gator chucks
BY FUERDA

Operating Instructions for:

GATOR MANUAL LATHE CHUCKS

UNIVERSAL & PRECISION

Medium Duty

No. 01-2015

Please read and keep this manual for future reference.

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Scroll Chuck Maintenance Requirements

Use extreme caution and care when operating and maintaining your lathe chuck.

- Always disconnect the machine from the power source before installing, inspecting or lubricating the chuck.
- ALWAYS remove the chuck key after clamping or unclamping of parts and never use the chuck key without the safety spring. Never use a chuck wrench extension (cheater bar) or any other device that extends the chuck key handle, this can lead to excessive torque that could damage the chuck or work piece.
- Do not exceed chuck maximum RPM specification.
- Do not touch or handle the chuck when it is running/rotating.
- Do not start the machine with the safety door or spindle nose guard open.
- Protect your chuck against chip infiltration. Inspect the chuck for chips each time the work piece is released. Remove all chips from chuck guide ways and from the jaw teeth by hand or with a vacuum. Never use compressed air to remove chips. Doing so could push chips deeper into the chuck leading to chuck damage.
- Routinely disassemble the chuck for cleaning and lubrication. This should be performed at least once every few weeks or more often depending upon your application. Consider factors such as: chip size, type of machining coolant and number of chuck working hours per shift.
- Routinely check the operation of the jaws. If jaws do not operate smoothly or are seized, disassemble the chuck, clean and lubricate all internal parts and reassemble.
- Always use proper molybdenum graphite “chuck” grease.
- Always use the proper jaws for your application. Contact Gator Chuck manufacturer if you have special clamping requirements or nonstandard machining applications.
- Long work piece machining should always be supported with a live/dead center or with a steady rest. See detailed information in our chuck manual Page 5.
- Never attempt to modify the chuck.
- Never grip a chuck with another chuck.
- Never clamp the work piece beyond the specified gripping range. See detailed information in our chuck manual, on Page 5.
- Follow specified torque requirements for all mounting and jaw bolts.
- When griping the work piece, keep your hands away from the chuck jaws.
- Always use supplied eyebolts and proper support (lifting belts, chains, etc.) when lifting chucks 10” and larger. All chucks 10” and larger are provided with two eyebolts. Remove all eye bolts (or other lifting devices) from the chuck body before starting the lathe.
- Never hammer chuck or clamped workpiece.
- Do not turn on the lathe without gripping down on the workpiece.
- All Gator Master, Top and Hard Solid jaws are numbered and mounted in corresponding numbered jaw guide ways (guide way numbers are etched on the face of the chuck). If jaws are removed from the chuck they must be reinstalled in the proper jaw/guide positions.
- Do not operate the machine while impaired or under the influence of alcohol or drugs.
- Do not wear any loose clothing, neckties or gloves. Long hair should be properly secured and kept clear of the machine, the chuck, and the work piece.

Safe Operating Parameters for Self-Centering Chucks

Lathe Chuck Safety Conditions

- Due to chuck rotating speeds and cutting forces during machining, care should be taken to ensure the proper and safe use of your chuck
- Cleaning should be done often for safety and prolonged chuck life
- Proper maintenance will ensure your satisfaction

Total Gripping Force of all Self-Centering Chucks (lb)

Chuck Diameter	3-1/4″	4″	5″	6-1/4″	8″	10″	12-1/2″	15-3/4″	20″	25″	31-1/2″
Steel & *Semi-Steel* Chucks	2200	3750	5300	6800	82000	10000	12000	14300	16000	17700	19800
Maximum Torque on the Wrench (Nm)	35	50	75	120	160	180	200	280	360	400	500

Recommended Maximum Speeds for Self-Centering Chucks (RPM)

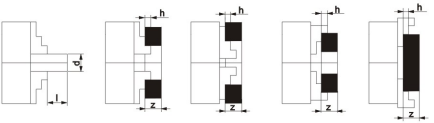
Chuck Diameter	3-1/4″	4″	5″	6-1/4″	8″	10″	12-1/2″	15-3/4″	20″	25″	31-1/2″
Semi-Steel Universal Chucks	4000	3500	3200	3000	2500	2000	1500	1000	700	500	300
Steel Precision Chucks	6000	5200	4800	4500	4000	3500	2800	2000	1200	1000	450

Value of Balancing for Precision Self-Centering Chucks Only

Chuck Diameter	3-1/4″	4″	5″	6-1/4″	8″	10″	12-1/2″	15-3/4″	20″	25″
Balancing (Ounce-Inch)	0.15	0.22	0.32	0.44	0.62	0.87	1.25	1.94	4.16	8.88

Admissible Weight and Size of the Workpiece For Medium Duty Scroll Chucks

It is very important to select the proper chuck for your application.



Chunk Size	3-1/4"	4"	5"	6-1/4"	8"	10"	12-1/2"	15-3/4"	20"	25"	31-1/2"
l	1.2d						1.5d			1d	
Z	4 x h										

Final chuck gripping ability depends on many factors like:

a. Chuck RPM
b. Weight of workpiece
c. Cutting forces, which means: precision machining, medium machining or rough machining
d. Jaw-gripping surface serration
e. How the workpiece is gripped

Note! Above listed admissible weights of workpiece should be considered as reference data only.

1. Unsupported Workpiece gripped with inside jaws with all teeth of the jaw engaged with the scroll plate. See Fig#1.

Chuck Size	3-1/4"	4"	5"	6-1/4"	8"	10"	12-1/2"	15-3/4"	20"	25"	31-1/2"
l	1.2d						1.5d			1d	
Weight lbs	1.3	2.2	4.4	6.6	13	22	44	88	198	330	880

l - max length of the workpiece projection outside the jaws d - diameter of the workpiece being clamped in the jaws

2. Unsupported Workpiece gripped with outside jaws with all teeth of the jaw engaged with the scroll plate. See Fig#1.

Chuck Size	3-1/4"	4"	5"	6-1/4"	8"	10"	12-1/2"	15-3/4"	20"	25"	31-1/2"
z	4 x h										
Weight lbs	3.3	5.5	4.4	15	33	55	88	154	286	528	880

z - max length of the workpiece projection outside the jaws h - height of the jaw step

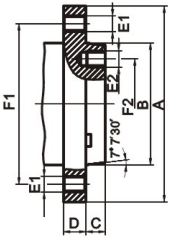
3. Supported workpiece with live center or steady rest. or gripped in two chucks when all teeth of the jaw are engaged with the scroll plate.

Chuck Size	3-1/4"	4"	5"	6-1/4"	8"	10"	12-1/2"	15-3/4"	20"	25"
Weight lbs*	88	132	220	330	550	1100	2200	5500	8800	13200

*Weight per one chuck

Determining the Proper Spindle Type and Size

Gator Chucks meet all of the requirements of ASA Standard B5.9-1960.



- Choose from the types shown below
- For short taper spindle noses Type A, D, & C (DIN), measure the pilot diameter and length bolt circle diameter (dimensions F1 & F2) and diameter of the holes (dimensions E1 & E2)
- For A type mount, check the number of bolt circles (A2 mount or A1 mount)
- All chucks with A1 mount can be installed on A1 spindle nose only
- All chucks with A2 mount can be installed on either A1 or A2 spindle nose
- For long taper spindle nose Type L, check pilot diameter, length and thread size
- For threaded spindle nose, check the thread diameter, number of threads per inch and length (dimensions B & D), plus overall length (dimension F1)

Spindle Nose	F1	F2	B	C max.	Thread E1 = E2 UNC-3B
A-4	3.2500	—	2.5005+.0005	.4375	7/16-14
A-5	4.1250	2.4374	3.2505+.0005	.5625	7/16-14
A-6	5.2500	3.2500	4.1880+.0005	.6250	1/2-13
A-8	6.7500	4.3750	5.50075+.0005	.6875	5/8-11
A-11	9.2500	6.5000	7.75075+.0005	.7500	3/4-10
A-15	13.0000	9.7500	11.251+.001	.8125	7/8-9
A-20	18.2500	14.5000	16.251+.001	.8750	1-8
A-28	25.5000	20.8750	23.001+.001	1.000	1-1/4-7

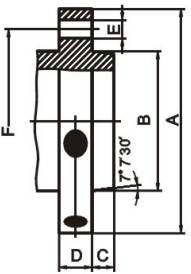
Spindle Type A1&A2

Type A1
has tapped holes on both inner and outer bolt circles.

Type A2
does not have holes in the inner bolt circles.

Determining the Proper Spindle Type and Size

Camlock Spindle Type D1



Spindle Nose	A	F	B	C max.	E	No. of Holes	Camlock Stud Dia
D1-3	3.622	2.7820	2.1250+.00025	.4375	.5937	3	9/16
D1-4	4.606	3.2500	2.5005+.0005	.4375	.6562		5/8
D1-5	5.748	4.1250	3.2505+.0005	.5000	.8750	6	3/ 4
D1-6	7.126	5.2500	4.1880+.0005	.5625	1.000		7/8
D1-8	8.858	6.7500	5.50075+.0005	.6250	1.125		1
D1-11	11.732	9.2520	7.75075+.0005	.6875	1.250		1-3/16
D1-15	15.866	13.0000	11.251 + .001	.7500	1.375		1-3/8

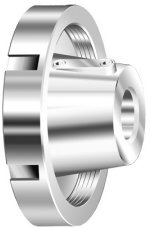
Note:

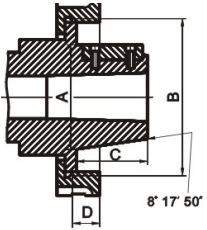
D1- & 4 chucks/adapters have 3 Camlock Studs.

D1-5 - D1-15 chucks/adapters have 6 Camlock Studs.

Determining the Proper Spindle Type and Size

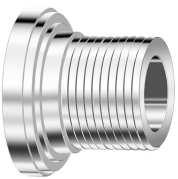
Long Taper Key Drive, Spindle Type L

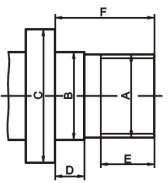




Spindle Nose	Thread B	C	A	Key
LOO	3-3/4"-6"	2	2.75	3/8x3/8x1-1/2
LO	4-1/2" - 6"	2-3/8	3.250	3/8x3/8x1-3/4
L1	6" - 6"	2-7/8	4.125	5/8 X5/8 x 2-3/ 8
L2	7-3/ 4"-5"	3-3/8	5.250	3/4 X3/4 x 2-7/ 8
L3	10-3/ 8"-4"	3-7/8	6.500	1 x1 X3-1/4

Long Taper Key Drive, Spindle Type L



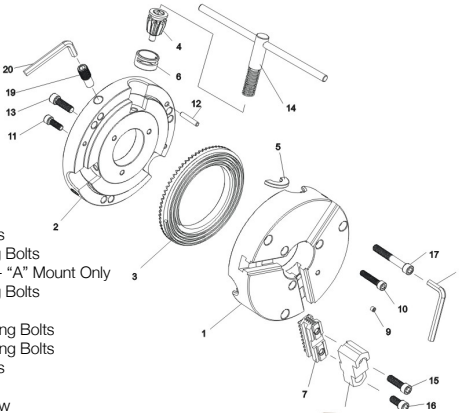


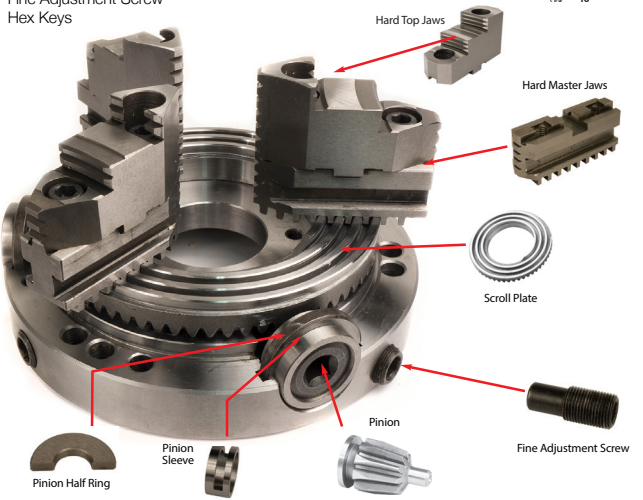
Spindle Nose A	B	F1	D	E
1"-10" UNS-2B	1.015	1.500	.4375	1.000
1-1/2"-8" UNS-2B	1.515	1.500	.4375	1.000
2-3/16"-10"UNS-2B	2.2025	1.750	.5625	1.125
2-1/4"-8" UNS-2B	2.260	1.750	.5625	1.125
2-3/16"-6" - UNS-2B	2.2025	1.750	.5625	1.125
2-3/4"-8" UNS-2B	2.760	2.0625	.6875	1.3125

PA Tech-Tru 3 & 6 Jaw PA Scroll Chucks. 0.0004”T.I.R.

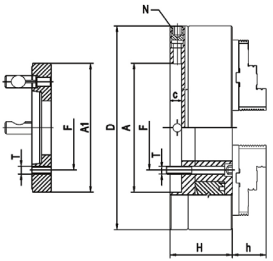
With adjustable body

1. Chuck Body
2. Back Cover
3. Scroll Plate
4. Pinion
5. Pinion Half Ring
6. Pinion Sleeve
7. Hard Master Jaws
8. Hard Top Jaws
9. Grease Nipple
10. Chuck Mounting Bolts
11. Back Cover Mounting Bolts
12. Spindle Locating Pin - “A” Mount Only
13. Back Cover Mounting Bolts
14. Chuck Wrench
15. Hard Top Jaw Mounting Bolts
16. Hard Top Jaw Mounting Bolts
17. Chuck Mounting Bolts
18. Hex Keys
19. Fine Adjustment Screw
20. Hex Keys

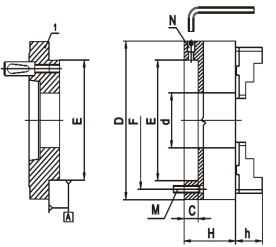




PA 3 & 6 Jaw, Self-Centering Scroll Chucks
Forged Steel Body. 0.0004” T.I.R. Adjustable



Chuck Diameters: 15-3/4", 20" & 25"

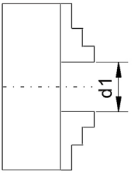


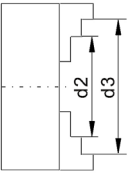
■ Chuck Diameters: 4" thru 12-1/2"

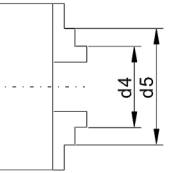
Chuck Dia. D	F	E	A1	A	Hole d max.	H	2-Piece Jaws	Solid Jaws	C	Mounting Bolts M		Fine Adjustment Screws N	
							h			Thread	Qty.	Thread	Qty.
4”	3.2677	1.7717	—	—	0.787	2.677	—	0.63	0.51	M8x1.25	3	M10x1.0	4
4”	3.2677	1.7717	—	—	0.787	2.677	—	0.63	0.51	M8x1.25		M12x1.0*	
5”	4.252	2.1654	—	—	1.378	2.362	1.575	0.787	0.59	M8x1.25		M12x1.0	
6-1/4”	5.5118	3.3858	—	—	1.654	2.677	1.71	1.26	0.67	M10x1.5		M18x1.0	
8”	6.9291	4.3307	—	—	2.165	3.071	1.77	1.142	0.71	M10x1.5			
10”	8.8189	5.7086	—	—	2.992	3.054	2.05	1.339	0.79	M12x1.75			
12-1/2”	11.2598	7.0866	—	—	4.055	3.819	2.24	1.693	0.79	M16x2			
15-3/4”	6.75	—	11.748	11.782	5.354	4.803	2.638	—	0.87	5/8x11	6		8
20”	9.252	—	16.022	16.032	7.48	5.669	3.11	—	1.18	3/4x10			
25”	13	—	16.022	16.032	9.921	5.905	3.425	—	1.18	3/4x10			

*For 6-Jaw chuck only

PA 3 & 6-Jaw Chuck CLAMPING RANGES For 2-Piece Jaw Chucks







3-Jaw Chucks

Chuck Dia.	d1	d2	d3	d4	d5
5″	.118-1.97	2.05-3.78	3.74-4.92	1.34-2.99	2.95-4.65
6-1/4″	.118-2.52	2.44-4.76	4.53-6.30	1.65-3.81	3.46-5.75
8″	.157-3.54	2.83-6.14	5.24-7.87	1.97-5.12	4.13-7.48
10″	.197-4.65	3.39-7.76	6.30-9.84	2.28-6.50	4.92-9.25
12-1/2″	.394-5.16	4.06-8.90	7.48-12.40	2.56-7.17	5.71-10.43
15-3/4″	.394-7.09	5.00-11.57	9.06-15.75	2.84-8.98	6.50-12.95
20″	.787-9.25	4.33-15.75	7.48-19.69	4.72-16.14	7.87-19.09
25″	1.18-13.19	4.72-22.44	7.87-24.80	5.51-23.23	8.27-26.18

6-Jaw Chucks

Chuck Dia.	d1	d2	d3	d4	d5
5″	.236-1.69	1.97-3.43	3.70-4.92	1.30-2.75	2.30-4.68
6-1/4″	.315-2.51	2.64-4.76	4.65-6.30	1.77-3.82	3.62-5.75
8″	.315-3.54	2.91-6.14	5.28-7.78	2.05-5.12	4.29-7.48
10″	.47-4.65	3.23-7.40	6.46-9.84	2.68-6.85	5.91-10.08
12-1/2″	.47-5.16	4.25-8.90	6.02-12.40	2.68-7.17	5.91-10.08
15-3/4″	.59-7.95	5.20-11.65	9.29-15.75	2.87-9.92	6.65-13.86
20″	1.18-9.25	4.76-15.83	7.76-18.82	5.31-16.26	8.27-19.25
25″	1.57-13.19	5.20-21.85	8.27-24.80	5.91-23.03	8.66-26.02

Note:

Never exceed chuck gripping ranges.

Master jaws and scroll should be always in a full engagement.

PA & PB Chuck & Adapter Installation on the Lathe Spindle Nose

Fig. #2

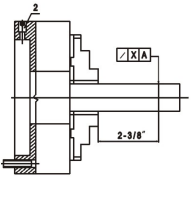


Fig. #3

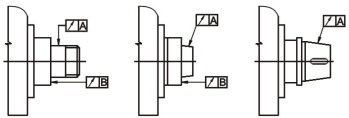


Fig. #1

Chuck Dia.	Spindle Runout
3" - 15-3/4"	0.00012" max
20" - 32"	0.0002" max

Back Plate Face T.I.R = 0.0005" MAX

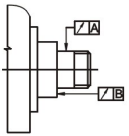
1. Ensure that lathe spindle nose and back face of adapter are clean and free from burrs and dirt.
2. Check spindle nose Radial "A" and Face "B" Run Out. See Fig. #1.
3. Mount the adapter onto the spindle nose and lock in place.
4. In the case of "D" type Camlock spindles, be sure that the Camlock studs are installed correctly into the adapter plate. The reference lines on the studs should be flush with, or slightly below, the face of the adapter plate.
5. After mounting the adapter and ensuring that it is securely locked, place a dial indicator on the face of the adapter plate, close to the mounting holes. Make a full rotation of the adapter and the Total Indicator Reading (T.I.R) should not exceed 0.0005 (inch). See Fig.#2.
6. Ensure that the chuck recess is clean and free of burrs. Also, make sure that the fine adjustment screws do not protrude into the recess.
7. Mount the chuck to the adapter and lightly tight in down the mounting bolts with equal torque.
8. To adjust the chuck to the required accuracy, insert a ground shaft (use fully and precisely ground shafts only) fully into the chuck jaws and rotate while tightening the chuck jaws to ensure the ground shaft is gripped firmly. Screw in the fine adjustment screws until light contact is made with the adapter. Place an indicator point on the shaft, about 2-3/8" from the chuck jaw top step face surface (see Fig. #3) and rotate the chuck by hand. Note the high and low points and the nearest fine adjustment screw to them. Rotate the chuck to the fine adjustment screw nearest the high point and unscrew slightly. Rotate the chuck to the opposite fine screw and screw it in to take up half the T.I.R. error. Repeat this procedure until all the desired accuracy is obtained and all the adjustment screws are equally tightened. Now lock the chuck mounting bolts in place with equal torque.

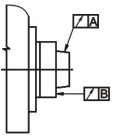
Note! For the highest chuck repeatability accuracy always use master pinion with "0" mark.

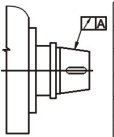
Permissible Spindle Run Out - Requirements for Plain Back & Direct Mount Scroll Chucks

To obtain the specified clamping accuracy of a chuck mounted on a machine tool, it is necessary to:

1. Reduce play in the spindle bearings to allowable minimum.
2. Ensure the machine spindle nose does not exceed the values specified.
3. Meet the basic requirements for correct mounting of the chuck on the spindle nose.
4. Follow the chuck manual.





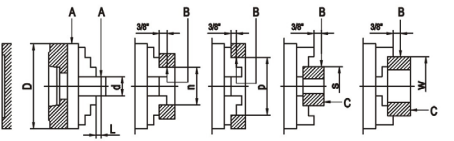


Chuck Dia.	Spindle Runout
PO Series Steel Body Chucks	
3″- 16″	.00012″max.
20″ - 25″	.0002″max.
PS Series Semi-Steel Body	
3″ - 6″	.00012″max.
8″ - 32″	.0002″max.

Self-Centering Scroll Chuck Accuracy

All allowable run outs which are specified concern measurements at three different jaw openings d (1, 2 & 3).

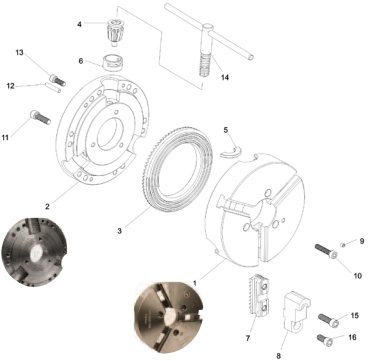
Chuck Dia. D	Universal and Precision Chuck Types: PO Series & PS Series									
	d	L	n	P	s	w solid jaws	w 2 pc. jaws	Radial Runout		Axial Runout
								A	B	C
3-1/4″	—	1.57	1.57	2.36	1.38	2.48	—	0.0008	0.001	0.0006
4″	0.55	1.57	1.57	2.95	1.97	3.15	—	0.0008	0.001	0.0006
5″	0.98	2.36	1.97	3.94	2.44	3.94	4.72	0.0012	0.0014	0.0008
6-1/4″	1.18	2.36	1.97	5.31	3.46	3.94	5.9	0.0012	0.0014	0.0008
8″	1.57	3.15	3.15	6.38	3.78	6.3	7.28	0.0016	0.0018	0.001
10″	2.08	3.15	3.15	7.87	5.9	6.3	8.86	0.0016	0.0018	0.001
12-1/2″	2.95	4.72	4.92	9.92	8.27	9.84	11.81	0.002	0.0022	0.0012
15-3/4″	3.94	4.72	4.92	11.1	9.84	9.84	13.78	0.0024	0.0025	0.0012
20″	3.94	6.3	7.87	11.1	11.81	15.75	15.75	0.004	0.004	0.002
25″	4.92	6.3	7.87	12.79	15.75	15.75	15.75	0.004	0.004	0.002
31-1/2″	7.87	6.3	12.8	19.7	15.75	19.7	19.7	0.0059	0.0059	0.0024

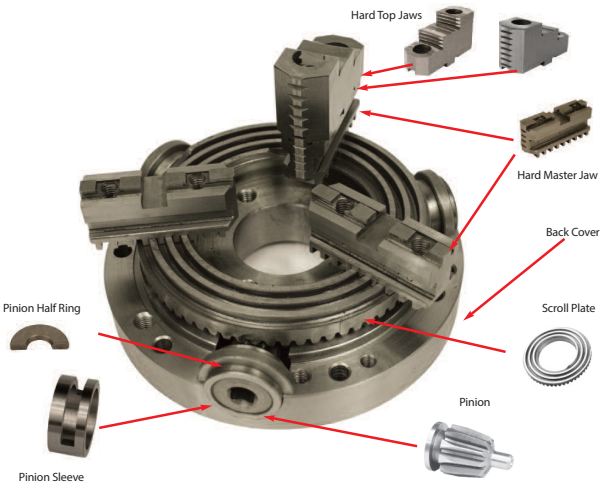


PO Forged Steel Body Scroll Chucks Construction

2-Piece Body design

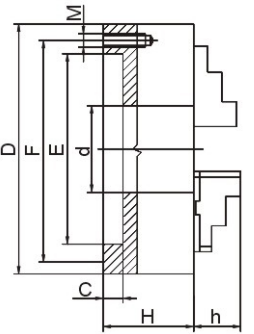
1. Chuck Body
2. Back Cover
3. Scroll
4. Pinion
5. Pinion Half Ring
6. Pinion Sleeve
7. Hard Master Jaws
8. Hard Top Jaws
9. Grease Nipple
10. Back Cover Mounting Bolts
11. Chuck Mounting Bolts
12. Back Cover Mounting Pin
13. Back Cover Mounting Bolts
14. Chuck Wrench
15. Jaw Mounting Bolts
16. Jaw Mounting Bolts





3 & 4-Jaw PO Forged Steel Body Scroll Chucks— Plain Back Mount

- All Chucks are provided with American Standard Tongue & Groove Jaws
- Please see hard top jaw dimensions on pages 25- 28
- Chuck clamping ranges on page 25



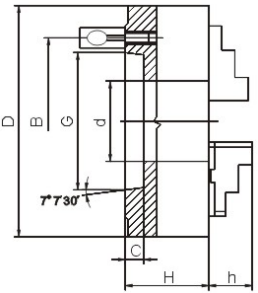
DIN 6350 Mount

Chuck Dia. D	Adapter Mounting Bolts			F	E (H7)	d	C	H	h
	Thread M	L	No. of Bolts						
3-1/4"	M6x1	.98	3	2.6387	2.2047	0.6299	.1181	1.732	—
4"	M8x1.25			3.2677	2.7559	0.7874	.1181	1.969	—
5"				4.2520	3.7402	1.3976	.1575	2.422	1.575
6-1/4"	M10x1.5		6	5.5118	4.9213	1.6535	.1575	2.756	1.693
8"				6.9291	6.2992	2.1654	.1575	3.150	1.772
10"	M12x1.75	1.18		8.8189	7.8740	2.9921	.1969	3.543	2.087
12-1/2"	M16x2			11.2598	10.2362	4.0551	.1969	3.937	2.244
15-3/4"		1.57		14.2519	12.9921	5.3543	.1969	4.331	2.693
20"				18.0314	16.5354	7.4803	.1969	4.685	3.150
25"				23.0709	21.4567	9.9212	.2756	5.079	3.425
31-1/2"	1" - 8	5.61		14.5000	17.7170	10.5118	.7874	5.906	3.425

PO Series Precision Forged Steel Body Chucks

Has a forged steel body & designed for high speed applications

Chuck Dia.	Taper Size	Hole Dia.(d)	RPM max.	Weight lbs.	B	G	C	H	h	Camlock Studs		
										OD	Thread	Qty.
6-1/4″	D1-3	1.6535	4500	20	2.7795	2.1250	.5118	2.6772	1.693	9/16	M10x 1	3
	D1-4				3.2520	2.5005				5/8		
	D1-5				4.1260	3.7505	.5629			3/4	M12x 1	6
8″	D1-5	2.1653	4000	42	4.1260	3.2505		3.0719	1.772	7/8	M16x 1.5	
	D1-6				5.2520	4.1880	.6299					
10″	D1-6	2.9921	3500	71	5.2520	4.1880		3.5039	2.087	1	M20x 1.5	
	D1-8				6.7480	5.5007	.7087					
12-1/2″	D1-6	4.0551	2800	112	5.2520	4.1880	.6299	3.7874	2.244	7/8	M16x 1.5	
	D1-8				6.7480	5.5007	.7087			1	M20x 1.5	
	D1-11				9.2520	7.7507	.7874	4.3976		1-3/16	M22x 1.5	
153/4″	D1-8	5.3543	2000	223	6.7480	5.5007	.7087	4.2570	2.639	1	M20x 1.5	
	D1-11				9.2520	7.7507	.7874			1-3/16	M22x 1.5	
20″	D1-11	7.5984	1200	331	9.2520	7.7507	.7874	4.6850	3.150	1-3/16	M22x 1.5	
25″	D1-11	7.4803	1000	604	9.2520	7.7507	.7874	5.0787	3.425	1-3/16	M22x 1.5	



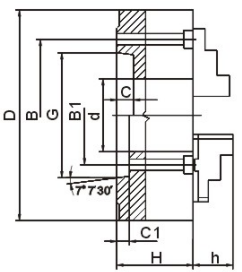
Type D1

PO Series Precision Forged Steel Body Chucks

3-Jaw, Type A1/A2, Direct Mount Self-Centering Scroll Chucks With Two Piece Hard Reversible Jaws, Medium Duty

- Forged steel body
- Type A1 spindle has 2 bolt hole patterns: inside (size B1), and outside the taper (size B), Either an A1 or A2 chuck will fit on it
- Type A2 spindle has 1 bolt pattern, outside the taper (size B)

Chuck Dia.	Taper Size	Hole Dia.(d)	RPM max.	wt. lbs.	B (A2)	B1 (A1)	G	C/C1*	H	h	Screws M		
											Thread	L	Qty.
5-1/4″	A1-5	1.6535	4500	22	—	2.4374	3.2505	.563	2.6772	1.693	7/16-14	2-3/8	3
8″	A1-5	1.6535	4000	42	—				3.0709	1.772		2-3/4	
	A1-6	2.1653			—	3.2500	4.1880	.625			1/2-13		6
10″	A1-6	2.1653	3500	71	—				3.5039	2.087		3-1/8	
	A1-8	2.9921			—	4.3750	5.5007	.688			5/8-11	2-3/4	
12-1/2″	A2-6	4.0551	2800	121	5.2520	—	4.1880	.630	3.7874	2.244	1/2-13	4	
	A1-8	3.1496			—	4.3750	5.5007	.688			5/8-11	3-1/8	
15-3/4″	A2-8	5.3543	2000	203	6.7480	—		.709	4.2520	2.639		4-5/16	
	A1-11	5.1181			—	6.5000	7.7507	.750			3/4-10	4-1/2	
20″	A2-8	5.3543	1200	353	6.7480	—	5.5007	.709	4.6850	3.091	5/8-11	4-3/4	
	A2-11	7.4803			9.2520	—	7.7507	.787			3/4-10		
25″	A2-11	7.4803	1000	628	9.2520	—	7.7507	.750	5.0787	3.425		5-5/16	
	A2-15	9.9213			13.000	—	11.251	.813			7/8-9	5-1/8	



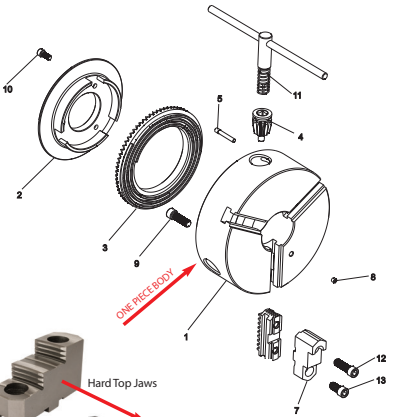
Type A

***C-C1, depth of counterbore.**

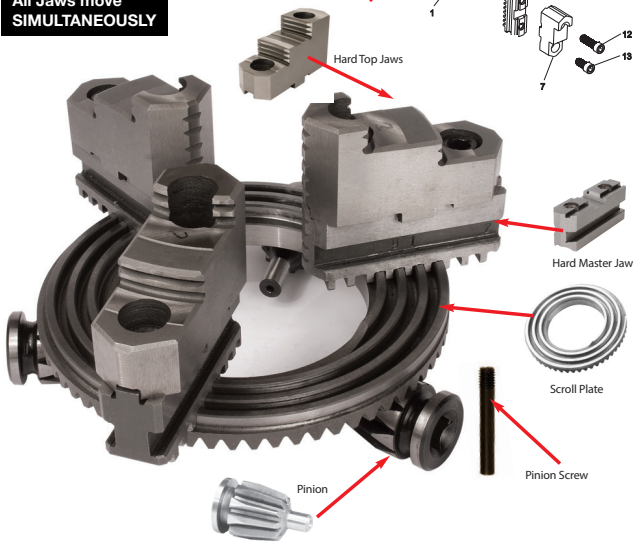
PS Semi-Steel Body Scroll Chuck Construction

One Piece Body design

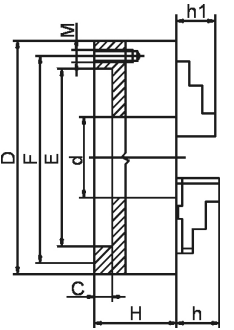
1. Chuck Body
2. Back Cover
3. Scroll Plate
4. Pinion
5. Pinion Screw
6. Hard Master Jaws
7. Hard Top Jaws
8. Grease Nipple
9. Chuck Mounting Bolts
10. Back Cover Mounting Bolts
11. Chuck Wrench
12. Jaw Mounting Bolts
13. Jaw Mounting Bolts



All Jaws move SIMULTANEOUSLY

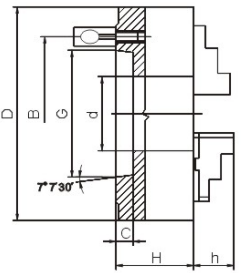


2, 3 & 4-Jaw Self-Centering Chucks
Semi-Steel Body, Medium Duty, Plain Back
Adapters Required



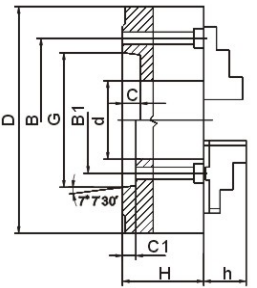
Chuck Dia. D	F	E	d	C	H	h	h1	Adapter Mounting Bolts			Weight lbs	RPM max.
								Thread M	L	No. of Bolts		
3-1/4"	2.6378	2.2047	0.6299	0.118	1.732	—	0.512	M6x1	0.98	3	3.3	4000
4"	3.2677	2.7599	0.7874	0.118	1.969	—	0.669	M8x1.25			6.2	3500
5"	4.2520	3.7402	1.2598	0.158	2.205	1.575	0.787				11.0	3200
6-1/4"	5.5118	4.9213	1.6535	0.158	2.539	1.693	1.26	M10x1.5		6	22.0	3000
8"	6.9291	6.2992	2.1654	0.158	2.953	1.772	1.142				39.0	2500
10"	8.8189	7.8740	2.9921	0.197	3.347	2.087	1.339	M12x1.75	1.18		55.0	2000
12-1/2"	11.2598	10.2362	4.0551	0.197	3.701	2.244	1.693	M16x2			110.0	1500
15-3/4"	14.2519	12.9921	5.3545	0.197	4.134	2.693	2.165		1.57		187.0	1000
20"	18.0314	16.5354	7.784	0.236	4.5276	3.504	2.205				320.0	700
25"	23.0709	21.4567	9.921	0.276	5.1575	3.465	2.756		1.97		551.0	500
31-1/2"	14.5000	17.7170	12.6000	0.787	6.2598	3.4650	—	1"-8	5.96		886.0	300

3-Jaw Self-Centering Chucks, Semi-Steel Body, Medium Duty, Direct D1 Mount



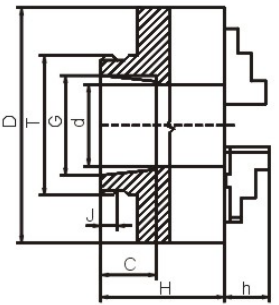
Chuck Dia.	Taper Size	Hole Dia. (d)	RPM max.	wt. Lbs	B	G	C	H	h	Camlock Studs		
										Dia.	Thread	Qty.
5"	D1-4	1.260	3200	11	3.252	2.501	.512	2.756	1.575	5/8	M10x1	3
6-1/4"	D1-3	1.654	3000	20	2.780	2.125	.512	3.209	1.693	9/16		
	D1-4				3.252	2.501				5/8		
8"	D1-3	2.028	2500	42	2.780	2.125	.512	3.583	1.772	9/16		6
	D1-4	2.165			3.252	2.501				5/8		
	D1-5				4.126	3.251	.563			3/4	M12x1	
	D1-6				5.252	4.188				7/8	M16x1.5	
10"	D1-5	2.992	2000	71	4.126	3.251	.563	4.075	2.087	3/4	M12x1	
	D1-6				5.252	4.188	.630			7/8	M16x1.5	
	D1-8				6.748	5.501	.709			1	M20x1.5	
12-1/2"	D1-6	4.055	1500	112	5.252	4.188	.630	4.634	2.244	7/8	M16x1.5	6
	D1-8				6.748	5.501	.709			1	M20x1.5	
	D1-11				9.252	7.751	.787	5.512		1-3/16	M22x1.5	
15-3/4"	D1-6	4.055	1000	223	5.252	4.188	.630	5.059	2.639	7/8	M16x1.5	
	D1-8	5.354			6.748	5.501	.709			1	M20x1.5	
	D1-11	5.354			9.252	7.751	.787			1-3/16	M22x1.5	
20"	D1-8	5.354	700	331	6.748	5.501	.709	5.669	3.504	1	M20x1.5	
	D1-11	7.598			9.252	7.751	.787			1-3/16	M22x1.5	
25"	D1-11	7.591	500	604	9.252	7.751	.787	6.496	3.465	1-3/16		

3-Jaw Self-Centering Chucks, Semi-Steel Body, Medium Duty, Direct A1 & A2 Mounts



Chuck Dia.	Taper Size	Hole Dia. (d)	RPM max.	wt. Lbs	B (A2)	B1 (A1)	G	C/C1	H	h	Chuck Mounting Bolts		
											Thread	L	Qty.
6-1/4"	A1-5	1.654	3000	22	—	2.437	3.251	.563	3.209	1.693	7/16-14	2-3/8	3
8"	A1-5	1.654	2500	42	—		3.251	.563	3.583	1.772	7/16-14	3-1/8	
	A1-6	2.165			—	3.250	4.188	.625			1-2/13		
10"	A2-5	2.992	2000	71	4.126	—	3.251	.563	4.075	2.087	7/16-14	4-1/8	6
	A1-6	2.164			—	3.250	4.188	.625			1/2-13	3-1/2	
	A1-8	2.992			—	4.375	5.501	.688			5/8-11	3-1/2	
12-1/2"	A2-6	4.055	1500	121	5.252	—	4.188	.630	4.634	2.244	1-2/13	4-3/4	
	A1-8	3.150			—	4.375	5.501	.688			5/8-11	4-3/16	
15-3/4"	A2-6	4.055	1000	203	5.252	—	4.188	.630	5.059	2.639	1-2/13	5	
	A2-8	5.354			6.748	—	5.501	.709			5/8-11	5	
	A1-11	5.118			_	6.500	7.751	.750			3/4-10	4-1/4	
20"	A2-11	7.591	700	353	9.252	—	7.751	.787	5.669	3.504	3/4-10	5-7/8	
25"	A2-11	7.490	500	628	9.252	—	7.751	.787	6.496	3.465	3/4-10	7-3/32	
	A2-15	7.490			13.000	—	11.251	.813			7/8-9	6	

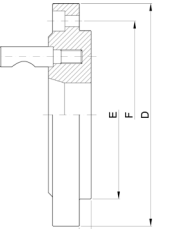
3-Jaw Self-Centering Chucks, Semi-Steel Body, Medium Duty, Direct “L” Mount

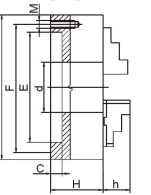


Chuck Dia.	Taper Size	Hole Dia. (d)	RPM max.	wt Lbs	B (A2)	B1 (A1)	G	C/C1	H	h	Chuck Mounting Bolts		
											Thread	L	Qty.
6-1/4″	A1-5	1.654	3000	22	—	2.437	3.251	.563	3.209	1.693	7/16-14	2-3/8	3
8″	A1-5	1.654	2500	42	—		3.251	.563	3.583	1.772	7/16-14	3-1/8	
	A1-6	2.165			—	3.250	4.188	.625			1-2/13		
10″	A2-5	2.992	2000	71	4.126	—	3.251	.563	4.075	2.087	7/16-14	4-1/8	6
	A1-6	2.164			—	3.250	4.188	.625			1/2-13	3-1/2	
	A1-8	2.992			—	4.375	5.501	.688			5/8-11	3-1/2	
12-1/2″	A2-6	4.055	1500	121	5.252	—	4.188	.630	4.634	2.244	1-2/13	4-3/4	
	A1-8	3.150			—	4.375	5.501	.688			5/8-11	4-3/16	
15-3/4″	A2-6	4.055	1000	203	5.252	—	4.188	.630	5.059	2.639	1-2/13	5	
	A2-8	5.354			6.748	—	5.501	.709			5/8-11	5	
	A1-11	5.118			—	6.500	7.751	.750			3/4-10	4-1/4	
20″	A2-11	7.591	700	353	9.252	—	7.751	.787	5.669	3.504	3/4-10	5-7/8	
25″	A2-11	7.490	500	628	9.252	—	7.751	.787	6.496	3.465	3/4-10	7-3/32	
	A2-15	7.490			13.000	—	11.251	.813			7/8-9	6	

Gator Adapter Plate Selection

Principle Mounting Dimensions for Adapter Plates





Gator supplies the following adapter plates:

- FL - Semi finished; requires full machining on chuck side, see chart below
- FLD - Machined; requires skim cut to fit with the chuck, see chart below
- FLA - Fully Machined; does not require any machining, designed for steel adjustable chuck
- FLI - Fully finished; does not require any machining, designed for Independent chucks
- Before adapter installation please verify spindle nose accuracy with dial indicator, see page 13
- Please be sure that spindle nose and adapter plate are clean before installation
- For Camlock mount be sure that all Camlock studs and set screws are mounted properly
- After selecting suitable back plate, mount it onto the lathe spindle nose
- Proper mounting is very important in order to secure concentricity between the lathe's spindle nose and the chuck
- The back of the lathe chuck has a counterbore diameter E, finished to H7 class, with depth C
- Prior to machining the adapter, accurately measure the chuck's counterbore diameter E and depth C
- A good press fit H7/k6 is most desirable
- To ensure very good concentricity, it is important that this procedure is done accurately

Chuck Dia. D	FL & FLD Adapter mounting dimensions after machining.				Chuck mounting dimensions			
	Boss Dia E	F	C	D	Counter bore Dia E	F	C	D
4″	2.7567	3.268	0.098	3.937	2.7571	3.268	0.118	3.937
	2.7560				2.7559			
5″	3.7411	4.252	0.138	4.921	3.7415	4.252	0.158	4.921
	3.7403				3.7402			
6-1/4″	4.9224	5.512	0.138	6.299	4.9228	5.512	0.158	6.299
	4.9214				4.9213			
8″	6.3003	6.929	0.138	7.874	6.3008	6.929	0.158	7.874
	6.2993				6.2992			
10″	7.8753	8.819	0.177	9.843	7.8758	8.819	0.197	9.843
	7.8742				7.8740			
12-1/2″	10.2376	11.260	0.177	12.402	10.2383	11.260	0.197	12.402
	10.2364				10.2362			
15-3/4″	12.9937	14.252	0.177	15.748	12.9944	14.252	0.197	15.748
	12.9923				12.9921			
20″	16.5372	18.031	0.177	19.685	16.5379	18.031	0.197	19.685
	16.5356				16.5354			
25″	21.4584	23.071	0.236	24.803	21.4594	23.071	0.276	24.803
	21.4567				21.4567			

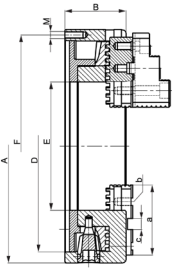
3 Jaw Self-Centering, Forged steel body, Extra Large Thru-hole, Plain back, Medium Duty

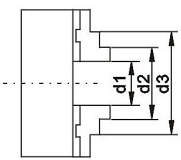
Chucks are provided with American Standard Tongue & Groove hard Top & Master Jaws. Please see hard top jaw dimensions on page 26.

Clamping Ranges

Note:
Never exceed chuck gripping ranges.

Master jaws and scroll should always be in a full engagement.



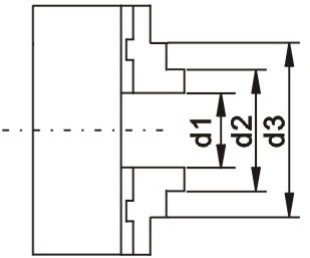


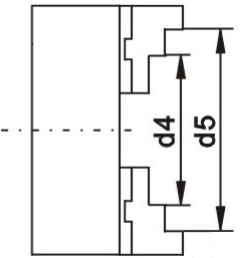
Chuck Dia.	d1		d2		d3	
	Min.	Max.	Min.	Max.	Min.	Max.
15-3/4″	5.12	10.63	9.06	13.78	11.81	15.75
20″	9.84	14.96	12.99	17.72	15.16	19.69
26″	14.80	18.50	17.91	22.64	20.28	25.00
31-1/2″	10.24	22.28	14.17	29.53	16.54	31.50

Chuck Dia. A	Thru Hole E	Jaw Stroke		wt. of Workpiece	
		min.	max.	without support	with support
15-3/4″	8.66	6.614	11.34	110	3307
20″	12.6	9.874	14.96	177	5512
26″	15.98	14.80	19.57	265	7716
31-1/2″	16.14	7.402	22.28	441	8820

Chuck Dia. A	B	F	D	a	M	b	c	wt. lbs.	Max. RPM
15-3/4″	4.13	15.000	14.251	4.72	M12x40	5/8"-11	0.7499	128	500
20″	4.72	18.957	18.189	4.72	M12x40	3/4"-10		168	350
26″	5.32	24.409	22.835	5.00	M16x40	3/4"-10		258	250
31-1/2″	5.95	18.110	27.953	8.86	M24x160	3/4"-10		468	200

Clamping Ranges for 3 & 4 jaw scroll chucks with 2-pc. Jaws

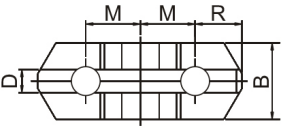


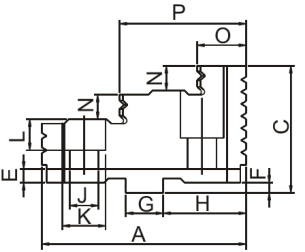


Chuck Dia. D		d1	d2	d3	d4	d5
		JAWS				
mm	inch	reversible	reversible	reversible	reversible	reversible
80	3-1/4*	.08-1.06	.87-1.81	1.77-2.72	.98-1.97	1.89-2.80
100	4*	.12-1.30	.98-2.20	2.20-3.43	1.26-2.44	2.44-3.27
125	5	.12-1.97	1.34-2.99	2.95-4.65	2.05-3.78	3.74-4.92
160	6-1/4	.12-2.52	1.65-3.82	3.46-5.75	2.44-4.76	4.53-6.30
200	8	.16-3.54	1.97-5.12	4.13-7.48	2.83-6.14	5.24-7.87
250	10	.20-4.65	2.28-6.50	4.92-9.25	3.38-7.75	6.30-9.84
315	12-1/2	.20-5.16	2.56-7.16	5.70-10.43	4.06-8.90	7.48-12.40
400	15-3/4	.39-7.09	2.83-8.98	6.50-12.95	5.00-11.57	9.05-15.75
500	20	.79-9.25	4.72-16.14	7.87-19.10	4.33-15.75	7.48-19.69
630	25	1.18-13.19	5.51-23.23	8.27-26.18	4.72-22.44	7.88-24.80
800	31-1/2	5.9-18.98	9.92-28-99	12.91-31.97	9.45-28.50	12.44-31.50
1000	40	9.84-23.62	14.02-42.52	16.93-45.28	16.73-42.13	19.69-45.28

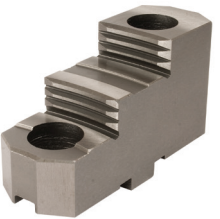
*Solid Jaws only.

Hard Top Jaws for 3, 4 & 6-Jaw Scroll Chucks





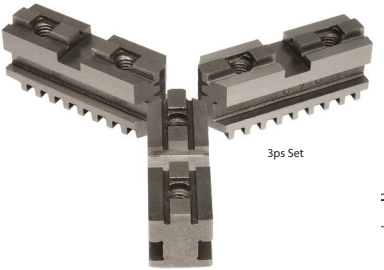
5" - 12-1/2"



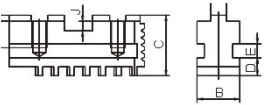
15-3/4" - 40"

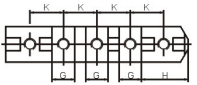
Chuck Dia.	M	H	G	J	K	D	E	F	N	C	B	OAL A	O	P
5"	5/8	57/64	.500	.35	.55	.313	.157	.126	.315	1.516	.866	2.205	.571	1.38
6-1/4"	3/4	1-1/8	.500	.43	.67	.313	.157	.126	.335	1.634	.984	2.638	.807	1.69
8"	7/8	1-3/8	.500	.43	.67	.313	.157	.126	.413	1.772	1.181	3.150	.984	2.09
10"	1-1/16	1-9/16	.750	.55	.79	.500	.157	.126	.531	2.087	1.417	3.740	1.14	2.52
12-1/2"	1-1/4	1-7/8	.750	.55	.79	.500	.157	.126	.689	2.402	1.654	4.252	1.22	3.01
15-3/4"	1-1/2	2-1/4	.750	.71	1.0	.500	.157	.248	.689	2.756	1.770	5.000	1.85	3.46
20"	1-1/2	2-1/4	.750	.87	1.3	.500	.157	.248	.787	3.425	1.968	5.157	2.05	3.23
25"	1-1/2	2-1/4	.750	.87	1.3	.500	.157	.248	.787	3.425	2.047	5.157	2.05	3.23
31-1/2"	1-1/2	2-1/4	.750	.87	1.3	.500	.157	.248	.787	3.425	2.047	5.157	2.05	3.23
40"	1-1/2	2-1/4	.750	.87	1.3	.500	.157	.248	.984	4.331	3.346	8.268	1.99	3.33

Hard Master Jaws for 2, 3, 4 & 6-Jaw Scroll Chucks

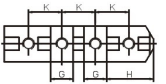


3ps Set

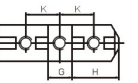




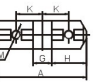
25" - 31-1/2"



20"



12-1/2" - 15-3/4"

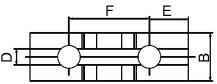


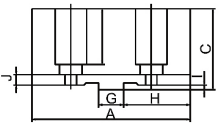
5" -10"

Chuck Dia.	K	H	G*	F	J	S	L	D	E	B	C	OAL A	Thread M
5"	5/8	57/64	.500	5/16	.158	.126	.532	.315	.315	.787	1.102	2.126	5/16-8
6-1/4"	3/4	1-1/8	.500	5/16	.158	.126	.551	.315	.315	.787	1.142	2.559	3/8-16
8"	7/8	1-3/8	.500	5/16	.158	.126	.551	.354	.394	.984	1.299	3.110	3/8-16
10"	1-1/16	1-9/16	.750	1/2	.158	.126	.630	.433	.472	1.102	1.417	3.622	1/2-13
12-1/2"	1-1/4	1-7/8	.750	1/2	.158	.126	.630	.500	.472	1.260	1.575	4.331	1/2-13
15-3/4"	1-1/2	2-1/4	.750	1/2	.284	.126	.866	.591	.551	1.417	1.929	5.118	5/8-11
20"	1-1/2	2-1/4	.750	1/2	.284	.126	1.280	.630	.551	1.575	2.126	6.535	3/4-10
25"	1-1/2	2-1/4	.750	1/2	.284	.126	1.280	.630	.551	1.969	2.146	8.268	3/4-10
31-1/2"	1-1/2	2-1/4	.750	1/2	.284	.126	1.280	.630	.551	1.969	2.146	8.858	3/4-10
40"	1-1/2	2-1/4	.750	1/2	.284	.126	1.575	.984	.984	3.150	3.032	12.593	3/4-10

*Note: 40" jaw has 6 Slots "G"

Soft Top Jaws for 2, 3, 4 & 6-Jaw Scroll Chucks

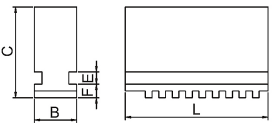


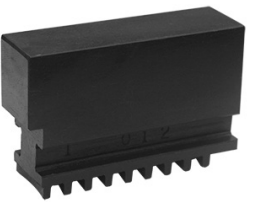


Chuck Dia.	A	B		C	D	E	F	G	H	I	J	Bolt Size
		2-Jaw	3-Jaw									
5″	2.520	-	0.866	1.520	.313	.591	1-1/4	.500	0.984	.126	.158	5/16-8
6-1/4″	3.071	1.575	0.984	1.634	.313	.829	1-1/2	.500	1.339	.126	.158	3/8-16
8″	3.543	1.575	1.063	1.713	.313	.949	1-3/4	.500	1.575	.126	.158	3/8-16
10″	4.173	1.850	1.280	2.028	.500	1.083	2-1/8	.750	1.772	.126	.158	1/2-13
12-1/2″	4.724	2.047	1.575	2.165	.500	1.209	2-1/2	.750	2.087	.126	.158	1/2-13
15-3/4″	5.512	2.047	1.654	2.539	.500	1.354	3	.750	2.480	.248	.158	5/8-11
20″	5.512	—	1.969	2.933	.500	1.354	3	.750	2.480	.248	.158	3/4-10
25″	6.299	—	2.047	3.288	.500	1.354	3	.750	2.480	.248	.158	3/4-10
32″	6.299	—	2.047	3.288	.500	1.354	3	.750	2.480	.248	.158	3/4-10

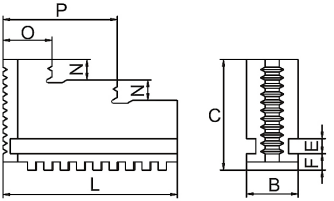
Soft Solid Jaws for 3 & 4-Jaw Scroll Chucks

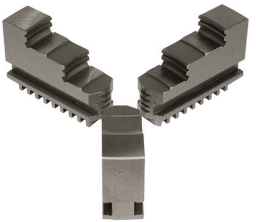
Chuck Dia.	C	L	B	F	E
3-1/4″	1.1024	1.2598	.4331	.2362	.2362
4″	1.2598	1.6535	.5906	.2362	.2362
5″	1.5748	2.0079	.7874	.3150	.3150
6-1/4″	2.0866	2.7559	.7874	.3150	.3150
8″	2.1260	3.3465	.9843	.3543	.3937
10″	2.4803	4.1339	1.1024	.4331	.4724
12-1/2″	2.8740	4.9213	1.2598	.5000	.4724
15-3/4″	3.622	5.709	1.417	0.591	0.551



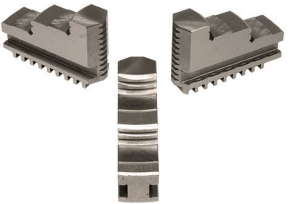


Hard Solid Jaws for 3, 4 & 6-Jaw Scroll Chucks





OD Hard Solid Jaws



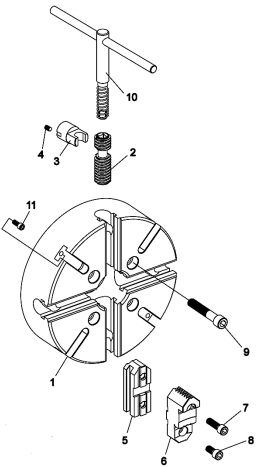
ID Hard Solid Jaws

Chuck Dia.	C	L	B	F	E	N	P	O
3-1/4"	1.1024	1.2598	.4331	.2362	.2362	.2362	.827	.374
4"	1.2598	1.6535	.5906	.2362	.2362	.2756	1.063	.433
5"	1.5748	2.0079	.7874	.3150	.3150	.3150	1.313	.512
6-1/4"	2.0866	2.7559	.7874	.3150	.3150	.3937	1.772	.748
8"	2.1260	3.3465	.9843	.3543	.3937	.4724	2.244	.906
10"	2.4803	4.1339	1.1024	.4331	.4724	.5512	2.736	1.102
12-1/2"	2.8740	4.9213	1.2598	.5000	.4724	.7087	3.268	1.358
15-3/4"	3.6220	5.7087	1.4173	.5906	.5512	.8661	3.898	1.417
20"	3.9370	7.0866	1.5748	.6299	.5512	1.0236	4.705	1.969

4-Jaw Independent Chucks, Medium Duty

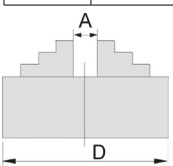
Solid reversible Jaws or Hard 2-Piece Reversible Jaws Semi-Steel Body & Cast Steel Body

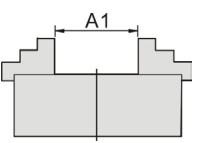
1. Chuck Body
2. Operating Screw
3. Thrust Bearing
4. Set Screw
5. Hard Master Jaw
6. Hard Top Jaw
7. Jaw mounting bolts
8. Jaw mounting bolts
9. Chuck mounting bolts
10. Chuck Wrench
11. T-Slot stop screw

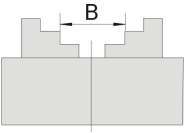


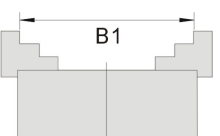
Gripping Ranges

Chuck Dia. D	A-A1	B-B1
3-1/4″	0.197-1.278	1.378-3.150
4″	0.236-1.772	1.575-3.937
5″	0.276-2.244	1.980-4.921
6-1/4″	0.315-3.150	1.969-6.299
8″	0.591-5.118	2.480-7.874
10″	0.787-6.929	3.150-9.843
12-1/2″	0.984-9.843	3.937-12.40
15-3/4″	1.378-11.81	4.646-15.75
20″	1.969-15.75	4.921-19.69
25″	2.756-21.26	6.299-24.80
31-1/2″	3.937-26.77	7.874-31.50
40″	4.921-32.28	9.874-39.37
50″	6.299-37.80	11.81-49.21



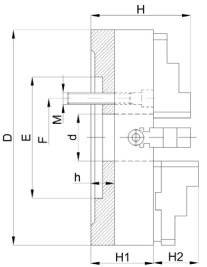


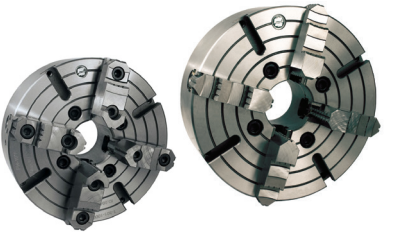




4-Jaw Independent Chucks, Plain Back with Solid or 2-Piece Hard Reversible Jaws

All 10” chucks and larger are provided with the T-Slots





All 2-pc. jaw Chucks are provided with American Standard Tongue & Groove jaws.

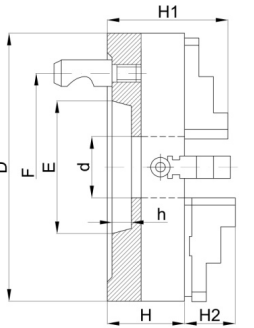
Chuck Dia. D	E (H7)	F	Hole d	H1	H	h	H2		Chuck Mounting Bolts		RPM* Max.	Load** Capacity lbs	Weight lbs
							Solid	2-Piece	Thread M	Qty.			
3-1/4”	2.165	2.598	0.866	1.654	2.283	0.138	0.6299	—	M6	4	4000	33	4
4”	2.835	3.307	0.984	2.126	3.031	0.157	0.9055	—	M8	4	4000	110	7
5”	3.74	4.252	1.181	2.205	3.071	0.177	0.8661	—	M8	4	3500	330	11
6-1/4”	2.559	3.74	1.772	2.559	3.799	0.196	1.2402	—	M10	4	3200	550	16
8”	2.953	3.74	2.205	2.953	4.331	0.236	1.3780	1.8268	M10	4	1800	1320	22
10”	5.906	4.126	2.559	3.347	4.7	0.276	1.5866	2.3780	M12	4	1500	2200	55
12-1/2”	6.89	5.252	3.15	3.74	5.701	0.276	1.9606	2.3980	M6	4	1200	3300	86
15-3/4”	7.874	6.748	3.937	4.134	6.095	0.394	1.9606	2.8465	M16	4	800	6600	134
20”	10.63	9.252	4.921	4.724	7.07	0.472	2.3543	3.5551	M20	4	500	9900	231
25”	10.63	9.252	6.299	5.512	7.866	0.472	2.3543	3.8504	M20	4	400	14300	359
31-1/2”	9.843	11.811	8.268	5.315	8.268	0.472	2.7874	3.6929	M20	8	300	18700	703
40”*	12.598	14.567	10.236	5.906	9.488	0.591	3.5827	4.6850	M20	8	150	25300	816
50”*	15.748	19.685	12.008	6.496	10.074	0.591	3.5827	4.6850	M20	8	100	28600	1543

* Note: 40” & 50” chucks provided with cast steel body

** Note: Max. Chuck load capacity & RPM are calculated for the round SUPPORTED workpieces centered in the jaws having full engagement with operating screws

4- Jaw Independent Chucks, Semi Steel Body, D1 Mount with Solid or 2-Piece Hard Reversible Jaws

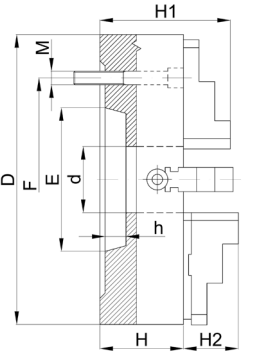
All 10” chucks and larger are provided with the T-Slots



* Note: Max. Chuck RPM’s are calculated for round SUPPORTED workpieces. centered in the jaws with full engagement with operating screws.

Chuck Dia.(D)	Taper No.	E	F	d	H	H1	h	Camlock Studs			Weight lbs	RPM* Max
								Dia.	Thread	Qty.		
8”	D1-4	2.501	3.252	2.205	2.953	4.331	0.5118	5 / 8	M10X1	3	22	1800
	D1-5	3.251	4.126				0.5906	3 / 4	M12X1	6	22	
10”	D1-4	2.501	3.252	2.205	3.347	4.700	0.5118	5 / 8	M10X1	3	60	1500
	D1-5	3.251	4.126				0.5906	3 / 4	M12X1	6	60	
	D1-6	4.188	5.252	2.953			0.6299	7 / 8	M16X1.5		60	
12-1/2”	D1-6	4.188	5.252	2.953	3.74	5.701	0.6299	7 / 8	M16X1.5	6	87	1200
	D1-8	5.5011	6.748	3.74			0.7087	1	M20X1.5		87	
15-3/4”	D1-6	4.188	5.252	2.953	4.134	6.095	0.6299	7 / 8	M16X1.5	6	132	800
	D1-8	5.501	6.748	4.921			0.7087	1	M20X1.5		132	
	D1-11	7.751	9.252	6.299			0.7874	1-3 / 16	M22X1.5		132	
20”	D1-8	5.501	6.75	4.921	4.724	7.070	0.7087	1	M20X1.5	6	211	500
	D1-11	7.751	9.252	6.299			0.7874	1-3 / 16	M22X1.5		211	
25”	D1-11	7.751	9.252	7.087	5.512	7.866	0.7874	1-3 / 16	M22X1.5	6	364	400

4- Jaw Independent Chucks, Semi Steel & Cast Steel Body, A Mount with Solid & Hard Top Reversible Jaws

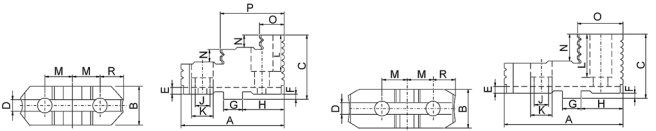


*Note: Max. Chuck RPM's are calculated for round SUPPORTED workpieces. Centered in the jaws with full engagement with operating screws.

Chuck Dia.(D)	Taper No.	E	F	d	H1	H	h	Spindle Mounting Bolts			Weight lbs	RPM*
								Thread M	L	Qty.		
8"	A2-5	3.251	4.125	2.205	4.331	2.953	0.512	7/16"-14	3-1/8	4	38	1800
10"	A2-5	3.251	4.125	2.953	4.700	3.347	0.512	7/16"-14	3-1/8	4	55	1500
	A2-6	4.188	5.250				0.591	1/2"-13	3-1/8	4		
	A2-8	5.501	6.750				0.709	5/8"-11	3-3/8	4		
12-1/2"	A2-5	3.251	4.125	2.953	5.701	3.740	0.512	7/16"-14	3-1/2	4	86	1200
	A2-6	4.188	5.250				0.591	1/2"-13	3-1/2	8		
	A2-8	5.501	6.750	3.740			0.709	5/8"11	3-1/4	4		
15-3/4"	A2-6	4.188	5.250	3.740	6.095	4.134	0.591	1/2"-13	4	8	140	800
	A2-8	5.501	6.750	4.921			0.709	5/8"-11		4		
	A2-11	7.751	9.252	6.299			0.787	3/4"-10		4		
20"	A2-8	5.501	6.750	5.366	7.070	4.724	0.709	5/8"-11	4-1/2	8	245	500
	A2-11	7.751	9.252	6.299			0.787	3/4"-10		8		
25"	A2-11	7.751	9.252	7.087	7.866	5.512	0.787	3/4"-10	5-5/16	8	358	400
	A2-15	11.251	13.000	9.488			0.827	7/8"-9		4		
32"	A2-11	7.751	9.252	7.087	8.266	5.315	0.787	3/4"-10	5-7/8	8	672	300
	A2-15	11.251	13.000				0.827	7/8"-9	6-1/8	8		
40"	A2-11	7.751	9.252	7.087	9.488	5.906	0.787	3/4"-10	7-3/32	8	780	150
	A2-15	11.251	13.000	11.024			0.827	7/8"-9	7-3/32	8		

Hard Top Jaws for Independent Chucks

American Standard Tongue & Groove Jaws



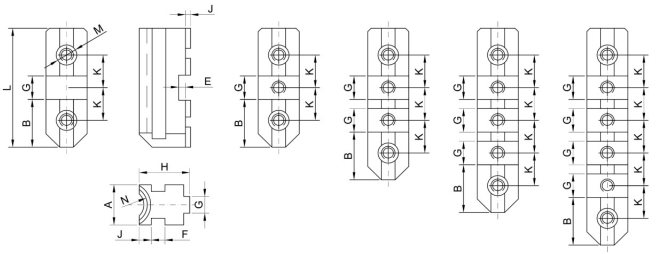
Chuck Dia.	M	H	G	J	K	D	E	F
8"	.8760	1.3858	.500	.4331	.7087	.3130	.1575	.1260
10"	1.0630	1.5748	.750	.5512	.7874	.5004	.1575	.1260
12-1/2"	1.2500	1.8858	.750	.5512	.7874	.5004	.1575	.1260
15-3/4"	1.5000	2.2598	.750	.7087	1.0236	.5004	.1575	.2480
20"	1.5000	2.2835	.750	.8881	1.2992	.5004	.1575	.2480
25"	1.5000	2.2835	.750	.8881	1.2992	.5004	.1575	.2480
32"	1.5000	2.2835	.750	.8881	1.2992	.5004	.1575	.2480
40"	1.5000	2.7748	.750	.8881	1.2992	.5004	.1575	.2480
50"	1.5000	2.7748	.750	.8881	1.2992	.5004	.1575	.2480

Chuck Dia.	N	C	B	OAL A	O	P	R	Weight Set lbs
8"	.3740	1.7126	1.3386	3.2280	.8661	2.0866	0.7598	1.65
10"	.4724	2.0276	1.3386	3.7992	.9843	2.4409	0.8858	2.25
12-1/2"	.5118	2.1654	1.6535	4.4291	1.0630	2.7756	1.0118	3.40
15-3/4"	.5315	2.5394	1.6535	5.0787	1.0433	3.1102	1.1339	4.50
20"	.7087	2.9331	2.1260	5.3543	1.4764	3.4252	1.1575	7.00
25"	.8268	3.2283	2.1260	5.3543	1.4764	3.4252	1.1575	7.60
32"	.9449	3.4646	2.8346	5.3543	1.5748	3.5039	1.1575	11.0
40"	2.2441	4.0157	3.2283	6.2992	3.1496	-	1.6465	17.3
50"	2.2441	4.0157	3.2283	6.2992	3.1496	-	1.6465	17.3

Note:
Always select proper jaws for your application.

Hard Master Jaws for Independent Chucks

American Standard Tongue & Groove Jaws

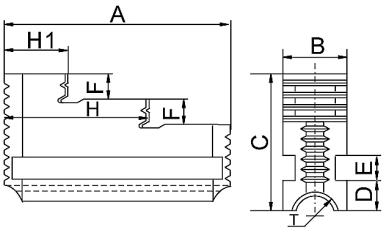


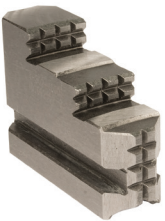
8" to 10" 12" to 16" 20" 25" to 32" 36" to 49"

Chuck Dia.	A	B	C	E	F	G	H
8″	1.0630	1.3071	.500	0.1575	.394	.313	1.260
10″	1.0630	1.4764	.750	0.1575	.394	.500	1.496
12-1/2″	1.5748	1.7874	.750	0.1575	.472	.500	1.535
15-3/4″	1.5748	5.1614	.750	0.2835	.472	.500	1.732
20″	2.0472	2.1850	.750	0.2835	.591	.500	2.323
25″	2.0472	2.1850	.750	0.2835	.709	.500	2.323
32″	2.7559	2.1850	.750	0.2835	.787	.500	2.323
40″	3.1496	2.2732	.750	0.2835	.984	.500	3.150
50″	3.1496	2.2732	.750	0.2835	.984	.500	3.150

Chuck Dia.	J	K	L	M	N	Weight Set lbs
8″	.453	.876	3.110	3/8-16	24x4sq.	1
10″	.453	1.063	3.701	1/2-13	24x4sq.	1.5
12-1/2″	.382	1.250	4.331	1/2-13	Tr32x6	2.5
15-3/4″	.382	1.500	5.079	5/8-11	Tr32x6	3.3
20″	.461	1.500	6.614	3/4-10	Tr36x6	7.9
25″	.618	1.500	8.110	3/4-10	Tr40x6	9.5
32″	.618	1.500	8.110	3/4-10	Tr44x8	13.0
40″	.984	1.500	12.795	3/4-10	Tr55x8	31.5
50″	.984	1.500	12.795	3/4-10	Tr55x8	31.5

Hard Solid Reversible Jaws for 4-Jaw Independent Chucks





Chuck Dia.	A	C	B	Thread T LH	E	D	H	H1	F	Weight per jaw lbs
3-1/4″	1.2992	1.2992	.5906	14x3 sq.	.3150	.2362	.8661	.4724	.2362	.22
4″	1.6535	1.6535	.6299	16x3 sq.	.3150	.2756	1.1024	.5512	.3150	.33
5″	2.0866	1.6535	.7087	18x4 sq.	.3150	.3150	1.4173	.7087	.3150	.44
6-1/4″	2.4213	2.0079	.7874	22x4 sq.	.3937	.3543	1.6142	.7874	.3937	.77
8″	3.3465	2.4213	1.0630	24x4 sq.	.3937	.4528	2.2835	1.2009	.4724	1.54
10″	3.6220	2.4213	1.0630	24x4 sq.	.3937	.4528	2.5787	1.2009	.4724	1.65
12-1/2″	4.3701	3.0118	1.5748	Tr32x6	.4724	.3819	2.6380	1.0630	.7097	3.31
15-3/4″	5.0787	3.0118	1.5748	Tr32x6	.4724	.3819	3.0906	1.2795	.7097	3.97
20″	6.0039	3.6811	2.0472	Tr36x6	.5906	.4606	3.6614	1.3780	.8661	7.5
25″	6.9685	3.9567	2.0472	Tr40x6	.7087	.6181	4.2913	1.7717	.9843	8.8
32″	7.9528	4.5079	2.7559	Tr44x8	.7874	.6181	4.8031	1.7323	.9843	18
40″	9.4488	5.9055	3.1496	Tr55x8	.9843	.9843	6.2992	2.5591	1.5748	28
50″	9.4488	5.9055	3.1496	Tr55x8	.9843	.9843	6.2992	2.5591	1.5748	28

Manual Lathe Chuck Maintenance

- Proper lubrication of manual lathe chucks is very important and will help to maintain lathe chuck accuracy, and safety.
- Improper lubrication will affect the performance of the chuck and could lead to diminished gripping force, reduced accuracy, abnormal wear and risk of the chuck seizing. The chuck must be cleaned and lubricated on a regular basis.
- After each machining process, the chuck should be thoroughly cleaned with a vacuum, NEVER use compressed air to clean the chuck.
- Use rust-preventive coolant to prevent oxidation. Be alert to any oxidation, this can lead to diminished gripping force.
- Disassemble and clean the chuck at least once per 6 months. Check to see if there are any worn or broken parts and replace them if necessary. When machining cast iron, the chuck should be cleaned at least once per month.
- Lubricate the chuck sufficiently before re-assembly. Always use proper chuck grease (Molybdenum Graphite Chuck Grease).

Quality Certification

Chuck Model _____ Chuck Size _____

Chuck Serial Number_____

This Gator chuck has been tested and inspected, and meets all DIN/ANSI manufacturing, operating and safety standards.

Inspection Supervisor _____

Inspector _____

Packaged By _____

global tooling SOLUTIONS

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