The true line of precision

Guide to Workholding

scroll chucks

precision chucks

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high speed chucks

power chucks

super thin chucks

ppc chucks

independent chucks

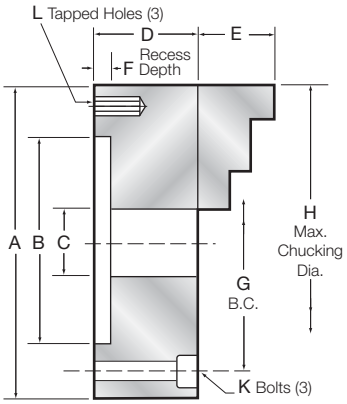
standard accuracy chucks

Pratt Burnerd International

600 Group

Product Index

3 Jaw Super Precision Scroll Chucks



- Conform to ISO 3089: 1991 (E) class 1
- 35µm T.I.R. up to 315mm size, 400mm 75µm T.I.R. using nominated pinion
- Repeatability 25µm on all sizes
- Sizes 80mm to 400mm
- Three hardened pinions
- Complete with one of set each hard inside and hard outside jaws
- American style two piece jaws available as an option
- High strength nodular iron bodies
- Twelve month warranty

Chuck Size	Model Number	Approx. Weight (kilos)	Maximum rpm
80mm	9210-00805	1.7	5000
100mm	9210-01005	2.9	5000
125mm	9210-01305	4.7	5000
160mm	9210-01705	8.6	4900
200mm	9210-02005	15.6	4200
250mm	9210-02505	27	3300
315mm	9210-03205	45	2700
400mm	9210-04005	83	2000

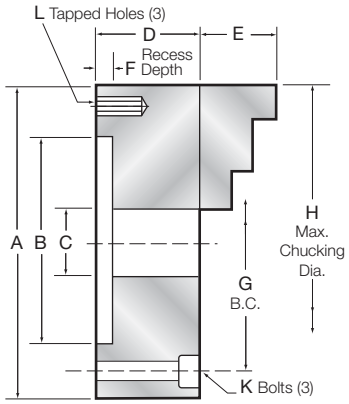
Larger diameter chucks available on request.

Dimensional Data for 3 Jaw Super Precision Scroll Chucks

Chuck Size (A)	B(H7)	C	D	E	F	G	K	Gripping Capacity Min.	Gripping Capacity Max.
80	63.5	19	45	13	3	71.3	M5	1	76
100	76.2	25.4	51.3	17	3	89	M6	1	98
125	95	35	57	19	4	108	M8	1.5	124
160	125	45.9	63.9	23	4	140	M10	1.5	160
200	160	54.8	74.2	29	4	176	M10	2	200
250	200	75.9	82.2	33	5	224	M12	3	250
315	260	105	91	40	5	286	M12	6	304
400	330	136	100.7	50	5	362	M16	10	406

HOW TO ORDER: State quantity, model number of chuck, part number of adaptor, and shipping instructions.

3 Jaw Standard Accuracy Scroll Chucks



- Conform to ISO 3089: 1991 (E) class 11
- 35µm T.I.R. up to 315mm size, 400mm and above 75µm T.I.R
- Repeatability 25µm on all sizes
- Sizes 80mm to 500mm
- Three hardened pinions
- Complete with one of set each hard inside and hard outside jaws
- American style two piece jaws available as an option
- High strength nodular iron bodies
- Twelve month warranty

Chuck Size	Model Number	Approx. Weight (kilos)	Maximum rpm
80mm	9580-00805	1.7	4000
100mm	9580-01005	2.9	3800
125mm	9580-01305	4.7	3700
160mm	9580-01705	8.6	3500
200mm	9580-02005	15.6	3200
250mm	9580-02505	27	3000
315mm	9580-03205	45	2300
400mm	9580-04005	83	2000
500mm	9580-05005		1100

Larger diameter chucks available on request.

Dimensional Data for 3 Jaw Standard Accuracy Scroll Chucks

Chuck Size (A)	B(H7)	C	D	E	F	G	K	Gripping Capacity Min.	Gripping Capacity Max.
80	63.5	19	45	13	3	71.3	M5	1	76
100	76.2	25.4	51.3	17	3	89	M6	1	98
125	95	35	57	19	4	108	M8	1.5	124
160	125	45.9	63.9	23	4	140	M10	1.5	160
200	160	54.8	74.2	29	4	176	M10	2	200
250	200	75.9	82.2	33	5	224	M12	3	250
315	260	105	91	40	5	286	M12	6	304
400	330	136	100.7	50	5	362	M16	10	406
500	420	190	120	54	8	458	M16		

HOW TO ORDER: State quantity, model number of chuck, part number of adaptor, and shipping instructions

Mounting Plates

for 3 Jaw Super Precision & Standard Accuracy Scroll Chucks

Mounting plates are precision machined to suit the spindle nose of your machine.
If ordering plate separately please specify the model number of your chuck.

Type D Camlock Mounting Plates

Spindle	100mm	125mm	160mm	200mm	250mm	315mm	400mm
D-3	8271-10222	8271-13222	8271-17222	8271-20222	-	-	-
D-4	-	8271-13223	8271-17223	8271-20223	8271-25223	-	-
D-5	-	-	8271-17224	8271-20224	8271-25224	-	-
D-6	-	-	8271-17225	8271-20225	8271-25225	8271-32225	8271-40225
D-8	-	-	8271-17226	8271-20226	8271-25226	8271-32226	8271-40226
D-11	-	-	-	8271-20227	8271-25227	8271-32227	8271-40227

Type A American Standard Short Taper A-1 & A-2 Spindles

Spindle	100mm	125mm	160mm	200mm	250mm	315mm	400mm
A-3	8271-10211	8271-13211	8271-17211	-	-	-	-
A-4	-	8271-13212	8271-17212	8271-20212	8271-25212	-	-
A-5	-	-	8271-17213	8271-20213	8271-25213	-	-
A-6	-	-	8271-17214	8271-20214	8271-25214	8271-32214	8271-40214
A-8	-	-	-	-	8271-25215	8271-32215	8271-40215
A-11	-	-	-	-	-	8271-32216	8271-40216

Special adapter plates available upon request. Specify chuck number and spindle nose specifications.
For spindle nose specifications, see page 80.

Pratt Burnerd 3 Jaw Griptru Scroll Chucks

- Conform to ISO 3089: 1991 (E) class 1
- Micro adjustment feature allows chuck to be trued to within 0.005mm
- Repeatability 0.013mm on same size component
- Sizes 80mm to 315mm
- Three hardened pinions
- Complete with one of set each hard inside and hard outside jaws
- American style two piece jaws available as an option
- High strength nodular iron bodies
- Twelve month warranty

Chuck Size	Model Number	Approx. Weight (kilos)	Maximum rpm
80mm	9250-00805	2	5000
100mm	9250-01005	3.1	5000
125mm	9250-01305	5.4	5000
160mm	9250-01705	9.6	4900
200mm	9250-02005	16.8	4200
250mm	9250-02505	31.7	3300
315mm	9250-03205	47.4	2700

Dimensional Data for 3 jaw Griptru scroll Chucks

Chuck Size (A)	B(H7)	C	D	E	F	G	K	Gripping Capacity Min.	Gripping Capacity Max.
80	63.5	19	54	14	12	71.3	M5	1	76
100	76.2	25.4	56.6	17	12	88.9	M6	1	98
125	95	35	69	19	15	107.9	M8	1.5	124
160	125	45.9	78.6	23	20	139.9	M10	1.5	160
200	160	54.8	89.8	29	22	176	M10	2	200
250	200	75.9	101.3	33	25	224	M12	3	250
315	260	102.8	110	40	25	286	M12	6	304

HOW TO ORDER: State quantity, Model Number of chuck and shipping instructions. These chucks require special adaptors, please contact the factory for details.

Pratt Burnerd 6 Jaw Griptru Scroll Chucks

- Conform to ISO 3089: 1991 (E) class 1
- Micro adjustment feature allows chuck to be trued to within 0.005mm
- Repeatability 0.013mm on same size component
- Sizes 125mm to 315mm
- Three hardened pinions
- Complete with one of set each hard inside and hard outside jaws
- American style two piece jaws available as an option
- High strength nodular iron bodies
- Twelve month warranty

Chuck Size	Model Number	Approx. Weight (kilos)	Maximum rpm
125mm	9260-01305	6.2	5000
160mm	9260-01705	11	4900
200mm	9260-02005	18.9	4200
250mm	9260-02505	36.7	3300
315mm	9260-03205	53.4	2700

Dimensional Data for 6 jaw Griptru scroll Chucks

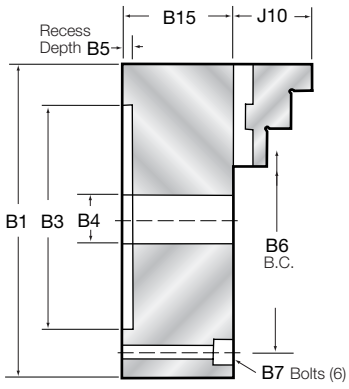
Chuck Size (A)	B(H7)	C	D	E	F	G	K	Gripping Capacity Min.	Gripping Capacity Max.
125	95	35	69	19	15	107.9	M8	1.5	124
160	125	45.9	78.6	23	20	139.9	M10	1.5	160
200	160	54.8	89.8	29	22	176	M10	2	200
250	200	75.9	101.3	33	25	224	M12	3	250
315	260	102.8	110	40	25	286	M12	6	304

HOW TO ORDER: State quantity, Model Number of chuck and shipping instructions. These chucks require special adaptors, please contact the factory for details.

3 Jaw Self-Centring Steel Body Scroll Chucks

Imperial Design
Series 332 Medium-Duty Flatback, A, L, and D Type Mountings, Sizes 20" to 32"

- Steel body
- Sizes 20" through 32"
- Maximum .003" TIR using nominating pinion
- 0.001" repeatability using nominating pinion
- Two-piece American standard tongue and groove jaws
- Nitride hardened and ground scroll
- Three hardened pinions
- Larger chuck sizes available upon request
- Twelve month warranty



Chuck Size	Recess Chuck No.	Type A Spindle Size	Type A Spindle Chuck No.	Type L Spindle Size	Type L Spindle Chuck No.	Fits Camlock Spindle Type D Size	Fits Camlock Spindle Type D Chuck No.
20"	2033-2000	A-8	2033-20A8	L-1	2033-20L1	D-8	2033-20D8
20"	---	A-11	2033-2A11	L-2	2033-20L2	D-11	2033-2D11
24"	2433-2000	A-8	2433-20A8	L-2	2433-20L2	D-8	2433-20D8
24"	---	A-11	2433-2A11	---		D-11	2433-2D11
28"	2833-2000	A-15	2833-2A15	L-2	2833-20L2	D-11	2833-2D11
28"	---	A-20	2833-2A20	Consult factory		---	
32"	3233-2000	A-15	3233-2A15	for L-3 mounted		D-11	32332D11
32"		A-20	3233-2A20	chuck			

Consult factory for chucks sizes larger than 32".

Dimensional Data for Recess Mounting Chucks

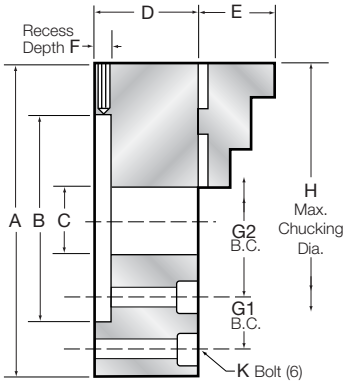
Chuck Dia.	B1	B3	B4	B5	B6	B7	B15	J10
20"	19.6"	15.748"	5.51"(1)	.236"	18.03"	M-16	4.17"	3.26"
24"	23.6"	21.456"	7.48"(1)	.236"	23.07"	M-16	4.25"	3.26"
28"	27.5"	23.818"	10.23"	.236"	25.98"	M-16	4.56"	3.62"
32"	31.5"	27.755"	10.23"	.236"	29.99"	M-16	5.43"	3.62"

NOTE: Dimensions are for recess chucks; for A, D or L mounted chucks dimension B15 will vary, add approx. 1" to B15 dimension. ①Model No. 2033-2A11 and 2433-2A11 have a 6.5" through-hole.

HOW TO ORDER: State quantity, chuck number, and shipping instructions.

Setrite® Self Centring Imperial Design Scroll Chucks

3 Jaw and 6 Jaw Versions



Jaws shown in O.D. position

- Precision manufactured for adapter mounting
- 12µm TIR repeatability on duplicate parts
- Steel body on sizes 160mm to 610mm
- Semi-steel body on the 125mm chucks
- 4 adjusting screws – 125mm to 310mm
- 8 adjusting screws – 380mm
- Sizes 125mm to 380mm, larger sizes available on request
- Nitride hardened scroll
- Hardened pinion
- Two-piece American standard tongue and groove jaws on chuck sizes 160mm to 610mm
- 125mm chucks equipped with one set of hard inside jaws and one set of hard outside jaws
- One pinion – up to 310mm; 3 pinions – 380mm up
- Durability - double the contact surface of the master jaw & body versus our competitor's chucks
- Twelve month warranty

Chuck Size	Model Number	Approx. Weight (kilos)	Maximum RPM*
3 Jaw			
5"/125mm	9219-01351	6	5000
6"/160mm	9219-01360	12	4900
8"/210mm	9219-01370	21	4200
102/250mm	9219-01380	32	3300
12"/310mm	9219-01390	51	2300
15"/380mm	9219-01400	66	2000
18"/460mm	9219-01500	123	1300
24"/610mm	9219-01600	250	850
6 Jaw			
5"/125mm	9219-01356	7	2600
6"/160mm	9219-01365	12	2500
8"/210mm	9219-01375	22	2200
10"/250mm	9219-01385	35	1900
12"/310mm	9219-01395	53	1500
15"/380mm	9219-01405	93	1300
18"/460mm	9219-01505	132	1100
24"/610mm	9219-01605	259	700

*Eccentric adjustment of chuck on mounting plate to obtain required TIR on the workpiece may result in unacceptable vibration at these speeds.

Reduce rpm's accordingly.

Jaws must be fully engaged in the chuck body.

Dimensional Data for Setrite® Adapter Mounting Self-Centring Chucks

Chuck Size (A)	B*	C	D	E	F	G1	G2	H	K	Gripping Capacity Min.**	Max.
125	60.32	33	72		16.7	112.8	-	127	1/4	2	100
160	79.37	46	73	41	17.4	135.7	-	185	1/4	5	127
210	120.65	57	82.5	44.5	19	190.5	-	235	3/8	5	165
250	161.92	76	92	54	20.6	-	111.1	279	7/16	5	203
310	200.81	103	101.6	58.7	20.6	-	133.3	355	1/2	19	254
380	299.24	116	130	79.4	28.6	-	171.4	432	5/8	38	330
460	299.24	127	147	83	28.6	-	171.4	483	5/8	38	106
610	407.16	178	166	83	30.2	-	235	635	3/4	50	257

* Tolerance - 0/+25µm **6-Jaw Chuck minimum grip, consult factory

Mounting Plates for Setrite®

3 Jaw and 6 Jaw Chucks

PBI offers a full range of Mounting Plates type "D", "A", "L" and threaded plates for the Setrite® Chucks. Mounting plates are precision machined to suit the spindle nose of your machine. For maximum accuracy of Setrite® mounting plates, mount plate on machine spindle nose, place a dial indicator on the chuck side face of the adapter close to the mounting holes, rotate the adapter and if the total indicator reading (TIR) exceeds 12µm take a light truing cut across the face of the mounting plate.

Type D Mounting Plates "Camlock"

Spindle	6"/160mm	8"/200mm	10"/250mm	12"/315mm	15"/380mm	18"/460mm	24"/610mm
D-3	0605020	0805020	-	-	-	-	-
D-4	0605021	0805021	1005021	-	-	-	-
D-5	0605022	0805022	1005022	-	-	-	-
D-6	-	0805023	1005023	1205023	1505023		
D-8	-	-	1005024	1205024	1505024	1805024	2405024
D-11	-	-	-	1205025	1505025	1805025	2405025

Type A American Standard Short Taper A-1 & A-2, Spindles

Spindle	6"/160mm	8"/200mm	10"/250mm	12"/315mm	15"/380mm	18"/460mm	24"/610mm
A-4	0605009	-	-	-	-	-	-
A-5	0605010	0805010	1005010	-	-	-	-
A-6	-	0805011	1005011	1205011	-	-	-
A-8	-	-	1005012	1205012	1505012	1805012	
A-11	-	-	-	-	1505013	1805013	2405013
A-15	-	-	-	-	-	-	2405014

Type L American Standard Long Taper Key Drive Spindle

Spindle	6"/160mm	8"/200mm	10"/250mm	12"/315mm	15"/380mm	18"/460mm	24"/610mm
L-00	0605031	0805031	1005031	-	-	-	-
L-0	0605032	0805032	1005032	1205032	-	-	-
L-1	-	0805033	1005033	1205033	1505033	1805033	2405033
L-2	-	-	1005034	1205034	1505034	1805034	2405034
L-3	-	-	-	-	1505035	1805035	2405035

For Hardinge® and Elgin Lathe

Spindle	5"/125mm	6"/160mm
4° Taper	0505044	0605044
23/16"-10 Threaded	0505045	0605045

Threaded & Blank Mountings for Setrite® Chucks

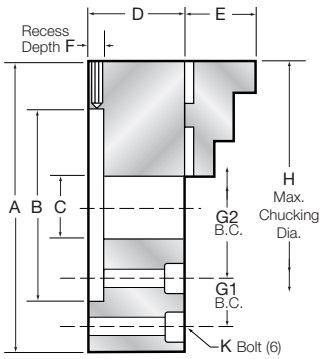
Spindle	5"/125mm	6"/160mm	8"/200mm	10"/250mm	12"/315mm
Blank	0505040	0605040	0805040	1005040	1205040
1 1/2"-8	0505041	0605041	0805041	-	-
1 3/4"-8	0505042	0605042	0805042	-	-
2 1/4"-8	0505043	0605043	0805043	-	-
2 3/8"-6	-	0605046	0805046	-	-

*Threaded adapter plates and special plates are available upon request. Setrite® chucks and adapters are shipped unassembled unless ordered assembled at extra charge. For standard spindle dimensions, see page 80.

Easy-Set™ Self-Centring Scroll Chuck

Imperial Design, Low Cost 3 & 6 Jaw Semi-Steel Scroll Chucks

- Precision manufactured for adapter plate mounting - utilises the same mounting plate as the Setrite® scroll chuck
- .0005" (12µm) repeatability on duplicate parts
- 4 adjusting screws
- Chuck Sizes 6", 8", 10", 12" & 15"
- Hardened scroll
- Hardened pinion
- Two-piece tongue and groove jaws
- Semi-steel body
- Twelve month warranty



Chuck Size	Model Number	Approx. Weight (kilos)	Maximum RPM*
Easy-set - 3 Jaw			
6/160mm	EZ63	9	3000
8/200mm	EZ83	20	2800
10/250mm	EZ103	30	2500
12/315mm	EZ123	47	2100
15/380mm	EZ153	64	1800
Easy-set - 6 Jaw			
6/160mm	EZ66	8	2500
8/200mm	EZ86	21	2200
10/250mm	EZ106	32	2000
12/315mm	EZ126	49	1500

*Eccentric adjustment of chuck on adapter to obtain required TIR on the workpiece may result in unacceptable vibration at maximum rpm. Reduce rpm accordingly.

Dimensional Data for Series Adapter Mounting Self-Centring Chucks

Chuck Size	A	B*	C	D	E	F	G1	G2	H	K	Gripping Capacity Min.	Gripping Capacity Max.
6	6.0	3.125	1.540	2.35	1.53	0.69	5.34	-	6.5	1/4"	1/8"	5"
8	8.25	4.750	2.346	3.15	2.10	0.75	7.50	-	8.5	3/8"	3/16"	61/2"
10	10.0	6.375	2.860	3.40	2.58	0.81	-	4.38	11.0	7/16"	15/32"	8"
12	12.0	7.906	3.285	4.00	2.58	0.84	-	5.25	12.5	1/2"	27/64"	10"
15	15.0	11.781	4.250	5.78	3.55	1.13	-	3.37	16.0	5/8"	9/16"	15"

* Tolerance - 75/+50µm **6-Jaw Chuck minimum grip, consult factory. 1. Bolt circle on 6" and 8" chucks are outside the pilot recess "B" as shown. Bolt circle on 10", 12" and 15" Dia. chucks are inside "B" dimension.

HOW TO ORDER: State quantity, model number of chuck, part number of adapter, and shipping instructions.

Mounting Plates for Easy-Set™

3-Jaw and 6-Jaw Chucks

PBI in conjunction with Atlas Workholding offers a full line of mounting plates type "D", "A", "L" and threaded plates for the Easy-Set™ chucks. Our mounting plates are interchangeable with other popular adjustable universal style chucks.
Mounting plates are precision machined to suit the spindle nose of your machine. For maximum accuracy of mounting plates, mount plate on machine spindle nose, place a dial indicator on the chuck side face of the adapter close to the mounting holes, rotate the adapter and if the total indicator reading (TIR) exceeds .0005" (12µm) take a light truing cut across the face of the mounting plate.

Type D Mounting Plates "Camlock"

Spindle	6"	8"	10"	12"	15"
D-3	0605020	0805020	-	-	-
D-4	0605021	0805021	-	-	-
D-5	0605022	0805022	1005022	-	-
D-6	-	0805023	1005023	1205023	-
D-8	-	-	1005024	1205024	1505024
D-11	-	-	-	1205025	1505025

Type L American Standard Long Taper Key Drive Spindle

Spindle	6"	8"	10"	12"
L-00	0605031	0805031	1005031	-
L-0	0605032	0805032	1005032	1205032
L-1	-	0805033	1005033	1205033
L-2	-	-	1005034	1205034

For Hardinge® and Elgin Lathe

Spindle	6"
4° Taper	0605044
23/16"-10 TH'D	0605045

Threaded & Blank Mountings for Setrite® Chucks

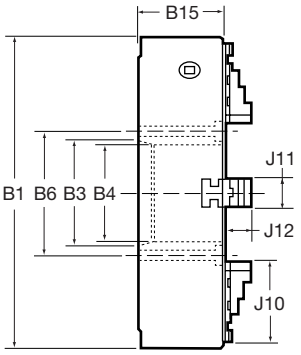
Spindle	6"	8"
	0605040	0805040
1 1/2"-8	0605041	0805041
1 3/4"-8	0605042	0805042
2 1/4"-8	0605043	0805043
2 3/8"-6	0605046	0805046

*Blank Mountings are finished on the chuck side of the mounting plate, and blank on the machine side. Hardinge is a registered trademark of Hardinge Inc.
For standard spindle dimensions, see page 80.

Large King Bore Oil Country 3 Jaw Scroll Chucks

Imperial Design
Series 332EX Extra Heavy-Duty
Sizes 20" through 48"

Shown with optional T-slots



- Sizes 20" to 48"
- Forged steel body
- Extra heavy duty American standard, hard top and master jaws.
- Gripping surfaces serrated for more holding power
- Large through-holes standard
- Hardened scroll gear for long life
- Also available with D1 camlock mounting

Chuck Size	Model No.	Mount	Bore	Max RPM's	Approx Weight
20	2033-2A11EX	A2-11	6.75	1100	475 lbs
20	2033-2A15EX	A2-15	8.00	1100	450 lbs
24	2433-2A15EX	A2-15	10.75	850	695 lbs
24	2433-2A20EX	A2-20	12.50	850	670 lbs
28	2833-2A15EX	A2-15	10.75	750	890 lbs
28	2833-2A20EX	A2-20	12.50	750	870 lbs
32	3233-2A15EX	A2-15	10.75	600	1290 lbs
32	3233-2A20EX	A2-20	14.50①	600	1270 lbs
36	3633-2A20EX	A2-20	14.50①	550	1610 lbs
40	4033-2A20EX	A2-20	14.50	500	1975 lbs
40	4033-2A28EX	A2-28	18.50	500	1910 lbs

①Optional 16" through-hole
Consult factory for 48" and larger sizes

Dimensional Data 3-Jaw Large Bore Oil Country Scroll Chucks

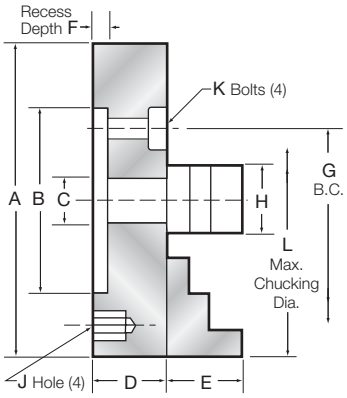
Model No.	B1 O.D.	Mount Type	B3 Mount Recess	B4 Bore	B6 Mounting Bolt Radius	B15 Body Width	J10 Master Jaw Length	J11 Top Jaw Width	J12 Top Jaw Height
2033-2A11EX	19.68	A2-11	7.75	6.75	4.625	6.34	6.50	2.36	3.27
2033-2A15EX	19.68	A1-15	11.25	8.00	4.875	6.34	6.50	2.36	3.27
2433-2A15EX	24.80	A2-15	11.25	10.75	6.50	6.61	6.50	2.36	3.27
2433-2A20EX	24.80	A1-20	16.25	12.50	7.25	6.69	6.50	2.36	3.27
2833-2A15EX	27.56	A2-15	11.25	10.75	6.50	6.81	8.50	2.95	3.62
2833-2A20EX	27.56	A1-20	16.25	12.50	7.25	6.89	8.50	2.95	3.62
3233-2A15EX	31.49	A2-15	11.25	10.75	6.50	7.01	9.84	2.95	3.62
3233-2A20EX	31.49	A2-20	16.25	14.50¿	9.175	7.09	8.50	2.95	3.62
3633-2A20EX	35.43	A2-20	16.25	14.50¿	9.175	7.48	9.84	2.95	3.62
4033-2A20EX	39.37	A2-20	16.25	14.50	9.175	7.48	9.84	2.95	3.62
4033-2A28EX	39.37	A2-28	23.00	18.50	12.750	7.48	9.84	2.95	3.62

HOW TO ORDER: State quantity, model number of chuck, part number of adapter, and shipping instructions.

4 Jaw Metric

Independent Chucks

- Precision manufactured to fit types A, D, L, and threaded spindles or adaptor mounting
- S.G. iron body
- Sizes 160 to 400mm
- Hardened operating screws
- Solid reversible hard jaws
- Special jaw and jaw way design adding extra bearing surfaces, increases chuck life and rigidity
- Twelve month warranty



Chuck Size	Model Number	Approx. Weight (kilos)	Maximum rpm
160mm	9500-01701	5.6	3000
200mm	9500-02001	14	2300
250mm	9500-02501	19.5	1700
315mm	9500-03201	32.2	1500
350mm	9500-03501	46	1300
400mm	9500-04101	60	1300

Larger diameter chucks available, contact us for price and delivery.

Dimensional Data for Adapter Mounting Chucks

Chuck Size (A)	B	C	D	E	F	G	H	J	K	L	Gripping Capacity Min.	Gripping Capacity Max.
160	125	45	54	22	4	140	24	M10	M10	180	8	127
200	125	50	72	32	4	140	32	M10	M10	235	8	178
250	200	60	72	32	5	224	32	M12	M12	305	13	203
315	200	75	80	36	5	224	36	M12	M12	355	13	254
350	260	75	91	37	5	286	36	-	M12	405	19	305
400	260	105	91	37	5	286	36	-	M12	455	19	356

HOW TO ORDER: State quantity, model number of chuck, part number of adaptor, and shipping instructions

Mounting Plates for 4 Jaw Metric

Independent Chucks

Mounting plates are precision machined to suit the spindle nose of your machine and the appropriate chuck.

Type D Camlock Mountings

Spindle	160mm	200mm	250mm	315mm	350mm	400mm
D-3	8271-17222	8271-17222	-	-	-	-
D-4	8271-17223	8271-17223	8271-25223	-	-	-
D-5	8271-17224	8271-17224	8271-25224	-	-	-
D-6	8271-17225	8271-17225	8271-25225	8271-25225	8271-32225	-
D-8	-	-	8271-25226	8271-25226	8271-32226	8271-32226
D-11	-	-	8271-25227	8271-25227	8271-32227	8271-32227

Type A American Standard Short Taper A1 & A2 Spindles

Spindle	160mm	200mm	250mm	315mm	350mm	400mm
A-3	8271-17211	-	-	-	-	-
A-4	8271-17212	8271-17212	8271-25212	-	-	-
A-5	8271-17213	8271-17213	8271-25213	8271-25213	-	-
A-6	8271-17214	8271-17214	8271-25214	8271-25214	8271-32214	-
A-8	-	-	8271-25215	8271-25215	8271-32215	8271-32215
A-11	-	-	-	-	8271-32216	8271-32216

DIN 55022 and DIN55027 Spindle Mounts

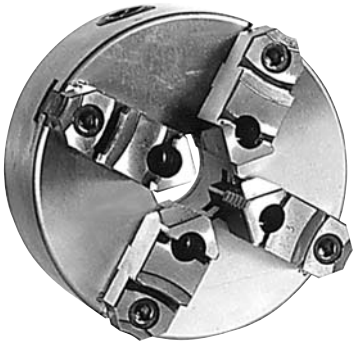
Spindle	160mm	200mm	250mm	315mm	350mm	400mm
DIN 3	8271-17241	-	-	-	-	-
DIN 4	8271-17242	8271-17242	8271-25242	-	-	-
DIN 5	8271-17243	8271-17243	8271-25243	8271-25243	-	-
DIN 6	8271-17244	8271-17244	8271-25244	8271-25244	8271-32244	-
DIN 8	-	-	8271-25245	8271-25245	8271-32245	8271-32245
DIN 11	-	-	-	-	8271-32246	8271-32246

Other adapter plates are available upon request. Specify chuck number and spindle nose specifications.
For standard spindle dimensions, see page 80.

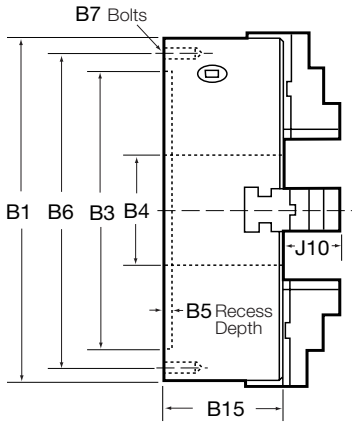
Pratt Burnerd International
600 Group

4 Jaw Steel Body Scroll Chucks

Imperial Design
Series 743
Sizes 6" (160mm) to 24" (610mm)



- Sizes 6" to 24"
- Chucks can be supplied with through holes from front of chuck for mounting on rotary tables or centres
- Maximum .003" (75µm) TIR using nominating pinion
- 0.001" (25µm) repeatability using nominating pinion
- Two-piece American standard tongue and groove jaws
- Nitride hardened and ground scroll
- Hardened pinions
- Steel body
- Can be used for either two jaw or four jaw concentric, self-centring chucking
- Larger sizes available on request
- Twelve month warranty



Chuck Size	Recess mount Chuck No.	Camlock D type Spindle Size	Camlock D type Spindle Chuck No.	Type L Spindle Size	Type L Spindle Chuck No.	Type A Spindle Size	Type A Spindle Chuck No.	Threaded Type Spindle Size	Threaded Type Spindle Chuck No.
6"	0673-2000	D-3	0673-20D3	L-00	0673-2L00	A-4	0673-20A4	1-1/2-8	0673-2041
6"		D-4	0673-20D4	L-0	0673-20L0	A-5	0673-20A5	1-3/4-8	0673-2042
6"								2-1/4-8	0673-2043
6"								2-3/8-6	0673-2046
8"	0873-2000	D-4	0873-20D4	L-00	0873-2L00	A-5	0873-20A5	2-1/4-8	0873-2043
8"		D-5	0873-20D5	L-0	0873-20L0	A-6	0873-20A6	2-3/8-6	0873-2046
8"		D-6	0873-20D6						
10"	1073-2000	D-5	1073-20D5	L-0	1073-20L0	A-5	1073-20A5	2-1/4-8	1073-2043
10"		D-6	1073-20D6	L-1	1073-20L1	A-6	1073-20A6	2-3/8-6	1073-2046
10"		D-8	1073-20D8			A-8	1073-20A8		
12"	1273-2000	D-6	1273-20D6	L-0	1273-20L0	A-6	1273-20A6		
12"		D-8	1273-20D8	L-1	1273-20L1	A-8	1273-20A8		
12"		D-11	1273-2D11	L-2	1273-20L2				
16"	1673-2000	D-6	1673-20D6	L-1	1673-20L1	A-8	1673-20A8		
16"		D-8	1673-20D8	L-2	1673-20L2	A-11	1673-2A11		
16"		D-11	1673-2D11						
20"	2073-2000	D-8	2073-20D8	L-1	2073-20L1	A-8	2073-20A8		
20"		D-11	2073-2D11	L-2	2073-20L2	A-11	2073-2A11		
24"	2473-2000	D-8	2473-20D8	L-2	2473-20L2	A-8	2473-20A8		
24"		D-11	2473-2D11			A-11	2473-2A11		

Dimensional Data for Recess Mounting Scroll Chucks with Two-piece Jaws

Chuck Dia.	B1	B3	B4	B5	B6	B7	B15	J10
6-1/4"	6.3"	4.921"	1.65"	.157"	5.51"	3xM10	2.56"	1.64"
8"	7.9"	6.299"	2.16"	.157"	6.92"	3xM10	2.95"	1.69"
10"	9.8"	7.952"	3.15"	.165"	8.74"	3xM12	3.26"	2.11"
12"	12.4"	10.157"	3.74"	.196"	11.18"	3xM14	4.13"	2.12"
16"	15.8"	12.598"	5.11"	.196"	14.25"	3xM16	5.55	2.44"
20"	19.6"	15.748"	6.49"	.236"	18.03"	3xM16	4.17"	2.93"
24"	23.6"	21.456"	8.07"	.275"	23.07"	3xM16	5.51"	2.93"

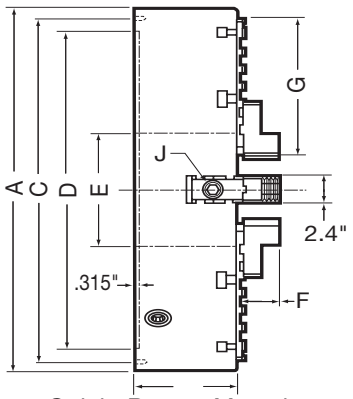
NOTE: Dimensions are for recess mounting chucks; on A, L and D mounting chucks dimension B15 will vary.

HOW TO ORDER: State quantity, chuck number, and shipping instructions.

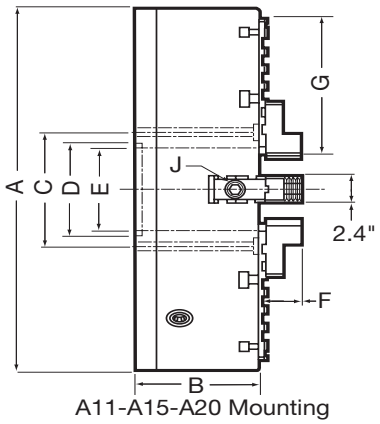
4 Jaw Large Diameter Combination Chuck

Imperial Design
Sizes 24" (610mm) through 40" (1015mm)

- Forged steel body
- Induction hardened in areas of friction
- Chuck bodies fully ground, including guideways
- Two piece jaws according to ASA norms
- Steel jaws cement hardened, treated and ground on all surfaces
- Scroll induction hardened and ground on spiral and internal diameter
- Operating screws hardened and ground
- Larger sizes available upon request



Stright Recess Mounting



A11-A15-A20 Mounting

Chuck Size	Straight Recessed Mount	Camlock type D Mount		Type A Spindle Mount	
24"	2427-2000	D-11	2427-2D11	A2-11	2427-2A11
		D-15	2427-2D15	A2-15	2427-2A15
28"	2827-2000	D-11	2827-2D11	A2-11	2827-2A11
		D-15	2827-2D15	A2-15	2827-2A15
32"	3227-2000	D-11	3227-2D11	A2-11	3227-2A11
		D-15	3227-2D15	A2-15	3227-2A15
		D-20	3227-2D20	A2-20	3227-2A20
36"	3627-2000	D-11	3627-2D11	A2-11	3627-2A11
		D-15	3627-2D15	A2-15	3627-2A15
		D-20	3627-2D20	A2-20	3627-2A20
40"	4027-2000	D-15	4027-2D15	A2-15	4027-2A15
		D-20	4027-2D20	A2-20	4027-2A20

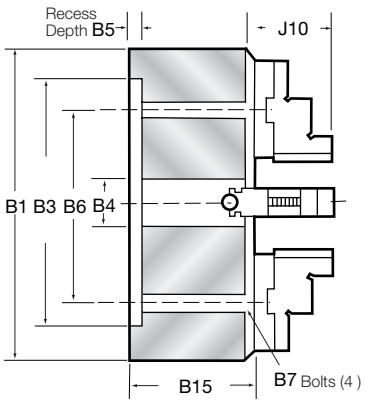
Dimensional Data (in inches)

SIZE A	Mount	B	C	D	E	F	G	H	J
24"	Recess	7.68	23.07	21.45	7.09/10.55	3.39	8.35/7.09	6xM16	1.57
	A11	8.66	9.25	7.75	7.09	3.39	8.35	-	1.57
	A15	9.65	13.00	11.25	10.51	3.39	7.09	-	1.57
27.5"	Recess	7.87	25.98	23.82	7.56/10.55	3.39	9.72/8.35	6xM20	1.57
	A11	8.86	9.25	7.75	7.56	3.39	9.72	-	1.57
	A15	8.86	13.00	11.25	10.51	3.39	8.35	-	1.57
31.5"	Recess	8.07	29.92	27.76	10.55/15.00	3.39	9.72/7.24	6xM20	1.57
	A11	9.06	9.25	7.75	7.56	3.39	10.71	-	1.57
	A15	9.06	13.00	11.25	10.51	3.39	9.72	-	1.57
	A20	9.06	18.25	16.25	15.00	3.39	7.24	-	1.57
35.43"	Recess	8.46	33.46	31.69	11.02/15.00	3.39	10.71/9.72	6xM24	1.57
	A11	9.45	9.25	7.75	7.56	3.39	10.71	-	1.57
	A15	9.45	13.00	11.25	11.02	3.39	10.71	-	1.57
	A20	9.45	18.25	16.25	15.00	3.39	9.72	-	1.57
39.37"	Recess	8.86	37.40	35.63	11.02/16.06	3.39	12.87/10.71	6xM24	1.57
	A15	9.84	13.00	11.25	11.02	3.39	12.87	-	1.57
	A20	9.84	18.25	16.25	16.06	3.39	10.71	-	1.57

HOW TO ORDER: State quantity, model number of chuck and shipping instructions.

4 Jaw Independent Steel Body Chucks

Imperial Design
Series 432 Medium-Duty
Sizes 14" (350mm) through 60" (1525mm)



- Sizes 12" through 36"
- Two-piece reversible American standard tongue and groove jaws
- Hardened and ground operating screws
- Steel body
- T-slots standard on 16" sizes and larger
- Straight recess for adapter mounting
- Larger chucks available up to 60" on request
- Twelve month warranty

Chuck Size	Flatback Chuck No.	Camlock Type D Spindle Size	Camlock Type D Spindle Chuck No,	Type A Spindle Size	Type A Spindle Chuck No.
14"	1443-2000	D-6	1443-20D6		
14"		D-8	1443-20D8		
16"	1643-2000	D-8	1643-20D8		
16"		D-11	1643-2D11		
18"	1843-2000	D-8	1843-20D8	A-8	1843-20A8
18"		D-11	1843-2D11	A-11	1843-2A11
20"	2043-2000	D-8	2043-20D8	A-8	2043-20A8
20"		D-11	2043-2D11	A-11	2043-2A11
24"	2443-2000	D-8	2443-20D8	A-8	2443-20A8
24"		D-11	2443-2D11	A-11	2443-2A11
24"				A-15	2443-2A15
28"	2843-2000	D-11	2843-2D11	A-11	2843-2A11
28"				A-15	2843-2A15
32"	3243-2000	D-11	3243-2D11	A-11	3243-2A11
32"				A-15	3243-2A15
32"				A-20	3243-2A20
36"	3643-2000	D-11	3643-2D11	A-15	3643-2A15
36"				A-20	3643-2A20

Larger sizes available, up to 60" dia., contact PBA for price quotation. Consult factory for 40" and larger sizes.

Dimensional Data 4-Jaw Independent Steel Body Chucks

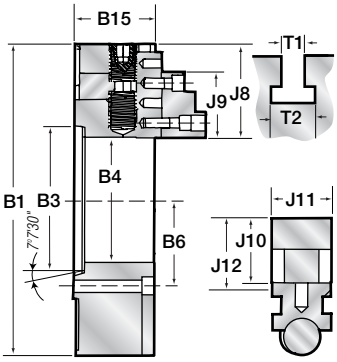
Chuck No.	B1	B3	B4	B5	B6	B7	B15	J10
14"	13.8"	5.905"	2.95"	.196"	4.92"	M-12	3.15"	2.70"
16"	15.8"	7.874"	4.055"	.196"	6.61"	M-20	3.15"	2.70"
18"	17.7"	7.874"	4.055"	.196"	6.61"	M-20	4.33"	3.22"
20"	19.6"	9.842"	4.055"	.196"	8.66"	M-20	4.33"	3.22"
24"	23.6"	9.842"	4.055"	.196"	8.66"	M-20	4.92"	3.22"
28"	27.5"	9.842"	4.72"	.196"	8.66"	M-20	4.92"	3.39"
32"	31.5"	9.842"	5.31"	.196"	8.66"	M-20	4.92"	3.39"
36"	35.43"	*	*	*	*	M-20	*	3.39"

Dimensions are for flatback-mount chucks; on A, L and D mounted chucks dimension B15 will vary. *Specify when ordering. "L" type mounts available upon request.

HOW TO ORDER: State quantity, chuck number, and shipping instructions.

King Bore Oil Country 4 Jaw Independent Chucks

Imperial Design
Series 432EX Extra Heavy-Duty, Sizes 18" through 48"



- Forged steel body
- Extra heavy duty American standard, hard top and master jaws.
- Gripping surfaces serrated for more holding power
- Large through holes as standard
- T-slots standard
- Direct A type mounting
- Available in smaller and larger sizes on request
- Twelve month warranty

Chuck Size	Model No.	Mount No.	Through Hole	Max RPM's	Approx. Weight
12	1243-20A8EX	A2-8	3.37"	1500	200 lbs
18	1843-2A11EX	A2-11	6.50"	1100	350 lbs
21	2143-2A11EX	A2-11	6.50"	1000	540 lbs
21	2143-2A15EX	A2-15	7.30"	1000	533 lbs
24	2443-2A11EX	A2-11	6.50"	850	720 lbs
24	2443-2A15EX	A2-15	10.50"	850	700 lbs
24	2443-2A20EX	A2-20	12.59"	850	685 lbs
28	2843-2A15EX	A2-15	10.50"	700	905 lbs
28	2843-2A20EX	A2-20	12.59"	700	920 lbs
32	3243-2A15EX	A2-15	10.50"	600	1265 lbs
32	3243-2A20EX	A2-20	12.59"	600	1255 lbs
36	3643-2A20EX	A2-20	12.59"	600	1930 lbs
40	4043-2A20EX	A2-20	12.59"	500	2350 lbs
40	4043-2A28EX	A2-28	18.50"	500	2275 lbs

Consult factory for 48" and larger sizes.

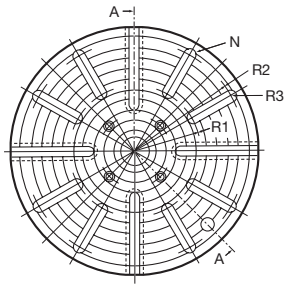
Dimensional Data 4-Jaw Independent King Bore Oil Country Chuck

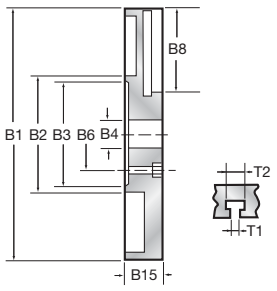
Model No.	B1 O.D.	Mount Type	B3 Mount Recess	B4 Through Hole	B6 Mounting Bolt Radius	B15 Body Width	J8 Master Jaw Length	J9 Top Jaw Length	J10 Top Jaw Height	J11 Top Jaw Weight	J12 Top Jaw Height From Face	T1 T-Slot	T2 T-Slot
1243-20A8EX	12"	A2-8	5.50"	3.37"	3.375"	5.47"	5.00"	5.00"	3.26"	2.12"	3.26"	.755"	
1843-2A11EX	18"	A2-11	7.75"	6.50"	4.625"	5.75"	6.50"	5.00"	2.87"	2.40"	3.26"	.855"	1.565"
2143-2A11EX	21"	A2-11	7.75"	6.57"	4.625"	5.75"	6.50"	5.00"	2.87"	2.40"	3.26"	.855"	1.565"
2143-2A15EX	21"	A2-15	11.25"	7.30"	6.50"	5.75"	6.50"	5.00"	2.87"	2.40"	3.26"	.855"	1.565"
2443-2A11EX	24"	A2-11	7.75"	6.57"	4.625"	6.10"	8.00"	5.00"	3.26"	3.00"	3.62"	.855"	1.565"
2443-2A15EX	24"	A2-15	11.25"	10.51"	6.50"	6.10"	8.00"	5.00"	3.26"	3.00"	3.62"	.855"	1.565"
2443-2A20EX	24"	A2-20	16.25"	12.59"	9.125"	6.10"	8.00"	5.00"	3.26"	3.00"	3.62"	.855"	1.565"
2843-2A15EX	28"	A2-15	11.25"	10.51"	6.50"	6.10"	8.00"	5.00"	3.26"	3.00"	3.62"	.855"	1.565"
2843-2A20EX	28"	A2-20	16.25"	12.59"	9.125"	6.10"	8.00"	5.00"	3.26"	3.00"	3.62"	.855"	1.565"
3243-2A15EX	32"	A2-15	11.25"	10.51"	6.50"	6.50"	8.00"	5.00"	3.26"	3.00"	3.62"	.855"	1.565"
3243-2A20EX	32"	A2-20	16.25"	12.59"	9.125"	6.50"	8.00"	5.00"	3.26"	3.00"	3.62"	.855"	1.565"
3643-2A20EX	36"	A2-20	16.25"	12.59"	9.125"	6.50"	8.00"	5.00"	3.26"	3.00"	3.62"	.855"	1.565"
4043-2A20EX	39.37"	A2-20	16.25"	12.59"	9.125"	6.50"	8.00"	5.00"	3.26"	3.00"	3.62"	.855"	1.565"
4043-2A28EX	39.37"	A2-28	23.00"	18.50"	12.75"	6.50"	8.00"	5.00"	3.26"	3.00"	3.62"	.855"	1.565"

HOW TO ORDER: State quantity, model number of chuck, part number of adaptor, and shipping instructions

Face Plates

Sizes up to 80" (2030mm)





- Cast face plate for special fixturing needs
- Available as direct mount or flatback
- Smaller sizes and specials available on request
- Available in forged steel up to 60" dia. on special request

Part No.	Diameter	Spindle Type
1602000	16"	Flatback
2002000	20"	Flatback
2402000	24"	Flatback
2802000	28"	Flatback
3202000	32"	Flatback
3602000	36"	Flatback
4002000	40"	Flatback
4802000	48"	Flatback
5502000	55"	Flatback
6002000	60"	Flatback
6302000	63"	Flatback
7102000	71"	Flatback
7902000	79"	Flatback

Part No.	Diameter	Spindle Type
1602022	16"	D-5
1602023	16"	D-6
1602024	16"	D-8
2002023	20"	D-6
2002024	20"	D-8
2002025	20"	D-11
2402023	24"	D-6
2402024	24"	D-8
2402025	24"	D-11
2802024	28"	D-8
2802025	28"	D-11
2802026	28"	D-15
3202024	32"	D-8
3202025	32"	D-11
3202026	32"	D-15
3602024	36"	D-8
3602025	36"	D-11
3602026	36"	D-15
4002025	40"	D-11
4002026	40"	D-15
4802025	48"	D-11
4802026	48"	D-15
5502025	55"	D-11
5502026	55"	D-15
5502027	55"	D-20
6002025	60"	D-11
6002026	60"	D-15
6002027	60"	D-20
6302025	63"	D-11
6302026	63"	D-15
6302027	63"	D-20

Part No.	Diameter	Spindle Type
1602010	16"	A-5
1602011	16"	A-6
1602012	16"	A-8
2002011	20"	A-6
2002012	20"	A-8
2002013	20"	A-11
2402011	24"	A-6
2402012	24"	A-8
2402013	24"	A-11
2802012	28"	A-8
2802013	28"	A-11
2802014	28"	A-15
3202012	32"	A-8
3202013	32"	A-11
3202014	32"	A-15
3602012	36"	A-8
3602013	36"	A-11
3602014	36"	A-15
4002013	40"	A-11
4002014	40"	A-15
4802013	48"	A-11
4802014	48"	A-15
5502013	55"	A-11
5502014	55"	A-15
5502015	55"	A-20
6002013	60"	A-11
6002014	60"	A-15
6002015	60"	A-20

Dia. B1	B2	B3	B4	B6	B7	B8	B15	T1	T2	R1	R2	R3	Windows N
15.75	8.27	6.89	2.44	5.91	4xM18	-	3.07	-	-	4.69	6.73	0.39	12
19.66	8.27	6.89	2.56	5.91	4xM18	-	2.95	-	-	4.92	6.73	0.39	12
23.62	11.02	9.84	2.68	6.89	4xM18	7.87	3.15	0.87	1.57	6.30	10.43	0.59	8
27.56	11.02	9.84	2.76	8.66	4xM18	9.84	3.35	0.87	1.57	6.61	11.97	0.59	8
31.50	11.02	9.84	2.95	8.66	8xM18	11.81	3.35	0.87	1.57	7.28	12.99	0.59	8
35.43	11.81	10.83	2.95	9.84	8xM18	12.80	3.35	0.87	1.57	7.28	14.96	0.59	8
39.37	11.81	10.83	3.15	9.84	8xM18	14.76	4.724	0.87	1.57	7.28	16.73	0.59	8
47.24	11.81	10.83	3.35	9.84	8xM18	18.31	4.724	1.10	1.97	7.28	20.67	0.59	8
55.12	11.81	10.83	3.35	9.84	8xM20	21.65	5.51	1.10	1.97	7.28/13.78	23.62/21.65	0.59	8/12
59.06	14.96	11.81	3.94	10.63	8xM24	23.62	5.90	1.10	1.97	10.24/17.72	26.57/18.11	0.59	8/12

Semi-Finished Mounting Plates

- Semi-finished suitable for all adapter mount chucks
- Precision CNC turned in the USA
- Sizes available 6"-24", larger diameter mounting plates available upon request
- Mounting types available "D" camlock, "A" Am. Std., "L" long tapered nose and threaded type
- Supplied with finish turning instructions

"D" camlock

Part No.	Spindle Type	Diameter	Plate Thickness
0603020	D1-3	6.25	1.125
0603021	D1-4	6.25	1.125
0603022	D1-5	6.25	1.125
0803020	D1-3	8.25	1.125
0803021	D1-4	8.25	1.125
0803022	D1-5	8.25	1.125
0803023	D1-6	8.25	1.125
1003020	D1-3	10.25	1.125
1003021	D1-4	10.25	1.125
1003022	D1-5	10.25	1.125
1003023	D1-6	10.25	1.250
1003024	D1-8	10.25	1.375
1203022	D1-5	12.50	1.250
1203023	D1-6	12.50	1.250
1203024	D1-8	12.50	1.375
1203025	D1-11	12.50	1.625
1503023	D1-6	15.75	1.375
1503024	D1-8	15.75	1.5
1503025	D1-11	15.75	1.625
2003024	D1-8	20.375	1.875
2003025	D1-11	20.375	1.875

Threaded Mounts

Part No.	Spindle Type	Diameter	Plate Thickness
0503039	1-10	5.0	.750
0503041	1-1/2-8	5.0	.750
0603041	1-1/2-8	6.312	.687
0603042	1-3/4-8	6.312	.687
0603043	2-1/4-8	6.312	.687
0803043	2-1/4-8	7.875	.781
0803046	2-3/8-6	7.875	.781
1003043	2-1/4-8	9.875	.906
1203046	2-3/8-8	12.42	1.10

"A" short taper

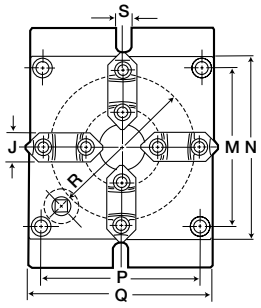
Part No.	Spindle Type	Diameter	Plate Thickness
0603009	A-4	6.250	1.250
0603010	A-5	6.250	1.250
0603011	A-6	6.250	1.375
0803010	A-5	8.250	1.375
0803011	A-6	8.250	1.500
1003010	A-5	10.50	1.375
1003011	A-6	10.50	1.500
1003012	A-8	10.50	1.750
1203011	A-6	12.75	1.625
1203012	A-8	12.75	1.787
1203013	A-11	12.75	2.125
1503011	A-6	15.75	1.625
1503012	A-8	15.75	1.787
1503013	A-11	15.75	2.125
2003012	A-8	20.375	2.125
2003013	A-11	20.375	2.375
2403012	A-8	25.0	2.375
2403013	A-11	25.0	2.625

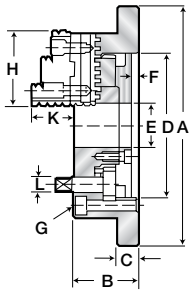
"L" long tapered nose

Part No.	Spindle Type	Diameter	Plate Thickness
0603031	L-00	6.25	1.25
0603032	L-0	6.25	1.50
0803031	L-00	8.25	1.25
0803032	L-0	8.25	1.50
0803033	L-1	8.25	1.75
1003031	L-00	10.5	1.25
1003032	L-0	10.5	1.50
1003033	L-1	10.5	1.75
1003034	L-2	10.5	2.0
1203032	L-0	12.5	1.5
1203033	L-1	12.5	1.75
1203034	L-2	12.5	2.0
1503033	L-1	15.75	1.75
1503034	L-2	15.75	2.0
2003034	L-2	20.375	2.0
2403034	L-2	25.0	2.0

Pratt Burnerd Super Thin Square Chucks

9320 Series





- Universal scroll chuck design
- End-surface clamping design enables fast efficient mounting of several chucks to a worktable
- Super thin design allows greater Z-axis machining
- Elongated slots allows fast and easy positioning on worktable, simply use standard T-bolts, versus mounting connecting plates required by conventional chucks
- Milled key-slots on the base plate allows accurate quick changing of the chucks
- Ideal for pallet applications
- American standard, hard top and master jaws
- Twelve month warranty

Model	Approx Weight	Gripping Capacity External Min.	External Max.	Internal Min.	Internal Max.
9320-01715	14 kg	4	128	55	128
9320-02015	21 kg	5	162	62	162
9320-02515	32 kg	6	197	72	197
9320-03115	57 kg	10	265	90	265

Dimensions

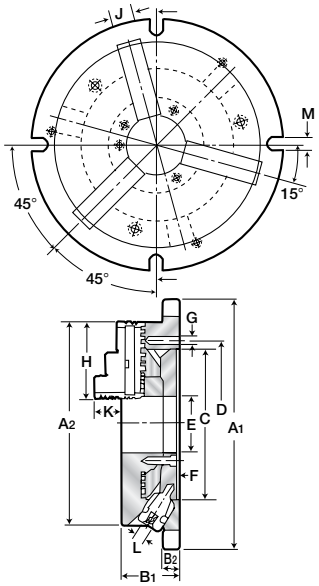
Size	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
160	215	57	18	130	40	5	4-M10	68	26	40	12mm*	144	165	144	165	132	16
200	250	65	20	160	55	5	4-M12	82	28	43	14mm*	174	200	174	200	166	16
250	310	72	22	200	70	6	4-M14	93	32	50	16mm*	218	250	218	250	206	18
315	380	85	25	260	100	6.6	4-M16	106	40	56	20mm*	274	310	274	310	270	22

*square drive

HOW TO ORDER: State quantity, model number of chuck and shipping instructions.

Pratt Burnerd Super Thin Round Chucks

9330 Series



The Ultimate Low Profile 3-Jaw Universal Chuck

- Three operating pinions positioned at a 45 degree angle for easier operation
- Four sizes available 160mm to 315mm diameter
- Easy Installation with flange type mounting
- Accurate- 25µm repeatability on duplicate parts using the nominated pinion
- Ideal for drill presses, standard mills, vertical machining centres, angle plates, tombstones, and grinding machines
- American standard hard top and master jaws
- Twelve month warranty

Model	Approx Weight	Gripping Capacity External Min.	External Max.	Internal Min.	Internal Max.
9330-01715	12 kg	7	70	48	140
9330-02115	19 kg	7.5	89	62	190
9330-02615	29 kg	9	105	72	241
9330-03115	47 kg	11	130	81	292

Dimensions

Size	A1	A2	B1	B2	C	D	E	F	G	H	J	K	L	M
160	220	170	62	18	130	146	45	6	M10	69	26	40	10*	13
200	270	210	65	20	155	172	60	6	M10	85	28	43	11*	13
250	315	255	73	20	190	210	80	6	M12	98	32	51	12*	16
315	370	305	80	22	250	286	105	5	M12	123	41	59	14*	18

*square drive

HOW TO ORDER: State quantity, Model number of chuck and shipping instructions.

Pratt Burnerd High Speed Quick Change 3 Jaw Power Chucks

Constant Grip Open Centre Power Chucks Sizes 6"(160mm) through 24" (610mm)

Shown with optional jaw setting fixture and hard reversible top jaws.

Jaw presetting fixture order number 1009-07090 for use with 160mm to 610mm sizes Standard Bore and Large Bore High Speed Quick Change Jaw Power Chucks.

① Insert last two digits for Master Jaw type.
Example 9131-21723...Indicates 1.5mm x 60°:
Master Jaw Required
Use 23 for 1.5mm x 60° Japanese type.**
Use 07 for Am. Std Tongue & Groove.
Use 10 for 1/16 X 90° Serrations.*
Use 26 for Acme Serration.
Use 27 for Square Serration.

NOTE: 18, 20" & 24" dia. chucks require separate collet pad master jaws: 18"-#8130-46696, 20"-#8130-50696 & 24"-#8130-61696.

- ±.12µm repeatability
- 3-Point adjusting feature in the chuck body permits indicating in to zero. Increase soft jaw life by using adjustment feature. Reduce or eliminate re-boring of soft jaws
- High RPM ... up to 6,000 using standard top jaws ... without loss of gripping force, due to internally counter-balanced design
- Quick change base jaws, 2 sets supplied with each chuck permits offline pre-assembly of top tooling for next job reducing traditional setup time by 95%
- SAFE visual Indicator shows when master jaws are in the unlocked mode
- Utilise existing top tooling by selecting style of master jaws from 1.5 x 60, 1/16 x 90, Am. Std. Acme, Am. Std tongue & groove and square serrations or substitute mono block jaws. Sets can be mixed styles
- Doubles as collet chuck as master jaws have keyed radius in front that accept standard W & S collet pads. Eliminate time wasted on switching over to collet chuck
- Large Bore Capacity (Bore can be sealed for VTL use... page 42 and 43)
- Quick conversion to an expanding mandrel, ref. page 34
- Utilize the machine's existing actuating cylinder - does not require long stroke cylinder
- Easy installation - removable blank sleeve in the chuck allows the customer to bore and thread the sleeve of the chuck to match existing drawtube or drawbar. PBI can supply chuck sleeve pre-threaded on request, at a nominal charge
- Optional jaw setting fixture (as shown) for presetting top jaws off the machine for the next job, while the machine is still running. A real timesaver!
- Sizes 160mm to 610mm diameters
- Twelve month warranty

Continued overleaf

Pratt Burnerd High Speed Quick Change 3 Jaw Power Chucks

Constant Grip Open Centre Power Chucks Sizes 6"(160mm) through 24" (610mm)

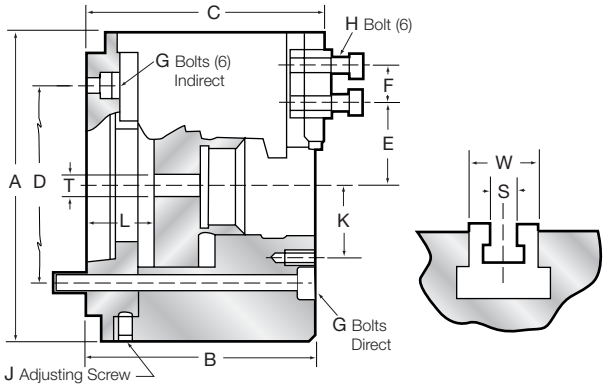
Chuck Size	Mount (D)Direct (I)Indirect	RPM	Model No. ①	Jaw Stroke	Sleeve Stroke	Bore	Collet Pad Bar Capacity	Tooling Hole Size	Operating Force kN	Grip Force kN	Wt (Kg)
160	A2-4(I)	6000	9131-217__	3.5	16	43	38	5/16" UNC	24	47	14
160	A2-5(D)	6000	9131-317__	3.5	16	43	38	5/16" UNC	24	47	14
160	A2-6(I)	6000	9131-417__	3.5	16	43	38	5/16" UNC	24	47	14
210	A2-5(I)	5500	9131-321__	3.5	16	52	51	5/16" UNC	24	66	24
210	A2-6(D)	5500	9131-421__	3.5	16	52	51	5/16" UNC	24	66	24
210	A2-8(I)	5500	9131-521__	3.5	16	52	51	5/16" UNC	24	66	24
254	A2-6(I)	5000	9131-426__	4	18.5	66	63	3/8" UNC	32	88	82
254	A2-8(D)	5000	9131-526__	4	18.5	66	63	3/8" UNC	32	88	82
305	A2-8(I)	4200	9131-531__	4	18.5	90	76	3/8" UNC	44	121	37
305	A2-11(D)	4200	9131-631__	4	18.5	90	76	3/8" UNC	44	121	37
380	A2-8(I)	3000	9131-538__	5	20	126	114	3/8" UNC	60	139	127
380	A2-11(D)	3000	9131-638__	5	20	126	114	3/8" UNC	60	139	127
460	A2-8(I)	2500	9131-546__	6	25	142	139	1/2" UNC	69	170	170
460	A2-11(I)	2500	9131-646__	6	25	142	139	1/2" UNC	69	170	170
500	A2-11(I)	2500	9131-650__	6	25	142	139	1/2" UNC	69	170	250
610	A2-11(I)	1800	9131-660__	8	25	160	158	1/2" UNC	92	170	345
610	A2-15(D)	1800	9131-760__	8	25	160	158	1/2" UNC	92	170	345
Big Bore Quick-Change Chucks											
210	A2-6(D)	5500	9171-421__	3.5	16	66	63	5/16" UNC	24	66	53
265	A2-6(I)	5000	9171-426__	4	18.5	77	76	3/8" UNC	32	88	82
265	A2-8(D)	5000	9171-526__	4	18.5	77	76	3/8" UNC	32	88	82

HOW TO ORDER: State quantity, model number of chuck, machine make & model, and shipping instructions.

Dimensional and Performance Data

Chuck Size A	mtg	B	C	D	F	E Max	E Min	G	H	J	K	L Min	L Max	S	W
165mm	A4	119	122	82.5	20	54	34	M10x25(6)	M10x25	5/16 UNFx1/2	76	24	40	12	31
165mm	A5	123	126	104.8	20	54	34	M10x130(3)	M10x25	5/16 UNFx1/2	76	28	44	12	31
165mm	A6	129	132	133.4	20	54	34	M12x30(6)	M10x25	5/16 UNFx1/2	76	38	54	12	31
210mm	A5	130	134	104.8	25	67	44	M10x30(6)	M12x35	3/8 UNFx3/4	100	25	41	14	40
210mm	A6	136	140	133.4	25	67	44	M12x130(3)	M12x35	3/8 UNFx3/4	100	30	46	14	40
210mm	A8	145	149	171.5	25	67	44	M16x30(6)	M12x35	3/8 UNFx3/4	100	51	45	14	40
254mm	A6	140	144	133.4	30	83	53	M12x35(6)	M12x35	1/2 UNFx3/4	115	26	55	16	40
254mm	A8	150	154	171.5	30	83	53	M16x150(3)	M12x35	1/2 UNFx3/4	115	36	52	16	40
305mm	A8	168	172	171.5	30	109	60	M16x40(6)	M14x45	1/2 UNFx3/4	145	33	52	18	46
305mm	A11	168	172	235.0	30	109	60	M20x160(3)	M14x45	1/2 UNFx3/4	145	33	52	18	46
380mm	A8	176	180	171.5	43	127	82	M16x35(6)	M20x55	1/2 UNFx3/4	180/300	35	55	22	60
380mm	A11	176	180	235.0	43	127	82	M20x180(6)	M20x55	1/2 UNFx3/4	180/300	35	60	22	60
460mm	A8	196	198	171.5	43	172	115	M16x40(6)	M20x55	1/2 UNFx3/4	220/320	35	60	25	60
460mm	A11	196	198	235.0	43	172	115	M20x35(6)	M20x55	1/2 UNFx3/4	220/320	35	60	25	60
500mm	A11	187	191	235.0	60	205	129	M20x45(6)	M20x35	1/2 UNFx3/4	220/310	35	60	25	60
610mm	A11	192	196	235.0	60	256	146	M20x45(6)	M20x35	1/2 UNFx3/4	***	40	65	25	60
610mm	A15	192	196	330.2	60	256	146	7/8-9x8(6)	M20x35	1/2 UNFx3/4	***	40	65	25	60

***240mm/330mm/420mm/510mm



(T) Draw Tube Thread Blank

1. Dimensions listed are with 1.5 x 60° Japanese type master jaws. Some dimensions will vary using other Master Jaw types such as Acme, 1/16" x 90° or Am. Std. Tongue & Groove.
2. Chuck is at mid stroke with master jaws flush with the body O.D.
3. UNC mounting bolts available upon request.

Mono block jaws are extremely accurate solid one piece design ideal for dedicated jobs, and will allow you to work closer to the chuck face, due to no jaw bolt obstructions. For longer service Mono block jaws are made from a nitride hardening material to allow hardening after forming without major distortion.

Mono Block Jaws

See page 46 for Dimensions.

Extra Sets of Master Jaws for Quick Change Power Chucks

	6"	8"	10"	12"	15"	18"	20"	24"
Master Jaw Type - 1.5mm x 60° Fine Serration (Japanese Type)	8130-17623	8130-21623	8130-26623	8130-31623	8130-40623	8130-46623	8130-50623**	8130-61623**
1/16 x 90° Fine serration (European Type)	8130-17610	8130-21610	8130-26610	8130-31610	8130-38610*	8130-46610*	8130-50610*	8130-61610*
Acme Serration	N/A	8130-21626	8130-26626	8130-31626	8130-40626	8130-46626	8130-50626	8130-61626
American Std. Tongue & Groove	8130-17607	8130-21607	8130-26607	8130-31607	8130-38607	8130-46607	8130-50607	8130-61607
Square Serration	N/A	8130-21627	8130-26627	8130-31627	8130-38627	8130-46627	8130-50627	8130-61627
Mono Block Jaw***	8130-17601P	8130-21601	8130-26601	8130-31601	8130-38601	8130-46601	8130-50601	8130-61601

**500mm & 610mm diameter chucks supplied with 3mm x 60° serrations * 380mm to 610mm diameter chucks supplied with 3/32" x 90° serrations
*** Also available in longer pointed design

Pratt Burnerd 3 Jaw Power Chucks

Constant Grip High Speed Standard and Large Bore Power Chucks Size 160mm through 610mm

① Insert last two digits for Master Jaw type.
Example 9131-21723...Indicates 1.5mm x 60°: Master Jaw Required
Use 23 for 1.5mm x 60° Japanese type.**
Use 07 for Am. Std Tongue & Groove.
Use 10 for 1/16 X 90° Serrations.***
Use 26 for Acme Serration.
Use 27 for Square Serration.

NOTE: 460 dia. and above require separate collet pad master jaws: 460mm 8130-46696, 500mm 8130-50696 & 610mm8130-61696.
**3mm on 500mm and 610mm dia. chucks
***3/32 x 90° on 500mm and 610mm chucks

- High RPM - up to 6000
- Constant grip, internally counter-balanced design that reduces grip loss from centrifugal force of the jaws at high RPM
- Easy retrofit on most all existing NC and CNC lathes utilizing the same drawtube and actuating cylinder including Japanese types
- Accurate - repeatability of ± 12µm
- 3-Point adjusting feature in the chuck body permits indicating in to zero. Increase soft jaw life by using adjustment feature. Reduce or eliminate re-boring of soft jaws
- Doubles as collet chuck as master jaws have keyed radius in front that accept standard W & S collet pads. Eliminate time wasted on switching over to collet chuck
- Quick conversion to an expanding mandrel, ref. page 34
- Large bore capacity (bore can be sealed for VTL use... page 42 and 43)
- Utilize existing top tooling by selecting style of master jaws from 1.5 x 60, 1.5 x 90, Am. Std. Acme, Am. Std tongue & groove and square serrations or substitute mono block jaws. Sets can be mixed styles
- Also available in 2-jaw style
- Chuck sizes available 160mm to 610mm diameters
- Twelve month warranty

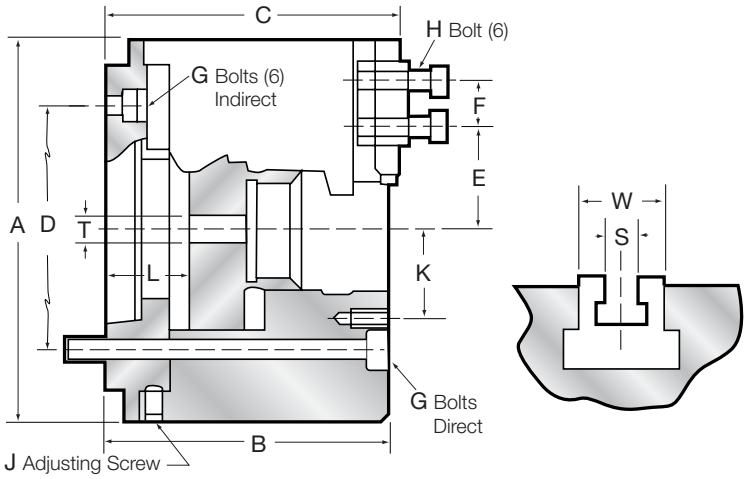
Chuck Size mm	Mount (D)Direct (I)Indirect	RPM	Model No. ①	Jaw Stroke	Sleeve Stroke	Bore	Collet Pad Bar Capacity	Tooling Hole Size	Operating Force kN	Grip Force kN	Wt (kg)
160	A2-4(I)	6000	9151-217__	3.5	16	43	38	5/16" UNC	24	47	14
160	A2-5(D)	6000	9151-317__	3.5	16	43	38	5/16" UNC	24	47	14
160	A2-6(I)	6000	9151-417__	3.5	16	43	38	5/16" UNC	24	47	14
210	A2-5(I)	5500	9151-321__	3.5	16	52	51	5/16" UNC	24	66	24
210	A2-6(D)	5500	9151-421__	3.5	16	52	51	5/16" UNC	24	66	24
210	A2-8(I)	5500	9151-521__	3.5	16	52	51	5/16" UNC	24	66	24
254	A2-6(I)	5000	9151-426__	4	18.5	66	63	3/8" UNC	32	88	82
254	A2-8(D)	5000	9151-526__	4	18.5	66	63	3/8" UNC	32	88	82
305	A2-8(I)	4200	9151-531__	4	18.5	90	76	3/8" UNC	44	121	37
305	A2-11(D)	4200	9151-631__	4	18.5	90	76	3/8" UNC	44	121	37
380	A2-8(I)	3000	9151-538__	5	20	126	114	3/8" UNC	60	139	127
380	A2-11(D)	3000	9151-638__	5	20	126	114	3/8" UNC	60	139	127
460	A2-8(I)	2500	9151-546__	6	25	142	139	1/2" UNC	69	170	170
460	A2-11(I)	2500	9151-646__	6	25	142	139	1/2" UNC	69	170	170
500	A2-11(I)	2500	9151-650__	6	25	142	139	1/2" UNC	69	170	250
610	A2-11(I)	1800	9151-660__	8	25	160	158	1/2" UNC	92	170	345
610	A2-15(D)	1800	9151-760__	8	25	160	158	1/2" UNC	92	170	345
Large Bore Chucks											
210	A2-6(D)	5500	9161-421__	3.5	16	66	63	5/16" UNC	24	66	53
265	A2-6(I)	5000	9161-426__	4	18.5	77	76	3/8" UNC	32	88	82
265	A2-8(D)	5000	9161-526__	4	18.5	77	76	3/8" UNC	32	88	82

HOW TO ORDER: State quantity, model number of chuck, machine make & model, and shipping instructions.

Dimensional and Performance Data

Chuck Size A	mtg	B	C	D	F	E Max	E Min	G	H	J	K	L Min	L Max	S	W
165mm	A4	119	122	82.5	20	54	34	M10x25(6)	M10x25	5/16 UNFx1/2	76	24	40	12	31
165mm	A5	123	126	104.8	20	54	34	M10x130(3)	M10x25	5/16 UNFx1/2	76	28	44	12	31
165mm	A6	129	132	133.4	20	54	34	M12x30(6)	M10x25	5/16 UNFx1/2	76	38	54	12	31
210mm	A5	130	134	104.8	25	67	44	M10x30(6)	M12x35	3/8 UNFx3/4	100	25	41	14	40
210mm	A6	136	140	133.4	25	67	44	M12x130(3)	M12x35	3/8 UNFx3/4	100	30	46	14	40
210mm	A8	145	149	171.5	25	67	44	M16x30(6)	M12x35	3/8 UNFx3/4	100	51	45	14	40
254mm	A6	140	144	133.4	30	83	53	M12x35(6)	M12x35	1/2 UNFx3/4	115	26	55	16	40
254mm	A8	150	154	171.5	30	83	53	M16x150(3)	M12x35	1/2 UNFx3/4	115	36	52	16	40
305mm	A8	168	172	171.5	30	109	60	M16x40(6)	M14x45	1/2 UNFx3/4	145	33	52	18	46
305mm	A11	168	172	235.0	30	109	60	M20x160(3)	M14x45	1/2 UNFx3/4	145	33	52	18	46
380mm	A8	176	180	171.5	43	127	82	M16x35(6)	M20x55	1/2 UNFx3/4	180/300	35	55	22	60
380mm	A11	176	180	235.0	43	127	82	M20x180(6)	M20x55	1/2 UNFx3/4	180/300	35	60	22	60
460mm	A8	196	198	171.5	43	172	115	M16x40(6)	M20x55	1/2 UNFx3/4	220/320	35	60	25	60
460mm	A11	196	198	235.0	43	172	115	M20x35(6)	M20x55	1/2 UNFx3/4	220/320	35	60	25	60
500mm	A11	187	191	235.0	60	205	129	M20x45(6)	M20x35	1/2 UNFx3/4	220/310	35	60	25	60
610mm	A11	192	196	235.0	60	256	146	M20x45(6)	M20x35	1/2 UNFx3/4	***	40	65	25	60
610mm	A15	192	196	330.2	60	256	146	7/8-9x8(6)	M20x35	1/2 UNFx3/4	***	40	65	25	60

***240mm/330mm/420mm/510mm



(T) Draw Tube Thread Blank

1. Dimensions listed are with 1.5 x 60° master jaws. Some dimensions will vary using other Master Jaw types such as Acme, 1/16" x 90° or Am. Std. Tongue & Groove.
2. Chuck is at mid stroke with master jaws flush with the body O.D.
3. UNC mounting bolts available upon request.
4. Standard master jaw serration for 20 and 24 inch chucks are 3mm x 60°.

Pratt Burnerd Quick Change 2 Jaw Power Chucks

Constant Grip High Speed Open Centre Power Chucks

Jaw Presetting Fixture Order number 1009-07090

for use with 6", 8", 10", 12", 15", 18", and 20" sizes Standard Bore and Big Bore Models Quick Change Jaw Power Chucks.

① Insert last two digits for Master Jaw type...
Example 9141-21723...Indicates 1.5mm x 60°: Master Jaw Required
Use 23 for 1.5mm x 60° Japanese type.
Use 26 for Acme Serration.
Use 10 for 1/16 X 90° Serrations.
Use 07 for Am. Std Tongue & Groove.
Use 27 for Square Serration.

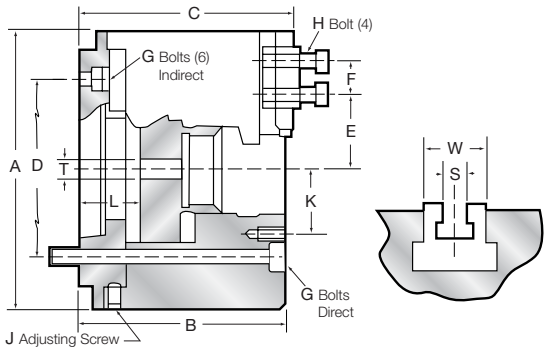
- ±.12µm repeatability
- 4-Point adjusting feature in the chuck body allows you to true up to virtually zero Increase Soft jaw life by using the adjustment feature instead of skim cutting soft jaws as often. 6 points on 380mm chucks and larger
- High RPM ... up to 6,000 using standard top jaws ... without loss of gripping force, due to internally counter-balanced design
- Quick change base jaws, 2 sets supplied with each chuck permits offline pre-assembly of top tooling for next job reducing traditional setup time by 95%
- SAFE visual indicator shows when master jaws are in the unlocked mode
- Master jaws available in 1.5mm x 60° (Japanese type), 1/16" x 90°, Acme serration and square serration, American standard tongue and groove
- Utilize existing top tooling by selecting style of master jaws from 1.5 x 60, 1.5 x 90, Am. Std. Acme, Am. Std tongue & groove and square serrations or substitute mono block jaws. Sets can be mixed styles
- Quick conversion to an expanding mandrel, ref. page 34
- Large bore capacity (bore can be sealed for VTL use... page 42 and 43)
- Utilise the machine's existing actuating cylinder - including Japanese types
- Easy installation - removable blank sleeve in the chuck allows the customer to bore and thread the sleeve of the chuck to match existing drawtube of drawbar PBI can supply chuck sleeve pre-threaded on request, at a nominal charge
- Optional jaw setting fixture for presetting top jaws off the machine for the next job, while the machine is still running. A real timesaver!
- Sizes 165mm to 305mm diameters...other sizes available on request
- Twelve month warranty

Chuck Size	Mount (D)Direct (I)Indirect	RPM	Model No. ①	Jaw Stroke	Sleeve Stroke	Through Hole	Collet Pad Bar Capacity	Tooling Hole Size	Operating Force lbs/f	Grip Force lbs/f	Wt (lbs)
165	A2-4(I)	6000	9141-217__	3.5	16	42	38	5/16" UNC	16	47	16
165	A2-5(D)	6000	9141-317__	3.5	16	42	38	5/16" UNC	16	47	16
165	A2-6(I)	6000	9141-417__	3.5	16	42	38	5/16" UNC	16	47	16
210	A2-5(I)	5500	9141-321__	3.5	16	52	50	5/16" UNC	24	66	28
210	A2-6(D)	5500	9141-421__	3.5	16	52	50	5/16" UNC	24	66	28
210	A2-8(I)	5500	9141-521__	3.5	16	52	50	5/16" UNC	24	66	28
254	A2-6(I)	5000	9141-426__	4	18.5	65	63	3/8" UNC	32	88	42
254	A2-8(D)	5000	9141-526__	4	18.5	65	63	3/8" UNC	32	88	42
305	A2-8(I)	4200	9141-531__	4	18.5	90	76	3/8" UNC	44	121	68
305	A2-11(D)	4200	9141-631__	4	18.5	90	76	3/8" UNC	44	121	68

HOW TO ORDER: State quantity, model number of chuck, machine make & model, and shipping instructions.

Dimensional and Performance Data

Chuck Size A	mtg	B	C	D	F	E Max	E Min	G	H	J	K	L Min	L Max	S	W
165mm	A4	119	122	82.5	20	54	34	M10x25(6)	M10x25	5/16 UNFx1/2	76	24	40	12	31
165mm	A5	123	126	104.8	20	54	34	M10x130(3)	M10x25	5/16 UNFx1/2	76	28	44	12	31
165mm	A6	129	132	133.4	20	54	34	M12x30(6)	M10x25	5/16 UNFx1/2	76	38	54	12	31
210mm	A5	130	134	104.8	25	67	44	M10x30(6)	M12x35	3/8 UNFx3/4	100	25	41	14	40
210mm	A6	136	140	133.4	25	67	44	M12x130(3)	M12x35	3/8 UNFx3/4	100	30	46	14	40
210mm	A8	145	149	171.5	25	67	44	M16x30(6)	M12x35	3/8 UNFx3/4	100	51	45	14	40
254mm	A6	140	144	133.4	30	83	53	M12x35(6)	M12x35	1/2 UNFx3/4	115	26	55	16	40
254mm	A8	150	154	171.5	30	83	53	M16x150(3)	M12x35	1/2 UNFx3/4	115	36	52	16	40
305mm	A8	168	172	171.5	30	109	60	M16x40(6)	M14x45	1/2 UNFx3/4	145	33	52	18	46
305mm	A11	168	172	235.0	30	109	60	M20x160(3)	M14x45	1/2 UNFx3/4	145	33	52	18	46



(T) Draw Tube Thread Blank

1. Dimensions listed are with 1.5 x 60° Japanese type master jaws. Some dimensions will vary using other Master Jaw types such as Acme, 1/16" x 90° or Am. Std. Tongue & Groove.
2. Chuck is at mid stroke with master jaws flush with the body O.D.
3. UNC mounting bolts available upon request.

Mono block jaws are extremely accurate solid one piece design ideal for dedicated jobs, and will allow you to work closer to the chuck face, due to no jaw bolt obstructions. For longer service Mono Block Jaws are made from a nitride hardening material to allow hardening after forming without major distortion.

Mono Block Jaws

See page 47 Dimensions.

Extra Sets of Master Jaws for Quick Change Jaw Power Chucks

	165mm	210mm	254mm	305mm
Master Jaw Type - 15mm x 60° Fine Serration (Japanese Type)	8140-17623	8140-21623	8140-26623	8140-31623
1/16 x 90° Fine serration (European Type)	8140-17610	8140-21610	8140-26610	8140-31610
Acme Serration	N/A	8140-21626	8140-26626	8140-31626
American Std. Tongue & Groove	8140-17607	8140-21607	8140-26607	8140-31607
Square Serration	N/A	8140-21627	8140-26627	8140-31627
Mono Block Jaw***	8130-17601P	8130-21601	8130-26601	8130-31601

*** Also available in longer pointed design

Pratt Burnerd Constant Grip Quick Change & Non-Quick Change Closed Centre Power Chucks

Designed for Vertical Turning Lathes

Jaw presetting fixture
Order number 1009-07090

for use with all sizes both Standard Bore and Large Bore Models Quick Change Jaw Power Chucks.

① Insert last two digits for Master Jaw type...Example 9101-42623...Indicates 1.5mm x 60°: Master Jaw Required
Use 23 for 1.5mm x 60° Japanese type.**
Use 07 for Am. Std Tongue & Groove.
Use 10 for 1/16 X 90° Serrations.*
Use 26 for Acme Serration.
Use 27 for Square Serration.

- ±.12µm repeatability
- 3-point adjusting feature in the chuck body permits indicating in to zero. Increase soft jaw life by using adjustment feature. Reduce or eliminate re-boring of soft jaws
- Close centre design with chip ejecting discharge chutes in the chuck body face reducing build-up to near zero
- High RPM ... up to 5,000 using standard top jaws ... without loss of gripping force, due to internally counter-balanced design
- Quick change base jaws, 2 sets supplied with each chuck permits offline pre-assembly of top tooling for next job reducing traditional setup time by 95%.
- SAFE visual indicator shows when base jaws are in the unlocked mode
- Utilize existing top tooling by selecting style of master jaws from 1.5 x 60, 1/16 x 90, Am. Std. Acme, Am. Std tongue & groove and square serrations or substitute mono block jaws. Sets can be mixed styles
- Doubles as collet chuck as master jaws have keyed radius in front that accept standard W & S collet pads. Eliminate time wasted on switching over to collet chuck
- Utilize the machine's existing actuating cylinder - including Japanese types
- Easy Installation - removable blank sleeve in the chuck allows the customer to bore and thread the sleeve of the chuck to match existing drawtube of drawbar PBI can supply chuck sleeve pre-threaded on request, at a nominal charge
- Optional jaw setting fixture (as shown) for presetting top jaws off the machine for the next job, while the machine is still running. A real timesaver!
- Sizes 165mm to 610mm diameters
- Twelve month warranty

Chuck Size	Mount (D)Direct (I)Indirect	RPM	Model No. ①	Jaw Stroke	Sleeve Stroke	Collet Pad Bar Capacity	Tooling Hole Size	Operating Force kN	Grip Force kN	Wt (kg)
Quick Change Jaw VTL Chucks										
254	A2-6(I)	5000	9101-426__	4	18.5	63	3/8" UNC	32	88	42
254	A2-8(D)	5000	9101-526__	4	18.5	63	3/8" UNC	32	88	42
305	A2-8(I)	4200	9101-531__	4	18.5	76	3/8" UNC	44	121	68
305	A2-11(D)	4200	9101-631__	4	18.5	76	3/8" UNC	44	121	68
380	A2-8(I)	3000	9101-538__	5	20	114	3/8" UNC	60	139	135
380	A2-11(D)	3000	9101-638__	5	20	114	3/8" UNC	60	139	135
460	A2-8(I)	2500	9101-546__	6	25	139	1/2" UNC	69	170	200
460	A2-11(I)	2500	9101-646__	6	25	139	1/2" UNC	69	170	200
500	A2-11(I)	2500	9101-650__	6	25	139	1/2" UNC	69	170	250
610	A2-11(I)	1800	9101-660__	8	25	158	1/2" UNC	92	170	345
610	A2-15(I)	1800	9101-760__	8	25	158	1/2" UNC	92	170	345
Non-Quick Change Jaw VTL Chucks										
254	A2-6(I)	5000	9111-426__	4	18.5	63	3/8" UNC	32	88	42
254	A2-8(D)	5000	9111-526__	4	18.5	63	3/8" UNC	32	88	42
305	A2-8(I)	4200	9111-531__	4	18.5	76	3/8" UNC	44	121	68
305	A2-11(D)	4200	9111-631__	4	18.5	76	3/8" UNC	44	121	68
380	A2-8(I)	3000	9111-538__	5	20	114	3/8" UNC	60	139	135
380	A2-11(D)	3000	9111-638__	5	20	114	3/8" UNC	60	139	135
460	A2-8(I)	2500	9111-546__	6	25	139	1/2" UNC	69	170	200
460	A2-11(I)	2500	9111-646__	6	25	139	1/2" UNC	69	170	200
500	A2-11(I)	2500	9111-650__	6	25	139	1/2" UNC	69	170	250
610	A2-11(I)	1800	9111-660__	8	25	158	1/2" UNC	92	170	345
610	A2-15(I)	1800	9111-760__	8	25	158	1/2" UNC	92	170	345

Dimensional and Performance Data

Chuck Size	A	B	C	D	F	E Max	E Min	G	H	J	K	L Min	L Max	S	W
254mm	A6	140	144	133.4	30	83	53	M12x35(6)	M12x35	1/2 UNFx3/4	115	26	55	16	40
254mm	A8	150	154	171.5	30	83	53	M16x150(3)	M12x35	1/2 UNFx3/4	115	36	52	16	40
305mm	A8	168	172	171.5	30	109	60	M16x40(6)	M14x45	1/2 UNFx3/4	145	33	52	18	46
305mm	A11	168	172	235.0	30	109	60	M20x160(3)	M14x45	1/2 UNFx3/4	145	33	52	18	46
380mm	A8	176	180	171.5	43	127	82	M16x35(6)	M20x55	1/2 UNFx3/4	180/300	35	55	22	60
380mm	A11	176	180	235.0	43	127	82	M20x180(6)	M20x55	1/2 UNFx3/4	180/300	35	60	22	60
460mm	A8	196	198	171.5	43	172	115	M16x40(6)	M20x55	1/2 UNFx3/4	220/320	35	60	25	60
460mm	A11	196	198	235.0	43	172	115	M20x35(6)	M20x55	1/2 UNFx3/4	220/320	35	60	25	60
500mm	A11	187	191	235.0	60	205	129	M20x45(6)	M20x35	1/2 UNFx3/4	220/310	35	60	25	60
610mm	A11	192	196	235.0	60	256	146	M20x45(6)	M20x35	1/2 UNFx3/4	***	40	65	25	60
610mm	A15	192	196	330.2	60	256	146	7/8-9x8(6)	M20x35	1/2 UNFx3/4	***	40	65	25	60

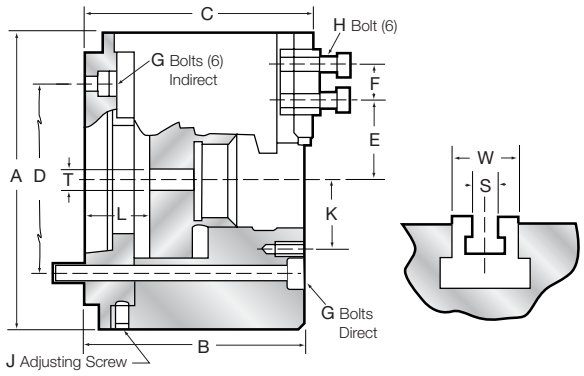
***9.45"/13"/16.53"/20.08"

HOW TO ORDER: State quantity, model number of chuck, machine make & model, and shipping instructions.

Continued overleaf

Pratt Burnerd Constant Grip Quick Change & Non-Quick Change Closed Centre Power Chucks

Designed for Vertical Turning Lathes



(T) Draw Tube Thread Blank

1. Dimensions listed are with 1.5 x 60° Japanese type master jaws. Some dimensions will vary using other Master Jaw types such as Acme, 1/16" x 90° or Am. Std. Tongue & Groove.
2. Chuck is at mid stroke with master jaws flush with the body O.D.
3. UNC mounting bolts available upon request.

Mono Block Jaws

See page 46 for Dimensions.

Mono block jaws are extremely accurate solid one piece design ideal for dedicated jobs, and will allow you to work closer to the chuck face, due to no jaw bolt obstructions. For longer service Mono Block Jaws are made from a nitride hardening material to allow hardening after forming without major distortion.

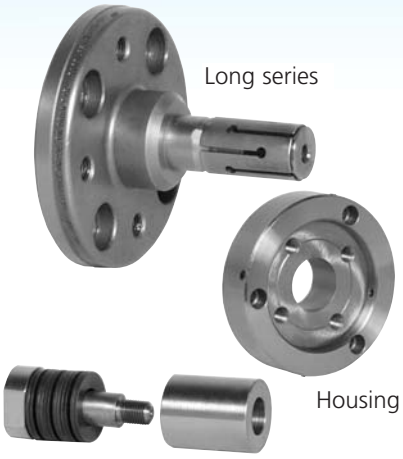
Extra Sets of Master Jaws for Quick Change Jaw Power Chucks

	254mm	305mm	380mm	460mm	500mm	610mm
Master Jaw Type - 15mm x 60° Fine Serration (Japanese Type)	8130-26623	8130-31623	8130-40623	8130-46623	8130-50623**	8130-61623**
1/16 x 90° Fine serration (European Type)	8130-26610	8130-31610	8130-38610*	8130-46610*	8130-50610*	8130-61610*
Acme Serration	8130-26626	8130-31626	8130-40626	8130-46626	8130-50626	8130-61626
American Std. Tongue & Groove	8130-26607	8130-31607	8130-40607	8130-46607	8130-50607	8130-61607
Square Serration	8130-26627	8130-31627	8130-40627	8130-46627	8130-50627	8130-61627
Mono Block Jaw ***	8130-26601	8130-31601	8130-38601	8130-46601	8130-50601	8130-61601

** 500mm and 610mm diameter chucks supplied with 3mm x 60° serrations
* 380mm to 610mm diameter chucks supplied with 3/32" x 90° serrations

Pratt Burnerd Expanding Mandrel Attachment

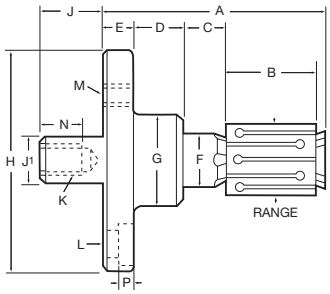
Imperial Design for Quick Change Jaw Chucks and Constant Grip Power Chucks



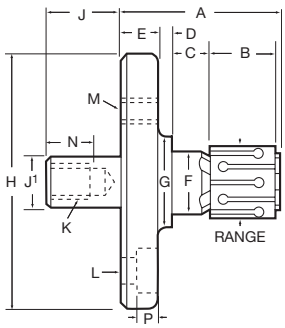
Spring Pack and Housing are design to fit individual chuck and lathe drawbar set-up. Give chuck model and drawbar set-up specification when ordering.

Convert your Pratt Burnerd 3-Jaw Power Chuck into an expanding Mandrel in minutes.

- Bolts directly onto existing PBI chuck using existing fixturing holes
- No drawtube or drawbar connection required
- Saves time, no need to change chucks or buy an additional chuck
- Size range available 12mm through to 113mm I.D. work pieces
- Available in long or short nose
- Ideal for second operation and twin spindle machines
- System uses high accuracy tork-lok, collets by ITW Woodworth
- Setrite®, feature allows adjustment for zero run-out
- Reference page 23, 25 and page 27 for PBI chucks that this mandrel will adapt to



Long Series Drawing



Short Series Drawing

Long Series

Model	Range	A	B	C	D	E	F	G	H	J	J1	K	L
AC-2110	.500-.655 10 Collets	2.49	.88	.39	.66	.50	.4702 .4692	1.25	3.3755 3.3750	.750	.562	3/8- 24	Four (4) 3/8 S.H.S. on 2.50 B.C.
AC-2210	.593-.780 12 Collets	2.69	1.06	.41	.66	.50	.5796 .5786	1.25	3.3755 3.3750	.750	.562	3/8 - 24	Four (4) 3/8 S.H.S. on 2.50 B.C.
AC-2310	.718-.999 18 Collets	2.96	1.25	.49	.66	.50	.7046 .7036	1.25	3.3755 3.3750	.750	.562	3/8 - 24	Four (4) 3/8 S.H.S.. on 2.50 B.C.
AC-2410	.875-1.249 12 Collets	3.58	1.44	.56	.90	.56	.8452 .8442	1.75	4.1255 4.1250	1.220	.750	1/2 - 20	Four (4) 1/2 S.H.S. on 3.12 B.C.
AC-2510	1.125-1.624 16 Collets	3.89	1.62	.69	.90	.56	1.0796 1.0786	1.75	4.1255 4.1250	1.220	.750	1/2 - 20	Four (4) 1/2 S.H.S. on 3.12 B.C..
AC-2610	1.468-2.092 20 Collets	4.14	1.81	.82	.72	.68	1.4077 1.4067	2.50	4.8755 4.8750	1.590	.968	3/4 - 16	Four (4) 1/2 S.H.S. on 3.75 B.C.
AC-2710	1.937-2.843 29 Collets	4.46	2.00	1.00	.66	.68	1.8452 1.8442	2.50	4.8755 4.8750	1.590	.968	3/4 - 16	Four (4) 1/2 S.H.S. on 3.75 B.C.
AC-2810	2.563-3.593 33 Collets	4.83	2.25	1.12	.66	.68	2.4390 2.4385	3.00	5.5005 5.5000	1.590	.968	3/4 - 16	Four (4) 1/2 S.H.S. on 4.50 B.C.
AC-2910	3.312-4.467 33 Collets	4.97	2.50	1.11	.56	.68	3.1885 3.1880	3.62	5.5005 5.5000	1.590	.968	3/4 - 16	Four (4) 1/2 S.H.S. on 4.50 B.C.

Short Series

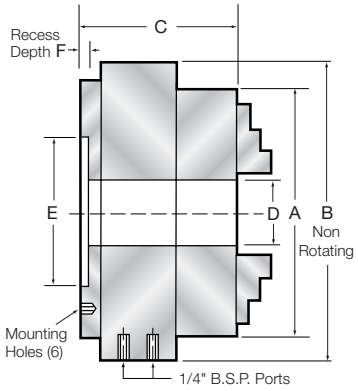
Model	Range	A	B	C	D	E	F	G	H	J	J1	K	L
AC-8100	.500-.655 10 Collets	1.81	.59	.42	.25	.50	.4702 .4692	.88	3.3755 3.3750	.762	.562	3/8- 24	Four (4) 3/8 S.H.S. on 2.50 B.C.
AC-8200	.593-.797 20 Collets	1.97	.72	.45	.25	.50	.5796 .5786	1.00	3.3755 3.3750	.781	.562	3/8 - 24	Four (4) 3/8 S.H.S. on 2.50 B.C.
AC-8300	.718-1.000 28 Collets	2.15	.84	.51	.25	.50	.7046 .7036	1.12	3.3755 3.3750	.781	.562	3/8 - 24	Four (4) 3/8 S.H.S. on 2.50 B.C.
AC-8400	.875-1.299 20 Collets	2.35	.94	.59	.18	.56	.8452 .8442	1.38	4.1255 4.1250	1.250	.750	1/2 - 20	Four (4) 1/2 S.H.S. on 3.12 B.C.
AC-8500	1.125-1.642 24 Collets	2.59	1.125	.65	.18	.56	1.0796 1.0786	1.56	4.1255 4.1250	1.250	.750	1/2 - 20	Four (4) 1/2 S.H.S. on 3.12 B.C.
AC-8600	1.468-2.104 30 Collets	2.93	1.22	.83	.12	.68	1.4077 1.4067	1.88	4.8755 4.8750	1.625	.968	3/4 - 16	Four (4) 1/2 S.H.S. on 3.75 B.C.
AC-8700	1.937-2.821 42 Collets	2.98	1.31	.79	.12	.68	1.8452 1.8442	2.38	4.8755 4.8750	1.625	.968	3/4 - 16	Four (4) 1/2 S.H.S. on 3.75 B.C.

Pratt Burnerd MK3 3 Jaw Self Centring Power Chucks

Turn your manual lathe into a production machine with this easy retrofit self contained power chuck.

- Precision manufactured to fit types A and D spindles and adapter mounting
- Repetitive gripping within 25µm TIR
- Safe, chuck operates independently of air supply when gripping
- No separate actuating cylinder
- No draw tube to restrict bore
- Sizes 160mm to 350mm
- Suitable for chucking or barwork
- Less overhang. Lighter in weight
- Minimum maintenance
- Quick, simple lever or foot pedal operation
- Optional top jaws ref. page 40
- 1/16" x 90° serrated master jaws standard
- Twelve month warranty

Chuck shown with optional hard reversible top jaws.



Dimensions are for adapter mount chucks.

Chuck Size	Adapter Mount Model No.	Type D Spindles Spindle Size	Type D Spindles 3-Jaw Model No.	Type A Spindles Spindle Size	Type A Spindles 3-Jaw Model No.
160	9760-01710	D-3	9762-21710	-	-
		D-4	9762-31710	-	-
		D-5	9762-41710	A-5	9761-31710
		D-6	9762-51710	A-6	-
200	9760-02110	D-4	9762-32110	-	-
		D-5	9762-42110	A-5	9761-32110
		D-6	9762-52110	A-6	9761-42110
250	9760-02610	D-5	9762-42610	-	-
		D-6	9762-52610	A-6	9761-42610
		D-8	9762-62610	A-8	9761-52610
315	9760-03210	D-8	9762-63210	A-8	9761-53210
		D-11	9762-73210	A-11	9761-63210
350	9760-03510	D-8	9762-63510	A-8	9761-53510
		D-11	9762-73510	A-11	9761-63510

Table Mount, "L" Type Mounts and Special Mounts available upon request.

Dimensional and Technical Data

Chuck Size A	B	C	D	E	F	Mtg Hole	Wt. (kg)	Max rpm*	Jaw Travel	Total grip **
160	240	129	38	125	6	M10	23	3000	4.6	3080
200	270	131	52	155	6	M10	31	2500	4.6	4550
250	310	146	65	185	6	M10	45	2000	5	6750
315	355	147	90	225	6.5	M10	65	1500	5	8210
380	390	185	142	254	6.5	M12	90	1300	6	8430

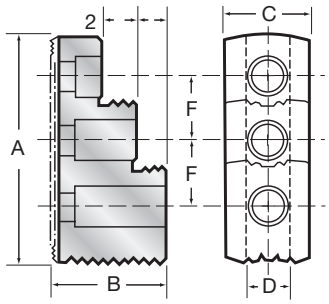
*Max. RPM at 85 PSI with standard hard top jaws. Consult factory for increased RPM rating
** Total grip at max. operating force of 5.9 Bar.

HOW TO ORDER: State quantity, model number of chuck and shipping instructions.

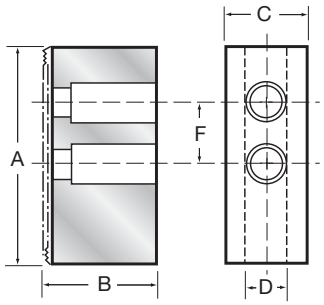
Pratt Burnerd Accessories for MK3 Self Contained Chucks

Top Jaws 1/16" x 90° Serrations

Type 611



Type 612



Type 611 - Hardened and ground reversible jaws with serrated gripping faces. (supplied in sets of 3 for 3 jaw chucks only)

Type 612 - Soft blank jaws, case hardening quality steel. (supplied as single units only)

Dimensional Data

Chuck Size	Jaw Type	Part Number	A	B	C	D	F	Bolt Size	Step Height
160	611	8130-17611	65	40	30	12	17	M8	10
160	612	8140-17512	65	38	32	12	20	M8	-
210/254	611	8130-21611	76	50	40	17	19	M12	12
210/254	612	2860-21512	89	51	38	17	25	M12	-
315/350	611	8130-31611	125	60	60	21	25	M16	14
315/350	612	2860-32512	114	64	51	21	32	M16	-

Pratt Burnerd Front End Hydraulic 3 Jaw Chucks

- Hardened steel body
- Sizes 210mm, 254mm & 305mm
- Large bore
- No draw tube required
- 25µm T.I.R. repeatability on duplicate parts
- High RPM ability
- Collet pad facility for bar work
- Totally self-lubricating
- Mechanically self-locking - no hydraulic check valves necessary
- Hydraulic cylinder and actuator are integrated
- Direct mount to type "A" spindles
- Acme, tongue & groove, and 1/16" by 90° base jaws available
- 2-jaw models available on request
- Other sizes available on request
- Twelve month warranty

Part No.	1749-02400	1749-02410①	1749-02420①
Body Diameter	210mm	254mm	305mm
Body Width	136	150	176
Tooling Height*	139	153	179
Bore	52	65**	81**
Movement Per Jaw	5	6	7
Max. RPM	4750	4050	3800
Total Static Grip daN	11,000	15,390	22740
Max. Hydraulic Pressure	38 Bar	38 Bar	38 Bar
Approx. Weight	28 kilos	47 kilos	77 kilos

Dimensional and Performance Data

*May vary slightly depending on the style of Base Jaw required.

**Special through-holes available: 3-1/16" for 10" chuck; 4" for 12" chuck.

NOTE: As shown in photo above, flanged base plate is supplied less slots or mounting holes. PBI can machine as required for an additional charge. For dimensional and performance data, reference the above.

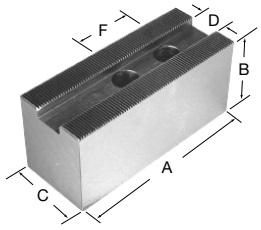
① Chuck numbers shown are for Cincinnati machines with 2 hydraulic ports in spindle. Consult factory for part number of 4-port spindle designs.

Mounting Plates for Stationary Front Mount Hydraulic 3-Jaw Chucks
Easy Retrofit no draw tube required

Chuck Size	Chuck Model No.	Mounting Plate Diameter
210	7749-21000	305mm
254	7749-26000	355mm
305	7749-31000	405mm

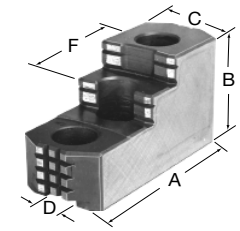
Top Jaws and Accessories

for Constant Grip, Quick Change, VTL, Setrite® Power, Self Contained & Front Mount Hydraulic Chucks



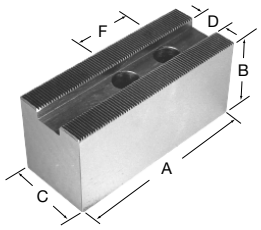
1.5mm x 60° Serrated Soft Top Jaws - Constant Grip, Quick Change & International Chucks

Chuck Dia.	Jaw No.	A	B	C	D	F	Screw Size	T-Nut 2 Req'd per Jaw
165	8140-17525*	79	38	32	12	20	M-10	8130-17590
210	8140-21525	89	51	38	14	25	M-12	8130-21590
254	8140-26525	102	51	38	16	30	M-12	8130-26590
305	8140-31525	133	51	51	18	30	M-14	8130-31590
380/460	8140-40525	165	64	51	22	43	M-20	8130-40590
500/610	8130-50525①	178	64	64	25	60	M-20	8130-50590



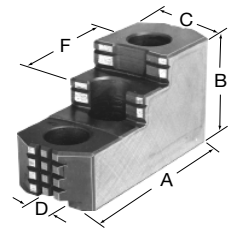
1.5mm x 60° Hard Reversible Top Jaw *Comes standard as offset points

Chuck Dia.	Jaw No.	A	B	C	D	F	Screw Size	T-Nut 2 Req'd per Jaw
165	8130-17624	65	35	30	12	17	M-10	8130-17590
210	8130-21624	75	50	40	14	19	M-12	8130-21590
254	8130-26624	75	50	40	16	19	M-12	8130-26590
305	8130-31624	115	58	50	18	24	M-14	8130-31590
380/460	8130-40624	126	75	60	22	25	M-20	8130-40590
500/610	8130-50624①	165	89	64	25	60	M-20	8130-50590



1/16 x 90° Serrated Soft Top Jaws for Constant Grip/Int'l and Self Contained Power Chucks

Chuck Dia.	Jaw No.	A	B	C	D	F	Screw Size	T-Nut 2 Req'd per Jaw
165	8140-17512	70	38	25	12	20	M-8	8820-17591
210	2860-21512	89	51	38	17	25	M-12	2870-17591
254	2860-26512	89	51	38	17	25	M-12	2870-17591
305	2860-32512	114	64	51	21	32	M-16	2870-26591
380/610	2860-40512②	152	76	51	25	44	M-20	

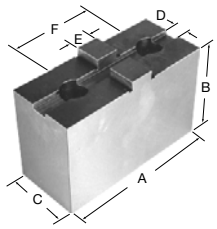


1/16 x 90° Hard Reversible Top Jaw

Chuck Dia.	Jaw No.	A	B	C	D		Screw F Size	T-Nut 2 Req'd per Jaw
165	8130-17611	65	40	30	12	17	M-8	8820-17591
210	8130-21611	76	50	40	17	19	M-12	2870-17591
254	8130-21611	76	50	40	17	19	M-12	2870-17591
305	8130-31611	125	60	60	21	25	M-16	2870-26591
380/610	8130-40611②	125	75	60	25	31	M-20	

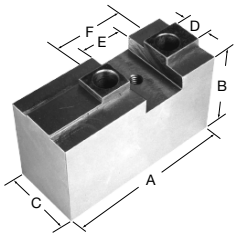
Top Jaws and Accessories

for Constant Grip, Quick Change, VTL, Setrite® Power, Self Contained & Front Mount Hydraulic Chucks



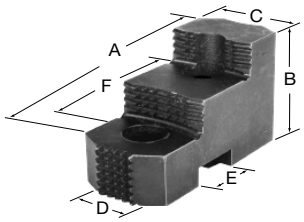
AM Tongue & Groove Soft Top Jaws for Constant Grip Quick Change Chucks

Chuck Dia.	Jaw No.	A	B	C	D	E	F	Screw Size	T-Nut
165	2770-17509	71	35	25	8	13	38	7/16	Not
210	8130-21509	84	48	32	8	13	44	1/2	Required
254	2770-26509	100	48	38	13	19	54	5/8	
305	2770-32509	114	54	44	13	19	64	5/8	
380	2770-38509	132	71	57	13	19	76	3/4	



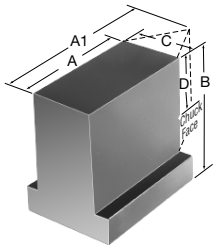
Acme Serrated Soft Top Jaws for Constant Grip Quick Change/Front Mount Hydraulic Chucks

Chuck Dia.	Jaw No.	A	B	C	D	E	F	Screw Size	T-Nut 1Req'd per Jaw
165	N/A	-	-	-	-	-	-	-	-
210	7749-22036	95	46	38	17	15	32	1/2	2749-02407
254	7749-26042	105	59	44	19	26	44	1/2	2749-02417
305	7749-32052	130	59	44	22	26	51	5/8	2749-02427
380/610	8130-40632	152	83	64	25	38	64	3/4	8130-40531



Acme Serrated Hard Rev. Top Jaws for Constant Grip Quick Change/Front Mount Hydraulic Chucks

Chuck Dia.	Jaw No.	A	B	C	D	E	F	Screw Size	Acme Key 1 Req'd per Jaw
165	N/A	-	-	-	-	-	-	-	-
210	7749-22036	89	51	38	17	15	32	1/2	2749-02405
254	7749-26042	108	64	44	19	26	44	1/2	2749-02415
305	7749-32052	124	64	44	22	26	51	5/8	2749-02425
380/610	8130-40632	140	89	64	25	39	64	3/4	8130-40530



Mono Jaws for Quick Change Jaw Power Chucks

Chuck Dia.	Jaw No.	A	A1	B	C	D
165	8130-17601P		66	72	31	42
210	8130-21601	85	103	85	40	51
254	8130-26601	112	127	90	40	58
305	8130-31601	153	151	105	46	61
380	8130-38601	160	188	125	60	74

Mono jaws are made from nitride hardening steel. This allows them to be case hardened after machining. Mono jaws for 460mm and larger chucks available upon request.

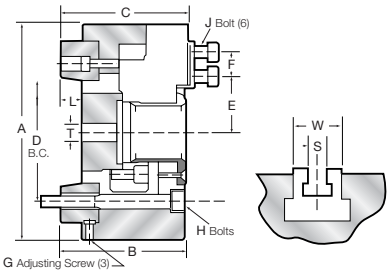
* 8140-17525 are pointed type ① 3mm x 60° Serrations ② 3/32 x 90° Serrations

Pratt Burnerd International Setrite® Power Chucks

Sizes 6" (170mm) through 10" (265mm)

- Repeatability ± 12µm
- 120µm adjustable Setrite® feature in the chuck body on sizes up to 265mm allows user to adjust to virtually zero; saves time and extends top jaw life
- High speed - up to 6000 rpm
- Extra large bores for bar work, supplied with cover plate for closed centre
- Utilize the machine's existing actuating cylinder.. including short stroke versions
- 1.5mm x 60° or 1/16 x 90° jaw serrations available
- Steel body
- Easily removable blank wedge sleeve in the chuck allows customer to bore and thread the sleeve of the chuck to the existing drawtube or bar We can supply pre-threaded sleeve at nominal charge
- 3-Jaw sizes available: 170mm, 210mm and 265mm
- Twelve month warranty

Dimensional and Performance Data



Size mm	Mount (D)Direct (I)Indirect	RPM	Model No.	Jaw Stroke	Sleeve Stroke	Bore Size	Master Jaw Type	Operating Force kN	Total Static Grip kN	Mass (kg)
170	A2-4(I)	6000	9829-17010	4.3	16	52	1.5mm x 60°	24	57	14
170	A2-5(D)	6000	9827-18100	4.3	16	52	1.5mm x 60°	24	57	14
210	A2-5(I)	5000	9821-32223	4.3	16	65	1.5mm x 60°	39	92	20
210	A2-6(D)	5000	9827-22000	4.3	16	65	1.5mm x 60°	39	92	20
210	A2-8(I)	5000	9821-52223	4.3	16	65	1.5mm x 60°	39	92	20
265	A2-6(I)	4200	9821-42723	4.9	18.5	77	1.5mm x 60°	48	114	40
265	A2-8(D)	4200	9827-27010	4.9	18.5	77	1.5mm x 60°	48	114	40

Chuck Ø A	Mtg	B	C	D	F	E* Max	E* Min	G	H**	J	T	S	W
170	A4	93	96	82.55	20	56	45	5/16 UNFx1/2	M10x25(6)	M10	M60	12	31
170	A5	93	96	104.78	20	56	45	5/16 UNFx1/2	M10x100(3)	M10	M60	12	31
210	A5	93	97	104.78	25	67	58	3/8 UNFx3/4	M10x25(6)	M12	M70	14	40
210	A6	93	97	133.35	25	67	58	3/8 UNFx3/4	M12x100(3)	M12	M70	14	40
210	A8	93	97	133.35	25	67	58	3/8 UNFx3/4	M16x25(6)	M14	M70	14	40
265	A6	108.5	112.5	133.35	30	88	65	1/2 UNFx3/4	M12x25(6)	M12	M80	16	40
265	A8	107.5	11.5	171.45	30	88	65	1/2 UNFx3/4	M16x110(3)	M12	M80	16	40

(T) Draw Tube Thread Blank

*With T-nut as shown in forward position with chuck jaws in midstroke. **UNC mounting bolts available.

2 & 3 Jaw Setrite® Power Chucks

Open or Closed Centres

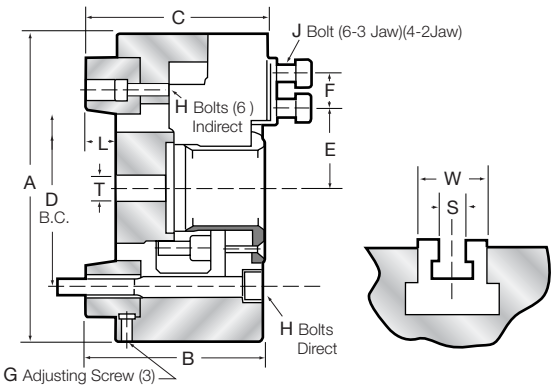
- Repeatability ± .12µm
- 120µm adjustable Setrite® feature in the chuck body on sizes up to 380mm that allows you to true to virtually zero; saves time and extends top jaw life.
- High speed - up to 5000 rpm
- Large bore for bar work; supplied with cover plate for closed centre operation
- Utilize the machine's existing actuating cylinder including short stroke Japanese types
- 1.5mm x 60° fine serrations or 1/16 x 90° master jaws. Master jaws are designed to accept top tooling from most imported lathes
- Steel body
- Easily removable blank wedge sleeve in the chuck allows customer to bore and thread the sleeve of the chuck to the existing drawtube or bar. PBI can supply pre-threaded sleeve at nominal charge.
- Standard 3-Jaw sizes available: 165mm to 380mm
- Standard 2-Jaw sizes available: 165mm to 305mm
- Larger sizes available upon request
- Twelve month warranty

Chuck Size	Mount (D)Direct (I)Indirect	RPM	Model No. ①	Jaw Stroke	Sleeve Stroke	Bore	Bar Capacity	Master Jaw Type	Operating Force kN	Grip Force kN	Wt (kg)
3-Jaw											
165	A2-4(I)	5500	9821-21723	4.3	16	42	43	1.5mm x 60°	24	57	13
165	A2-5(D)	5500	9821-31723	4.3	16	42	43	1.5mm x 60°	24	57	13
210	A2-5(I)	5000	9821-32123	4.3	16	2.05	52	1.5mm x 60°	36	85	22
210	A2-6(D)	5000	9821-42123	4.3	16	2.05	52	1.5mm x 60°	36	85	22
254	A2-6(I)	4000	9821-42623	4.9	18.5	2.56	65	1.5mm x 60°	48	114	36
254	A2-8(D)	4000	9821-52623	4.9	18.5	2.56	65	1.5mm x 60°	48	114	36
305	A2-8(I)	3300	9821-53123	4.9	18.5	3.54	90	1.5mm x 60°	60	142	57
305	A2-11(D)	3300	9821-63123	4.9	18.5	3.54	90	1.5mm x 60°	60	142	57
380	A2-8(I)	2500	9821-53823	5.3	20	4.92	126	1.5mm x 60°	75	177	98
380	A2-11(D)	2500	9821-63823	5.3	20	4.92	126	1.5mm x 60°	75	177	98
2-Jaw											
165	A2-4(I)	5500	9821-21723	4.3	16	42	43	1.5mm x 60°	16	38	14
165	A2-5(D)	5500	9821-31723	4.3	16	42	43	1.5mm x 60°	16	38	14
210	A2-5(I)	5000	9821-32123	4.3	16	2.05	52	1.5mm x 60°	24	57	23
210	A2-6(D)	5000	9821-42123	4.3	16	2.05	52	1.5mm x 60°	24	57	23
254	A2-6(I)	4000	9821-42623	4.9	18.5	2.56	65	1.5mm x 60°	32	76	38
254	A2-8(D)	4000	9821-52623	4.9	18.5	2.56	65	1.5mm x 60°	32	76	38
305	A2-8(I)	3300	9821-53123	4.9	18.5	3.54	90	1.5mm x 60°	40	95	61
305	A2-11(D)	3300	9821-63123	4.9	18.5	3.54	90	1.5mm x 60°	40	95	61

① NOTE: For 1/16 x 90° Base jaws change last two digits of model number from 23 to 10 (Example 9821-21710).
Chuck sizes 165mm to 380mm are available in 60° or 90° fine serrations only.

Dimensional and Performance Data

Chuck Size A	A	B	C	D	F	E* Max	E* Min	G	H**	J	Max T	S	W
165	A4 (I)	93	96	83	20	54	41	5/16 UNFx1/2	M10x25(6)	10MM	M52	12	31
165	A5(D)	93	96	105	20	54	41	5/16 UNFx1/2	M10x100(3)	10MM	M52	12	31
205	A5(I)	93	97	105	25	67	27	3/8 UNFx3/4	M10x35(6)	12MM	M68	14	40
205	A6(D)	93	97	133	25	67	27	3/8 UNFx3/4	M12x100(3)	12MM	M68	14	40
254	A6(I)	108	112	133	30	83	60	1/2 UNFx3/4	M12x25(6)	12MM	M80	16	40
254	A8(D)	107	111	171	30	83	60	1/2 UNFx3/4	M16x110(3)	12MM	M80	16	40
305	A8(I)	121	126	171	30	109	73	1/2 UNFx5/8	M16x30(6)	14MM	M110	18	46
305	A11(D)	121	126	235	30	109	73	1/2 UNFx5/8	M20x130(3)	14MM	M110	18	46
380	A8(I)	148	152	171	43	127	99	1/2 UNFx3/4	M16x30(6)	20MM	M120	22	60
380	A11(D)	148	152	235	43	127	99	1/2 UNFx3/4	M20x150(6)	20MM	M140	22	60



(T) Draw Tube Thread Blank

*With T-nut as shown in forward position with chuck jaws in midstroke.

**UNC mounting bolts available.

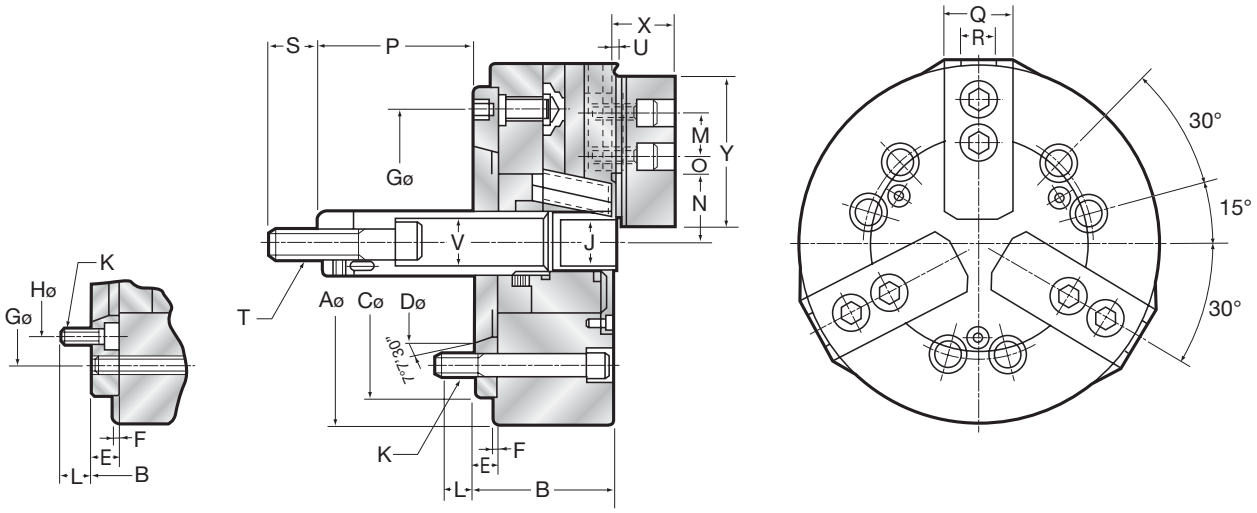
HOW TO ORDER: State quantity, model number of chuck, machine make & models, and shipping instructions.

3 Jaw Closed Centre Chuck with A Mountings

Imperial Design
ACA Series 6" through 24" Chucks

- All steel body
- Repeatability 25µm
- 1.5mm x 60° master jaws up to 18"
- 3mm x 60° on sizes 21" and 24", for larger sizes ref. page 68
- Hardened jaw ways, master jaws and internal parts

Model No.	Mount	Jaw Stroke Dia	Sleeve Stroke	Gripping Capacity Max	Gripping Capacity Min	Draw Bar Pull lb/f	Grip Force lb/f	Max RPM	Wt kg
ACA6-A5	A2-5	.334	.787	6.496	.784	4,025	11,801	5270	14
ACA8-A6	A2-6	.346	.827	8.267	.905	5,619	16,860	4760	27
ACA10-A6	A2-6	.346	.984	10.000	.945	6,519	24,279	4010	40
ACA10-A8	A2-8	.346	.984	10.000	.945	6,519	24,279	4010	40
ACA12-A6	A2-6	.413	1.181	11.968	1.023	9,217	35,068	3380	67
ACA12-A8	A2-8	.413	1.181	11.968	1.023	9,217	35,068	3380	66
ACA15-A8	A2-8	.630	1.378	15.000	2.795	18,434	55,976	3040	105
ACA15-A11	A2-11	.630	1.378	15.000	2.795	18,434	55,976	3040	103
ACA18-A8	A2-8	.630	1.378	17.716	5.296	18,434	55,976	2710	134
ACA18-A11	A2-11	.630	1.378	17.716	5.296	18,434	55,976	2710	132
ACA21-A8	A2-8	.630	1.378	20.866	2.441	18,434	61,371	1940	201
ACA21-A11	A2-11	.630	1.378	20.866	2.441	18,434	61,371	1940	198
ACA21-A15	A2-15	.630	1.378	20.866	2.441	18,434	61,371	1940	190
ACA24-A11	A2-11	.630	1.378	24.015	5.984	18,434	61,371	1760	241
ACA24-A15	A2-15	.630	1.378	24.015	5.984	18,434	61,371	1760	235



HOW TO ORDER: State quantity, model number of chuck and shipping instructions.

ACA Series Dimensional Data

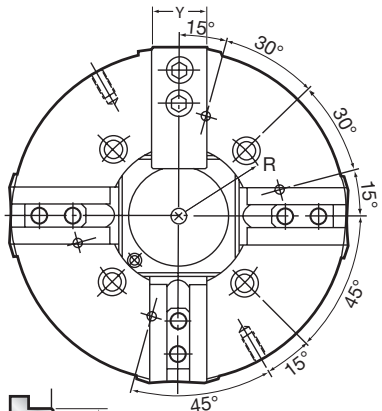
Imperial Design

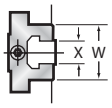
	ACA6-A5 (I)	ACA8-A6 (I)	ACA10-A6 (I)	ACA10-A8 (I)	ACA12-A6 (I)	ACA12-A8 (I)	ACA15-A8 (I)	ACA15-A11 (I)	ACA18-A8 (I)	ACA18-A11 (I)	ACA21-A8 (I)	ACA21-A11 (I)	ACA21-A15 (D)	ACA24-A11 (I)	ACA24-A15 (D)
A	6.49	8.28	10.00	10.00	11.97	11.97	15.00	15.00	17.72	17.72	20.87	20.87	20.87	24.02	24.87
B	3.31	3.89	4.09	4.01	4.72	4.64	5.19	5.19	5.19	5.19	5.75	5.75	5.75	5.75	5.75
C	5.51	6.69	8.66	8.66	8.66	8.66	11.81	11.81	11.81	11.81	14.96	14.96	14.96	14.96	14.96
D	3.251	4.188	41.88	5.501	4.188	5.501	5.501	7.751	5.501	7.751	5.501	7.751	11.251	7.751	11.251
E.	591	.669	.787	.709	.787	.709	.866	.866	.866	.866	1.063	1.063	1.063	1.063	1.063
F	.197	.197	.197	.197	.236	.236	.236	.236	.236	.236	.236	.236	.236	.236	.236
G	4.567	5.906	6.748	7.480	6.748	7.480	9.252	10.236	9.252	10.236	13.000	13.000	13.000	13.000	13.000
H	4.126	5.256	5.256	6.748	5.256	6.748	6.748	9.252	6.748	9.252	6.748	9.252	13.000	9.252	13.000
J	.826	.948	1.338	1.338	1.338	1.338	-	-	-	-	-	-	-	-	-
K	6-M10	6-M12	6-M12	6-M16	6-M12	6-M16	6-M16	6-M20	6-M16	6-M20	6-M16	6-M20	6-M22	6-M20	6-M22
L	.551	.708	.708	.984	.708	.984	.905	.130	.905	.130	.905	1.103	1.338	1.102	1.338
M	.787	.984	1.181	1.181	1.181	1.181	1.693	1.693	1.693	1.693	2.362	2.362	2.362	2.362	2.362
N															
max.	1.488	1.823	2.012	2.012	2.401	2.401	3.051	3.051	4.252	4.252	3.386	3.386	3.386	4.921	4.921
min.	1.319	1.649	1.838	1.838	2.195	2.195	2.736	2.736	3.937	3.937	3.071	3.071	3.071	4.606	4.606
O															
max.	.541	.876	1.210	1.210	1.919	1.919	1.919	1.919	1.919	1.919	3.381	3.381	3.381	3.381	3.381
min.	.305	.463	.443	.443	.492	.492	.915	.915	.915	.915	1.082	1.082	1.082	1.082	1.082
P															
max.	3.327	3.700	3.897	3.976	4.645	4.724	3.228	3.228	2.756	2.756	2.756	2.756	2.756	2.756	2.756
min.	2.539	2.874	2.913	2.992	3.504	3.543	1.850	1.850	1.378	1.378	1.378	1.378	1.378	1.378	1.378
Q	1.220	1.378	1.575	1.575	1.968	1.968	1.968	1.968	1.968	1.968	2.559	2.559	2.559	2.559	2.559
R	.422	.551	.630	.630	.708	.708	1.004	1.004	1.004	1.004	.984	.984	.984	.984	.984
S	1.417	1.417	1.417	1.417	1.417	1.417	2.165	2.165	2.165	2.165	2.165	2.165	2.165	2.165	2.165
T	M16x2.0	M20x2.5	M20x2.5	M20x2.5	M24x3.0	M24x3.0	M30x3.5	M30x3.5	M30x3.5	M30x3.5	M30x3.5	M30x3.5	M30x3.5	M30x3.5	M30x3.5
U	.157	.197	.197	.197	.197	.197	.079	.079	.079	.079	.118	.118	.118	.118	.118
V	1.338	1.496	1.771	1.771	1.968	1.968	2.362	2.362	2.362	2.362	2.362	2.362	2.362	2.362	2.362
X	1.378	1.653	1.811	1.811	2.126	2.126	2.401	2.401	2.401	2.401	2.795	2.795	2.795	2.795	2.795
Z	2.834	3.740	4.331	4.331	5.078	5.078	5.315	5.315	5.315	5.315	7.086	7.086	7.086	7.086	7.086

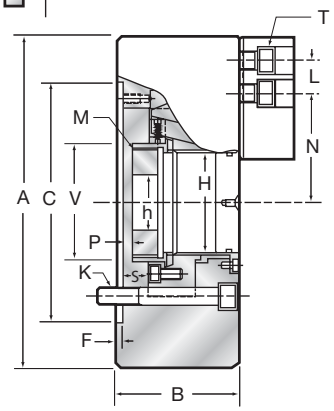
(I) Indirect mount (D) Direct mount

4 Jaw Universal Power Chuck

Imperial Design 4 ATL Series
8", 10" & 12" Chucks







- All steel body
- Hardened jaw way and internal parts
- ± 12µm repeatability
- 1.5mm x 60° master jaws
- 4-Jaw universal design

Model No.	Jaw Stroke Dia	Sleeve Stroke	Gripping Capacity Max	Gripping Capacity Min①	Bar Pull lb/f	Draw Force lb/f	Grip Max RPM②	Wt kg
4ATL8-A5	.291	.630	8.00	.905	5,200	12,855	5000	23
4ATL8-A6	.291	.630	8.00	.905	5,200	12,855	5000	23
4ATL10-A6	.346	.748	10.00	.945	6,395	16,600	4200	35
4ATL10-A8	.346	.748	10.00	.945	6,395	16,600	4200	35
4ATL12-A6	.417	.905	12.00	1.023	8,235	21,535	3300	52
4ATL12-A8	.417	.905	12.00	1.023	8,235	21,535	3300	52
4ATL12-A11	.417	.905	12.00	1.023	8,235	21,535	3300	52

① Small diameters can be gripped using offset pointed jaws
② In balanced Condition

Dimensional Data

MODEL	4ALT-8	4ALT-10	4ALT-12
A	8.25	10	12
B	3.58	3.94	4.33
C	6.693	8.661	8.661
F	.197	.197	.236
H	2.05	3.03	3.58
K	M12	M16	M16
L	.984	1.18	1.18
M	M60 max	M85 max	M100 max
N			
max.	2.69	3.34	4.21
min	1.95	2.40	2.82
P			
max.	.315	.315	.571
min	-.06	-.06	-.06
R	2.625	3.375	3.375
S	.630	.748	.905
T	M12	M12	M16
V	4.25	3.70	2.60
W	1.45	1.65	2.05
X	.551	.630	.827
H	1.18	1.77	2.05
Y	1.38	1.57	1.97

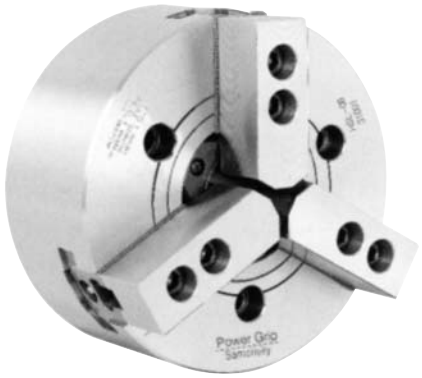
HOW TO ORDER: State quantity, model number of chuck and shipping instructions.

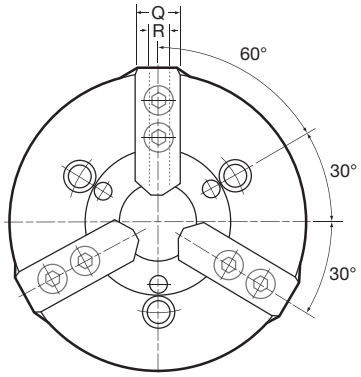
Pratt Burnerd International
600 Group

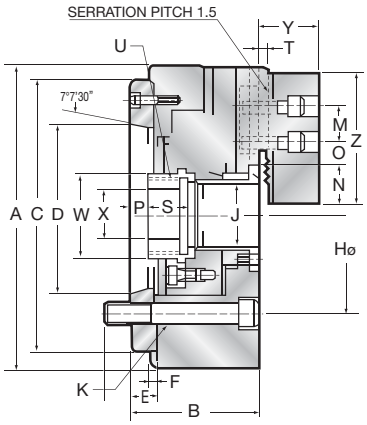
3 Jaw Open Centre 'Long Stroke' Power Chuck

Imperial design ALS Series 6" through 12" Chucks

- Extended jaw stroke
- ± 12µm repeatability
- 1.5mm x 60° master jaws
- All steel body
- Hardened jaw ways, master jaws and internal parts
- Open centre







Model No.	Jaw Stroke Dia	Sleeve Stroke	Gripping Capacity Max	Gripping Capacity Min	Bar Pull lb/f	Force lb/f	Draw Max RPM	Grip Wt kg	
ALS6-A5 (D)	1.102	.787	.590	6.49	1.102	6,272	7,015	4500	14
ALS8-A6 (D)	1.771	.984	.748	8.46	1.259	9,239	11,016	3300	25
ALS8-A8 (I)	1.771	.984	.748	8.46	1.259	9,239	11,016	3300	25
ALS10-A6 (I)	2.086	1.181	.866	10.00	1.653	12,094	14,169	3000	45
ALS10-A8 (D)	2.086	1.181	.866	10.00	1.653	12,094	14,169	3000	45
ALS12-A6 (I)	2.480	1.377	.984	11.96	1.692	15,579	18,075	2200	78
ALS12-A8(D)	2.480	1.377	.984	11.96	1.692	15,579	18,075	2200	78
ALS12-A11 (I)	2.480	1.377	.984	11.96	1.692	15,579	18,075	2200	78

(I) Indirect mount (D) Direct mount

Dimensional Data

MODEL	ALS6-A5	ALS8-A6	ALS8-A8	ALS10-A6	ALS10-A8	ALS12-A6	ALS12-A8	ALS12-A11
A	6.65	8.46	8.46	10.00	10.00	11.97	11.97	11.97
B	5.91	6.69	7.17	5.20	5.24	9.45	9.17	9.33
C	5.512	6.693	6.693	8.661	8.661	8.661	8.661	8.661
D	3.250	4.188	5.501	4.188	5.501	4.188	5.501	7.751
E	.622	.699	.738	1.014	.738	.945	.669	.827
F	.197	.197	.197	.197	.197	.197	.197	.197
H	4.126	5.252	6.748	5.252	6.748	5.252	6.748	9.250
J	1.102	1.771	1.771	2.086	2.086	2.480	2.480	2.480
K	M10	M12	M16	M12	M16	M12	M16	M20
M	.787	.984	.984	1.181	1.181	1.181	1.181	1.181
N								
max.	1.545	2.086	2.086	2.460	2.460	2.933	2.933	2.933
min.	1.151	1.594	1.594	1.870	1.870	1.244	1.244	1.244
O								
max.	.659	.817	.817	1.053	1.053	1.505	1.505	1.505
min.	.364	.462	.462	.443	.443	.502	.502	.502
P								
max.	.394	.118	.118	.236	.236	.323	.323	.323
min.	.197	-.630	-.630	-1.102	-1.102	-.661	-.661	-.661
Q	1.023	1.378	1.378	1.575	1.575	1.969	1.969	1.969
R	.472	.551	.551	.630	.630	.826	.826	.826
S	.945	1.260	1.260	1.575	1.575	1.496	1.496	1.496
T	.079	.079	.079	.079	.079	.118	.118	.118
U								
max.	M38x1.5	M55x2.0	M55x2.0	M65x2.0	M65x2.0	M75x2.0	M75x2.0	M75x2.0
W	1.771	2.480	2.480	2.874	2.874	3.268	3.268	3.268
X	.787	1.181	1.181	1.771	1.771	1.968	1.968	1.968
Y	1.141	1.535	1.535	1.693	1.693	2.047	2.047	2.047
Z	2.598	3.740	3.740	4.331	4.331	4.370	4.370	4.370

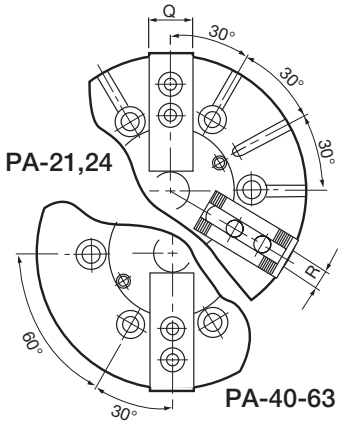
HOW TO ORDER: State quantity, model number of chuck and shipping instructions

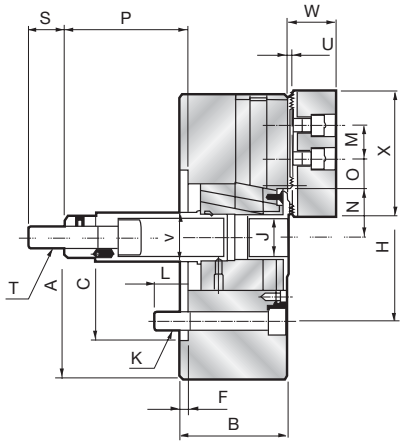
3 Jaw Wedge Type Closed Centre Power Chuck

Imperial Design PA Series
21" through 63" Large Diameter Chucks

- All steel body
- Standard 3 jaw closed centre wedge chuck for general machining
- Hardened jaw ways and all internal parts
- Standard metric serrations 3.0mm serration pitch

Model No.	Jaw Mount Width*	Stroke Dia	Sleeve Stroke	Gripping Capacity Max	Gripping Capacity Min	Bar Pull lb/f	Draw Force lb/f	Grip Max RPM	Wt kg
PA21-A11	1.06	.630	1.378	20.87	2.68	18,400	61,350	1940	167
PA24-A15	1.06	.630	1.378	24.02	5.98	18,400	61,350	1760	224
PA-40	1.06	1.181	2.244	39.37	11.42	40,450	89,900	500	601
PA-50	1.06	1.181	2.244	49.21	11.42	40,450	89,900	450	800
PA-55	1.06	1.181	2.244	53.12	11.42	40,450	89,900	400	1100
PA-63	1.06	1.181	2.244	62.99	11.42	40,450	89,900	350	1500





Dimensional Data

MODEL	PA-21	PA-24	PA-40	PA-50	PA-55	PA-63
A	20.87	24	39.37	49.21	55	63
B	4.92	4.92	7.09	7.09	7.8	7.8
C	14.96	14.96	20.47	20.47	28.35	28.35
F	.236	.236	.314	.314	.314	.314
H	13.0	13.0	18.25	18.25	25.5	25.5
J	-	-	-	-	-	-
K	6-M22	6-M22	6-M24	6-M24	6-M24	6-M24
L	1.22	1.22	1.38	1.38	1.38	1.38
M	2.36	2.36	3.94	3.94	3.94	3.94
N						
max.	3.38	4.92	5.77	5.77	5.77	5.77
min	3.07	4.61	5.18	5.18	5.18	5.18
O						
max.	3.68	3.68	8.86	9.25	16.73	20.67
min	.96	.96	1.18	1.18	1.18	1.18
P						
max.	3.82	3.82	1.38	1.38	1.38	1.38
min	2.44	2.44	-.87	-.87	-.87	-.87
Q	2.56	2.56	3.35	3.35	3.35	3.35
R	.984	.984	.984	.984	.984	.984
S	2.165	2.17	2.539	2.559	2.559	2.559
T	M30x3.5	M30x3.5	M36x4.0	M36x4.0	M36x4.0	M36x4.0
U	.118	.118	-.159	-.159	-.159	-.159
V	2.36	2.36	-	-	-	-
W	2.8	2.8	4.17	4.17	4.17	4.17
X	7.09	7.09	7.87	7.87	7.87	7.87

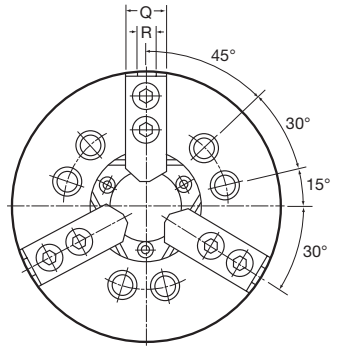
HOW TO ORDER: State quantity, model number of chuck and shipping instructions.

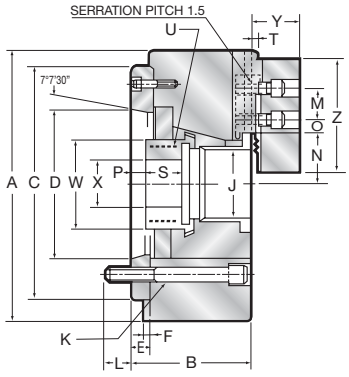
Pratt Burnerd International
600 Group

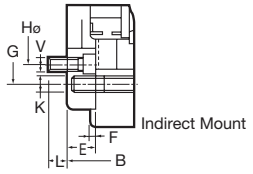
ATL Series Power Chuck

Imperial Design
6" through 12" Diameter

- Easy retrofit
- Interchangeable top tooling 1.5mm x 60° serrations
- High speed
- Hardened jaw ways, master jaws and internal parts
- Large bore, plus quick change cover plate for closed centre applications.
- Chuck accuracy plus/minus 12µm repeatability
- Great price and value
- Twelve month warranty







HOW TO ORDER: State quantity, Model Number of chuck and shipping instructions.

Model No.	Mount	Bore Dia	Jaw Stroke Dia	Sleeve Stroke	Gripping Capacity Max	Gripping Capacity Min	Draw Bar Pull lb/f	Grip Force lb/f	Max RPM	Wt kg
ATL6-A5 (D)	A2-5	1.771	.216	.472	6.65	.590	4,945	12,813	6000	14
ATL8-A5 (I)	A2-5	2.047	.291	.630	8.27	.512	7,824	19,332	5000	24
ATL8-A6 (D)	A2-6	2.047	.291	.630	8.27	.512	7,824	19,332	5000	24
ATL10-A6 (I)	A2-6	2.952	.346	.748	10.00	1.220	9,667	24,953	4200	41
ATL10-A8 (D)	A2-8	2.952	.346	.748	10.00	1.220	9,667	24,953	4200	41
ATL12-A6 (I)	A2-6	3.582	.417	.905	11.97	1.653	12,363	32,372	3300	67
ATL12-A8 (D)	A2-8	3.582	.417	.905	11.97	1.978	12,363	32,372	3300	64
ATL12-A11 (I)	A2-11	3.582	.417	.905	11.97	1.978	12,363	32,372	3300	64

(I) Indirect mount (D) Direct mount

Dimensional Data

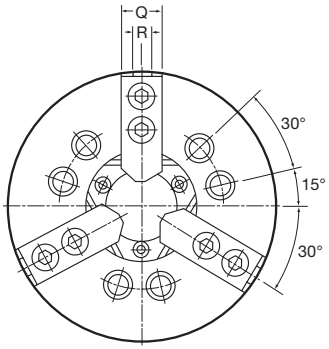
MODEL	ATL6-A5	ALT8-A5	ALT8-A6	ATL10-A6	ATL10-A8	ATL12-A6	ATL12-A8	ATL12-A11
A	6.63	8.26	8.26	10.00	10.00	11.97	11.97	11.97
B	3.582		4.055	4.724	4.449	5.079	4.832	
C	5.512	6.693	6.693	8.661	8.661	8.661	8.661	8.661
D	3.250	3.250	4.188	4.188	5.501	4.188	5.501	7.751
E		.590		.669	.984	.708	.984	.708
F	.167	.167	.167	.167	.167	.236	.236	.236
G	-	5.252	5.252	6.748	6.748	6.748	6.748	6.748
H	4.126	4.126	-	5.252	6.748	5.252	6.748	9.250
J	1.771	2.047	2.047	2.953	2.953	3.582	3.582	3.582
K	6-M10	6-M12	6-M12	6-M16	6-M16	6-M16	6-M16	6-M16
L	.630		.708	.728	.945	.728	.984	
M	.787	.984	.984	1.181	1.181	1.181	1.181	1.181
N max	1.259	1.523	1.523	2.007	2.007	2.413	2.413	2.413
N min	1.151	1.378	1.378	1.834	1.834	2.204	2.204	2.204
O max	.895	1.171	1.171	1.329	1.326	1.801	1.801	1.801
O min	.364	.581	.581	.581	.581	.620	.620	.620
P max	1.023		1.240	1.319	1.043	1.299	1.299	1.299
P min	.551		.610	.571	.295	.394	.394	.394
Q	1.220	1.378	1.378	1.575	1.575	1.968	1.968	1.968
R	.472	.551	.551	.630	.630	.827	.827	.827
S	.748	.807	.807	.984	.984	1.102	1.102	1.102
T	.0789	.0789	.0789	.0789	.0789	.0789	.0789	.0789
U max	M55x2.0	M60x2.0	M60x2.0	M85x2.0	M85x2.0	M90x2.0	M100x2.0	
V	M10	M10	-	6-M12	-	6-M12		6-M20
X	.787	1.181	1.181	1.771	1.771	1.968	1.968	1.968
Y	1.142	1.535	1.535	1.693	1.693	2.009	2.009	2.009
Z	2.834	3.740	3.740	4.331	4.331	4.370	4.370	4.370

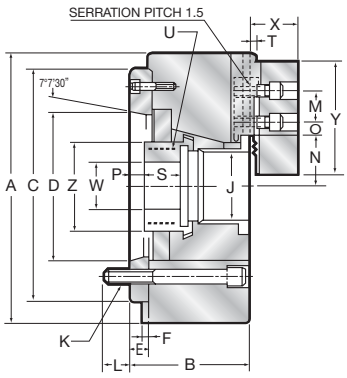
Large Diameter ATL Series Open Centre Power Chuck

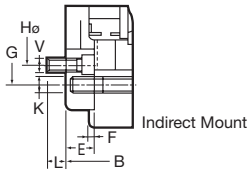
Imperial Design 15" through 24"

Direct replacement chucks for Kitagawa B Series

- Easy retrofit
- Interchangeable top tooling 1.5mm x 60° serrations 15" and 18" chucks and 3mm x 60°on 21" and 24" chucks
- High speed
- Hardened jaw ways, master jaws and internal parts
- Large bore, plus quick change cover plate for closed centre applications
- Chuck accuracy plus/minus 12µm repeatability
- Twelve month warranty







HOW TO ORDER: State quantity, Model Number of chuck and shipping instructions.

Model No.	Mount	Bore Dia	Jaw Stroke Dia	Sleeve Stroke	Gripping Capacity Max	Gripping Capacity Min	Draw Bar Pull lb/f	Grip Force lb/f	Max RPM	Wt kg
ATL15-A8 (I)	A2-8	4.626	.417	.905	15.00	1.181	15,961	40,465	2500	134
ATL15-A11 (D)	A2-11	4.626	.417	.905	15.00	1.181	15,961	40,465	2500	127
ATL18-A11 (D)	A2-11	4.626	.417	.905	17.71	1.181	15,961	40,465	2000	178
ATL21-A11 (I)	A2-11	5.512	.417	.905	20.86	3.425	20,231	43,940	1700	246
ATL21-A15 (D)	A2-15	5.512	.417	.905	20.86	3.425	20,231	43,940	1700	246
ATL24-A11 (I)	A2-11	6.496	.417	.905	24.01	4.331	20,231	43,940	1400	305
ATL24-A15 (D)	A2-15	6.496	.417	.905	24.01	4.331	20,231	43,940	1400	305

(I) Indirect mount (D) Direct mount

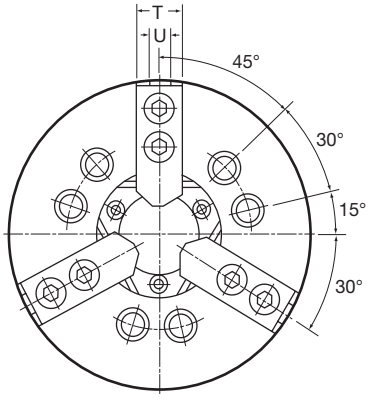
Dimensional Data

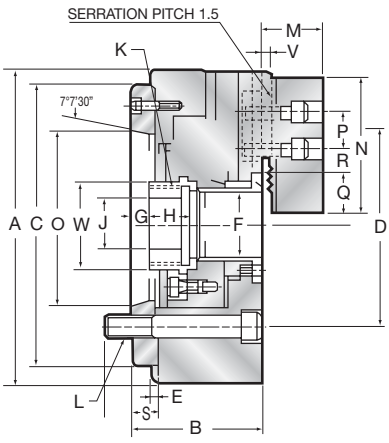
MODEL	ATL15-A8	ATL15-A11	ATL18-A11	ATL21-A11	ATL21-A15	ATL24-A11	ATL24-A15
A	15.00	15.00	17.72	20.86	20.86	24.01	24.01
B	6.299	5.860	5.860	6.338	6.338	6.693	6.693
C	11.811	11.811	14.960	14.960	14.960	14.960	14.960
D	5.501	7.751	7.751	11.251	11.251	11.251	11.251
E	1.299	.866	.866	.866	1.063	.866	1.063
F	.234	.234	.234	.234	.234	.234	.234
G	9.252	9.252	9.250	13.000	13.000	13.000	13.000
H	6.748	9.552	-	9.252	13.000	9.252	13.000
J	4.626	4.626	4.626	5.511	5.511	6.496	6.496
K	6-M20	6-M20	6-M20	6-M22	6-M22	6-M22	6-M22
L	.945	1.102	1.102	1.338	1.338	1.378	1.378
M	1.693	1.693	1.693	2.362	2.362	2.362	2.362
N							
max	3.228	3.228	3.228	3.878	3.878	4.252	4.252
min	3.016	3.016	3.016	3.669	3.669	4.043	4.043
O							
max	1.722	1.722	3.081	3.445	3.445	4.626	4.626
min	.718	.718	.718	.846	.846	.846	.846
P							
max	1.732	1.142	1.299	1.496	1.496	1.850	1.850
min	.827	.236	.394	.590	.590	.945	.945
Q	.244	.244	.244	.256	.256	.256	.256
R	.866	.866	.866	.866	.866	.866	.866
S	1.555	1.555	1.555	1.555	1.555	1.575	1.575
T	.197	.197	.197	.197	.197	.197	.197
U max	M130x2.0	M130x2.0	M130x2.0	M155x2.0	M155x2.0	M175x2.0	M175x2.0
V	6-M16	-	-	6-M20	-	6-M20	-
W	2.362	2.362	2.362	3.146	3.146	3.146	3.146
X	2.756	2.756	2.756	2.874	2.874	2.874	2.874
Y	6.496	6.496	6.496	7.046	7.046	7.046	7.046
Z	5.472	5.472	5.472	6.693	6.693	7.362	7.362

Large Bore Power Chucks

Imperial Design
ATLB Series 6", 8", 10" & 12"

Model No.	Mount	Bore Dia	Jaw Stroke Dia	Sleeve Stroke	Gripping Capacity Max	Gripping Capacity Min	Draw Bar Pull lb/f	Grip Force lb/f	Max RPM	Wt kg
ATLB6-A5	A2-5	2.047	.252	.591	6.89	.649	5,624	12,815	6000	12
ATLB8-A5	A2-5	2.598	.291	.689	8.27	.905	7,928	19,554	5000	23
ATLB8-A6	A2-6	2.598	.291	.689	8.27	.905	7,928	19,554	5000	23
ATLB10-A6	A2-6	3.030	.346	.748	10.00	1.220	24,953	19,554	4200	40
ATLB10-A8	A2-8	3.030	.346	.748	10.00	1.220	24,953	19,554	4200	40
ATLB12-A8	A2-8	4.055	.417	.905	12.40	2.126	12,363	32,376	2800	56
ATLB12-A11	A2-11	4.055	.417	.905	12.40	2.126	12,363	32,376	2800	56





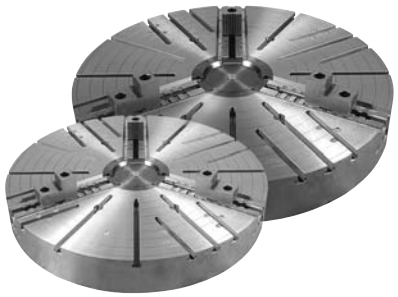
Dimensional Data

MODEL	ATLB6-A5	ATLB8-A5	ATLB8-A6	ATLB10-A6	ATLB10-A8	ATLB12-A8	ATLB12-A11
A	6.889	8.267	8.267	10.00	10.00	12.401	12.401
B	4.173	5.354	5.118	4.724	4.449	5.512	5.827
C	5.512	6.693	6.693	8.661	8.661	11.811	11.811
D	4.126	5.252	5.252	6.748	6.748	9.252	9.252
E	.197	.197	.197	.167	.167	.236	.236
F	2.204	2.598	2.598	3.033	3.033	4.055	4.055
G							
max.	.551	.275	.275	1.319	1.319	.315	.315
min.	-.039	-.354	-.354	.571	.295	-.590	-.590
H	.689	1.082	1.082	.984	.984	1.102	1.102
J	.787	1.578	1.578	1.771	1.771	1.968	1.968
K	M60x2.0	M74x1.5	M74x1.5	M85x2.0	M85x2.0	M112x2.0	M112x2.0
L	6-M10x95	6-M12x120	6-M12x120	6-M16	6-M16	6-M20x130	6-M20x130
M	1.279	1.535	1.535	1.693	1.693	1.988	1.988
N	2.834	3.740	3.740	6.748	6.748	4.370	4.370
O	3.201	3.201	4.188	4.188	5.501	5.501	7.751
P	.787	.984	1.181	1.181	1.181	1.181	1.181
Q							
max.	1.496	1.799	1.799	2.007	2.007	2.649	2.649
min.	1.370	1.653	1.653	1.834	1.834	2.441	2.441
R							
max.	.856	.935	.935	1.329	1.801	1.801	1.801
min.	.903	.462	462	.581	.620	.620	.620
S	1.181	1.969	1.733	.984	.708	1.417	1.732
T	1.229	1.378	1.378	1.575	1.575	1.968	1.968
U	.472	.551	.551	.630	.630	.708	.708
V	.078	.078	.078	.078	.078	.078	.078
W	2.559	3.149	3.149	3.701	3.701	4.882	4.882

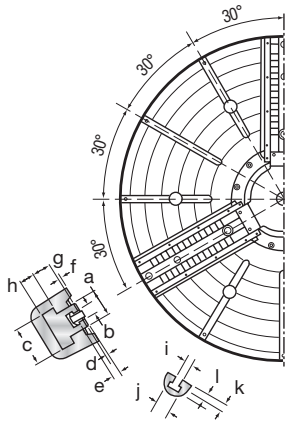
HOW TO ORDER: State quantity, model number of chuck and shipping instructions.

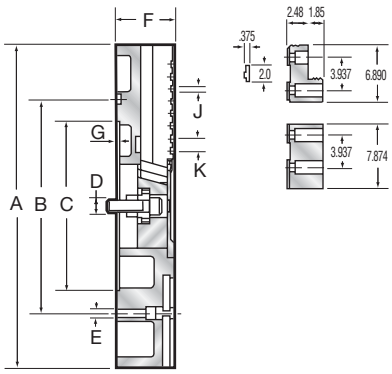
Large Diameter 3 Jaw Power Chuck

Imperial Design
HP-D Series 40" through 63"
Closed Centre Chucks



- Closed centre VTL style power chucks
- Parallel T-slots in chuck face for optional boring mill jaws
- Also available in 4 jaw and 6 jaw versions or with adjustable base jaw feature
- Built to order, consult factory for further information





Model No.	Per Jaw	Stroke Sleeve Stroke	Bar Pull lb/f	Draw Force lb/f	Grip Max RPM	Wt lbs
HP-D1000	.591	2.244	40,500	90,000	630	600
HP-D1250	.591	2.244	40,500	90,000	500	800
HP-D1400	.591	2.244	40,500	90,000	450	1100
HP-D1600	.945	2.244	45,000	81,000	400	1600

Dimensional Data

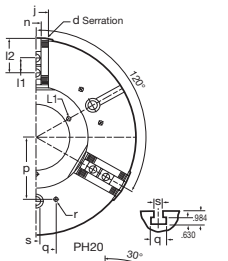
MODEL	HP-D1000	HP-D1250	HP-D1400	HP-D1600
A	39.37	49.21	55.9	63
B	25.984	25.984	33.858	33.858
C	20.472	20.472	28.346	28.346
D	M36	M36	M36	M36
E	1.024	1.024	1.024	1.024
F	7.087	7.087	7.795	8.661
G	.315	.315	.315	.315
J	.749	.749	.749	.749
K	1.50	1.50	1.50	1.50
a	3.346	3.346	3.346	4.331
b	1.181	1.181	1.181	1.181
c	4.921	4.921	4.921	4.921
d	.236	.236	.236	.236
e	1.024	1.024	1.024	1.024
f	.157	.157	.157	.157
g	2.559	2.559	2.559	2.559
h	1.575	1.575	1.575	1.575
I	.866	.866	.866	.866
J	1.457	1.457	1.457	1.457
K	1.496	1.496	1.496	1.496
L	.866	.866	.866	.866

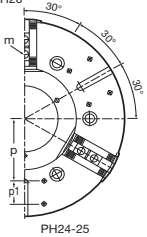
HOW TO ORDER: State quantity, model number of chuck and shipping instructions.

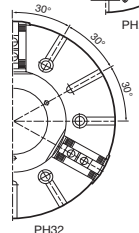
3 Jaw Large Bore Wedge Type Power Chucks

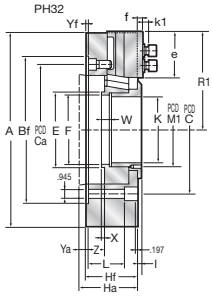
Imperial Design
PHB Series
20", 24", 25" & 32" Chucks

- Large bore
- Hardened jaw ways and all internal parts
- Repeatability ± 35µm
- All steel body
- 3mm 60° master
- Twelve month warranty









Model No.	Chuck Width Ha	Thur Hole Dia	Jaw Stroke Dia	Sleeve Stroke	Gripping Max	Capacity Min	Draw Bar Pull lb/f	Grip Force lb/f	Max RPM	Wt kg
PHB20-A11	6.653	6.693	.551	1.575	19.68	2.677	15,740	80,715	1800	130
PHB24-A11	7.556	8.070	.669	1.338	24.01	5.984	22,486	86,339	1400	270
PHB24-A15	7.677	8.070	.669	1.338	24.01	5.984	22,486	86,339	1400	270
PHB25-A11	7.559	9.055	.669	1.338	25.19	5.984	22,486	86,339	1400	295
PHB25-A15	7.677	9.055	.669	1.338	25.19	5.984	22,486	86,339	1400	295
PHB32-A11	7.952	9.055	.787	1.574	31.49	7.086	22,486	86,339	1000	350
PHB32-A15	8.071	9.055	.787	1.574	31.49	7.086	22,486	86,339	1000	350
PHB32-A20	8.268	9.055	.787	1.574	31.49	7.086	22,486	86,339	1000	350

Dimensional Data

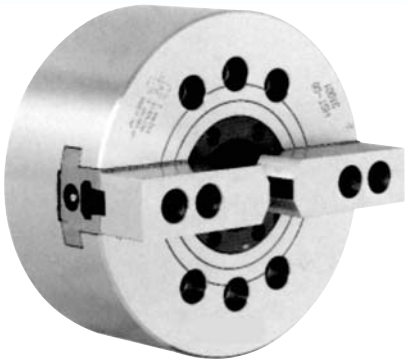
MODEL	PHB-20	PHB-24	PHB-25	PHB-32
A	19.68	24.01	25.19	31.49
Bf	14.96	20.47	20.47	20.47
C	13.00	18.25	18.25	18.25
CA	-	-	-	-
D	.945	.945	.945	.945
E	7.677	9.055	10.236	10.236
F	M180x3	M215x3	M240x3	M240x3
Hf	5.000	5.905	5.905	6.299
K	6.693	8.070	9.055	9.055
L	3.504	3.504	3.504	3.504
L1	M10	M10	M10	M10
M1	7.480	8.661	9.842	9.842
R1	10.000	12.086	12.677	15.354
U	.225	.334	.334	.393
W	.984	1.181	1.181	1.181
X	.315	.393	.393	.393
Yf	.236	.236	.236	.236
Z	1.514/0	1.338/0	1.338/0	1.732/.157
d	3 x 60°	3 x 60°	3 x 60°	3 x 60°
e	4.685	5.982	5.982	8.661
f	.512	.354	.354	.354
g	.137	.137	.137	.137
l	2.440	2.952	2.952	2.952
k1	.630	.630	.630	.630
l	.393	.197	.197	.197
l1	1.496	1.496	1.496	1.496
l2	4.055/2.125	4.803/2.125	4.803/2.125	7.480/2.125
m	M20	M20	M20	M20
n	1.004	1.004	1.004	1.004
p	6.259	7.874	7.874	-
p1	-	2.362	2.362	-
q	3.937	3.937	3.937	3.937
r	M12	M12	M12	-
s	.787	.787	.787	.866

HOW TO ORDER: State quantity, model number of chuck and shipping instructions.

2 Jaw High Speed Open Centre Power Chuck

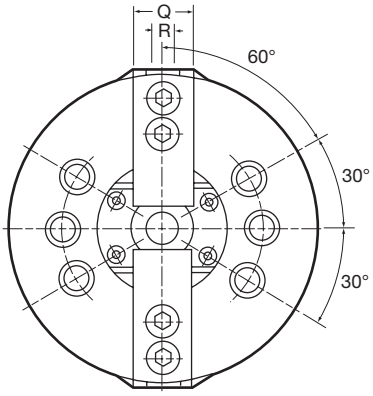
Imperial Design
HST 6" to 12" Chucks

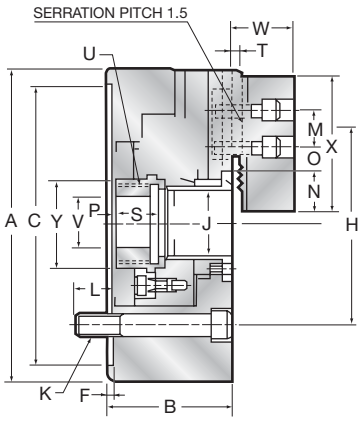
- 1.5mm x 60° master jaw
- Repeatability ± 12µm
- Large bore
- Hardened jaw ways and all internal parts
- All steel body
- High RPM



Model No.	Mount	Bore Dia	Jaw Stroke Dia	Sleeve Stroke	Gripping Capacity Max	Gripping Capacity Min	Draw Bar Pull lb/f	Grip Force lb/f	Max RPM	Wt kg
HST6-A5 (D)	A2-5	1.771	.216	.472	6.65	.590	4,945	12,813	6000	14
HST8-A5 (I)	A2-5	2.047	.291	.630	8.27	.512	7,824	19,332	5000	24
HST8-A6 (D)	A2-6	2.047	.291	.630	8.27	.512	7,824	19,332	5000	24
HST10-A6 (I)	A2-6	2.952	.346	.748	10.00	1.220	9,667	24,953	4200	41
HST10-A8 (D)	A2-8	2.952	.346	.748	10.00	1.220	9,667	24,953	4200	41
HST12-A6 (I)	A2-6	3.582	.417	.905	11.97	1.653	12,363	32,372	3300	67
HST12-A8 (D)	A2-8	3.582	.417	.905	11.97	1.978	12,363	32,372	3300	64
HST12-A11 (I)	A2-11	3.582	.417	.905	11.97	1.978	12,363	32,372	3300	64

(I) Indirect mount (D) Direct mount





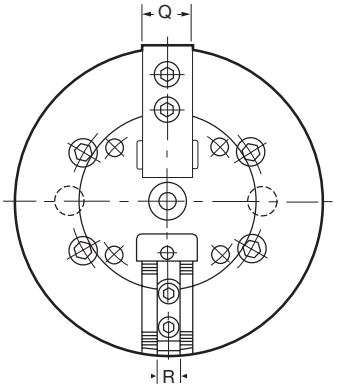
Dimensional Data

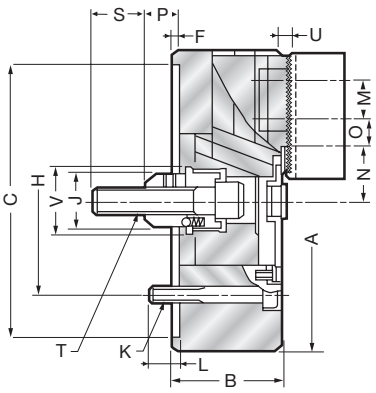
MODEL	HST6-A5	HST8-A5	HST8-A6	HST10-A6	HST10-A8	HST12-A6	HST12-A8	HST12-A11
A	6.63	8.26	8.26	10.00	10.00	11.97	11.97	11.97
B		3.582		4.055	4.724	4.449	5.079	4.832
C	5.512	6.693	6.693	8.661	8.661	8.661	8.661	8.661
D	3.201	3.201	4.188	4.188	5.501	4.188	5.501	7.751
E		.590		.669	.984	.708	.984	.708
F	.167	.167	.167	.167	.167	.236	.236	.236
G	4.126	5.252	5.252	6.748	6.748	6.748	6.748	6.748
H	4.126		5.252	5.252	6.748	5.252	6.748	9.250
J	1.771	2.047	2.047	2.953	2.953	3.582	3.582	3.582
K	6-M10	6-M12	6-M12	6-M16	6-M16	6-M16	6-M16	6-M16
L		.630		.708	.728	.945	.728	.984
M	.787	.984	.984	1.181	1.181	1.181	1.181	1.181
N max	1.259	1.523	1.523	2.007	2.007	2.413	2.413	2.413
N min	1.151	1.378	1.378	1.834	1.834	2.204	2.204	2.204
O max	.895	1.171	1.171	1.329	1.326	1.801	1.801	1.801
O min	.364	.581	.581	.581	.581	.620	.620	.620
P max	1.023		1.240	1.319	1.043	1.299	1.299	1.299
P min	.551		.610	.571	.295	.394	.394	.394
Q	1.220	1.378	1.378	1.575	1.575	1.968	1.968	1.968
R	.472	.551	.551	.630	.630	.827	.827	.827
S	.748	.807	.807	.984	.984	1.102	1.102	1.102
T	.0789	.0789	.0789	.0789	.0789	.0789	.0789	.0789
U max	M55x2.0	M60x2.0	M60x2.0	M85x2.0	M85x2.0	M90x2.0	.M100x2.0	
V	-	6-M10	-	6-M12	-	6-M12	-	6-M20
W	2.362	2.598	2.598	3.701	3.701	4.252	4.252	4.252
X	.787	1.181	1.181	1.771	1.771	1.968	1.968	1.968
Y	1.142	1.535	1.535	1.693	1.693	2.009	2.009	2.009
Z	2.834	3.740	3.740	4.331	4.331	4.370	4.370	4.370

HOW TO ORDER: State quantity, model number of chuck and shipping instructions.

2 Jaw Long Stroke Power Chuck

Imperial Design
PTH Series 5" to 12" Chucks





- 2 jaw closed centre long stroke power chuck
- Draw bar activated
- Use where jaws need to overcome part obstructions like valve bodies and flanges
- Adapter mounted
- 1.5mm serration pitch on 5" to 10" chucks, 3mm on 12" chucks

Model No.	Jaw Stroke Dia	Sleeve Stroke	Gripping Capacity Max	Gripping Capacity Min	Draw Bar Pull lb/f	Grip Force lb/f	Max RPM	Wt kg
PTH5	.370	.512	5.12	.591	1,322	2,204	3500	8
PTH6-A4	.512	.709	6.5	.787	2,204	4,850	3500	10
PTH6-A5	.512	.709	6.5	.787	2,204	4,850	3500	10
PTH6-A6	.512	.709	6.5	.787	2,204	4,850	3500	10
PTH8-A6	.630	.866	8.26	.866	4,408	9,700	3000	20
PTH8-A8	.630	.866	8.26	.866	4,408	9,700	3000	20
PTH10-A6	.709	.984	9.84	.984	5,070	11,023	2500	32
PTH10-A8	.709	.984	9.84	.984	5,070	11,023	2500	32
PTH12-A8	.787	1.102	11.81	1.102	6,613	14,550	2000	54
PTH12-A11	.787	1.102	11.81	1.102	6,613	14,550	2000	54

Dimensional Data

MODEL	PTH-5	PTH-6	PTH-8	PTH-10	PTH-12
A	5.12	6.50	8.26	10	11.97
B	1.969	2.480	3.031	3.346	3.819
C	4.528	5.512	7.480	9.055	11.024
F	.197	.197	.197	.197	.197
H	3.250	4.125	5.250	5.250	6.750
J	1.102	1.260	1.496	1.969	2.047
K	4-M10	4-M10	4-M12	6-M16	6-M16
L	.638	.669	.828	.906	.984
M	.748	.787	.984	1.181	1.575
N					
max.	1.291	1.528	1.685	1.921	2.264
min	1.106	1.272	1.370	1.567	1.870
O					
max.	.531	.709	1.181	1.594	1.772
min	.177	.295	.531	.591	.591
P					
max.	.551	1.142	1.339	1.732	1.969
min	.039	.433	.472	.748	.866
Q	.984	1.181	1.378	1.575	1.969
R	.394	.472	.630	.709	.827
S	1.417	1.417	1.417	1.811	1.969
T	M12x1.75	M16x2.0	M20x2.5	M24x3.0	M24x3.0
U	.197	.197	.197	.197	.197
V	-	1.496	1.88	2.283	2.559

HOW TO ORDER: State quantity, model number of chuck and shipping instructions.

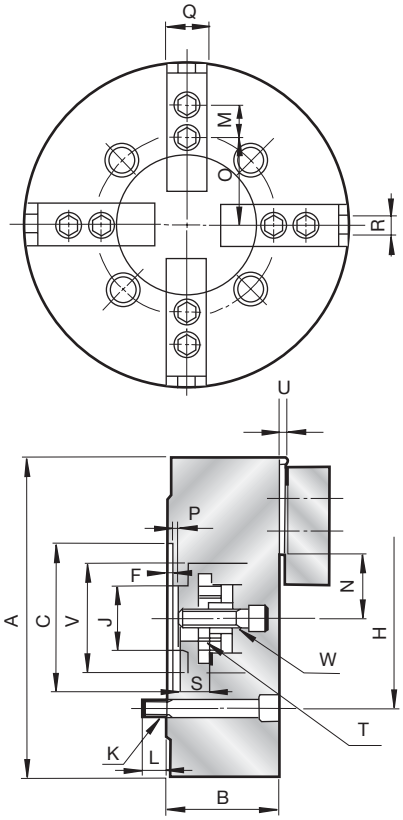
2+2 Jaw Double Clamping Power Chuck

Imperial Design
PAF Series 10" to 24" Chucks

- Closed centre style power chuck with 2 separate clamping motions of opposing jaws
- Ideal for square or angular work
- Long jaw stroke and high clamping forces
- A mounts
- Requires double acting cylinder (ref pg 68)
- 3mm serration pitch

Model No.	Jaw Stroke Dia	Sleeve Stroke	Gripping Dia. Max	Gripping Dia. Min	Draw Bar Pull lb/f	Grip Force lb/f	Max RPM	Wt kg
PAF10-A6	.630	.866	10.0	1.574	5,070	18,500	2000	50
PAF10-A8	.630	.866	10.0	1.574	5,070	18,500	2000	50
PAF12-A8	.630	.866	12.0	1.574	5,070	18,500	1500	63
PAF12-A11	.630	.866	12.0	1.574	5,070	18,500	1500	63
PAF15-A8	.669	.984	15.0	2.047	6,600	23,800	1200	120
PAF15-A11	.669	.984	15.0	2.047	6,600	23,800	1200	120

Larger sizes available on request.



Dimensional Data

MODEL	PAF-10	PAF-12	PAF-15
A	10.63	11.98	15
B	4.33	4.33	5.01
C	4.72	5.51	7.68
F	.217	.217	.295
H	6.693	6.673	9.252
J	2.283	2.283	3.071
K	4-M16	4-M16	4-M20
L	.945	.945	1.181
M	1.181	1.181	1.496
N			
max.	2.520	2.520	3.071
min	2.205	2.205	2.736
O			
max.	3.740	4.449	5.689
min	2.913	2.913	3.563
P			
max.	.925	.925	1.319
min	.059	.059	.197
Q	1.574	1.574	1.968
R	.630	.630	.709
S	.122	.122	2.163
T	M42x1.5	M42x1.5	M55x2.0
U	.197	.197	.197
V	4.055	4.055	5.118
W	M16x20	M16x20	M20x25

HOW TO ORDER: State quantity, model number of chuck and shipping instructions.

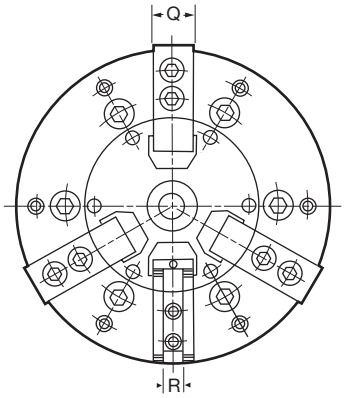
2/3 Jaw Open Centre Power Chuck

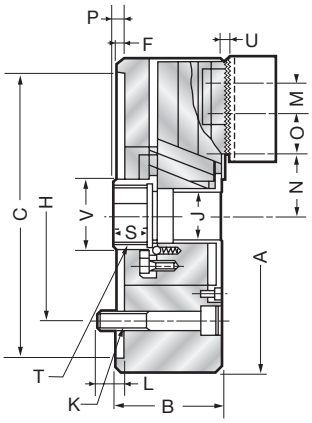
PAF Series
8" to 24" Chucks

- Use as 2 jaw or 3 jaw power chuck
- Open centre and long stroke
- Adapter mounted
- Serration pitch 1.5mm 8", 10" & 12" - 3mm 15"
- Larger diameters available

Model No.	Jaw Stroke Dia	Sleeve Stroke	Gripping Dia. 2 Jaw Max	Gripping Dia. 3 Jaw Min	Maximum Pull 2 Jaw lbs	Maximum Pull 3 Jaw lbs	Max Grip 2 Jaw lbs	Max Grip 3 Jaw lbs	Max RPM	Wt kg
PAFH8-A5	.378	.709	7.87	1.181	3,306	4,409	7,275	9,700	3000	20
PAFH8-A6	.378	.709	7.87	1.181	3,306	4,409	7,275	9,700	3000	20
PAFH10-A6	.728	.984	9.84	1.181	5,070	7,716	9,038	13,668	3000	32
PAFH10-A8	.728	.984	9.84	1.181	5,070	7,716	9,038	13,668	3000	32
PAFH12-A8	.803	1.102	11.81	1.967	6,613	9,920	11,684	17,636	2500	55
PAFH12-A11	.803	1.102	11.81	1.967	6,613	9,920	11,684	17,636	2500	55
PAFH15-A8	.803	1.102	13.78	2.756	8,818	13,227	15,652	23,148	2000	99
PAFH15-A11	.803	1.102	13.78	2.756	8,818	13,227	15,652	23,148	2000	99

Also available in 18", 21" and 24", contact factory.





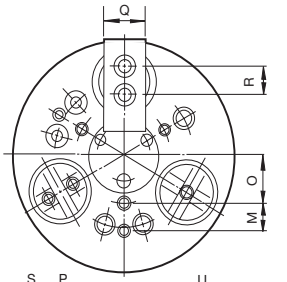
Dimensional Data

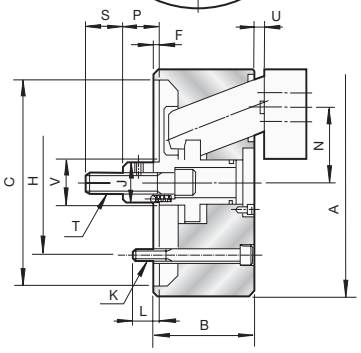
MODEL	PAFH-8	PAFH-10	PAFH-12	PAFH-15
A	8.26	10	11.97	15
B	2.874	3.346	3.819	4.803
C	7.480	9.055	11.024	13.760
F	.197	.197	.197	.276
H	5.250	6.750	7.874	9.843
J	1.378	1.575	2.165	2.953
K	6-M12	6-M16	6-M20	6-M20
L	.787	.866	.984	1.063
M	.984	1.181	1.181	1.969
N				
max.	1.803	2.020	2.891	3.378
min	1.614	1.661	2.189	2.976
O				
max.	1.181	1.654	1.831	2.608
min	.295	.374	.413	.591
P				
max.	.827	0	0	0
min	.118	-.984	-1.102	-1.102
Q	1.181	1.378	1.575	1.575
R	.475	.630	.630	.826
S	1.063	1.102	1.181	1.575
T	M42	M50	M65	M85
U	.197	.197	.197	.197
V	1.890	2.283	2.953	3.740

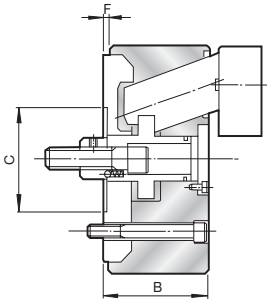
HOW TO ORDER: State quantity, model number of chuck and shipping instructions.

Pull Back Power Chuck

Imperial Design
PDD Series 4" to 15" Chucks







- 3 jaw draw down chuck for machining work requiring squareness and parallelism
- High accuracy
- Maintains high grip forces
- Adapter mount for A type spindles, other mounts available

Model No.	Jaw Stroke Dia.	Sleeve Stroke	Gripping Capacity Max.	Gripping Capacity Min.	Draw Bar Pull lb/f	Grip Force lb/f	Max RPM	Wt. kg
PDD4	.197	.276	1.97	.591	1,300	3,300	3500	5
PDD5	.197	.276	2.56	.591	2,200	4,400	3500	7
PDD6-A4	.285	.394	3.35	1.378	3,300	5,500	3500	14
PDD6-A5	.285	.394	3.35	1.378	3,300	5,500	3500	14
PDD6-A6	.285	.394	3.35	1.378	3,300	5,500	3500	14
PDD8-A5	.283	.394	7.87	1.575	5,500	9,900	3000	27
PDD8-A6	.283	.394	7.87	1.575	5,500	9,900	3000	27
PDD10-A6	.425	.591	9.84	1.969	7,700	13,200	2500	46
PDD10-A8	.425	.591	9.84	1.969	7,700	13,200	2500	46
PDD12-A8	.425	.591	11.81	1.969	9,900	16,550	2000	68
PDD12-A11	.425	.591	11.81	1.969	9,900	16,550	2000	68
PDD15-A8	.573	.787	14.96	2.362	12,100	19,850	1500	110
PDD15-A11	.573	.787	14.96	2.362	12,100	19,850	1500	110

Dimensional Data

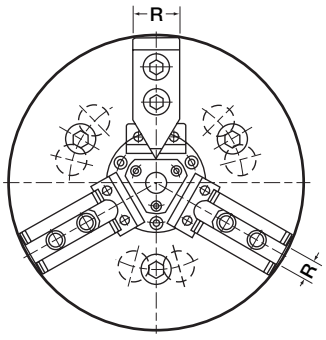
MODEL	PD-4	PD-5	PD-6	PD-8	PD-10	PD-12	PD-15
A	4.33	5.12	6.50	8.25	10	12	15
B	2.36	2.76	3.35	3.74	4.33	4.92	5.52
C	2.362	3.150	5.512	7.480	9.055	9.055	11.81
F	.197	.197	.197	.197	.197	.197	.315
H	3.150	3.937	4.125	5.250	6.750	6.750	9.055
J	.984	1.103	1.260	1.496	1.969	2.047	2.362
K	3-M8	3-M8	6-M10	6-M12	6-M16	6-M16	6-M20
L	.511	.511	.630	.906	.866	1.063	1.181
M	-	-	.787	.984	1.181	1.378	1.772
N							
max.	1.657	1.732	2.283	2.795	3.346	4.016	5.261
min	1.358	1.634	2.142	2.654	3.134	3.803	4.975
O	.984	1.181	1.378	1.272	2.165	2.756	3.740
P							
max.	.748	.748	1.299	1.496	1.850	1.850	2.795
min	.472	.472	.906	1.102	1.206	1.206	2.008
Q	.984	1.181	1.378	1.575	1.967	2.362	2.756
R	-	-	-	1.024	1.260	1.417	1.575
S	.787	.984	1.417	1.417	1.811	1.989	1.989
T	M10x1.5	M12x1.75	M16x2.0	M20x2.5	M20x3.0	M20x3.0	M30x3.5
U							
max.	.413	.413	.551	.551	.748	.748	1.024
min	.138	.138	.155	.155	.155	.155	.236
V	1.102	1.181	1.378	1.654	2.047	2.165	3.543

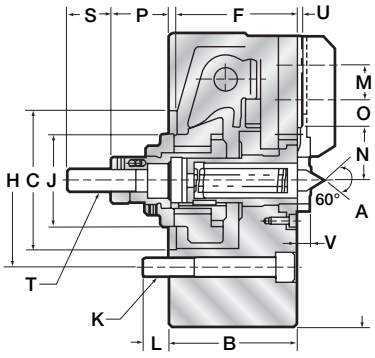
HOW TO ORDER: State quantity, model number of chuck and shipping instructions.

3 Jaw Compensating Power Chuck

PAC Series
160mm to 380mm Chucks

- 3 jaw power chuck with float compensation designed for shaft applications machined on centres
- Supplied with fixed or spring centre (specify when ordering)
- Maximum durability achieved through internal sliding on spherical surface
- Adapter mount for A type spindles
- Larger sizes available on request
- 1.5mm serration pitch on 175mm to 305mm chucks, 3mm on 380mm chucks





Model No.	Dia mm	Jaw Stroke	Sleeve Stroke	Gripping Capacity Max	Gripping Capacity Min	Draw Bar Pull lb/f	Grip Force lb/f	Max RPM	Wt kg
PAC6-A4	175	.275	.591	1.299	.591	2,645	5,291	2800	16
PAC6-A5	175	.275	.591	1.299	.591	2,645	5,291	2800	16
PAC6-A6	175	.275	.591	1.299	.591	2,645	5,291	2800	16
PAC8-A6	210	.315	.787	1.496	.787	3,968	9,259	2800	25
PAC8-A8	210	.315	.787	1.496	.787	3,968	9,259	2800	25
PAC10-A6	250	.394	.984	2.047	.866	5,291	13,228	2400	38
PAC10-A8	250	.394	.984	2.047	.866	5,291	13,228	2400	38
PAC12-A8	305	.394	.984	2.874	.984	6,614	16,534	2000	60
PAC12-A11	305	.394	.984	2.874	.984	6,614	16,534	2000	60
PAC15-A8	380	.472	1.102	4.724	1.181	7,716	19,180	1700	95
PAC15-A11	380	.472	1.102	4.724	1.181	7,716	19,180	1700	95

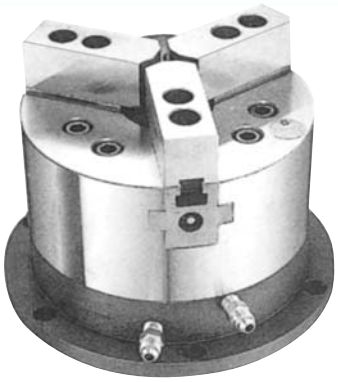
Dimensional Data

MODEL	PAC6	PAC8	PAC10	PAC12	PAC15
A	6.89	8.26	10	12	15
B	3.543	3.937	4.331	4.921	5.581
C	3.543	4.113	4.724	5.512	6.693
F	.354	.295	.295	.295	.295
H	5.118	5.118	5.905	6.693	8.268
J	2.362	2.756	3.144	3.346	3.740
K	3-M16	3-M16	3-M16	6-M16	6-M16
L	.866	.866	.866	.866	.866
M	.787	.984	1.181	1.575	1.968
N					
max.	1.528	1.724	1.921	2.000	2.362
min	1.389	1.567	1.724	1.803	2.126
O					
max.	.650	.828	1.085	1.555	1.968
min	.236	.295	.315	.375	.512
P					
max.	1.850	1.988	2.264	2.402	2.677
min	1.260	1.201	1.279	1.417	1.575
Q	1.220	1.378	1.575	1.772	2.165
R	.472	.630	.709	.827	1.024
S	1.496	1.496	1.496	1.811	1.811
T	M16x2.0	M16x2.0	M20x2.5	M24x3.0	M27x3.0
U	.197	.197	.197	.197	.197
V	.393	.393	.472	.472	2.559

HOW TO ORDER: State quantity, model number of chuck and shipping instructions.

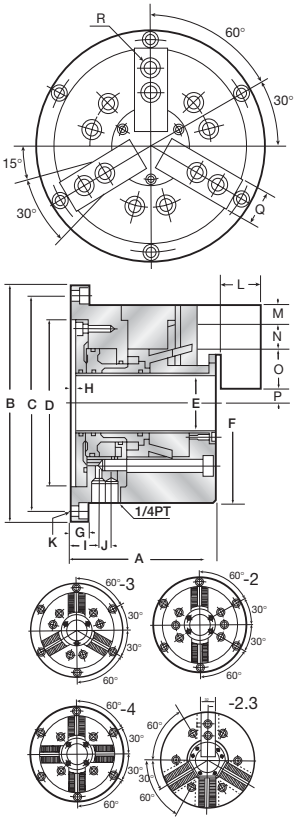
Stationary 2 and 3 Jaw Power Chuck

Imperial Design
OLU Series
165mm to 254mm Chucks



- Super thin body
- Accuracy, plus minus 12µm
- Easy retrofit
- Hydraulic operation standard
- Optional air operation
- Standard 1.5mm 60 degree fine serrated master jaws
- Twelve month warranty

Model	Stroke	Jaw Stroke Dia.	Hydraulic Pressure	Max. Grip ID	Max. Grip OD	Weight
OLU06D	591"	197"	350 psi	6,888 lbs.	4,774 lbs.	21 kilos.
OLU08D	787"	256"	350 psi	11,270 lbs	6,370 lbs	33 kilos
OLU10D	.787"	256"	350 psi	19,180 lbs	13,020 lbs	45 kilos

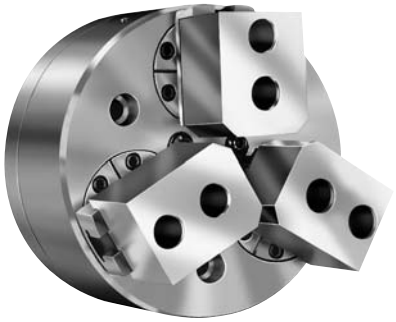


Dimensional Data

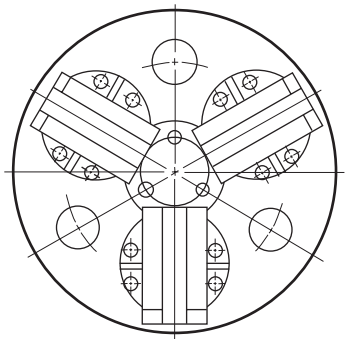
MODEL	OLU06D	OLU08D	OLU10D
A	4.96"	5.79"	6.30"
B	7.80"	9.76"	10.87"
C	7.09"	8.86"	9.84"
D	5.51"	6.69"	8.66"
E	1.65"	2.05"	2.95"
F	6.50"	8.07"	10.00"
G	.59"	.59"	.71"
H	.177"	.177"	.197"
I	1.10"	1.10"	1.18"
J	1.38"	1.73	2.17
K	M8	M8	M10
L	1.42"	1.50"	1.65"
M	.59"	.94"	1.18"
N	.79"	.98"	1.18"
O	1.46"	1.81"	1.97"
P max.	.394"	.531"	.650"
P min.	.197"	.256"	.394"
Q	1.26"	1.38"	1.57"
R	M10 x 30	M12 x 35	M12 x 35

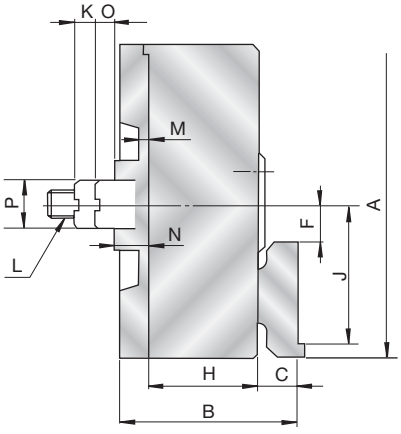
Ball Lock Power Chuck

Imperial Design
BLS Series
160mm - 535mm Chucks



- This chuck is used for gripping castings and forgings. It pulls back workpieces with tapered surfaces of up to 10 degrees while providing a right and left compliance of 5 degrees resulting in strong clamping force
- Available in self-centring version (add "CT" to end of part number "BL8-A5CT")
- Available as compensating chuck with centre or plug (add "CP" to end of part number "BL8-A5CP")
- Also available in 2 jaw configuration (add "2" to end of part number "BL8-A5PT2")
- Available as adapter or direct mount





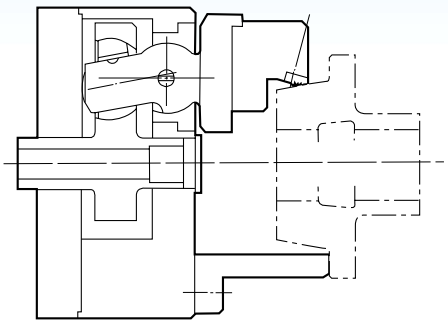
Model* No.	Jaw Stroke Dia	Sleeve Stroke	Gripping Capacity Max	Gripping Capacity Min	Draw Bar Pull lb/f	Grip Force lb/f	Max RPM	Wt kg
BL6-A4	.311	.445	4.72	.500	5,950	17,850	4000	18
BL6-A5	.311	.445	4.72	.500	5,950	17,850	4000	18
BL6-A6	.311	.445	4.72	.500	5,950	17,850	4000	18
BL8-A5	.374	.563	5.98	.630	7,950	23,800	3500	27
BL8-A6	.374	.563	5.98	.630	7,950	23,800	3500	27
BL10-A6	.500	.689	7.99	1.969	9,900	29,750	3000	45
BL10-A8	.500	.689	7.99	1.969	9,900	29,750	3000	45
BL12-A8	.500	.689	9.49	2.480	9,900	35,700	2500	68
BL12-A11	.500	.689	9.49	2.480	9,900	35,700	2500	68
BL15-A8	.622	.878	12.48	2.992	15,000	45,000	2000	85
BL15-A11	.622	.878	12.48	2.992	15,000	45,000	2000	85
BL18-A8	.622	.878	15.51	3.504	15,000	45,000	1500	120
BL18-A11	.622	.878	15.51	3.504	15,000	45,000	1500	120
BL21-A11	.622	.878	18.50	6.378	15,000	45,000	1000	180

Dimensional Data

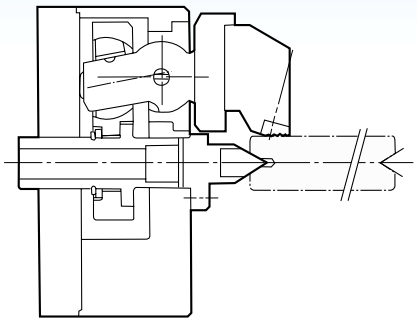
MODEL	BL6	BL8	BL10	BL12	BL15	BL18	BL21
A	6.38	7.87	10	11.81	15	18	21
B	4.12	4.85	5.79	5.79	6.433	6.433	6.433
C	.760	.917	1.146	1.46	1.276	1.276	1.276
F	.799	.990	1.181	1.988	2.991	4.091	5.591
H	2.331	2.756	3.409	3.409	3.783	3.783	3.783
J Outer Dia.	2.880	3.502	4.437	1.307	6.750	8.250	9.750
Inner Dia.	.874	.998	1.193	2.0	2.748	4.248	5.748
K max.	.445	.563	.689	.689	.878	.878	.878
min	.244	.354	.374	.374	.472	.472	.472
L	M16	M16	M18	.M18	M24	M24	M24
M	.189	.236	.279	.276	.276	.276	.394
N	.780	.846	1.023	1.023	1.441	1.441	1.441
O	.173	.118	.157	.157	.500	.500	.500
P	1.187	1.250	1.625	1.625	2.250	3.500	3.500

BL Series
Chuck Features

BL Chuck Structure



CENTERING TYPE

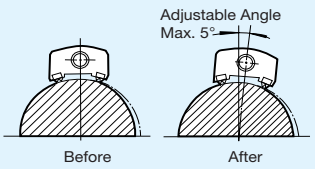


COMPENSATING TYPE

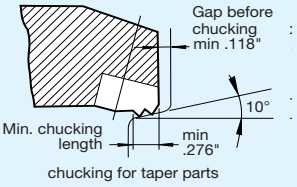
BL Chuck Features

- Centres work, pulls work back and clamps firm
- Clamps tapered parts up to 10°
- Automatic radial adjustment of ± 5°
- I.D. and O.D. clamping of forgings or castings
- O.D. clamping of shafts
- Sealed against contamination
- High speed rotation
- Excellent retention of clamp force
- Also available as a 2 jaw

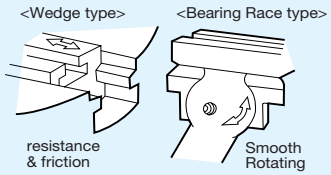
Automatic Adjustable Angle



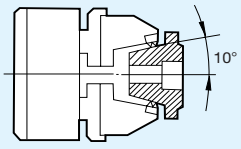
Min. Length in Chucking Parts



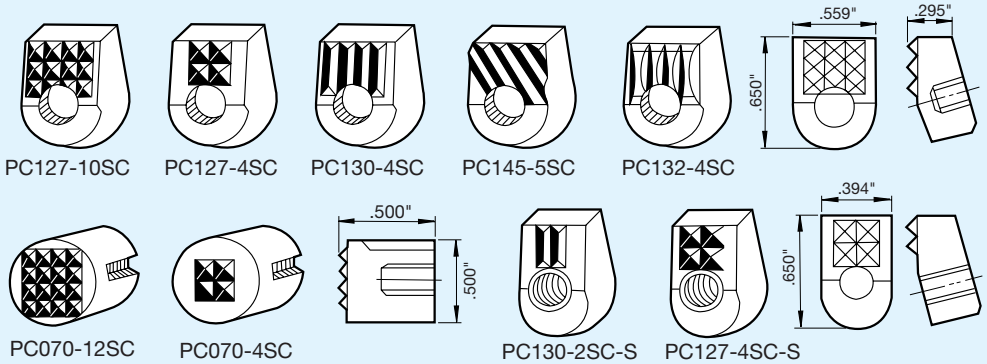
Smooth Rotating Standard



Max. Taper Angle in Chucking Parts

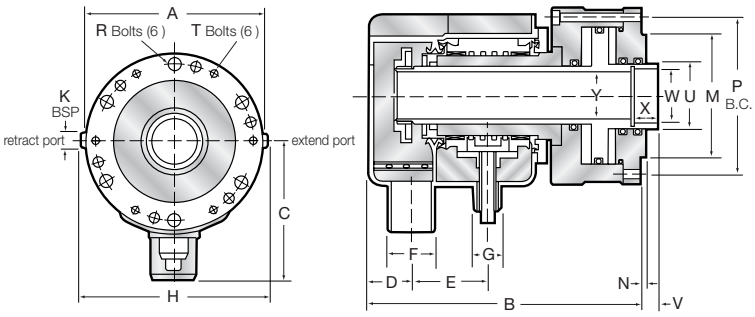


BL Inserts



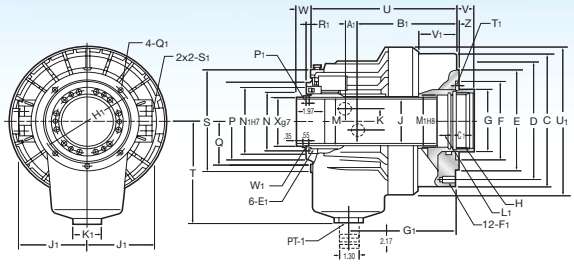
Pratt Burnerd High Speed Open Centre Hydraulic Cylinders

	Chuck Size		165mm	210mm	254mm	305/380mm
	Model No.		1910-04680	1910-05680	1910-06617	1910-09021
	Cylinder Size		46/75	56/125	66/170	90/210
A	Cylinder diameter	mm/in	156/6.142	187/7.36	220/8.66	260/10.23
B	Overall length	mm/in	281/11.06	289/11.38	312/12.28	340/13.38
C	Port height	mm/in	135/5.31	145/5.70	160/6.29	175/6.88
D	Coolant drain centre from rear	mm/in	43.5/1.71	45.5/1.71	54/2.12	34/1.33
E	Centre distance between drains	mm/in	81.5/3.20	81.5/3.20	84/3.30	90/3.54
F	Coolant drain diameter	mm/in	50/1.96	50/1.96	50/1.96	50/1.96
G	Hydraulic return diameter	mm/in	30/1.18	30/1.18	30/1.18	30/1.18
H	Width over ports	mm/in	189/7.44	204/8.03	216/8.50	246/9.68
K	Port dimension	BSP	3/8"	3/8"	3/8"	3/8"
M	Flange diameter	mm/in	110/4.33	130/5.11	150/5.90	180/7.08
N	Flange height	mm/in	5/.19	5/.19	5/.19	5/.19
P	Mounting holes, B.C.	mm/in	143/5.63	165/6.49	195/7.67	225/8.858
R	Mounting holes, six clearance					
	holes to take bolts	Metric	M8 x 95	M10 x 100	M12 x 110	M12 x 130
		Imperial	5/16" x 3.75"	3/8" x 4"	1/2" x 4-1/2"	5/8" x 4-3/4"
U	Sleeve diameter	mm/in	60/2.36	70/2.75	85/3.34	115/4.52
V	Maximum sleeve extension	mm/in	28/1.10	28/1.10	32/1.25	32/1.25
W	Drawtube thread diameter	Size	M53 x 1.5	M63 x 1.5	M75 x 1.5	M100 x 2
X	Sleeve thread depth	mm/in	29/1.14	30/1.18	30/1.18	30/1.18
Y	Bore	mm/in	46/1.81	56/2.20	66/2.59	90/3.54
	Maximum speed	rpm	7000	5900	5000	4000
	Maximum pressure	Bar/PSI	38/550	38/550	38/550	38/550
	Maximum drawtube pull	lbs.	6950	10,800	14,400	18,000
	Cylinder stroke	ins	20/.788	20/.788	.905	.905
	Oil leakage	GPM	.88	1.07	1.26	1.51
	Moment of inertia	Kg/m2	.048	.09	.22	.60
	Piston area	sq. ins.	11.7	19.6	26.4	32.6
	Weight	kg	16	21	26	40



Open Centre Long Stroke Hydraulic Cylinder

Imperial Design
Large Bore up to 166mm



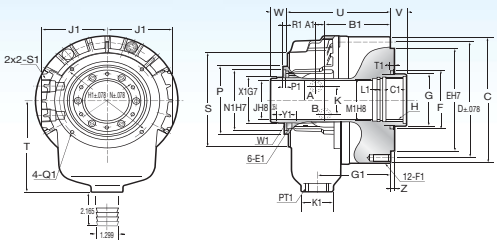
- High RPM
- Safety check valves built-in
- Large bore, up to 166mm
- Coolant catcher standard
- Long stroke will allow use with standard or special power chucks

	Model		OHL1246	OHL1446	OHL1552	OHL1875	OHL2091	OHL2816
	Cylinder dia	mm/in	125/4.92	140/5.51	155/6.10	180/7.09	205/8.07	280/11.02
C		mm/in	155/6.10	175/6.89	190/7.48	215/8.46	240/9.45	325/12.80
D		mm/in	130/5.12	155/6.10	170/6.69	190/7.48	215/8.46	290/11.42
E		mm/in	100/3.94	130/5.12	130/5.12	160/6.34	180/7.09	260/1024
F		mm/in	80/3.15	80/3.15	85/3.35	120/4.72	140/5.51	240/9.49
G		mm/in	65/2.56	65/2.56	70/2.76	95/3.74	110/4.33	190/7.48
H		mm/in	M55x2.0	M55x2.0	M60x2.0	M85x2.0	M100x2.0	M180x3.0
J	Bore	mm/in	46/1.81	46/1.81	52/2.05	75/2.95	91/3.58	166.5/6.56
K		mm/in	36/1.42	36/1.42	36/1.42	36/1.42	34/1.34	30.1.18
M		mm/in	52.9/2.08	52.9/2.08	52.9/2.08	84.9/3.33	99.6/3.92	174.6/6.87
N		mm/in	64/2.52	64/2.52	73/2.87	98/3.86	108/4.25	188/7.40
P		mm/in	85/3.35	85/3.35	96/3.78	121/4.76	138/5.43	222/8.74
Q		mm/in	51.5/2.03	51.5/2.03	57/2.24	70/2.76	79/3.11	120/4.72
S		mm/in	118/4.65	118/4.65	137/5.39	166/6.54	182/7.17	282/11.10
T		mm/in	115/4.53	115/4.53	130/5.12	160/6.30	185/7.28	250/9.84
U		mm/in	205/8.07	205/8.07	213/8.39	246/9.69	273/10.75	370/14.57
V	Max	mm/in	27/1.06	27/1.06	29/1.14	35/1.38	50/1.97	51/2.01
	Min	mm/in	-5/-.20	-5/-.20	-5/-.20	-5/-.20	0/0	0/0
W	Max	mm/in	57/2.24	57/2.24	59/2.32	65/2.56	75/2.95	76/2.99
	Min	mm/in	25/.98	25/.98	25/.98	25/.98	25/.98	25/.98
Z		mm/in	5/.20	5/.20	5/.20	5/.20	5/.20	5/.20
A1		mm/in	11.5/.45	11.5/.45	12/.47	17.5/.69	21/.83	28/1.10
B1		mm/in	147.5/5.81	147.5/5.81	153/6.02	169.5/6.67	188/7.40	259/10.20
C1		mm/in	30/1.18	30/1.18	30/1.18	35/1.38	35/1.38	45/1.77
E1			M6x9	M6x9	M6x9	M6x9	M6x14	M6x12
F1			M10x20	M10x20	M10x20	M10x20	M12x24	M16x32
G1		mm/in	156/6.14	156/6.14	162/6.38	182.5/7.19	203/7.99	276/10.87
H1		mm/in	98/3.86	98/3.86	110/4.33	55/6.10	165/6.50	256/10.09
J1		mm/in	76/2.99	76/2.99	86/3.38	101/3.98	110/4.33	162/6.38
K1		mm/in	47/1.85	47/1.85	47/1.85	47/1.85	47/1.85	47/1.85
L1		mm/in	15/.59	15/.59	15/.59	15/.59	15/.59	15/.59
M1		mm/in	50/1.97	50/1.97	55/2.17	80/3.15	95/3.74	170/6.69
N1		mm/in	76/2.99	76/2.99	85/3.35	108/4.25	120/4.72	200/7.87
P1		mm/in	4/.157	4/.157	4/.157	4/.157	4/.157	4/.157
Q1			M5x10	M5x10	M6x12	M6x12	M6x12	M6x12
R1		mm/in	6/.236	6/.236	7/.276	7/.276	7/.276	7/.276
S1			PT1/2	PT1/2	PT1/2	PT1/2	PT1/2	PT1/2
T1		mm/in	12/.472	12/.472	12/.472	12/.472	12/.472	7/.276
U1		mm/in	200/7.87	200/7.87	220/8.66	242/9.53	267/10.51	352/13.86
V1		mm/in	67/2.64	67/2.64	68/2.68	74/2.91	86/3.39	123/4.84
W1			M52x1.5	M52x1.5	M58x1.5	M84x2.0	M99x2.0	M173x20
X1		mm/in	50/1.97	50/1.97	56/2.20	81/3.19	96/3.78	170.5/6.71
	Piston stroke	mm/in	32/1.26	32/1.26	34/1.34	40/1.57	50/1.97	51/2.01
	Piston surface push	cm2/in2	100/15.3	131/20.3	161/25.0	198/30.7	252/39.1	377/58.4
	Piston surface pull	cm2/in2	89/13.8	120/47.2	150/23.3	183/28.4	234/36.3	332/51.5
	Piston force push	lbf	8,543	11,016	13,488	16,636	21,131	25,401
	Piston force pull	lbf	7,418	10,117	12,588	15,511	19,782	22,478
	Max. operating pressure	PSI	580	580	580	580	580	478
	Max. rpm		7000	7000	6200	4700	3800	2000
	Weight	kg	13	14	17	27	34	100

Pratt Burnerd International
600 Group

Super High Speed Open Centre Hydraulic Cylinder

Imperial Design



- High RPM
- Large bore, up to 117mm
- Coolant catcher standard
- Safety check valves built-in

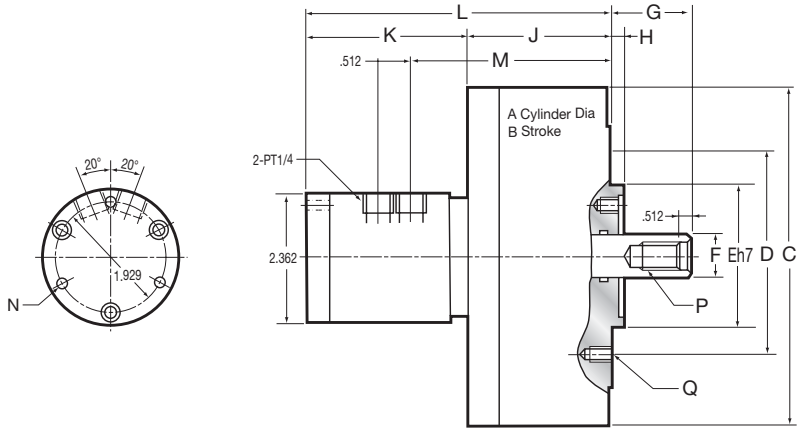
	Model		ASH13046	ASH15052	ASH17068	ASH18077	ASH25011
A	Cylinder dia	mm/in	135/5.31	156/6.14	170/6.69	185/7.28	255/10.04
B	Stroke	mm/in	15/.590	22/.866	25/.984	25/.984	50/1.968
C		mm/in	165/6.49	190/7.48	210/8.26	218/5.58	310/12.20
D		mm/in	130/5.12	170/6.69	190/7.48	215/8.46	275/10.83
E		mm/in	100/3.94	130/5.12	160/6.30	160/6.30	230/9.05
F		mm/in	80/6.53	85/3.34	120/4.72	120/4.72	166/6.53
G		mm/in	65/2.56	70/2.75	85/3.34	95/3.74	145/5.51
H			M52x2	M60x2	M75x2	M85x2	M130x2
J	Bore	mm/in	46/1.81	52/2.04	68/2.68	77/3.03	117.5/4.62
K		mm/in	40/157	40/157	48/1.89	48/1.89	46/1.81
N		mm/in	64/2.52	73/2.87	88/3.46	108/4.25	138/5.43
P		mm/in	85/3.34	96/3.78	111/4.37	121/4.76	170/6.69
S		mm/in	116/4.56	135/5.31	154/6.06	164/6.45	230/9.05
T		mm/in	120/4.72	130/5.19	150/5.96	165/6.49	215/8.46
U		mm/in	142/5.59	138/5.43	155/6.10	167/6.57	258/10.15
V	Max	mm/in	15/.59	22/.86	25/.98	25/.98	46/1.81
	Min	mm/in	0	0	0	0	-4/-.16
W	Max	mm/in	40/1.57	47/185	50/1.97	50/1.97	75/2.95
	Min	mm/in	25/.98	25/.98	25/.98	25/.98	25/.98
Z		mm/in	5/.19	5/.19	5/.19	5/.19	6/.23
A1		mm/in	8.5/.33	9.0/.35	10//.39	10/.39	19/.75
B1		mm/in	103/4.05	97.5/3.84	108/4.25	119.5/4.70	176.5/6.95
C1		mm/in	30/1.18	30/1.18	35/1.34	35/1.34	45/1.77
E1			M6	M6	M6	M6	M6
F1			M10x20	M10x20	M10x20	M10x20	M10x32
G1		mm/in	111/4.37	101/3.97	113/4.45	125/4.92	190.5/7.50
H1		mm/in	98/3.85	110/4.33	145/3.19	155/6.10	206/8.11
J1		mm/in	82/3.29	92/3.62	97/3.82	102/4.01	140/5.51
K1		mm/in	47/1.85	47/1.85	47/1.85	47/1.85	47/1.85
L1		mm/in	15/.59	15/.59	15/.59	15/.59	20/.79
M1		mm/in	48/1.90	55/2.16	70/2.75	80/3.15	123/4.84
N1		mm/in	76/2.99	85/3.34	100/3.98	108/4.25	150/5.90
P1		mm/in	4/.15	4/.15	4/.15	4/.15	5.5/.21
Q1			M5x6	M6x7	M6x10	M6x10	M6x12
R1		mm/in	6/.23	7/.27	7/.27	7/.27	7.5/.29
S1			PT1/2	PT1/2	PT1/2	PT1/2	PT1/2
T1		mm/in	6/.23	5/.19	5/.19	5/.19	6/.23
W1			M52x1.5	M58x1.5	M74x1.5	M84x2	M12x2
X1		mm/in	50/1.97	56/2.20	71.5/2.81	81/3.19	121.5/4.78
Y1		mm/in	24/.94	20/.79	26/1.02	26/1.02	29/1.14
	Piston force push	lbf	10,610	14,680	15,983	19,345	33,408
	Piston force pull	lbf	9,589	13,702	14,843	17,965	31,146
	Max. operating pressure	PSI	494	494	494	494	494
	Max. rpm		7000	6200	5600	5000	2800
	Weight	kg	10	14	17	18	41

Closed Centre Rotating Air Cylinder

Imperial Design
CCA Series

- Single piston closed centre air cylinder
- Can be installed in horizontal and vertical applications
- Ideal for machine with no hydraulic system

Model No.	Piston Area (Sq. in.) Push	Pull	Piston Stroke	Max Speed RPM	Draw Bar Pull lb/f	Max Pressure PSI	Wt kg
CCA100	12.17	11.41	.197	5000	1,139	120	4
CCA130	20.31	19.84	.591	5000	1,698	120	6
CCA170	34.86	34.16	.787	5000	2,910	120	8
CCA220	58.59	57.52	.984	4000	4,916	120	13
CCA270	88.41	86.92	1.181	3000	7,429	120	19



Dimensional Data

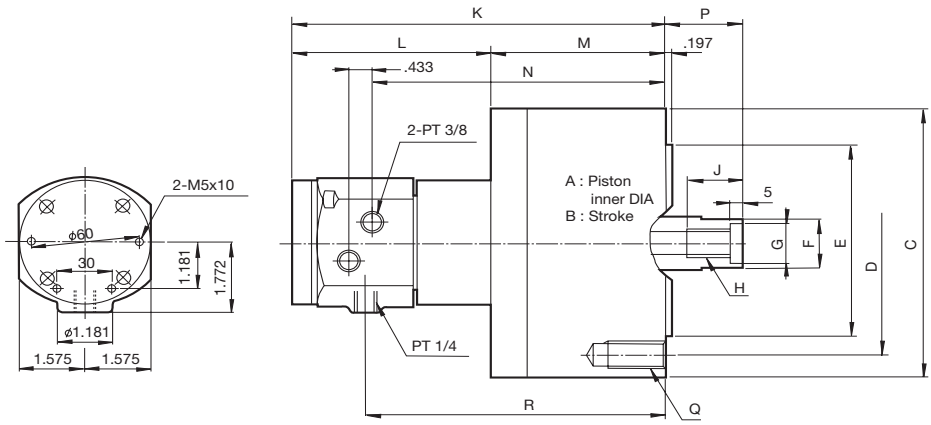
Model No.	A	B	C	D	E(h7)	F	G Max	G Min	H	J	K	L	M	N	Q	P
CCA100	3.957	.197	5.039	3.543	2.559	.787	1.181	.984	.197	2.086	2.756	4.842	3.110	M5	M6x11	M12x22
CCA130	5.118	.591	6.142	3.543	2.559	.787	1.378	.787	.197	2.480	2.756	5.236	3.504	M5	M6x11	M12x22
CCA170	6.693	.787	7.874	3.937	3.149	.984	2.559	1.772	.197	3.228	2.756	5.984	4.252	M5	M10x16	M16x30
CCA220	8.661	.984	10.039	5.118	4.331	1.181	2.795	1.811	.197	3.661	2.756	6.417	4.685	M5	M20x20	M20x35
CCA270	10.630	1.181	12.008	5.118	4.331	1.378	2.992	1.800	.197	4.055	2.933	6.988	5.256	M5	M20x20	M24x40

Closed Centre Rotating Hydraulic Cylinder

Imperial Design
RVC Series with Safety Device / Optional Stroke Sensing

- High speed closed centre hydraulic cylinder
- This can be installed in both horizontal and vertical applications
- Equipped with safety check valves, preventing loss of grip if power supply is interrupted
- Available with stroke sensing

Model No.*	Piston Area (Sq. in.) Push	Pull	Piston Stroke	Max Speed RPM	Draw Bar Pull lb/f	Max Pressure PSI	Drain gal/min	Wt kg
RCV75	6.83	5.73	.591	6000	3,325	580	.2	4
RCV100	13.33	12.24	.787	6000	7,100	580	.2	7
RCV125	18.91	17.52	.984	6000	10,160	580	.2	10
RCV150	27.28	24.80	1.181	5500	14,385	580	.2	14
RCV200	48.67	44.95	1.378	5500	26,100	580	.2	22
RCV250	67.30	70.80	2.360	2000	63,720	900	.2	88



Dimensional Data

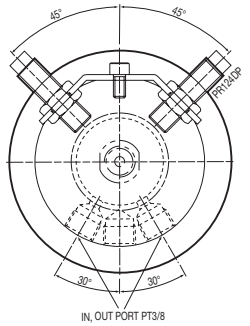
Model No.	A	B	C	D	E	F	G	H	J	K	L	M	N	P Max	P Min	Q	R
RCV75	2.953	.591	4.094	3.543	2.559	1.181	.827	M20x2.5	1.378	6.772	4.173	2.598	5.000	1.811	1.220	6-M6x20	5.236
RCV100	4.134	.787	5.345	3.937	3.150	1.181	.827	M20x2.5	1.378	7.756	4.252	3.504	5.984	1.772	.984	6-M10x20	6.220
RCV125	4.921	.984	6.299	5.118	4.331	1.378	.984	M24x3.0	1.732	8.071	4.252	3.819	6.299	2.008	1.024	6-M12x24	6.535
RCV150	5.906	1.181	7.480	5.118	4.331	1.772	1.220	M30x3.5	1.772	8.425	4.252	4.173	6.654	2.005	1.024	6-M12x24	6.890
RCV200	7.874	1.378	9.646	5.709	4.724	2.165	1.457	M36x4.0	2.362	8.976	4.173	4.803	2.205	2.717	1.339	12-M16x30	7.441
RCV250	9.842	1.968	11.810	10.827	6.298	2.559	1.732	M42x3.0P	2.165	12.4000	4.921	7.283	9.720	2.953	.590	6-M16x190	10.000

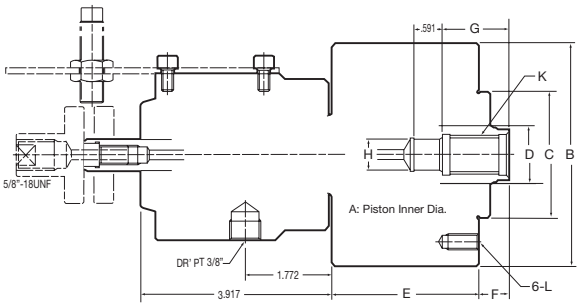
Closed Centre Rotating Hydraulic Cylinder

Imperial Design
RCCK Series with Coolant or Air Connection

- High RPM
- Includes rotary union to allow part sensing, air blow or coolant
- Long stroke
- Optional stroke sensing available

Model No.	Piston Area (Sq. in.) Push	Pull	Piston Stroke	Speed RPM	Max Bar Pull lb/f	Draw Pressure PSI	Max Wt kg
RCCK80	6.696	7.517	.591	5000	4,350	580	6
RCCK100	11.067	11.888	.787	5000	6,890	580	7
RCCK125	17.515	18.739	.984	5000	10,860	580	10
RCCK140	21.901	23.56	1.378	4000	13,660	580	13





Dimensional Data

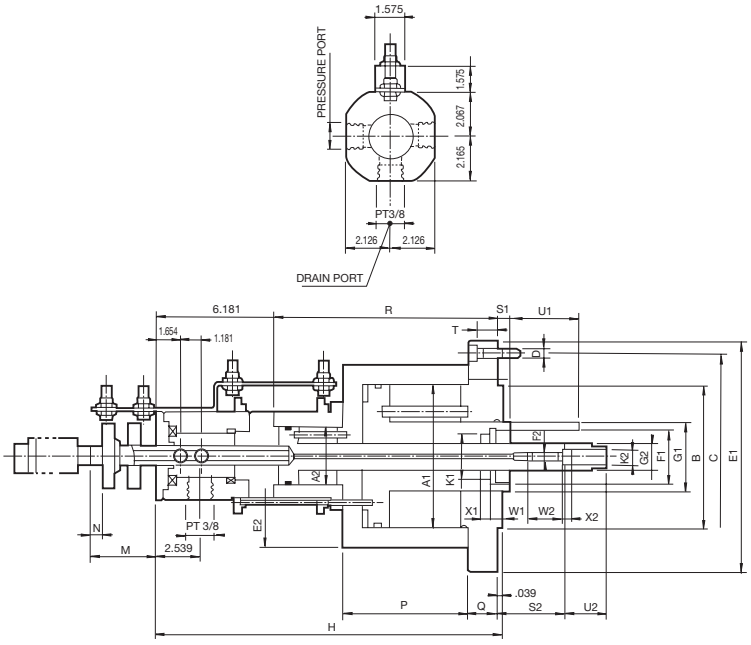
Model No.	A	B	C	D	E	F Max	F Min	G	H	K	L
RCCK80	3.149	4.527	2.559	1.181	3.031	1.220	.630	1.378	.630	M20x2.5	M8x1.25
RCCK100	3.937	5.315	3.149	1.181	3.464	1.417	.630	1.378	.630	M20x2.5	M10x1.5
RCCK125	4.921	6.299	4.331	1.778	3.740	1.614	.630	1.575	.708	M24x3.0	M12x1.75
RCCK140	5.512	7.086	4.331	1.575	4.291	2.008	.630	1.771	.866	M27x3.0	M12x1.75

Closed Centre Rotating Hydraulic Double Cylinder

Imperial Design
RCD Series with Stroke Control

- Special double acting cylinder has two separate piston actuations
- Can integrate rear attachments such as air sensing, air blow, coolant etc
- Available with stroke control
- Can be used vertically or horizontally
- Optional add rotary union to for air sensing, air blow or coolant

Model No.	Piston Area (Sq. in.) Piston 1	Piston2	Max Piston Stroke	Max Speed RPM	Pressure PSI	Wt kg
RCD1370	17.52/19.38	4.96/5.58	2.756/.787	5000	735	30
RCD1770	29.14/34.10	4.96/5.58	3.223/.787	4000	735	50



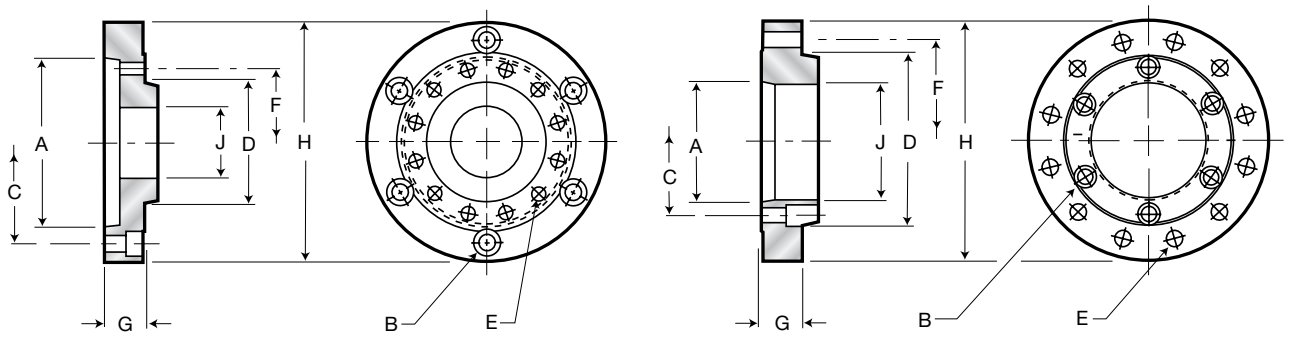
Dimensional Data

Model	RCD1370	RCD1770
A1	5.118	6.693
A2	2.756	2.756
B	5.118	6.693
C	7.480	9.252
D	6-M12	6-M16
E1	8.465	10.630
E2	6.693	8.268
F1	M42xP1.5	M42xP1.5
F2	M16	M16
G1	1.969	2.756
G2	1.102	1.102
H	15.039	15.906
I	.197	.197
K1	1.102	1.969
K2	.708	.708
M	2.559	2.559
N	.591	.591
P	5.197	5.748
Q	1.024	1.339
R	8.661	9.528
S1(min)	.394	.394
S2(min)	3.701	2.835
T	.551	.709
U1	2.756	3.228
U2	.787	.787
W1	.709	.787
W2	.984	.984
X1	.472	.472
X2	.472	.472

Spindle Conversion Adaptors

Imperial Design

- Made from steel
- Dimensions are per USA standards
- Available with UNC or metric mounting bolt holes
- Precision CNC turned in the UK



Part No.	Spindle (Machine) Type	Mount	A	B(bolt) in.*	B(bolt) mm *	C	Chuck Mount	D	E(tap) in	E(tap) mm	F	Offset G	Dia H	Hole J
A5-A6	2	5	3.250	7/16	10	4.125	6	4.188	1/2x13	12x1.75	5.250	1.000	6.500	2.500
A5-A8	2	5	3.250	7/16	10	4.125	8	5.500	5/8x11	16x2	6.750	1.125	8.250	3.000
A6-A5	1	6	4.188	1/2	12	5.250	5	3.250	7/16x14	10x1.5	4.125	1.500	6.500	1.700
A6-A8	2	6	4.188	1/2	12	5.250	8	5.500	5/8x11	16x2	6.750	1.125	8.250	3.250
A6-A11	2	6	4.188	1/2	12	5.205	11	7.750	3/4x10	20x2.5	9.250	1.375	11.000	4.000
A8-A6	1	8	5.500	5/8	16	6.750	6	4.188	1/2x13	12x1.75	5.250	1.750	8.250	2.500
A8-A11	2	8	5.500	5/8	18	6.750	11	7.750	3/4x10	20x2.5	9.250	1.375	11.000	5.250
A8-A15	2	8	5.500	5/8	16	6.750	15	11.250	7/8x9	22x2.5	13.000	1.625	15.000	5.250
A11-A6	1	11	7.750	3/4	20	9.250	6	4.188	1/2x13	12x1.75	5.250	1.750	11.000	2.500
A11-A8	1	11	7.750	3/4	20	9.250	8	5.500	5/8x11	16x2	6.750	1.875	11.000	3.250
A11-A15	2	11	7.750	3/4	20	9.250	15	11.250	7/8x9	22x2.5	13.000	1.625	15.000	7.500
A11-A20	2	11	7.750	3/4	20	9.250	20	16.250	1x8	24x3	18.250	1.875	20.500	7.500
A15-A8	1	15	11.250	7/8	22	13.000	8	5.500	5/8x11	16x2	6.750	2.000	15.000	3.250
A15-A11	1	15	11.250	7/8	22	13.000	11	7.500	3/4x10	20x2.5	9.250	2.250	15.000	5.250
A15-A20	2	15	11.250	7/8	22	13.000	20	16.250	1x8	24x3	18.250	1.875	20.500	11.000
A20-A11	1	20	16.250	1	24	18.250	11	7.750	3/4x10	20x2.5	9.250	2.125	20.500	5.250
A20-A15	1	20	16.250	1	24	18.250	15	11.250	7/8x9	22x2.5	13.000	2.500	20.500	8.250

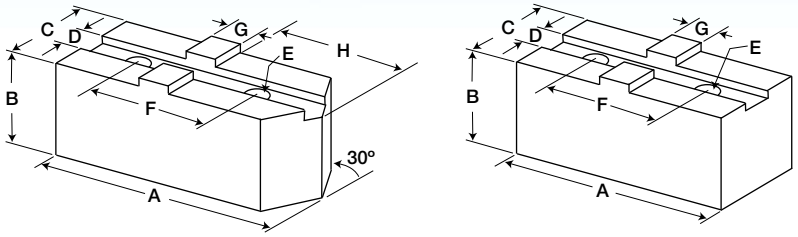
* Specify metric or inch requirements when ordering

NOTE:

1. Spindle and chuck mountings are outer bolt circle (type A2).
2. "A" and "D" are diameters to sharp corners (large diameter of taper).
3. "B" bolts are a total of 6 equally spaced (60 deg. apart) on a bolt circle of "C".
4. "E" tapped holes are a total of 12 equally spaced (30 deg. apart) on a bolt circle of "F".
5. See standard spindle dimensions on page 80.

Tongue and Groove Soft Blank Top Jaws - USA Style

For: Pratt Burnerd, Buck, Cushman, Forkhart, Rohm, SCA and others



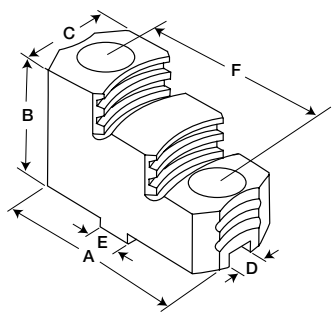
Soft Jaws, Medium Duty

Chuck Size	Part Number	Length A	Height B	Width C	L/Wise Slot D	Bolt Size E	Bolt Spacing F	Cross Key G	Offset Pointed Part	Offset Pointed A	H	Extra High Part Number	Extra High B
5"	2210-13609	2.18"	1.37"	.75"	.25"	5/16"	.87"	.375"	N/A	--		N/A	--
6"	2210-17609	2.81"	1.37"	1.0"	.31"	3/8"	1.5"	.501"	2210-17609OP	3.25"	1.81"	2210-17609EH	3.5"
8"	2210-20609	3.31"	1.87"	1.25"	.31"	3/8"	1.75"	.501"	2210-20609OP	3.75"	2.18"	2210-20609EH	3.5"
10"	2210-25609	3.93"	1.87"	1.5"	.5"	1/2"	2.12"	.749"	2210-25609OP	4.62"	2.62"	2210-25609EH	3.5"
12"	2210-32609	4.5"	2.125"	1.75"	.5"	1/2"	2.5"	.749"	2210-32609OP	5.37"	3.12"	2210-32609EH	4.0"
15"	2210-38609	5.18"	2.125"	1.75"	.5"	5/8"	3.0"	.749"	2210-38609OP	6.25"	3.62"	2210-38609EH	3.81"
18"& Up*	2980-38509	5.18"	2.81"	2.25"	.5"	3/4"	3.0"	.749"	2980-38509OP	6.37"	3.75"	2980-38509EH	3.81"

Soft Jaws, Heavy Duty

Chuck Size	Part Number	Length A	Height B	Width C	L/Wise Slot D	Bolt Size E	Bolt Spacing F	Cross Key G	Offset Pointed Part Number	Offset Pointed A Length	H	Extra High Part Number	Extra High B Height
6"	2770-17509	2.81"	1.37"	1.0"	.31"	7/16"	1.5"	.501"	2770-17509OP	3.25"	1.81"	2770-17509EH	3.5"
8"	8130-21509	3.31"	1.87"	1.25"	.31"	1/2"	1.75"	.501"	8130-21509OP	3.75"	2.18"	8130-20609EH	3.5"
10"	2770-26509	3.93"	1.87"	1.5"	.5"	5/8"	2.12"	.749"	2770-26509OP	4.62"	2.62"	2770-26509EH	3.5"
12"	2770-32509	4.5"	2.125"	1.75"	.5"	5/8"	2.5"	.749"	2770-32509OP	5.37"	3.12"	2770-32509EH	4.0"
15"	2980-38509	5.18"	2.81"	2.25"	.5"	3/4"	3.0"	.749"	2980-38509OP	6.37"	3.75"	2980-38509EH	3.81"

Standard length jaws have centreed cross key

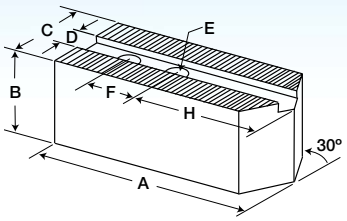


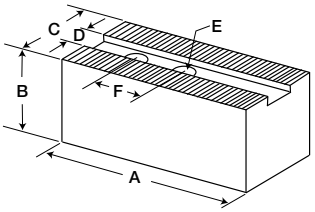
Hard Top Jaws - Medium Duty

Chuck Size	Part Number	Length A	Height B	Width C	L/Wise Slot D	Cross Key E	Bolt Spacing F	Bolt Size
6"	8210-17608	2.63"	1.63"	.98"	.313"	.5"	1.5"	3/8"
8"	8210-20608	3.34"	1.71"	1.06"	.313"	.5"	1.75"	3/8"
10"	8210-25608	3.74"	2.03"	1.28"	.5"	.75"	2.12"	1/2"
12"	8210-32608	4.33"	2.17"	1.45"	.5"	.75"	2.5"	1/2"
15"*	8210-38608	5.06"	2.68"	1.68"	.5"	.75"	3"	5/8"
18"& Up*	2980-38608	5.06"	2.93"	1.65"	.5"	.75"	3"	3/4"

Top Tooling 1.5mm x 60° Serrations - USA Style

For: Pratt Burnerd, Howa, Kitagawa, Matsumoto and others

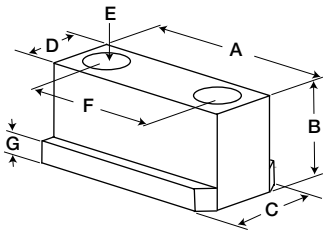




Soft Jaws

Chuck Size	Part Number	Length A	Height B	Width C	Slot D	Bolt Size E	Hole Spacing F	Offset Pointed Part Number	Offset Length A	H	Extra High Part Number	Extra High B Height
6"*	8140-17525	3.125"	1.5"	1.25"	.475"	M10	.78"	N/A	-	-	N/A	-
8"	8140-21525	3.5"	2.0"	1.5"	.551"	M12	1.0"	8140-21525OP	4.25"	2.45"	8140-21525EH	3.5"
10"	8140-26525	4.0"	2.0"	1.5"	.630"	M12	1.18"	8140-26525OP	5.0"	3.15"	8140-26525EH	3.5"
12"	8140-31525	5.25"	2.0"	2.0"	.71"	M14	1.18"	8140-31525OP	6.25"	4.15"	8140-31525EH	3.5"
12"	8140-B212	5.5"	2.0"	2.0"	.826"	M16	1.18"	8140-B212OP	6.25"	4.15"	8140-B212EH	3.5"
15"&18"	8140-40525	6.5"	2.5"	2.5"	.866"	M20	1.69"	8140-40525OP	7.5"	4.41"	8140-40525EH	3.5"
20"x24"**	8140-50525	7.0"	2.5"	2.5"	.984"	M20	2.36"	8140-50525OP	8.0"	-	8140-50525EH	3.5"

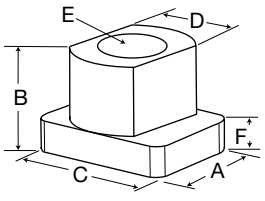
* 6" Jaw Part No. 8140-17525 Comes Standard as Offset Pointed ** 20" & 24" Jaws have 3mm x 60° Serrations



T-Nuts: for Atlas ATL Series and Kitagawa Chucks

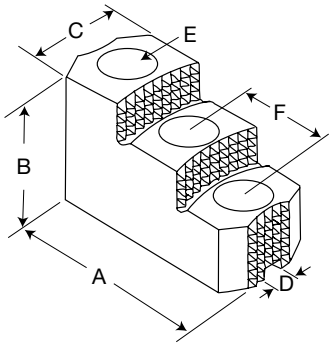
Chuck Size	Part Number	Length A	Height B	Width C	Neck D	Bolt Size E	Hole Spacing F	Shoulder G
6"	8130-B206	1.58"	.728"	.708"	.472"	M10	20mm	.295"
8"	8130-B208	1.77"	.807"	.787"	.551"	M12	25mm	.335"
10"	8130-B210	2.08"	.846"	.866"	.630"	M12	30mm	.335"
12"*	8130-B212	2.28"	1.100"	1.181"	.826"	M16	30mm	.453"
12"**	8130-B12	2.16"	1.319"	.984"	.708"	M14	30mm	.531"

* .826 Neck fits Kitagawa B, BT, and BL series ** .708 Neck fits Kitagawa N, HOH and NLT series



T-Nuts: for PBA Constant Grip, Quick Change Jaw Chucks and PBA Setrite® Power Chucks (Split type) 2 required per jaw

Chuck Size	Part Number	Length A	Height B	Width C	Neck D	Bolt Size E	Shoulder F
6"	8130-17590	.64"	.82"	.69"	.472"	M10	.30"
8"	8130-21590	.74"	.98"	.87"	.550	M12	.37"
10"	8130-26590	.74"	1.0"	.91"	.627"	M12	.34"
12"	8130-31590	.97"	1.3"	1.03"	.707"	M14	.53"
15"-18"	8130-40590	.97"	1.75"	1.32"	.864"	M20	.62"
20"&Up	8130-50590	1.2"	1.47"	1.32"	.980"	M20	.43"



*Hard Top Jaws: for PBA, Kitagawa and others (Split T-Nut Req'd)

Chuck Size	Part Number	Length A	Height B	Width C	Slot D	Bolt Size E	Bolt Spacing F
6"	8130-17624	2.56"	1.57"	1.18"	.475"	M10	.669"
8"	8130-21624	2.95"	1.96"	1.57"	.551"	M12	.748"
10"	8130-26624	2.95"	1.96"	1.57"	.63"	M12	.748"
12"	8130-31624	4.52"	2.36"	1.96"	.71"	M14	.948"
15"&18"	8130-40624	4.92"	2.95"	2.36"	.866"	M20	.948"
20"&Up	8130-50624	6"	2.95"	2.36"	.984"	M20	2.36"

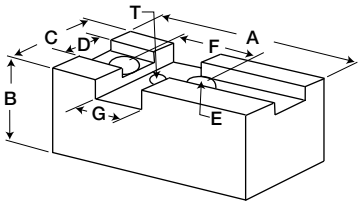
* Some manufacturers' "F" dimension may vary. It may be necessary to buy split T-nuts or split existing nuts

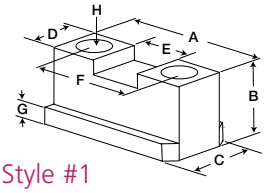
Top Tooling Square Serrations - USA Style

For: Pratt Burnerd, S.P., Cushman, Logansport and others

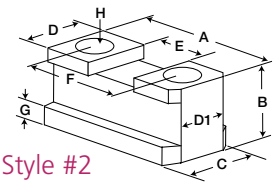
Soft Jaws

Chuck Size	Part Number	Length A	Height B	Width C	Tongue D	Bolt Size E	Hole Spacing F	Key Slot G
8"	8140-21527	3.0"	2.0"	1.25"	.5"	3/8"	1.437"	.745"
10"-12"	8140-26527	4.37"	2.5"	1.75"	.75"	1/2"	1.75"	.994"
15"-18"	8140-38527	5.0"	3.0"	2.0"	1.0"	3/4"	2.5"	1.488"





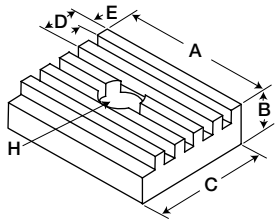
Style #1



Style #2

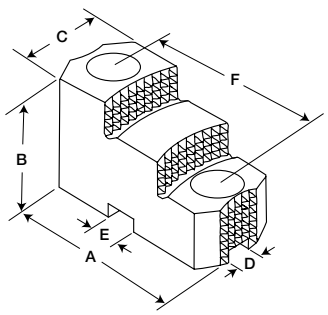
T-Nuts

Chuck Size	Part Number	Style Number	Length A	Height B	Width C	Neck D	Bolt Neck D1	Cross Size H	Bolt Slot E	Spacing F	Shoulder G
8"	8130-21528	1	2.12"	.99"	.87"	.49"	-	3/8"-16	.875"	1.44"	.31"
10"	8130-26528	2	2.5"	1.13"	.86"	.74"	.61"	1/2"-13	1.063"	1.75"	.40"
10"-12"	8130-25528	1	2.44"	1.0"	1.0"	.74"	-	1/2"-13	1.063"	1.75"	.37"
12"	8130-31528	2	2.5"	.98"	1.02"	.74"	.61"	5/8"-11	1.063"	1.75"	.35"
15"-18"	8130-40528	1	3.75"	1.25"	1.25"	1.0"	-	3/4"-10	1.563"	2.5"	.43"



Keys

Chuck Size	Part Number	A	Length B	Height C	Width D	E	Bolt Size H
8"	2179-00856	1.31"	.37"	.744"	.2"	.098"	1/4"-20
10"-12"	2179-01056	1.68"	.5"	.993"	.25"	.124"	5/16"-18
15"-18"-21"	8130-40529	2.75"	.5"	1.487"	.25"	.124"	3/8"-16

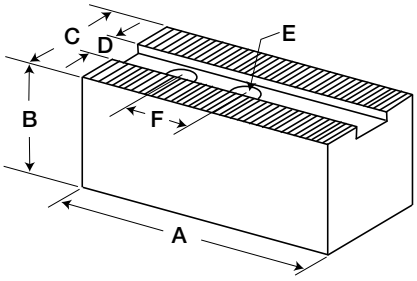


Hard Top Jaws

Chuck Size	Part Number	Length A	Height B	Width C	Tongue D	Key Slot E	Hole Spacing F	Bolt Size
10"-12"	8130-26327	4.87"	2.5"	1.75"	.75"	.994"	1.75"	1/2"
15"-18"	8130-38327	5.5"	3.5"	2.25"	1.0"	1.488"	2.5"	3/4"

Top Tooling 1/16" x 90° and 3/32 x 90° Serrations USA Style

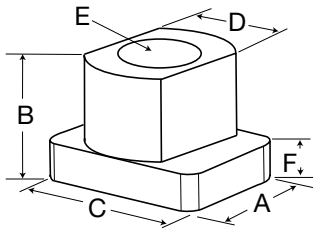
For: Pratt Burnerd and others



Soft Jaws

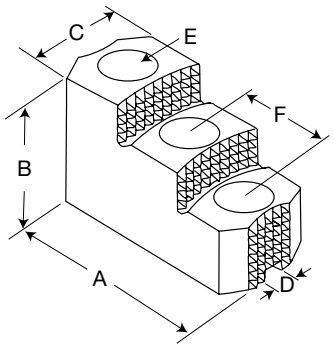
Chuck Size	Part Number	Length A	Height B	Width C	Slot D	Bolt Size E	Hole Spacing F
6"	8140-17512	2.75"	1.5"	1.25"	.475"	M8	.79"
8"	2860-21512	3.5"	2.0"	1.5"	.670"	M12	1.13"
10"	2860-21512	3.5"	2.0"	1.5"	.670"	M12	1.13"
12"	2860-32512	4.5"	2.5"	2.0"	.827"	M16	1.25"
15"&24"*	2860-40512	6.0"	3.0"	2.0"	1.00"	M20	1.56"

*3/32" x 90° serrations



T-Nuts 2 required per jaw

Chuck Size	Part Number	Length A	Height B	Width C	Neck D	Bolt Size E	Shoulder
6"	8820-17591	.47"	.82"	.69"	.470"	M8	-
8"	2870-17591	.88"	.91"	.73"	.669"	M12	.35
10"	2870-17591	.88"	.91"	.73"	.669"	M12	.35
12"	2870-26591	1.12"	1.06"	.94"	.826"	M16	.43
15"-24"	2870-40591	1.10"	1.14"	1.42"	.999"	M20	.43



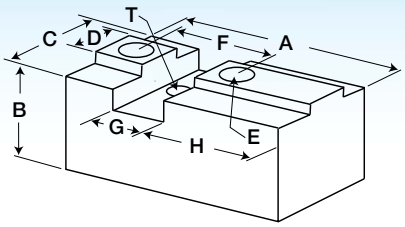
Hard Stepped Top Jaws

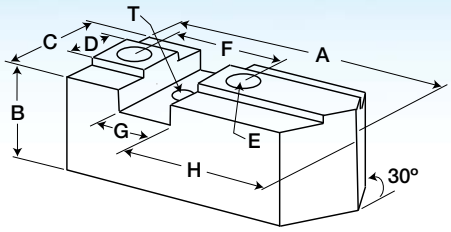
Chuck Size	Part Number	Length A	Height B	Width C	Slot D	Bolt Size E	Bolt Spacing F
6"	8130-17611	2.56"	1.56"	1.18"	.475"	M8	.67"
8"	8130-21611	3.00"	1.97"	1.57"	.670"	M12	.75"
10"	8130-21611	3.00"	1.97"	1.57"	.670"	M12	.75"
12"	8130-31611	4.92"	2.36"	2.36"	.827"	M16	.98"
15"&24"*	8130-40611	4.92"	2.95"	2.36"	1.00"	M20	1.22"

*3/32" x 90° serrations

Top Tooling American Standard Acme Serrations

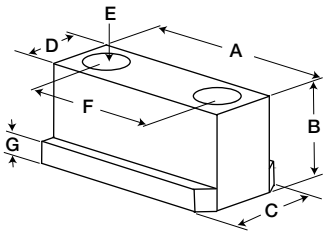
For: Pratt Burnerd, Buck, Cushman, S.P. and others





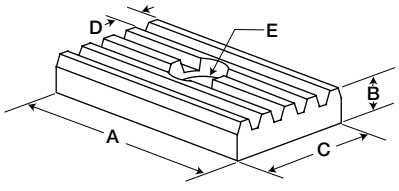
Soft Jaws

Chuck Size	Part Number	Length A	Height B	Width C	Tongue D	Bolt Size E	Hole Spacing F	Key Slot G	H	Tapped Hole T	Offset Pointed Part Number	Offset Pointed A	H	Extra High Part Number	Extra High B
8"	7749-22038	3.75"	2.0"	1.5"	.67"	1/2"	1.25"	.601"	2.12"	10-24	7749-22038OP	N/A		7749-22038EH	N/A
10"	7749-26047	4.12"	2.31"	1.75"	.75"	1/2"	1.75"	1.031"	2.12"	5/16"-18	7749-26047OP	5.5"	3.5"	7749-26047EH	3.31"
12"	7749-32056	5.12"	2.31"	1.75"	.875"	5/8"	2.0"	1.031"	2.87"	5/16"-18	7749-32056OP	5.5"	3.25"	7749-32056EH	3.31"
15",18"&20"	8140-40533	6.0"	3.31"	2.5"	1.0"	3/4"	2.5"	1.531"	2.62"	3/8"-16	8140-40533OP	7.5"	4.25"	8140-40533EH	4.81"
21"-UP	8140-50533	6.0"	3.31"	3.0"	1.25"	7/8"	3.0"	1.531"	2.62"	3/8"-16	8140-50533OP	7.5"	4.25"	8140-50533EH	4.81"



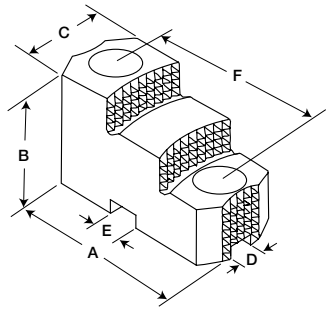
T-Nuts

Chuck Size	Part Number	Length A	Height B	Width C	Neck D	Bolt Size E	Hole Spacing F	Shoulder G
8"	2749-02407	2.0"	1.0"	.94"	.670"	1/2"-13	1.25"	.44"
10"	2749-02417	2.5"	.64"	.94"	.678"	1/2"-13	1.75"	.38"
12"	2749-02427	3.0"	.74"	1.06"	.802"	5/8"-11	2.0"	.44"
15",18"&20	8130-40531	3.5"	.93"	1.25"	.933"	3/4"-10	2.5"	.55"
21&Up	8130-50531	4.25"	1.18"	1.55"	1.159"	7/8"-9	3.0"	.68"



Keys

Chuck Size	Part Number	Length A	Height B	Width C	D	Bolt Size E
8"	2749-02405	1.5"	.38"	.6"	.156"	10-24
10"	2749-02415	1.68"	.5"	1.030"	.25"	5/16"-18
12"	2749-02425	2.13"	.5"	1.030"	.25"	3/8"-16
15" & Up	8130-40530	2.87"	.5"	1.530"	.25"	3/8"-16



Hard Top Jaws

Chuck Size	Part Number	Length A	Height B	Width C	Tongue D	Slot E	Bolt Spacing F
8"	7749-22036	3.50"	2.0"	1.75"	.67"	.601"	1.25"
10"	7749-26042	4.25"	2.50"	1.75"	.75"	1.031"	1.75"
12"	7749-32052	4.87"	2.50"	1.75"	.87"	1.031"	2.0"
15",18"&20	8130-40632	5.5"	3.31"	2.5"	1.0"	1.531"	2.5"
21 & UP	8130-50532	6.5"	3.31"	2.5"	1.25"	1.531"	3.0"

Machining Soft Blank Top Jaws

Standard hard top jaws can be used for most normal work. Soft jaws may be used for second operation work, for previously machined surfaces to prevent part marring and for improved concentricity. Soft jaws are generally machined to size, in position on chuck or formed into the desired shape for holding difficult shaped workpieces.

Soft jaws generally conform to existing industry standards or accepted standards to fit master jaws that may have fine, metric, acme or square serrations or have tongue and groove type cross tenon mount. Steel used in making soft jaws is mostly mild, low carbon content capable of being case hardened through specific heat treating steps. Due to clamping force factors (heavy jaws reduce clamping force and rpm's) reducing weight through use of lighter materials such as aluminium may be considered. All jaws should be designed and formed keeping in mind the potential grip force loss due to centrifugal forces.

The initial fitting of the top jaws to the chuck prior to machining is important if repeat accuracy is to be achieved. For all types except on chucks with fine serrated base jaws, the jaws should be loaded radially outward to take up any fitting clearance prior to tightening the jaw screws. This applies to top jaws which are intended to hold a workpiece externally. In the case of internal gripping the jaws should load inwards.

Operate the chuck several times gripping a suitable size piece of material to load the top jaws back and then lock the base jaws in their approximate mid-stroke position. On chucks which accept collet pads a suitable sized ring may be placed in the collet seating diameter of the chuck's base jaws. If extreme accuracy is not required the jaws may then be turned directly to the size required to suit the gripped workpiece diameter. On long grip faces a back taper should be allowed to ensure that the jaws initially contact the workpiece at their outer end. A back taper of 75µmt per inch on jaw height will be found adequate in most cases.

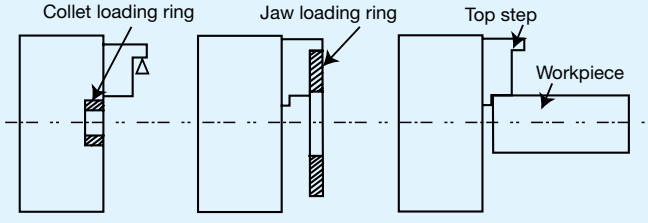
Where very accurate concentricity is required top jaws should be machined as described previously but to accept a suitable loading ring rather than the workpiece itself. The ring should be thin axially but of sufficient radial thickness to withstand the gripping force. A diameter is machined to receive the ring at the outer end of the jaws with the chuck in its mid stroke condition, master jaws are flush with the chuck body. The ring previously fitted to the base jaw collet seating diameter is removed after first opening the chuck. The jaws are then closed to grip the loading ring in the top jaws. This effectively pre-loads the top jaws in a similar manner to the loading which occurs when the workpiece is gripped.

The top jaws are then machined to hold the workpiece. Since the top jaws are fully loaded during machining it is generally unnecessary to include any back taper on the gripping face as this occurs automatically. The jaws are then opened and the loading ring removed. If the top step of the jaw used for holding the loading ring interferes with the workpiece then it may be machined away. Otherwise it should be left on to allow the jaws to be reskimmed at a later date with the loading ring in position. The procedure for carrying out this operation is shown in Figure 3.

To obtain good concentricity it is important that the top jaws are loaded in an identical manner when holding the ring as when gripping the workpiece. Thus the same chuck operating pressure should be used and the ring should be held either externally or internally to suit the particular case.

If care is taken in machining top jaws, concentricity between a turned diameter and the gripped diameter of 25µm TIR can be achieved. As an aid to improving concentricity it is better when loading the workpiece if the chuck is positioned with a single rather than two jaws at the bottom. Simultaneous location on two jaws can cause a trapping effect on large diameter workpieces as the workpiece is lifted to contact the third jaw. This may be detrimental if very accurate concentricity is demanded.

Figure 3 - Machining Soft Jaws



a) Machine step for jaw loading ring with collet loading ring in position and jaws at midstroke.

b) Insert jaw loading ring and machine step for workpiece

c) Insert workpiece. Top step may be machined away if desired

Guide to Top Tooling

Top jaws should be designed to hold the workpiece as close to the chuck face as possible. Excessive jaw height reduces the effective gripping force available and is detrimental to accuracy. As a general rule the height of the grip point above the chuck front face should not exceed one-quarter of the chuck's diameter. Thus for a 305mm chuck the height of the grip point should not exceed 75mm.

Large heavy top jaws should be avoided if possible since the loss in gripping force due to centrifugal effects at high spindle speeds is increased. If heavy jaws are unavoidable it may be necessary to restrict the spindle speed below the chuck's maximum recommended speed to ensure that sufficient gripping force is retained to hold the workpiece.

All top jaws in a set should be of equal weight to ensure no large out-of-balance forces occur. In the case of workpieces with a residual out-of-balance this may be corrected by designing the top jaws to counteract the imbalance component. Alternatively, it may be necessary to restrict the machine spindle to low speeds to avoid possible vibration problems.

Ideally, top jaws should not extend beyond the chuck periphery. If this is unavoidable, the amount of projection should be restricted within safe limits bearing in mind that the loss in gripping force due to centrifugal effect is a function of the product of top jaw mass and the distance to the jaws centre of mass about the chuck's rotational axis. Precautions should also be taken to ensure that projecting top jaws will not collide with tooling during the machining cycle.

Care should be exercised in machining workpieces whose length protrudes excessively beyond the chuck jaws. As a general guide, for workpieces up to approximately one-third of the chuck diameter whose inner end face is located close to the chuck, machining should not be carried out at a distance greater than five times the workpiece diameter or three times the axial length gripped by the jaws measured from the outer end of the jaws. The lesser of these two values should be used and the maximum height of the top jaws should be restricted to one-quarter of the chuck diameter. The proportions for this condition are shown in Figure 1.

If the protrusion of the workpiece exceeds this amount then support by the tailstock and/or use of a steady rest should be considered.

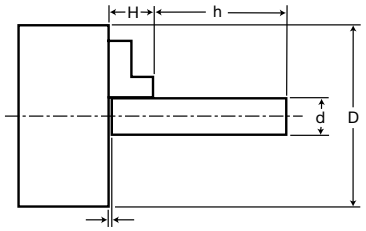
When the workpiece diameter is greater than approximately one-third of the chuck diameter and the workpiece is well-supported axially close to its outer periphery, the distance to the machining point from the outer end face of the jaws should not normally exceed three-quarters of the workpiece diameter. This is based on the assumption that the axial length of the workpiece gripped by the jaws is not less than one-tenth of the workpiece diameter. The proportions for this condition are shown in Figure 2.

If these conditions cannot be satisfied, support by the machine's tailstock should be considered.

With slender or thin-walled tubular workpieces, care should be taken to ensure that the workpiece is sufficiently rigid to withstand the cutting force incurred.

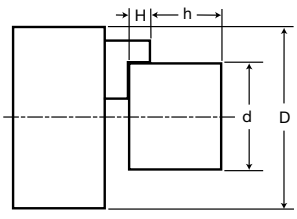
The position of the top jaw securing screws is important with tee-slotted and serrated type jaws, particularly when split tee nuts are used. The centre of the screws should always be within the length of the base jaw. In addition, the centre distance between pairs of screws on chucks with split tee nuts should always be as large as possible to restrain any lifting effect.

Figure 1 For d less than D/3



Workpiece close to chuck face
Max h = 3H or 5d whichever is the smallest
Max H = 1/4D

Figure 2 For d greater than D/3



Max h = 3/4d Min H = 1/10d

Guide to Top Tooling

It is particularly important that the inner screws should be as far forward as possible to counteract the couple arising from application of the gripping force at some distance above the chuck face.

If distortion occurs with thin-walled workpieces, the amount may be reduced by lowering the chuck's operating pressure thus reducing the gripping force. In general the amount of distortion reduces in direct proportion to gripping force. Thus, halving the gripping force will reduce distortion to one-half of the original amount. Extreme care should be exercised in lowering the chuck's operating pressure since the resulting lower gripping force may be inadequate to hold the workpiece at high speed due to the effect of centrifugal force. In many cases it is better to overcome distortion problems by using wraparound top jaws. These should preferably contact the workpiece circumferentially at six-equally spaced points with the gripping force distributed equally between all six points.

If this ideal arrangement is achieved the resulting distortion will be reduced to approximately 1/20th of that experienced with an equivalent total gripping force distributed over only three grip points. When the diameter to be gripped is not perfectly round the provision of a rocking top jaw arrangement may be necessary to ensure that the total gripping force is equally distributed between all six grip points.

Where it is desired to ensure that the turned end face of a workpiece is perfectly parallel with a previously machined rear face, the use of end location stops should be considered. These are fitted directly to the chuck body so that the machined face of the workpiece rests against them rather than on the top jaw step faces. Tapped holes are provided in most chucks on their front face for this purpose. Three locators of equal length should be used, positioned at as large a diameter as possible. For extreme accuracy the end faces of the locators may be machined in position on the chuck with the top jaws temporarily removed.

Top jaws can be used for holding workpieces either externally or internally and should be positioned on the chuck's base jaws accordingly. When fitting top jaws they should be located to grip the mean workpiece diameter at the master jaw at mid-stroke position, which is indicated when master jaws are flush with the chuck O.D.

The effect of variations in workpiece grip diameters should be considered to ensure in the workpiece maximum metal condition that sufficient clearance exists with the jaws fully opened to permit insertion of the workpiece. It is even more important to ensure that in the workpiece minimum metal condition the jaws do not close an excessive amount to guarantee that the workpiece is securely gripped. The latter is important from a safety aspect since it is possible with an undersize workpiece for the jaws to close to their end-of-stroke position while only loosely holding the part. As a safety check to ensure that the workpiece is gripped, rotating hydraulic cylinders can be fitted with electrical proximity probes to detect the end-of-stroke condition.

The length of the workpiece and its axial location when loaded are important to prevent an excessive depth of cut occurring during end facing operations. This in the extreme case may dislodge the workpiece from the chuck jaws. Similarly, variations in unmachined diameters of forged and cast workpieces should be considered to ensure that an excessive depth of cut does not inadvertently occur. In certain cases an additional preliminary pass of the tool may be necessary in the interest of safety.

Always check that all the top jaw securing screws are correctly tightened. Avoid over-tightening as this can spread the width of tee-slotted master jaws, distorting them and tightening their fit in the chuck body. Use top jaws conforming to flatness and fit tolerance standards since poor quality top jaws can also promote distortion of the chuck's master jaws. Cheap soft blank top jaws not conforming to the tolerance standards can be dangerous and should not be used.

Pratt Burnerd's Constant Grip, Quick Change Jaw Chuck will accept collet pads. Collet pads are ideal for bar stock work and are fitted to the inner end of the base jaws. Always ensure that the pads are correctly secured but do not over-tighten the pad expander plug as this can distort the chuck's base jaws.

Do not leave loose keys or tee nuts in the chuck as these will be thrown out if spindle rotation is started and may cause damage or injury. Always check that the workpiece is correctly loaded and securely gripped and ensure that the covers and guards are in place before commencing spindle rotation.

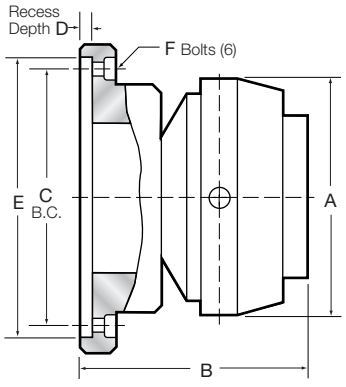
Please understand that the foregoing recommendations can only act as a general guide and may require modification depending on other factors such as the severity of the machining operation being carried out particularly where interrupted cutting conditions appertain.

Manual Collet Chucks Key Operated

KC Series

- Twelve month warranty
- 25µm repeatability
- Capacities from 1.6mm to 63.5mm
- Precision manufactured to fit types A, D and L spindles and adapter recess
- Steel components are hardened and ground
- Simple operation. No drawbar or actuating cylinder required

Chuck Size	Capacity	Uses Collet Type	Adapter Recess Model No.	Type A Spindle Spindle Size	Type A Spindle Chuck Model No.	Type D Spindle Spindle Size	Type D Spindle Chuck Model No.	Type L Spindle Spindle Size	Type L Spindle Chuck Model No.
KC15	1/16" - 1-1/2" 1.6 - 3.81mm	EC	KC15/AP (6010-01300)	A-5 A-6	6011-31300 6011-41300	D-3 D-4 D-5 D-6	6012-21300 6012-31300 6012-41300 6012-51300	L-00 L-0	6013-11300 6013-21300
KC20	1/4" - 2" 6.4 - 50.8mm	ED	KC20/AP (6010-01700)	A-6 A-8	6011-41700 6011-51700	D-4 D-5 D-6 D-8	6012-31700 6012-41700 6012-51700 6012-61700	L-0 L-1	6013-21700 6013-31700
KC25	1/2" - 2-1/2" 12.7 - 63.5mm	EE	KC25/AP (6010-02100)	A-6 A-8	6011-42100 6011-52100	D-6 D-8 D-11	6012-52100 6012-62100 6012-72100	L-1 L-2	6013-32100 6013-42100



Other mounting available upon request.

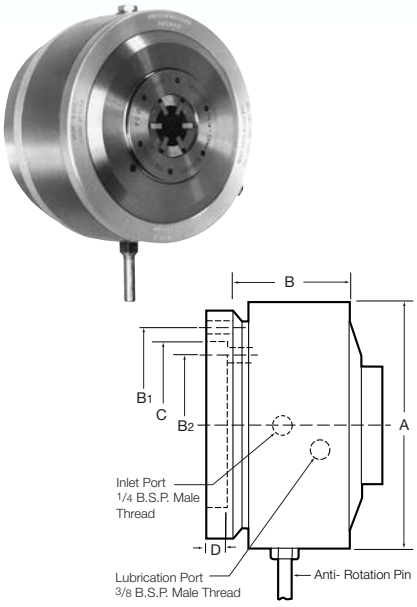
Dimensional and Performance Data

Chuck Size	A	B	C	D	E	F	Max rpm	Wt lbs
KC15/AP	4.65	4.56	5.51	.15	4.921	M10	4000	16
KC20/AP	6.00	5.15	6.93	.15	6.299	M10	3000	33
KC25/AP	6.00	5.15	6.93	.15	6.299	M10	3000	30

HOW TO ORDER: State quantity, model number, spindle specification and shipping instructions.

Self Contained Power Collet Chucks

PC Series



Dimensions for Adapter Mount Chucks
Other type mounts available. Consult factory

- Precision manufactured to fit types A, D and L spindles and adapter recess
- Size range: Collet chucks will accommodate part sizes from 1.6mm to 63.5mm in diameter. Collets accommodate round and hexagonal stock
- Accuracy is 17.5µm TIR at the nose of the collet
- Gripping power suitable for heavy torque loads and end throughst with an adjustment feature on the chuck to reduce the gripping force down to the lightest grip essential for soft materials or thin walled components
- No loss of grip due to centrifugal force
- No draw tube required that would restrict machines bore capacity
- No rear actuating cylinder or drawbar required
- Reliable: Chuck bearings are thoroughly lubricated by a micro-fog lubrication system for smooth running and minimum wear
- Advance part while chuck is in motion
- Failsafe design. Chuck will not release part if power supply fails
- Compact design. Less overhang
- Light in weight
- Easy installation
- Twelve month warranty

Chuck Size	Capacity	Uses Collet Type	Adapter Mount Model No.	Type "A" Mount Spindle Size	Type "A" Mount Chuck Model No.	Type "D" Mount Spindle Size	Type "D" Mount Chuck Model No.
PC15	1/16 - 1-1/2 1.6 - 38.1mm	EC	3030-21300	A-5 A-6	3031-31300 3031-41300	D-3 D-4 D-5 D-6	3032-21300 3032-31300 3032-41300 3032-51300
PC20	1/4 - 2 6.4 - 50.5mm	ED	3030-31700	A-5 A-6 A-8	3031-31700 3031-41700 3031-51700	D-5 D-6 D-8	3032-41700 3032-51700 3032-61700
PC25	1/2 - 2-1/2 12.7 - 63.5mm	EE	3030-32100	A-8 A-11	3031-52100 3031-62100	D-6 D-8 D-11	3032-52100 3032-62100 3032-72100

- Hydraulic power unit with 3 gallon tank and 1/2 HP motor
- Foot control valve
- Air-lube control unit (Requiring Max psi 20 psi)
- Package set of connectors, 6' of hose
- Low-pressure hose (3/8" bore) for linking lubro-control unit to chuck
- High-pressure air hose (1/4" bore) for linking control valve to chuck

ORDER KIT NO. 3536-00000

Chuck Size	A	B	B.C. B1	B.C. B2	TAP B1	TAP B2	Recess Dia C	Recess Depth D	Max. rpm	Wt. lbs	Operating PSI②
PC-15	7.75	5.04	6.000	4.687	(6)5/16" UNC	(3)3/8" UNC	5.250	.188	3000	20	480
PC-20	9.06	5.59	8.268	6.250	(6)M-8	(3)1/2" BSW	7.500	.307	2000	31	650
PC-25	9.06	5.59	8.268	6.250	(6)M-8	(3)1/2" BSW	7.500	.307	2000	30	650

HOW TO ORDER: State quantity, model number of chuck and shipping instructions.

Multisize Collets

Advantages of the Pratt Burnerd Multisize Collets

WIDE RANGE CAPACITY
Each multisize collet has a gripping range of 3mm with an extended range of 2.5mm above and below each nominal size for a total range of 3.7mm per collet.

ADAPTABILITY
Fractional, decimal, metric and non-standard bar sizes are all accommodated as the collet range is stepless. The collets will accept round and hexagonal bars.

UNEQUALLED ACCURACY
Each collet is inspected to 12µm maximum eccentricity at the nose of the collet.

NO DISTORTION
Geometrically designed. Ensures freedom from collet distortion and provides constant parallel grip throughout the gripping range with even wear and long life.

ALL STEEL COLLETS
Collet blades are all hardened and ground.

INTERCHANGEABILITY
Multisize collets are interchangeable between the various types of Pratt Burnerd collet chucks.

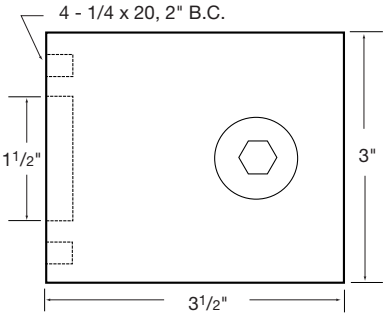
MULTISIZE COLLETS
Multisize collets are available with smooth blades or serrated blades for gripping black or scaly type material.

Use with chucks prefixed by No.		KC-15 PC-15	KC-20 PC-20	KC-25 PC-25
Capacity Collets	Collet Numbers	Collet Numbers	Collet Numbers	Collet Numbers
1/16 - 3/16 1.6 - 4.8mm	EA2 3150-10200	EC2 3150-30200	-	-
1/8 - 1/4 3.2 -6.4mm	EA3 3150-10300	EC3 3150-30300	-	-
1/4 - 3/8 6.4 - 9.5mm	EA4 3150-10400	EC4 3150-30400	ED4 3150-40400	-
3/8 - 1/2 9.5 - 12.7mm	EA5 3150-10500	EC5 3150-30500	ED5 3150-40500	-
1/2 - 5/8 12.7 - 15.9mm	EA6 3150-10600	EC6 3150-30600	ED6 3150-40600	EE6 3150-50600
5/8 - 3/4 15.9 - 19.0mm	EA7 3150-10700	EC7 3150-30700	ED7 3150-40700	EE7 3150-50700
3/4 - 7/8 19.0 - 22.2mm	EA8* 3150-10800	EC8 3150-30800	ED8 3150-40800	EE8 3150-50800
7/8 - 1 22.2 - 25.4mm	EA9* 3150-10900	EC9 3150-30900	ED9 3150-40900	EE9 3150-50900
1 - 1-1/8 25.4 - 28.6mm	-	EC10 3150-31000	ED10 3150-41000	EE10 3150-51000
1-1/8 - 1-1/4 28.6 - 31.8mm	-	EC11 3150-31100	ED11 3150-41100	EE11 3150-51100
1-1/4 - 1-3/8 31.8 - 35.0mm	-	EC12* 3150-31200	ED12 3150-41200	EE12 3150-51200
1-3/8 - 1-1/2 35.0 - 38.1mm	-	EC13* 3150-31300	ED13 3150-41300	EE13 3150-51300
1-1/2 - 1-5/8 38.1 - 41.3mm	-	-	ED14 3150-41400	EE14 3150-51400
1-5/8 - 1-3/4 41.3 - 44.5mm	-	-	ED15 3150-41500	EE15 3150-51500
1-3/4 - 1-7/8 44.5 - 47.6mm	-	-	ED16* 3150-41600	EE16 3150-51600
1-7/8 - 2 47.6 - 50.8mm	-	-	ED17* 3150-41700	EE17 3150-51700
2 - 2-1/8 50.8 - 54.0mm	-	-	-	EE18 3150-51800
2-1/8 - 2-1/4 54.0-57.2mm	-	-	-	EE19 3150-51900
2-1/4 - 2-3/8 57.2 - 60.3mm	-	-	-	EE20* 3150-52000
2-3/8 - 2-1/2 60.3 - 63.5mm	-	-	-	EE21* 3150-52100
Complete Set	EA10 3160-10900	EC14 3160-31300	ED18 3160-41700	EE22 3160-52100

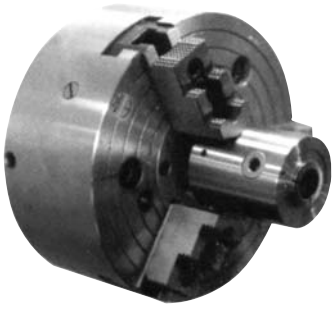
*For round stock only.

Quick Change 5C Collet Chuck

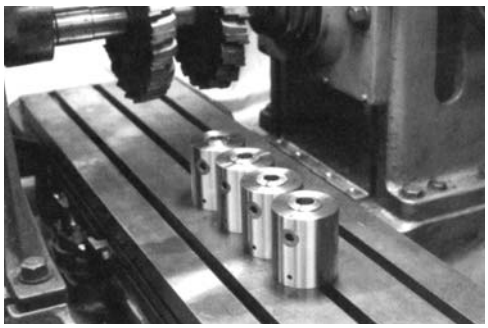
Series No. COL5C



- Quickly change from chuck work to collet work
- Hold the collet chuck O. D. in your power or manual chucks
- Mount in vertical mills, horizontal mills and machining centres
- Drilled and tapped for fixture mounting
- Dead length
- Hardened and ground
- No set-up
- Hex key included
- Twelve month warranty



Ideal for short run production on CNC lathes. No tear down or change over



Stack units for multiple part production

Chuck Lubricant

for Manual and Power Chucks

This is a specially formulated high pressure Chuck Lubricant and is the recommended lubricant to be used in all Pratt Burnerd Chuck that require grease type lubrication.

Features:

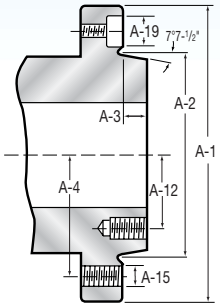
- Dramatically improves Chuck jaw forces over conventional lubricants, withstands
- pressure up to 500,000 pounds per square inch
- Rust and oxidation inhibitors
- Tacky nature gives high resistance to centrifugal force
- Contains molybdenum disulfide to reduce seizing, fretting wear galling and lower friction under conditions of extreme pressure
- Help reduce maintenance costs
- An effective lubricant for all brands of chucks

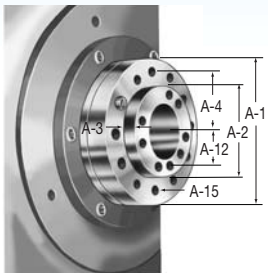
Ordering Information:

Order No.	Description
PB16OZ	16 oz (453.6 gms) tube
PB10LB	10 lb (4.5 kilo) pail

Standard Spindle Nose Data

Source: BS4442: Part 1: 1969



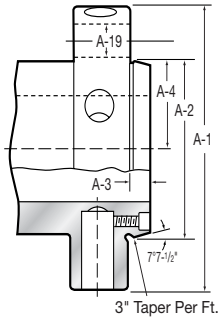


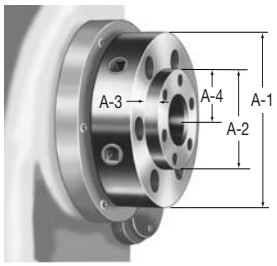
Type A American Standard A-1, A-2, B-1, B-2 Spindle

	A5	A6	A8	A11	A15	A20
A-1	133	165	210	280	380	520
A-2	82.563	106.375	139.719	196.869	285.775	412.775
A-3	13	14	16	18	19	21
A-4	52.4	66.7	85.7	117.5	165.1	231.8
A-12	30.95	41.3	55.55	82.55	123.8	184.15
A-15	M10	M12	M16	M18	M22	M24

US, ISO and DIN standards are available on request

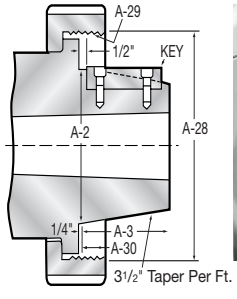
A-1 Has tapped holes on both the inner bolt circle and outer bolt circle.
A-2 Has tapped holes on the outer bolt circle, but has no hole on inner bolt circle.
B-1 Has drilled holes on the outer bolt circles, and has tapped holes on inner bolt circle.
B-2 Has drilled holes on the outer bolt circles, but has no holes on inner bolt circle.

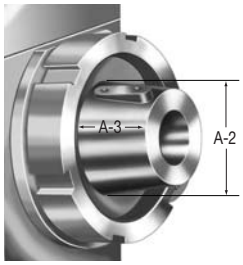




Type D1 American Standard Cam Lock Spindles

	D3	D4	D5	D6	D8	D11
A-1	92	117	146	181	225	298
A-2	53.975	63.513	82.563	106.375	139.719	196.869
A-3	11	11	13	14	16	18
A-4	35.3	41.3	52.4	66.7	85.7	117.5
A-19	15.1	16.7	19.8	23	26.2	31

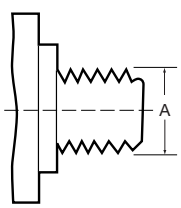


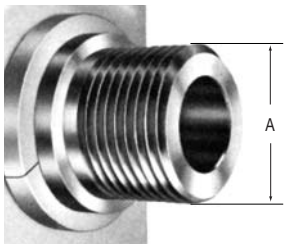


Type L Long Taper Key Drive

	L00	L0	L1	L2	L3
A-2*	2¾	3¼	4⅛	5¼	6½
A-3	2	2⅜	2⅞	3⅜	3⅞
A-28	3¾	4½	6	7¾	10⅜
A-29	6TPI	6TPI	6TPI	5TPI	4TPI

*Tolerance +.002/-.000





Threaded Spindle

Thread size A
1½-8
2¼-8
2⅜-6

Pratt Burnerd International
600 Group

Conversion Tables

Decimal & Millimeter Equivalents

Decimals		mm	Decimals		mm
1/64	0.015625	0.397	33/64	0.515625	13.097
1/32	.03125	0.794	17/32	.53125	13.494
3/64	.046875	1.191	35/64	.546875	13.891
1/16	.0625	1.588	9/16	.5625	14.288
5/64	.078125	1.984	37/64	.578125	14.684
3/32	.09375	2.381	19/32	.59375	15.081
7/64	.109375	2.778	39/64	.609375	15.478
1/8	**.1250**	**3.175**	**5/8**	**.6250**	**15.875**
9/64	.140625	3.572	41/64	.640625	16.272
5/32	.15625	3.969	21/32	.65625	16.669
11/64	.171875	4.366	43/64	.671875	17.066
3/16	.1875	4.763	11/16	.6875	17.463
13/64	.203125	5.159	45/64	.703125	17.859
7/32	.21875	5.556	23/32	.71875	18.256
15/64	.234375	5.953	47/64	.734375	18.653
1/4	**.2500**	**6.350**	**3/4**	**.7500**	**19.050**
17/64	.265625	6.747	49/64	.765625	19.447
9/32	.28125	7.144	25/32	.78125	19.844
19/64	.296875	7.541	51/64	.796875	20.241
5/16	.3125	7.938	13/16	.8125	20.638
21/64	.328125	8.334	53/64	.828125	21.034
11/32	.34375	8.731	27/32	.84375	21.431
23/64	.359375	9.128	55/64	.859375	21.828
3/8	**.3750**	**9.525**	**7/8**	**.8750**	**22.225**
25/64	.390625	9.922	57/64	.890625	22.622
13/32	.40625	10.319	29/32	.90625	23.019
27/64	.421875	10.716	59/64	.921875	23.416
7/16	.4375	11.113	15/16	.9375	23.813
29/64	.453125	11.509	61/64	.953125	24.209
15/32	.46875	11.906	31/32	.96875	24.606
31/64	.484375	12.303	63/64	.984375	25.003
1/2	**.5000**	**12.700**	**1**	**1.000**	**25.400**

1 mm = .03937" .001" = .0254 mm

Conversion chart

mm into inch	=	1 / 25.4	=	mm x 0.03937
mm^2 into sq. in.	=	1 / 645	=	mm^2 x 0.00155
cm^2 into sq. in.	=	1 / 6.45	=	mm^2 x 0.1550
kg into lbs	=	1 / 0.4536	=	kg x 2.2046
bar into PSI	=	1 / 0.0703	=	bar x 14.2248
daN onto lbs	=	9.80665 / 4,536	=	daN x 2.162
GD^2 kgm^2 lbf. ft. sec	=	kgm^2 / 1.356	=	kgm^2 0.7379

mm		inches	mm		inches
.1	=	.0039	46	=	1.8110
.2	=	.0079	47	=	1.8504
.3	=	.0118	48	=	1.8898
.4	=	.0157	49	=	1.9291
.5	=	.0197	50	=	1.9685
.6	=	.0236	51	=	2.0079
.7	=	.0276	52	=	2.0472
.8	=	.0315	53	=	2.1260
.9	=	.0354	54	=	2.1260
1	=	.0394	55	=	2.1654
2	=	.0787	56	=	2.2047
3	=	.1181	57	=	2.2441
4	=	.1575	58	=	2.2835
5	=	.1969	59	=	2.3228
6	=	.2362	60	=	2.3622
7	=	.2756	61	=	2.4016
8	=	.3150	62	=	2.4409
9	=	.3543	63	=	2.4803
10	=	.3937	64	=	2.5197
11	=	.4331	65	=	2.5591
12	=	.4724	66	=	2.5984
13	=	.5118	67	=	2.6378
14	=	.5118	68	=	2.6772
15	=	.5906	69	=	2.7165
16	=	.6299	70	=	2.7559
17	=	.6693	71	=	2.7953
18	=	.7187	72	=	2.8346
19	=	.7580	73	=	2.8740
20	=	.7874	74	=	2.9134
21	=	.8268	75	=	2.9528
22	=	.8661	76	=	2.9921
23	=	.9055	77	=	3.0315
24	=	.9449	78	=	3.0709
25	=	.9843	79	=	3.1102
26	=	1.0236	80	=	3.1496
27	=	1.0630	81	=	3.1890
28	=	1.1024	82	=	3.2283
29	=	1.1417	83	=	3.2677
30	=	1.1811	84	=	3.3071
31	=	1.2205	85	=	3.3465
32	=	1.2598	86	=	3.3858
33	=	1.2992	87	=	3.4252
34	=	1.3386	88	=	3.4646
35	=	1.3780	89	=	3.5039
36	=	1.4173	90	=	3.5433
37	=	1.4567	91	=	3.5827
38	=	1.4961	92	=	3.6220
39	=	1.5354	93	=	3.6614
40	=	1.5748	94	=	3.7008
41	=	1.6142	95	=	3.7402
42	=	1.6535	96	=	3.7795
43	=	1.6929	97	=	3.8189
44	=	1.7323	98	=	3.8583
45	=	1.7717	99	=	3.8976
			100	=	3.9370

Linear Measure

1 km.	=	0.6214 mi.
1 m.	=	3.28 ft
1 cm	=	0.3937 in.
1 mm	=	.03937 in.

Square Measure

1 km^2	=	0.3861 $mi.^2$
1 m^2	=	0.10.67 $ft.^2$
1 cm^2	=	0.155 $in.^2$
1 mm^2	=	0.00155 $in.^2$

Liquid Measure

1 litre	=	0.264 U.S. Gal.

Weight Measure

1 kg.	=	2.2 lbs.
1 kg	=	35.274 ozs.

Force Measure

1 daN	=	2.25 lbs.
1 Kg Force	=	9.8 Newton (N)
1 Kilopound	=	9.5 Newton (N)
1 Pound/inch	=	175.127 Newton/Metre
1 pound/foot	=	14.59 Newton/Metre

Pressure Measure

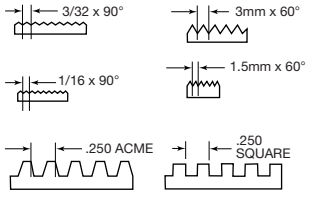
1 Bar	=	14.5 $Pound/inch^2$
1 Kg/m^2	=	9.8 $Newton/metre^2$
1 Kg/m^2	=	9.8 Pascal (Pa)
1 Kilonewton /$metre^2$	=	0.145 $Pound/inch^2$

Temperature Measure

Fahrenheit to celsius $= t_C = \frac{(t_f \cdot 23)}{1.8}$

Celsius to Fahrenheit $= {}^t f = 1.8\ {}^t c + 32$

Chart for serration identification



Pratt Burnerd Radio Frequency Gripmeter

The measurement of dynamic clamping force has never been more important than it is today. With the trend for faster and faster cutting speeds and the recent changes in legislation, you cannot afford to ignore it...

The latest version of our gripmeter now provides a host of new features resulting from the incorporation of 'state of the art' microcontrollers - including the facility to transfer measurements to your personal computer for presentation, analysis or storage. The NEW way to accurately measure the gripping force of manual and power operated chucks under both static and rotating conditions. An indispensable aid for production and maintenance engineers and a necessity for anyone concerned with machine shop safety.

Features

- Measures the chuck's gripping force under both static and dynamic condition up to 100 kN (or equivalent) per jaw
- Measures speed of rotation up to 6000 rpm
- Convenient and safe during use. Radio frequency signal between loadcell and handset hence no electrical slip rings or connecting wires
- Stores up to 120 readings, comprising grip, speed, cylinder pressure and date/time stamp
- Readings can be stored indefinitely or selectively deleted
- PC compatible - download readings for long term storage, presentation and analysis with 'Grip Analyzer' the new Windows® compatible software from PBA
- Read-out in any one of four selectable units kN, lbf, Mgf, Tons(long)
- High stiffness load cell ensures accurate measurement of gripping force
- Extension rings are are included to enable measurement of larger diameters
- Can be used for 2 jaw chucks and vices
- Low battery warning
- Powered by long-life batteries with automatic “power off” feature to extend battery life to the maximum. New easy battery replacement… uses 4 each AA in the readout unit and 1 each D cell 3.6 volt in the load cell
- No re-calibration required after a battery change
- Automatic zeroing
- Indication of overload
- Complies with CE and EMC directives
- Twelve month warranty

HOW TO ORDER: State quantity, part number, and shipping instructions.

Pratt Burnerd Radio Frequency Gripmeter

Hand Held Receiver

Loadcell Transmitter

The Radio Frequency Gripmeter or RFG comprises a hand held receiver unit and loadcell transmitter that is gripped in the chuck under test. The loadcell is completely self-contained and is free to rotate in the chuck to its maximum speed of 6000rpm. The loadcell when 'on' measures the grip and speed and then transmits the data at a permissible frequency (433.92Mhz) to the handset receiver. A valuable advantage of using radio frequency transmission is that there is no need for 'line of sight' between the loadcell transmitter and handset, which often can be difficult with machine guards obstructing clear view. The reading can be taken even with the loadcell and handset as much as 10m feet apart. The data when received at the handset is then converted to the operator's choice of units and displayed at the handset on a dot matrix screen. The grip reading is updated every 1/2 second and the speed measurement every 2 seconds. The data can then be stored at handset simply by pressing a few keys, up to 120 readings can be stored at one time. This information can subsequently be downloaded onto a PC for storage, analysis and printing. The RFG kit includes loadcell extension rings that extend the gripping diameter from 60mm to 100mm and 160mm. The instrument may also be used to measure the grip of 2 jaw chucks and vices.

RFG Kit Contents...

* Magnet required for speed measurement

Specifications:

Maximum Load Per Jaw (3 jaw)	100 kN
Unit of Measurement (user selectable)	kN, lbf, Mgf, Tons (long)
Grip Accuracy	± 1% (FSD)
Maximum Distance Between Units	10m
Loadcell Diameter	60mm
Smallest gripping Diameter Over Protection Ring	63mm
Alternative Diameters with Extension Rings	100/160mm
Maximum speed	6000 rpm
Set Zero	Automatic
PC Communications	RS232 (serial bus)
Handset Battery	AA (four)
Loadcell Battery lithium	D 3v long-life
Part Number	1009-07360

Distributed by:

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