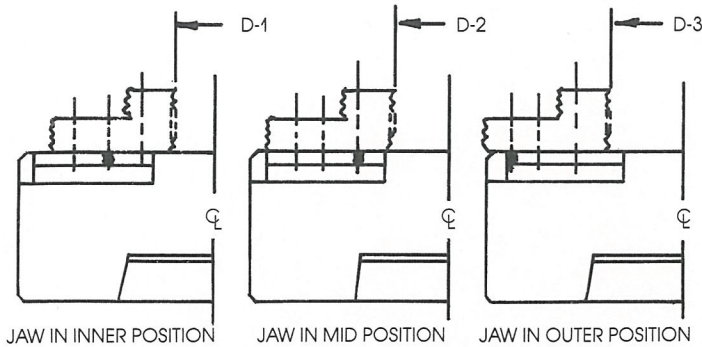
CHUCK	TYPE	A	B	C	D	E	F	G MIN	G MAX	H	J	K	L	M	O	SPINDLE MIG	JAW TRAVEL	STROKE	TOP JAW MOUNTING	PR MOUNTING DIA
4.8-3-A5F	L	4.8	3.18	1.08	0.96	1.75	1.37	.93	1.31	.37	1.25-16	-	.312-18	.432 .431	-	A4, A5/PR	.094	.376	¼x90° SERRATIONS	4.3310 4.3307
5.5-3-A4F	S	5.5	3.18	1.34	1.25	-	1.44	1.72	2.18	-	-	1.62	.312-18	.432 .431	1.375	A5/PR	.094	.376	¼x90° SERRATIONS	4.3310 4.3307
5.5-3-A5F	L	5.5	3.18	1.56	1.25	1.93	1.44	1.06	1.44	.87	1.75-16	-	.312-18	.432 .431	1.375	A5/PR	.094	.376	¼x90° SERRATIONS	4.3310 4.3307
6.5-3-A5/A6F	S	6.5	3.75	1.34	1.41	-	1.78	2.22	2.80	-	-	1.62	.375-16	.550 .549	1.437	A5, A6/PR	.125	.500	¼x90° SERRATIONS	5.5123 5.5119
6.5-3-A5/A6F	L	6.5	3.75	1.56	1.41	1.93	1.78	.97	1.47	1.00	1.75-16	-	.375-16	.550 .549	1.437	A5, A6/PR	.125	.500	¼x90° SERRATIONS	5.5123 5.5119
7.7-3-A5/A6F	S	7.7	3.75	1.50	1.41	-	2.37	2.33	2.78	-	-	1.73	.437-14	.669 .668	1.437	A5, A6/PR	.151	.450	¼x90° SERRATIONS	5.5123 5.5119
7.7-3-A5/A6F	L	7.7	3.75	1.56	1.41	1.93	2.37	.97	1.41	1.00	1.75-16	-	.437-14	.669 .668	1.437	A5, A6/PR	.151	.450	¼x90° SERRATIONS	5.5123 5.5119
8.2-3-A6F	S	8.2	3.75	1.79	1.66	-	2.37	2.33	2.78	-	-	2.20	.437-14	.669 .668	2.06	A6/PR	.151	.450	¼x90° SERRATIONS	7.4821 7.4803
8.2-3-A6F	L	8.2	3.75	2.05	1.66	2.27	2.37	1.35	1.80	1.00	M65x1.5P	-	.437-14	.669 .668	2.06	A6/PR	.151	.450	¼x90° SERRATIONS	7.4821 7.4803
10.0-3-A8F	S	9.9	5.00	2.36	2.04	-	2.79	3.23	4.02	-	-	2.60	M16x2P	.827 .826	2.06	A8/PR	.197	.787	¼x90° SERRATIONS	8.8600 8.8583
10.0-3-A8F	L	9.9	5.00	2.60	2.04	2.93	2.79	1.73	2.52	1.00	M88x2P	-	M16x2P	.827 .826	2.06	A8/PR	.197	.787	¼x90° SERRATIONS	8.8600 8.8583

Note: All models available in 2-jaw configuration

Gripping Diameters

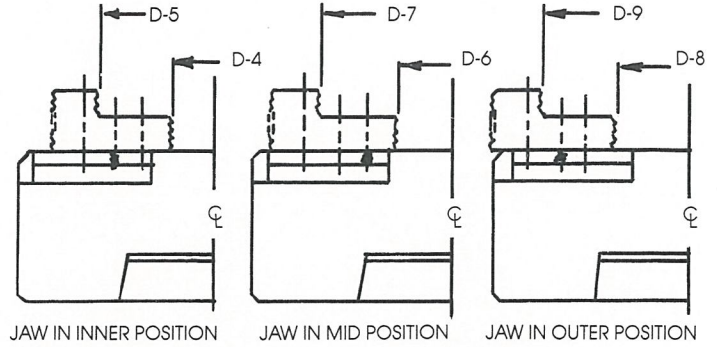
Note: Chuck shown in mid-stroke position

Long Bite



Minimum gripping diameter using long bite of jaw with master jaw in minimum effective gripping position.

Short Bite



Diameters D-3 and D-9 show jaw overhang. This is not recommended.

MODELS	JAW MOVEMENT (Per Jaw)	DIA. 1	DIA. 2	DIA. 3	DIA. 4	DIA. 5	DIA. 6	DIA. 7	DIA. 8	DIA. 9
4.8	.094	.56	.93	1.81	.44	3.18	1.68	4.44	—	—
5.5	.094	.87	1.25	2.12	.750	3.50	2.00	4.75	—	—
6.5	.125	1.00	2.63	3.38	.750	3.88	1.50	4.50	3.13	6.13
7.7	.151	1.06	2.75	3.50	1.00	4.38	2.50	5.75	3.50	6.75
8.2	.151	1.31	3.00	3.75	1.25	4.63	2.75	6.00	3.75	7.00
10.0	.197	1.50	2.75	3.63	2.12	8.12	3.25	9.38	4.25	10.12

POWERHOLD Workholding Engineers since 1957

Founded more than 35 years ago, Powerhold has specialized in the development of precise and efficient workholding devices. We invented the first thru-hole pneumatic chucking system in the U.S., and we continue to lead the competition today by providing the workholding answers to the issues of high speed, accuracy, and computer integration.

In addition to our wide range of chucks, we also manufacture hydraulic and pneumatic actuators and cylinders, chuck/collet combinations, a variety of top jaws

and accessories such as pressure gages, revolving tool holders, machining fixtures, live centers and workheads.

We are also frequently called upon by customers to create custom devices – many for difficult or unusual applications. **Send us your workholding problem, and we will send you a solution!**

For more information on the products described in this brochure or any of our standard or custom workholding devices and accessories, please contact:

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