Workholding Solutions

855-869-2425 (855-TMX-CHCK) • www.tmxworkholding.com

Workholding Solutions

Dear Valued Partners,

We have broadened our line of TMX Workholding products – the manufacturing world is changing and you need Workholding products designed and engineered to exceed your customers expectations.

Our TMX Workholding Experts will help you to:

- Close the gap between people and the workholding problems they are tasked with solving
- Seamlessly integrate pre-engineered power chuck packages into well-known Machine Tools
- Provide workholding solutions to capture maximum efficiency and performance from machine tool investments
- Improve existing processes, reduce scrap, eliminate unsafe workholding practices, innovate and develop new products and services to keep you competitive

We analyze your current workholding and map it to your tactical and strategic business goals. Today's organizations struggle with too many choices, some of which are aging, inflexible, and no longer support your changing requirements. As a result, you need to transform your business to better meet your needs and the Toolmex Workholding Solution experts are here to do just that.

The TMX Workholding Solutions team will:

- **Discover** – problems associated with or created by existing workholding and provide ROI driven solutions
- **Analyze** – existing machining processes to quantify throughput, scrap rates and quality measurements
- **Decide** – which products should be changed, and develop a transformation workholding product roadmap with associated actions, costs, and benefits.

Based on the TMX Workholding assessment phase, applications fall into three broad categories:

- **Keep** – There is no immediate need to modernize this application or little business value in doing so. The TMX Workholding Solutions team will be there to work with you through all changes you need now and in the future
- **Change** – The application requires modernization to address new business requirements, improve throughput, reduce cost and support innovation
- **Retire** – The product you currently have is no longer required to support a business process. You should plan to retire it. We will help you train your staff on the features and benefits of a better Workholding solution

Improvement and Transformation.

Regards,
TMX Workholding Solutions Team

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QUALITY ASSURANCE QA LAB

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Fast Efficient Shipping

In-stock orders are shipped the day you place your order. Order by 3PM EST Monday-Friday and we will ship your order to you the same day.

Always Open – www.tmxworkholding.com or www.toolmex.com – order on line – anytime-anywhere

2 Year WARRANTY

ON ALL CHUCKS

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POWER CHUCKS

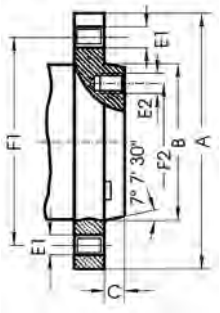
Spindle Nose with A1/A2 Mount

Selecting the chuck mounting:

- Choose from the types below
- For the short taper spindle nose Types A and D measure the pilot diameter and length (dimensions B and C), bolt circle diameter (dimensions F1 and F2) and diameter of the holes (dimensions E1 and E2)
- In the case of A type mount check the number of bolt circles (one for A2 mount, or two for A1 mount)
- Chucks with an A1 mount can only be installed on an A1 spindle nose
- Chucks with an A2 mount can be installed on either an A1 or A2 spindle nose

Spindle Type A1 and A2 Mount

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

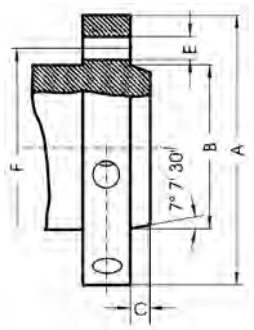


- Type A1 is exactly as shown with tapped holes in both inner and outer bolt circles
- Type A2 is as shown except without holes in the inner bolt circle

Spindle Nose with D1 Mount

Camlock Spindle Type D1 Mount

Spindle Nose	A	F	B	C max	E	Number of Holes
D1-3	3.622	2.7820	2.1250 +.00025	.4375	.5937	3
D1-4	4.606	3.2500	2.5005 +.0005	.4375	.6562	3
D1-5	5.748	4.1250	3.2505 +.0005	.5000	.8750	6
D1-6	7.126	5.2500	4.1880 +.0005	.5625	1.000	6
D1-8	8.858	6.7500	5.50075+.0005	.6250	1.125	6
D1-11	11.732	9.2520	7.75075 +.0005	.6875	1.250	6
D1-15	15.866	13.0000	11.251 +.001	.7500	1.375	6



Important: The camlock stud length is adjustable to suit the spindle camlock

Power Chuck and Cylinder Packages

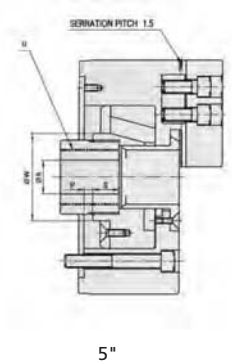
- Engineered specifically for each machine
- Power Chuck Packages available up to 63 inches
- Optimized chuck and cylinder combination
- Chuck upsizing; engineered to work with cylinder
- Dynamically balanced draw tube
- Maximized through-hole capacities
- Proprietary design engineering calculations
- Open center and closed center packages

TMX Power Chuck and Cylinder packages are designed with every detail in mind. TMX engineers review the machine spindle print to ensure that the cylinder mounting adapter, drawtube and chuck adapter are designed to interface with the machine properly and to ensure that maximum performance is achieved.

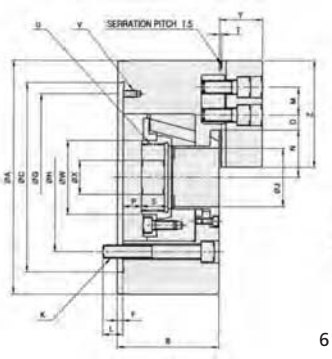
Using proprietary calculations, TMX engineers can determine the maximum allowable through-hole capacity for any machine and chuck package combination. In many cases, this through-hole capacity is larger than the Original Equipment offered by the machine tool builder ensuring that your TMX Power Chuck and Cylinder solution works each and every time.

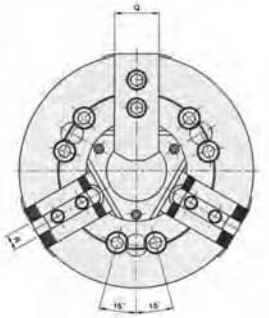
All TMX products are backed by a 2 year warranty and come with the peace of mind knowing that workholding engineers have designed and built the system with your goals in mind.

3-Jaw Large Thru-Hole Plain Back Chucks



5"





6", 8", 10", 12", 15", 18", 21", 24"

Chuck Dia	Part Number	Thru Hole	Jaw Stroke	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Permissible Input Force	Max Static Gripping Force	Max Speed	Wt	Moment of Inertia
		in					lbf		RPM	lb	lbs*ft2
5"	3-780-0500	1.2992	0.2126	0.3937	5.3150	0.3937	3933	8093	7000	14.8	0.0145
6"	3-780-0600	1.8110	0.2165	0.5118	6.6535	0.5118	5512	14167	6000	27.6	0.0512
8"	3-780-0800	2.0472	0.2992	0.7087	8.2677	0.4331	8995	21159	5000	49.2	0.1454
10"	3-780-1000	3.0315	0.3346	0.7874	10.0000	1.2205	11244	28088	4200	76.1	0.2642
12"	3-780-1200	3.5827	0.4016	0.9449	11.9685	1.3386	13043	33071	3300	121.9	0.6267
15"	3-780-1500	4.6457	0.4173	0.9055	15.0000	1.1811	15962	40467	2500	264.6	1.9539
18"	3-780-1800				17.7165				2000	361.6	3.9120
21"	3-780-2100	5.5118			20.8661	3.4252	20233	52606	1700	518.1	7.5782
24"	3-780-2400	6.4961	0.4094		24.0157	4.3307			1400	645.9	13.5998

For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025

Chuck Dia	Matching Cylinder Part Number	Matching Hard Jaw Part Number	Matching Soft Jaw Part Number
5"	3-797-050	3-787-305	3-788-305
6"	3-797-060	3-787-306	3-788-306
8"	3-797-080	3-787-308	3-788-308
10"	3-797-100	3-787-310	3-788-310
12"	3-797-120	3-787-312	3-788-312
15"	3-797-150	3-787-315	3-788-315
18"			
21"		3-787-321	3-788-321
24"			

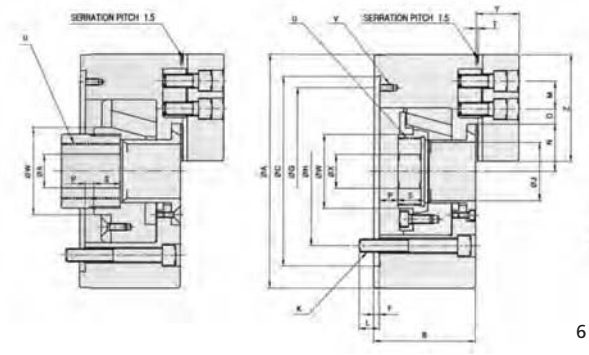
TMX part number series 3-780 and 3-781 are interchangeable with Kitagawa® B200 series*

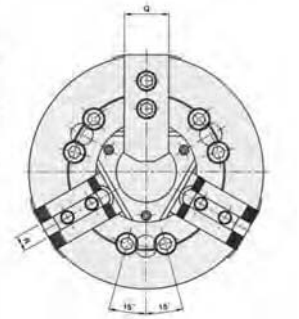
* TMX Power Chuck Workholding Solutions interchangeability with the Kitagawa® B200 Series is based on mounting dimensions (i.e. drawtube connection and spindle nose adapter dimensions) and top jaw mounting dimensions

TMX High Pressure Chuck Lubricant

TMX Chuck Lubricant	Part Number
16 oz	3-799-025

TMX 3-Jaw Large Thru-Hole Plain Back Chucks – Dimensions



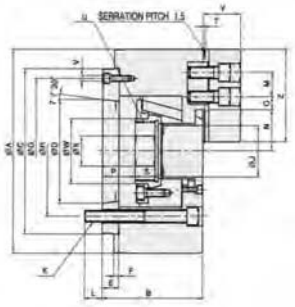


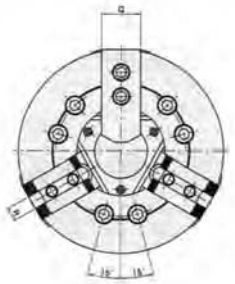
6", 8", 10", 12", 15", 18", 21", 24"

Chuck Dia	Part Number	A	B	C	F	G	H	J	K	L	M	N max	N min	O max	O min
5"	3-780-0500	5.3150	2.3622	4.3307	0.1575	3.7795	3.2520	1.2992	3-M10	0.5906	0.5512	1.0433	0.9370	0.7776	0.3051
6"	3-780-0600	6.6535	3.1496	5.5118		4.5669	4.1260	1.8110	6-M10	0.4724	0.7874	1.3189	1.2087	0.9055	
8"	3-780-0800	8.2677	3.5433	6.6929	0.1969	5.9055	5.2520	2.0472	6-M12	0.5906	0.9843	1.6417	1.4921	1.0630	0.3937
10"	3-780-1000	10.0000	3.9370	8.6614		7.4803	6.7480	3.0315	6-M16	0.6693	1.1811	2.1457	1.9803	1.2205	0.4724
12"	3-780-1200	11.9685	4.5276					3.5827		0.7087		2.4449	2.2323	1.7717	0.5906
15"	3-780-1500	15.0000	5.2362	11.8110		10.2362	9.2520	4.6457	6-M20	1.1811	1.6929	3.2283	3.0197	1.7244	0.7205
18"	3-780-1800	17.7165		14.9606	0.2362	12.5984								2.9055	
21"	3-780-2100	20.8661	5.5118			13.0000	13.0000	5.5118	6-M22	1.3386	2.3622	3.8780	3.6693	3.4449	0.8465
24"	3-780-2400	24.0157	5.8661					6.4961		1.2598		4.2677	4.0630	4.6260	

Chuck Dia	Part Number	P max	P min	Q	R	S	T	U max	V	W	X	Y	Z
5"	3-780-0500	0.0394	-0.3543	0.9055	0.3937	0.7874		M40x1.5		1.7717	0.7874	1.0236	2.1260
6"	3-780-0600	0.4724	-0.0394	1.2205	0.4724	0.7480		M55x2	3-M6	2.3622	0.7874	1.2992	2.8346
8"	3-780-0800	0.6496	-0.0591	1.5354	0.5512	0.8071	0.0787	M60x2		2.5984		1.5354	3.7402
10"	3-780-1000	0.3740	-0.4134	1.7323	0.6299	1.0630		M85x2	3-M8	3.7008	1.1811	1.7717	4.3307
12"	3-780-1200	0.3937	-0.5512	1.9685	0.8268	1.1024		M100x2		4.2520		2.0079	4.3701
15"	3-780-1500												
18"	3-780-1800	0.4331	-0.4724	2.4409	0.8661	1.5354		M130x2	3-M10	5.4724	2.3622	2.7559	6.4961
21"	3-780-2100						0.1969	M155x3		6.5354			
24"	3-780-2400	0.7874	-0.1181	2.5591	0.9843	1.5748		M17x3	3-M12	7.3622	3.1496	2.8740	7.0866

3-Jaw Large Thru-Hole Direct A2 Mount Chucks





Chuck Dia	Part Number	Spindle Nose	Thru Hole	Jaw Stroke	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Permissible Input Force	Max Static Gripping Force	Max Permissible Speed	Wt	Moment of Inertia
			in					lbf		RPM	lbs	lbs*ft²
6"	3-781-0650	A2-5	1.8110	0.2165	0.5118	6.6535	0.5118	5512	14167	6000	30.2	0.0512
8"	3-781-0860	A2-6	2.0472	0.2992	0.7087	8.2677	0.4331	8995	21159	5000	52.0	0.1454
10"	3-781-1080	A2-8	3.0315	0.3346	0.7874	10.0000	1.2205	11244	28088	4200	88.2	0.2642
12"	3-781-1280	A2-8	3.5827	0.4016	0.9449	11.9685	1.3386	13043	33071	3300	141.1	0.6267
15"	3-781-1511	A2-11	4.6457	0.4173	0.9055	15.0000	1.1811	15962	40467	2500	280.0	1.9539
18"	3-781-1811	A2-11				17.7165				2000	392.4	3.9120
21"	3-781-2115	A2-15	5.5118			20.8661	3.4252	20233	52606	1700	542.3	7.5782
24"	3-781-2415	A2-15	6.4961	0.4094		24.0157	4.3307			1400	670.2	13.5998

Chuck Dia	Matching Cylinder Part Number	Matching Hard Jaws Part Number	Matching Soft Jaws Part Number
6"	3-797-060	3-787-306	3-788-306
8"	3-797-080	3-787-308	3-788-308
10"	3-797-100	3-787-310	3-788-310
12"	3-797-120	3-787-312	3-788-312
15"	3-797-150	3-787-315	3-788-315
18"			
21"		3-787-321	3-788-321
24"			

TMX part number series 3-780 and 3-781 are interchangeable with Kitagawa™ B200 series*

* TMX Power Chuck Workholding Solutions interchangeability with the Kitagawa® B200 Series is based on mounting dimensions (i.e. drawtube connection and spindle nose adapter dimensions) and top jaw mounting dimensions

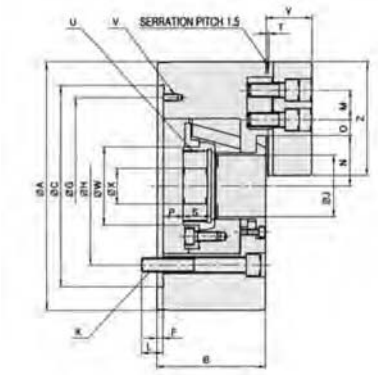
For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025

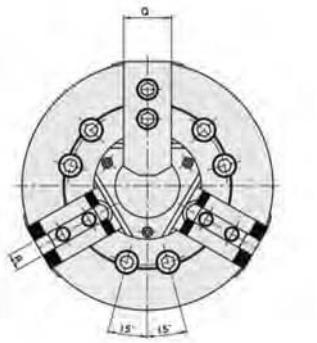
Dimensions

Dia	Part Number	A	B	C	D	E	F	G	H	J	K	L	M	N max	N min
6"	3-781-0650	6.6535	3.5433	5.5118	3.2505	0.5906	0.1969	4.5669	4.1260	1.8110	6-M10	0.6299	0.7874	1.3189	1.2087
8"	3-781-0860	8.2677	4.0551	6.6929	4.1880	0.6693		5.9055	5.2520	2.0472	6-M12	0.7087	0.9843	1.6417	1.4921
10"	3-781-1080	10.0000	4.4488	8.6614	5.5007	0.7087		7.4803	6.7480	3.0315	6-M16	0.9449	1.1811	2.1457	1.9803
12"	3-781-1280	11.9685	5.0000				0.2362			3.5827		0.9843		2.4449	2.2323
15"	3-781-1511	15.0000	5.8661	11.8110	7.7507	0.8661		10.2362	9.2520	4.6457	6-M20	1.1024	1.6929	3.2283	3.0197
18"	3-781-1811	17.7165		14.9606				12.5984							
21"	3-781-2115	20.8661	6.3386		11.2510	1.0630		13.0000	13.0000	5.5118	6-M22	1.3386	2.3622	3.8780	3.6693
24"	3-781-2415	24.0157	6.6929							6.4961		1.3780		4.2677	4.0630

Dia	Part Number	O max	O min	P max	P min	Q	R	S	T	U max	V	W	X	Y	Z
6"	3-781-0650	0.9055	0.3937	1.0630	0.5512	1.2205	0.4724	0.7480	0.0787	M55x2	3-M6	2.3622	0.7874	1.2992	2.5984
8"	3-781-0860	1.0630		1.3189	0.6102	1.5354	0.5512	0.8071		M60x2		2.5984	1.1811	1.5354	3.3858
10"	3-781-1080	1.2205	0.4724	1.0827	0.2953	1.7323	0.6299	1.0630		M85x2	3-M8	3.7008		1.7717	4.2520
12"	3-781-1280	1.7717	0.5906	1.1024	0.1575	1.9685	0.8268	1.1024		M100x2		4.2520		2.0079	4.3701
15"	3-781-1511	1.7244	0.7205	1.2992	0.3937	2.4409	0.8661	1.5354	0.1969	M130x2	3-M10	5.4724	2.3622	2.7559	6.4961
18"	3-781-1811	2.9055													
21"	3-781-2115	3.4449	0.8465	1.4961	0.5906	2.5591	0.9843			M155x3	3-M12	6.5354	3.1496	2.8740	7.0866
24"	3-781-2415	4.6260		1.8504	0.9449			1.5748		M175x3		7.3622			

3-Jaw Extra Large Thru-Hole Plain Back Chucks, 6 thru 10"





Chuck Dia	Part Number	Thru Hole	Jaw Stroke	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Permissible Input Force	Max Static Gripping Force	Max Permissible Speed	Wt	Moment of Inertia
		in					lbf		RPM	lbs	lbs*ft²
6"	3-770-0600	2.0866	0.2165	0.5118	6.6535	0.5118	5622	13493	6000	26.2	0.0471
8"	3-770-0800	2.5984	0.2992	0.7087	8.2677	0.4331	8598	21159	5000	50.7	0.1167
10"	3-770-1000	3.2283	0.3346	0.7874	10.0000	1.2205	11244	26986	4200	70.5	0.2683

Chuck Dia	Matching Cylinder Part Number	Matching Hard Jaws Part Number	Matching Soft Jaws Part Number
6"	3-797-060	3-787-306	3-788-306
8"	3-797-080	3-787-308	3-788-308
10"	3-797-100	3-787-310	3-788-310

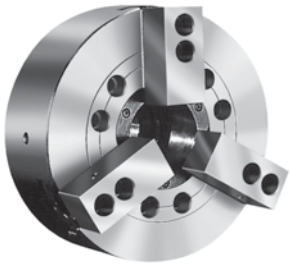
For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025

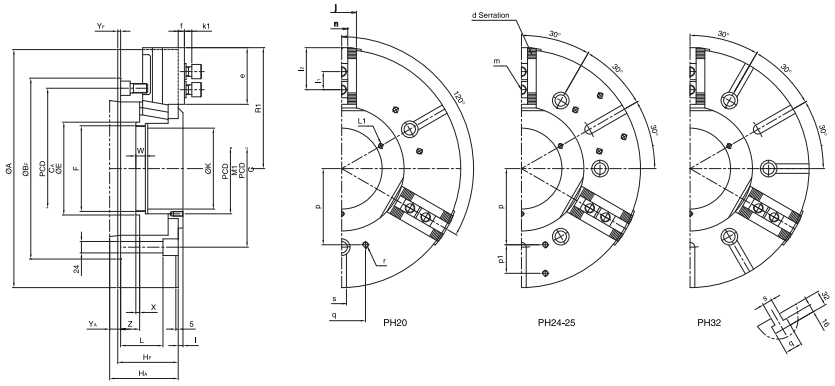
Dimensions

Chuck Dia	Part Number	A	B	C	F	H	J	K	L	M	N max	N min	O max	O min
6"	3-770-0600	6.6929	3.1890	5.5118	0.1969	4.1260	2.0866	6-M10	0.6299	0.7874	1.4567	1.3480	0.8268	0.3150
8"	3-770-0800	8.2677	3.5827	6.6929	0.1969	5.2520	2.5984	6-M12	0.7874	0.9843	1.8189	1.6693	0.9154	0.4035
10"	3-770-1000	10.0000	3.9370	8.6614	0.1969	6.7480	3.2283	6-M16	0.6693	1.1811	2.2154	2.0551	1.2205	0.4724

Chuck Dia	Part Number	P max	P min	Q	R	S	T	U max	V	W	X	Y	Z
6"	3-770-0600	0.4724	-0.0394	1.2205	0.4724	0.7480	0.0787	M60x2	3-M6	2.5984	0.7874	1.3189	2.8346
8"	3-770-0800	0.2756	-0.4331	1.5354	0.5512	1.0630		M75x2		3.1496	1.1811	1.5354	3.7402
10"	3-770-1000	0.3740	-0.4134	1.7323	0.6299			M90x2	3-M8	3.8583		1.7717	4.3307

3-Jaw Extra Large Thru-Hole Plain Back Chucks, 20 thru 32"





Chuck Dia	Part Number	Thru Hole	Jaw Stroke Dia	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Draw Bar Pull	Gripping Force	Max Speed	Wt	Moment of Inertia GD²
		in					lbf		RPM	lbs	lbs*ft²
20"	3-770-2000	6.6929	0.5512	1.5748	19.6850	2.6772	15741.0	44974.2	1800	286.6	408.2
24"	3-770-2400	8.0709	0.6693	1.3386	24.0157	5.9843	22487.1	48347.3	1400	595.2	1376.3
25"	3-770-2500	8.7402			25.1969					650.4	1661.1
32"	3-770-3200		0.7874	1.5748	31.4961	7.0866			1000	771.6	4461.2

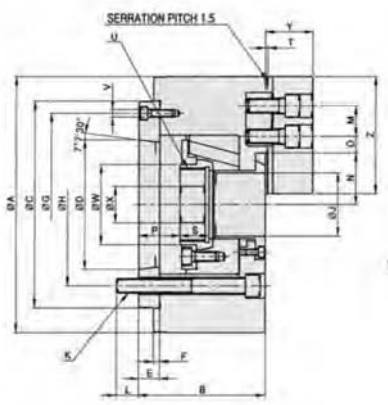
Dimensions

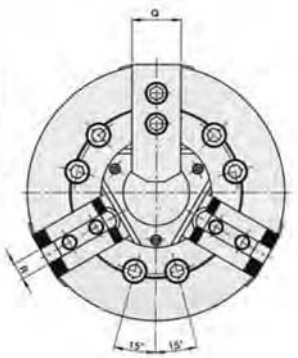
Chuck Dia	Part Number	A	Bf	C	CA	D	E	F	Hf	K	L	L1	M1
20"	3-770-2000	19.6850	14.9606	1.3071		0.9449	7.6772	M180x2	5.0000	6.6929	3.5039	M10	7.4803
24"	3-770-2400	24.0157	20.4724	18.2520	–		9.0551	M215x3	5.9055	8.0709			8.6614
25"	3-770-2500	25.1969		18.2520	–		10.2362	M240x3		8.7402			9.8425
32"	3-770-3200	31.4961		18.2520	–				6.2992				

Chuck Dia	Part Number	R1	U	W	X	Yf	Z	d	e	f	g	i
20"	3-770-2000	10.0000	0.2756	0.9843	0.3150	0.2362	40/0	3x60°	4.6850	0.5118	0.1378	2.4409
24"	3-770-2400	12.0866	0.3346	1.1811	0.3937		34/0		5.9843	0.3543		2.9528
25"	3-770-2500	12.6772					34/0					
32"	3-770-3200	15.3543	0.3937				44/4		8.6614			

Chuck Dia	Part Number	k1	l	l1	l2	m	n	p	p1	q	r	s
20"	3-770-2000	0.6299	0.3937	1.4961	103/54	M20	1.0039	6.2992	–	3.9370	M12	0.7874
24"	3-770-2400		0.1969		122/54			7.8740	2.3622			
25"	3-770-2500											
32"	3-770-3200				190/54			–	–	1.4567		0.8661

3-Jaw Extra Large Thru-Hole Direct A2 Mount Chucks





Chuck Dia	Part Number	Spindle Nose	Thru Hole	Jaw Stroke	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Permissible Input Force	Max Static Gripping Force	Max Permissible Speed	Wt	Moment of Inertia
			in					lbf		RPM	lbs	lbs*ft^2
6"	3-771-0650	A2-5	2.0866	0.2165	0.5118	6.6535	0.5118	5622	14167	6000	30.2	0.0512
8"	3-771-0860	A2-6	2.5984	0.2992	0.7087	8.2677	0.4331	8598	21159	5000	52.0	0.1454
10"	3-771-1080	A2-8	3.2283	0.3346	0.7874	10.0000	1.2205	11244	26986	4200	88.2	0.2642

Chuck Dia	Matching Cylinder Part Number	Matching Hard Jaws Part Number	Matching Soft Jaws Part Number
6"	3-797-060	3-787-306	3-788-306
8"	3-797-080	3-787-308	3-788-308
10"	3-797-100G	3-787-310	3-788-310

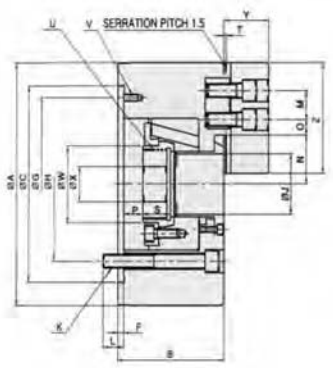
For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025

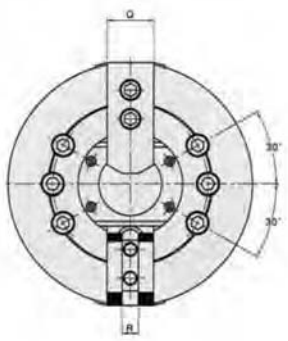
Dimensions

Chuck Dia	Part Number	A	B	C	D	E	F	G	H	J	K	L	M	N max	N min
6"	3-771-0650	6.6929	3.5827	5.5118	3.2505	0.5906	0.1969	4.5669	4.1260	2.0866	6-M10	0.6299	0.7874	1.4567	1.3480
8"	3-771-0860	8.2677	4.3701	6.6929	4.1880	1.0236		5.9055	5.2520	2.5984	6-M12	0.8268	0.9843	1.8189	1.6693
10"	3-771-1080	10.0000	4.4488	8.6614	5.5007	0.7087		7.4803	6.7480	3.2283	6-M16	0.9449	1.1811	2.2154	2.0551

Chuck Dia	Part Number	O max	O min	P max	P min	Q	R	S	T	U max	V	W	X	Y	Z
6"	3-771-0650	0.8268	0.3150	1.0630	0.5512	1.2205	0.4724	0.7480	0.0787	M60x2	3-M6	2.5984	0.7874	1.3189	2.8346
8"	3-771-0860	0.9154	0.4035	1.2992	0.5906	1.5354	0.5512	0.8071		M80x2	6-M12	3.4646	1.1811	1.5354	3.7402
10"	3-771-1080	1.2205	0.4724	1.0827	0.2953	1.7323	0.6299	1.0630		M90x2	3-M8	3.8583		1.7717	4.3307

2-Jaw Large Thru-Hole Plain Back Chucks





Chuck Dia	Part Number	Thru Hole	Jaw Stroke	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Permissible Input Force	Max Static Gripping Force	Max Permissible Speed	Wt	Moment of Inertia
		in					lbf		RPM	lbs	lbs*ft²
6"	3-782-0600	1.8110	0.2165	0.5118	6.6535	0.5118	3748	9445	6000	27.1	0.0451
8"	3-782-0800	2.0472	0.2992	0.7087	8.2677	0.4331	5997	14106	5000	47.8	0.1434
10"	3-782-1000	3.0315	0.3346	0.7874	10.0000	1.2205	7496	18725	4200	74.3	0.2622
12"	3-782-1200	3.5827	0.4016	0.9449	11.9685	1.3386	8808	22488	3300	112.4	0.5530

Chuck Dia	Matching Cylinder Part Number	Matching Soft Jaws Part Number
6"	3-797-060	3-788-306
8"	3-797-080	3-788-308
10"	3-797-100	3-788-310
12"	3-797-120	3-788-312

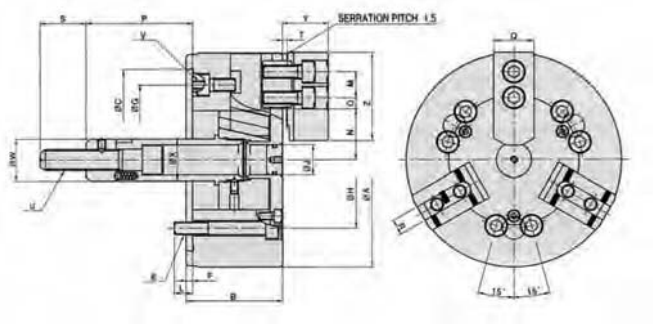
For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025

Dimensions

Chuck Dia	Part Number	A	B	C	F	G	H	J	K	L	M	N max	N min	O max
6"	3-782-0600	6.6535	3.1496	5.5118	0.1969	4.5669	4.1260	1.8110	3-M10	0.4724	0.7874	1.3189	1.2087	0.9055
8"	3-782-0800	8.2677	3.5827	6.6929		5.9055	5.2520	2.0472	3-M12	0.5906	0.9843	1.6417	1.4921	1.0630
10"	3-782-1000	10.0000	3.9370	8.6614		7.4803	6.7480	3.0315	3-M16	0.6693	1.1811	2.1457	1.9803	1.2205
12"	3-782-1200	11.9685	4.5276		0.2362			3.5827		0.7087		2.4449	2.2323	1.7717

Chuck Dia	Part Number	O min	P max	P min	Q	R	S	T	U max	V	W	X	Y	Z
6"	3-782-0600	0.3937	0.4724	-0.0394	1.2205	0.4724	0.7480	0.0787	M55x2	3-M6	2.3622	0.7874	1.2992	2.5984
8"	3-782-0800		0.6496	-0.0591	1.5354	0.5512	0.8071		M60x2		2.5984	1.1811	1.5354	3.3858
10"	3-782-1000	0.4724	0.3740	-0.4134	1.7323	0.6299	1.0630		M85x2	3-M8	3.7008		1.7717	4.2520
12"	3-782-1200	0.5906	0.3937	-0.5512	1.9685	0.8268	1.1024		M100x2		4.2520		2.0079	4.3701

Closed Center Chucks, Plain Back, 6 thru 12"



Chuck Dia	Part Number	Jaw Stroke	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Permissible Input Force	Max Static Gripping Force	Max Permissible Speed	Wt	Moment of Inertia
		in				lbf		RPM	lbs	lb*ft²
4"	3-760-0400	0.1969	0.5906	4.3307	0.2362	981	2699	5000	8.8	0.0041
5"	3-760-0500			5.3150	0.5906	1426	3949		13.2	0.0123
6"	3-760-0600	0.3622	0.7874	6.4961	0.7480	4273	14167	6000	28.7	0.0369
8"	3-760-0800	0.3465	0.8268	8.2677	0.9055	6297	17990	4800	55.1	0.1126
10"	3-760-1000	0.3465	0.9843	10.0000	0.9449	7309	25861	4100	81.6	0.2458
12"	3-760-1200	0.4134	1.1811	11.9685	1.0236	9332	35306	3400	126.3	0.5940

Chuck Dia	Matching Cylinder Part Number	Matching Hard Jaws Part Number	Matching Soft Jaws Part Number
4"	3-796-065	–	3-788-304
5"	3-796-080	–	3-788-305
6"	3-796-100	3-787-306	3-788-306
8"	3-796-125	3-787-308	3-788-308
10"		3-787-310	3-788-310
12"	3-796-150	3-787-312	3-788-312

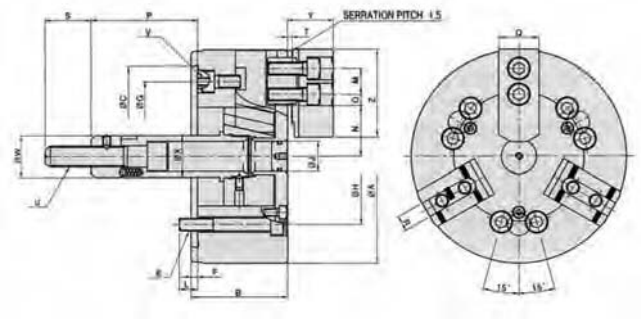
For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025

Dimensions

Chuck Dia	Part Number	A	B	C	F	G	H	J	K	L	M	N max	N min
4"	3-760-0400	4.3307	2.0472	2.3622	0.2362	–	3.1496	–	3-M8	0.6496	0.5512	1.0236	0.9252
5"	3-760-0500	5.3150		3.1496	0.2756	–	3.9370	–			0.7480	1.2598	1.1614
6"	3-760-0600	6.6535	2.9134	5.5118	0.1969	4.5669	4.1260	0.9055	6-M10	0.5512	0.7874	1.6142	1.4449
8"	3-760-0800	8.2677	3.3465	6.6929		5.9055	5.2520	1.1024	6-M12	0.5906	0.9843	1.8228	1.6496
10"	3-760-1000	10.0000	3.5039	8.6614		7.4803	6.7480	1.3386	6-M16	0.7087	1.1811	2.0118	1.8386
12"	3-760-1200	11.9685	4.1732		0.2362			1.5354				2.4016	2.1929

Chuck Dia	Part Number	O max	O min	P max	P min	Q	R	S	T	U max	V	W	X	Y	Z
4"	3-760-0400	0.3937	0.2756	0.1969	-0.3937	0.9843	0.3937	0.9843	0.1181	M10x1.5	–	0.9843	–	1.0630	2.1260
5"	3-760-0500	0.4528		0.3543	-0.2362			1.4173		M12x1.75	–	1.1024	–		2.3031
6"	3-760-0600	0.5118	0.2756	3.9961	3.2087	1.2205	0.4724		0.1575	M16x2.0	3-M6	1.2598	1.2598	1.3780	2.8346
8"	3-760-0800	0.8858	0.3543	5.0000	4.1732	1.5354	0.5512		0.1969	M20x2.5		1.4961	1.4961	1.6929	3.7402
10"	3-760-1000	1.2087	0.4409	6.2205	5.2362	1.7323	0.6299				3-M8		1.7323	1.9685	4.3307
12"	3-760-1200	1.9173	0.5000	6.4173		1.9685	0.7087						1.9685	2.1260	4.3701

Closed Center Chucks, Plain Back, 15 thru 63"



Chuck Dia	Part Number	Jaw Stroke	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Permissible Input Force	Max Static Gripping Force	Max Speed	Wt	Moment of Inertia
		in				lbf		RPM	lbs	lb*ft²
15"	3-760-1500	0.6299	1.3780	15.0000	2.3622	18436	78027	3040	212	1.4747
18"	3-760-1800			17.7165	5.5118			2710	289	1.9867
21"	3-760-2100			20.8661	3.2283		61374	1940	437	3.9325
24"	3-760-2400			24.0157	6.6929			1760	492	1.4173
32"	3-760-3200	0.7323	1.4961	31.4961	7.8740	25927	46453	800	752	0.4977
40"	3-760-4000	1.8110	2.2441	39.3701	7.0866	40452	71915	630	1323	1.4399
50"	3-760-5000			49.2126	7.8740			500	1764	3.0272
63"	3-760-6300		2.3622	62.9921	12.5984			280	3527	10.4395

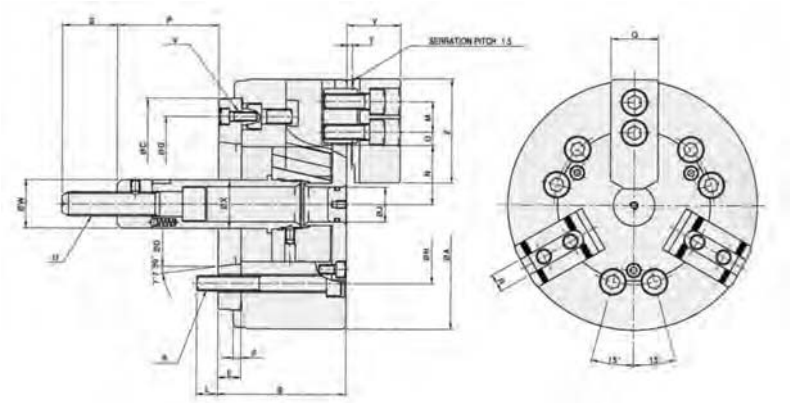
For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025

Dimensions

Chuck Dia	Part Number	A	B	C	F	G	H	J	K	L	M	N max	N min
15"	3-760-1500	15.0000	4.4882	11.8110	0.2362	10.2362	6.7480	1.0630	6-M20	0.7874	1.6929	2.8740	2.5591
18"	3-760-1800	17.7165					9.2520					4.1929	3.8780
21"	3-760-2100	20.8661	4.9213	14.9606		12.6063	13.0000			1.1811	2.3622	3.3858	3.0709
24"	3-760-2400	24.0157										4.9016	4.5866
32"	3-760-3200	31.4961	5.9055			–		–	6-M24	1.2205	2.9921	3.4646	3.0591
40"	3-760-4000	39.3701	7.0866	20.4724	0.3150	–	20.0787	–		1.3386	3.9370	5.7087	5.1102
50"	3-760-5000	49.2126				–	18.2520	–		1.2598			
63"	3-760-6300	62.9921	8.6614	28.3465		–	25.4961	–	6-M30	1.8110	–	–	–

Chuck Dia	Part Number	O max	O min	P max	P min	Q	R	S	T	U max	V	W	X	Y	Z
15"	3-760-1500	2.1535	0.6181	4.0945	2.7165	1.9685	1.0039	2.1654	0.2362	M30x3.5	3-M10	2.1654	2.3622	2.3622	–
18"	3-760-1800	1.9094	0.9134	3.6220	2.2441									2.3740	5.3150
21"	3-760-2100	3.6811	1.0827	3.8189	2.4409	2.5591	0.9843				3-M12			2.7953	7.0866
24"	3-760-2400														
32"	3-760-3200	–	–	1.3780	-0.1181	2.9528	1.0039	2.3622	0.3150		–		4.4882	3.2677	6.4961
40"	3-760-4000	–	–	2.0866		3.8583	1.1811	2.5591	-0.1575	M36x4.0	–	2.3622	2.3622	4.1732	7.8740
50"	3-760-5000	–	–	1.3780	-0.8661			2.6772			–				10.6299
63"	3-760-6300	–	–	0.5118	-1.8504	–	–	–	–		–	–		–	–

Closed Center Chucks, Direct A2 Mount, 6 thru 12"



Chuck Dia	Part Number	Spindle Nose	Jaw Stroke	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Permissible Input Force	Max Static Gripping Force	Max Permissible Speed	Wt	Moment of Inertia
			in				lbf		RPM	lbs	lb*ft²
6"	3-761-0650	A2-5	0.3622	0.7874	6.4961	0.7480	4273	14167	6000	30.9	0.0410
8"	3-761-0860	A2-6	0.3465	0.8268	8.2677	0.9055	6297	17990	4800	59.5	0.1208
10"	3-761-1080	A2-8		0.9843	10.0000	0.9449	7309	25861	4100	88.2	0.2683
12"	3-761-1280	A2-8	0.4134	1.1811	11.9685	1.0236	9332	35306	3400	145.5	0.6165

Chuck Dia	Matching Cylinder Part Number	Matching Hard Jaws Part Number	Matching Soft Jaws Part Number
6"	3-796-100	3-787-306	3-788-306
8"	3-796-125	3-787-308	3-788-308
10"		3-787-310	3-788-310
12"	3-796-150	3-787-312	3-788-312

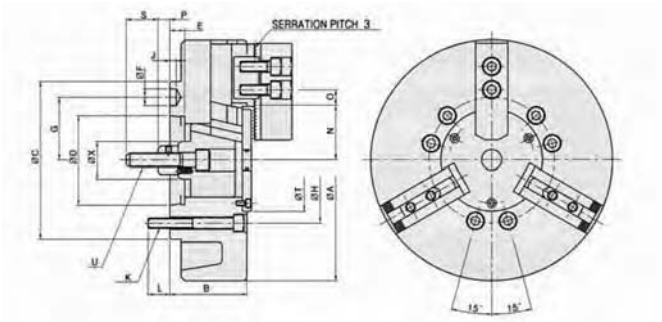
For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025

Dimensions

Chuck Dia	Part Number	A	B	C	D	E	F	G	H	J	K	L	M	N max	N min
6"	3-761-0650	6.6535	3.3071	5.5118	3.2505	0.5906	0.1969	4.5669	4.1260	0.9055	6-M10	0.5512	0.7874	1.6142	1.4449
8"	3-761-0860	8.2677	3.8189	6.6929	4.1880	0.6693		5.9055	5.2520	1.1024	6-M12	0.7087	0.9843	1.8228	1.6496
10"	3-761-1080	10.0000	4.0157	8.6614	5.5007	0.7087		7.4803	6.7480	1.3386	6-M16	0.9843	1.1811	2.0118	1.8386
12"	3-761-1280	11.9685	4.6457				0.2362			1.5354				2.4016	2.1929

Chuck Dia	Part Number	O max	O min	P max	P min	Q	R	S	T	U max	V	W	X	Y	Z
6"	3-761-0650	0.5118	0.2756	3.4055	2.6181	1.2205	0.4724	1.4173	0.1575	M16x2.0	3-M6	1.2598	1.2598	1.3780	2.8346
8"	3-761-0860	0.8858	0.3543	4.3307	3.5039	1.5354	0.5512		0.1969	M20x2.5		1.4961	1.4961	1.6929	3.7402
10"	3-761-1080	1.2087	0.4409	5.5118	4.5276	1.7323	0.6299				3-M8		1.7323	1.9685	4.3307
12"	3-761-1280	1.9173	0.5000	5.7087		1.9685	0.7087						1.9685	2.1260	4.3701

Closed Center Chucks, Direct A2 Mount, 15 thru 24"



Chuck Dia	Part Number	Spindle Nose	Jaw Stroke	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Permissible Input Force	Max Static Gripping Force	Max Speed	Wt	Moment of Inertia
			in				lbf		RPM	lbs	lbs*ft²
15"	3-761-1508	A2-8	0.7323	1.3780	15.0000	2.3622	16399	32797	2100	216.0	1.4583
	3-761-1511	A2-11									
18"	3-761-1808	A2-8			17.9921				1700	291.0	2.8265
	3-761-1811	A2-11									
21"	3-761-2111	A2-11			20.8661	4.3307	21886	43283	1500	429.9	5.6120
	3-761-2115	A2-15									
24"	3-761-2411	A2-11			24.0157				1200	551.1	9.5280
	3-761-2415	A2-15									

Chuck Dia	Matching Cylinder Part Number	Matching Hard Jaws Part Number	Matching Soft Jaws Part Number
15"	3-796-200	3-787-315	3-788-315
18"			
21"		–	–
24"			

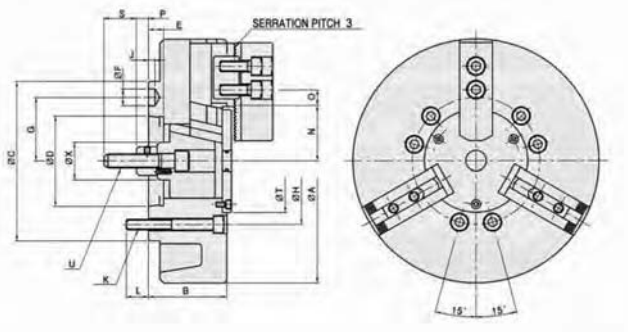
For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025

Dimensions

Dia	Part Number	A	B	C	D	E	F	G	H	J	K (ANSI)	K (JIS)
15"	3-761-1508	15.0000	4.9213	8.8583	5.5006	0.7874	0.9531	3.3750	6.7500	0.3150	5/8-11UNC	6-M16
	3-761-1511			11.0236	7.7506							
18"	3-761-1808	17.9921		8.8583	5.5006		0.9531	3.3750	6.7500	0.3150	5/8-11UNC	6-M16
	3-761-1811			11.0236	7.7506		1.1559	4.6260	9.2520	0.3937	3/4-10UNC	6-M20
21'	3-761-2111	20.8661	5.5118	14.9606	7.7506	0.7874	1.1559	4.6260	9.2520	0.3937	3/4-10UNC	6-M20
	3-761-2115				11.2505	0.8661	1.4059	6.5000	13.0000		7/8-9UNC	6-M22
24"	3-761-2411	24.0157		11.0236	7.7506	0.7874	1.1559	4.6260	9.2520		3/4-10UNC	6-M20
	3-761-2415			14.9606	11.2505	0.8661	1.4059	6.5000	13.0000		7/8-9UNC	6-M22

Dia	Part Number	L (ANSI)	L (JIS)	N max	N min	O max	O min	P max	P min	S	T	U	V	X
15"	3-761-1508	0.9449	0.8858	2.9331	2.5669	2.1457	0.8465	1.3780	0.0000	1.9685	6.8898	M27x3.0	3.3465	2.4803
	3-761-1511	0.9055	1.0236										2.5591	
18"	3-761-1808	0.9449	0.8858	2.9331	2.5669	3.5630							4.7244	
	3-761-1811	0.9055	1.0236										3.9370	
21'	3-761-2111	1.3150	1.2205	3.9961	3.6299	3.9567				2.1654	8.6614	M30x3.5	4.3307	2.9528
	3-761-2115	1.3937	1.2598											
24"	3-761-2411	1.3150	1.2205	3.9961	3.6299	5.3740							5.7087	
	3-761-2415	1.3937	1.2598											

Closed Center Chucks, Direct A2 Mount, 32 thru 63"



Chuck Dia	Part Number	Jaw Stroke	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Permissible Input Force	Max Static Gripping Force	Max Speed	Wt	Moment of Inertia
		in				lbf		RPM	lbs	lbs*ft²
32"	3-761-3200	0.7323	1.4961	31.4961	7.8740	25927	46453	800	751.8	0.4977
40"	3-761-4000	1.8110	2.2441	39.3701	7.0866	40452	71915	630	1322.8	1.4399
50"	3-761-5000			49.2126	7.8740			500	1763.7	3.0272
63"	3-761-6300		2.3622	62.9921	12.5984			280	3527.3	10.4395

Chuck Dia	Matching Cylinder Part Number
32"	3-796-200
40"	3-796-245
50"	
63"	

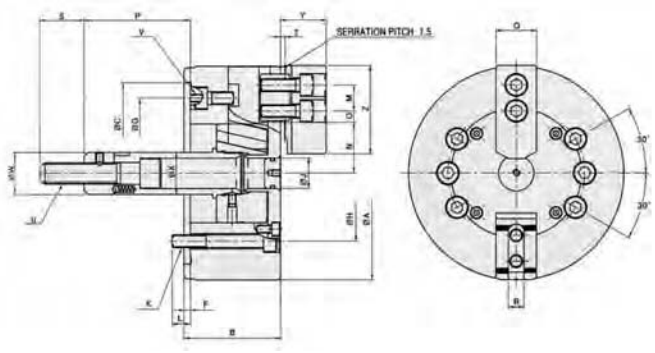
For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025

Dimensions

Chuck Dia	Part Number	A	B	C	E	G	H	K (JIS)	L (JIS)
32"	3-761-3200	31.4961	5.9055	14.9606	0.2362	13.0000	13.0000	6-M24	1.2205
40"	3-761-4000	39.3701	7.0866	20.4724	0.3150	18.2520	18.2520		1.2598
50"	3-761-5000	49.2126							
63"	3-761-6300	62.9921	8.6614	28.3465		25.4961	25.4961	6-M30	1.8110

Chuck Dia	Part Number	N max	N min	P max	P min	S	T	U	X
32"	3-761-3200	3.9764	2.5157	1.3780	-0.1181	2.3622	10.6299	M30xP3.5	4.4882
40"	3-761-4000	8.1496	6.0630	1.2598	-0.9843	2.6772	13.3858		2.3622
50"	3-761-5000	–	–					M36xP4.0	
63"	3-761-6300	–	–	0.5118	-1.8504		15.3543		

2-Jaw Closed Center Chucks, Plain Back



Chuck Dia	Part Number	Jaw Stroke	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Permissible Input Force	Max Static Gripping Force	Max Permissible Speed	Wt	Moment of Inertia
		in				lbf		RPM	lbs	lb*ft²
6"	3-762-0600	0.3622	0.7874	6.4961	0.7480	2820	9350	4300	27.6	0.0348
8"	3-762-0800	0.3465	0.8268	8.2677	0.9055	4156	11872	3600	52.9	0.1086
10"	3-762-1000		0.9843	10.0000	0.9449	4822	17069	3100	78.3	0.2396
12"	3-762-1200	0.4134	1.1811	11.9685	1.0236	6158	23301	2500	133.4	0.5796

Chuck Dia	Matching Cylinder Part Number	Matching Soft Jaws Part Number
6"	3-796-100	3-788-306
8"	3-796-125	3-788-308
10"		3-788-310
12"	3-796-150	3-788-312

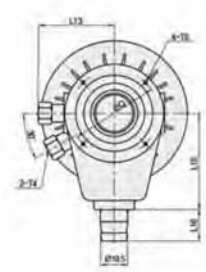
For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025

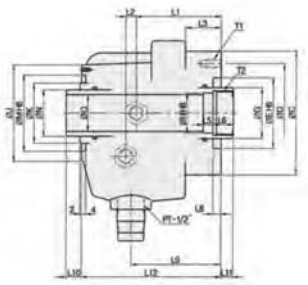
Dimensions

Chuck Dia	Part Number	A	B	C	F	G	H	J	K	L	M	N max	N min
6"	3-762-0600	6.6535	2.9134	5.5118	0.1969	4.5669	4.1260	0.9055	6-M10	0.5512	0.7874	1.6142	1.4449
8"	3-762-0800	8.2677	3.3465	6.6929		5.9055	5.2520	1.1024	6-M12	0.5906	0.9843	1.8228	1.6496
10"	3-762-1000	10.0000	3.5039	8.6614		7.4803	6.7480	1.3386	6-M16	0.7087	1.1811	2.0118	1.8386
12"	3-762-1200	11.9685	4.1732		0.2362			1.5354				2.4016	2.1929

Chuck Dia	Part Number	O max	O min	P max	P min	Q	R	S	T	U max	V	W	X	Y	Z
6"	3-762-0600	0.5118	0.2756	3.9961	3.2087	1.2205	0.4724	1.4173	0.1575	M16x2.0	3-M6	1.2598	1.2598	1.4173	2.8346
8"	3-762-0800	0.8858	0.3543	5.0000	4.1732	1.5354	0.5512		0.1969	M20x2.5		1.4961	1.4961	1.6929	3.7402
10"	3-762-1000	1.2087	0.4409	6.2205	5.2362	1.7323	0.6299				3-M8			1.9685	4.3307
12"	3-762-1200	1.9173	0.5000	6.4173		1.9685	0.7087							2.1260	4.3701

High Speed Hydraulic Cylinders with Large Thru-Hole





Part Number	Cylinder Dia	Piston Stroke	Thru-hole Dia	Piston Surface Area Extend	Piston Surface Area Retract	Max Draw Bar Pull Extend	Max Draw Bar Pull Retract	Max Operating Pressure	Max Permissable Speed	Total Leakage	Wt	Moment of Inertia	Matching Chuck
	in			in^2		lbf		lbs/in^2	RPM	gal/min	lbs	$lbs*ft^2$	
3-797-040	2.9528	0.3937	0.8268	1.4370	1.3386	2648	2467	497.82	8000	0.42	12.6	0.0033	4"
3-797-050	3.3465		1.2205	1.7008	1.5669	3133	2886		7000		14.8	0.0049	5"
3-797-060	5.1181	0.5906	1.8110	4.3543	3.9173	9352	8413	580.31		0.79	26.5	0.0154	6"
3-797-080	6.2992	0.7874	2.0472	6.8031	6.4016	14611	13749		6200	0.92	34.2	0.0410	8"
3-797-100	7.2835	0.9843	3.0315	8.3976	7.7913	18034	16734		4700	1.11	50.7	0.0717	10"
3-797-120	8.0709	1.1811	3.5827	9.9016	9.2520	21267	19871		3800	1.19	68.3	0.1188	12"
3-797-150	10.0394	0.9055	4.626	14.4685	14.0433	29168	28311		2800	1.85	114.6	0.3072	15" & 21"
3-797-100G	7.2835	0.9843	3.2283	8.0748	7.4882	17342	16083		4500	1.19	64.4	0.1004	3-770-2100

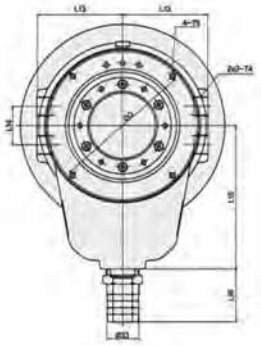
Dimensions

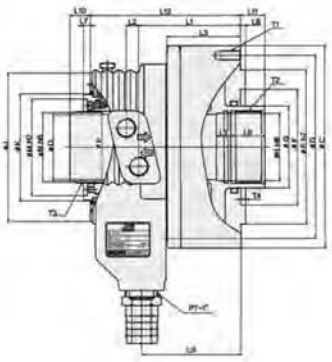
Part Number	C	D	E	F	G	H	J	K	M	N	O	P	Q
3-797-040	3.9370	3.3465	2.3622	–	1.3780	0.9843	3.3465	1.7717	2.5591	1.1811	0.8268	–	2.9921
3-797-050	4.3307	3.7402	2.5591	–	1.7717	1.4173	3.5433	2.1654		1.5748	1.2205	–	
3-797-060	6.4173	5.1181	3.9370	3.1496	2.5591	1.9685	4.2520	3.2362	2.9134	1.9685	1.8110	2.0866	3.8583
3-797-080	7.6772	6.6929	5.1181	3.5433	2.7559	2.1654	4.7244	3.5906	3.2283	2.2047	2.0472	2.3622	4.3307
3-797-100	8.5827	7.4803	6.2992	4.7244	3.7402	3.1496	5.7087	4.5748	4.2126	3.1890	3.0315	3.3465	5.3150
3-797-120	9.7244	8.4646	7.0866	5.3150	4.3307	3.7402	6.5748	5.1654	4.8031	3.7795	3.5827	3.9370	6.0630
3-797-150	12.0866	10.8268	9.0551	6.6929	5.5118	4.8425	8.3465	6.5748	6.2992	5.2992	4.6260	5.3150	7.7953
3-797-100G	8.7795	7.4803	6.2992	4.9213	3.9370	3.3858	6.5748	4.7717	4.4094	3.4252	3.2283	3.5433	6.0630

Part Number	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10 max	L10 min
3-797-040	2.8346	0.5118	0.6299	–	0.3543	0.7087	–	0.1969	3.0709	0.8661	0.4724
3-797-050	3.0315	0.5512		–	0.1969	0.9843	–		3.3071		
3-797-060	4.8622	0.4331	3.2480	0.2165	0.5906	1.1811	0.2362		4.4685	1.3386	0.7480
3-797-080	5.1181	0.4724	3.4843						4.7047	1.5354	
3-797-100	5.6299		3.7598			1.3780			4.9803	1.7323	
3-797-120	6.3976	0.5512	4.2717						5.5709	1.9291	
3-797-150	6.4961	0.7874	3.8976	0.2362	0.7874	1.7717	0.3740	0.2362	6.8386	1.5945	0.6890
3-797-100G	5.8858	0.5512	3.7598	0.2165	0.5906	1.3780	0.2362	0.1969	5.0591	1.7323	0.7480

Part Number	L11 max	L11 min	L12	L13	L14	L15	L16	T1	T2	T3	T4	T5
3-797-040	0.5118	0.1181	5.1181	2.8740	–	3.7402	1.9685	6-M6x14	M28xP1.5	–	PT-1/4	4-M4x7
3-797-050			5.3937	2.9921	–	3.9370			M38xP1.5	–		
3-797-060	0.5906	0.0000	7.0079	2.9528	1.4173	4.7244	1.5748	6-M10x18	M55xP2.0	M52xP1.5	PT-1/2	4-M5x10
3-797-080	0.7874		7.3228	3.1890		5.1181			M60xP2.0	M58xP1.5		
3-797-100	0.9843		8.0709	3.7402		5.9055		12-M10x18	M85xP2.0	M84xP2.0		
3-797-120	1.1811		9.0551	4.2126		6.5354		12-M12x22	M100xP2.0	M99xP2.0		
3-797-150	0.9449	0.0394	9.9409	5.2756	0.7874	8.4646		12-M16x32	M130xP2.0	–		4-M6x10
3-797-100G	0.9843	0.0000	8.5433	4.2126	1.4173	6.5354		12-M10x18	M90xP2.0	M89xP2.0		6-M6x10

Super High Speed Hydraulic Cylinders with Large Thru-Hole





Part Number	Cylinder Dia	Piston Stroke	Thru-hole Dia	Piston Surface Area Extend	Piston Surface Area Retract	Max Draw Bar Pull Extend	Max Draw Bar Pull Retract	Max Operating Pressure	Max Permissable Speed	Total Leakage	Wt	Moment of Inertia
	in			in^2		lbf		lbs/in^2	RPM	gal/min	lbs	$lbs*ft^2$
3-797-2050	4.1339	0.5906	1.4173	10.4083	9.9929	5620	5395	580.31	8000	0.79	16.1	0.0020
3-797-2060	5.3150		1.8110	27.5715	16.4192	9668	8687		7000		20.9	0.0039
3-797-2080	6.1417	0.8661	2.0472	24.7644	23.0361	12961	12454		6200	1.03	29.8	0.0082
3-797-2080G	6.6929	0.9843	2.6772	27.8381	25.7610	15023	13903		5600	1.06	36.4	0.0133
3-797-2100	7.2835	0.9843	3.0315	32.3951	30.0546	175	16220		5000	1.11	37.0	0.0170

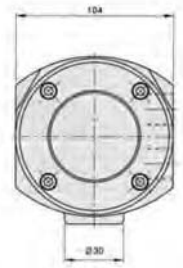
Dimensions

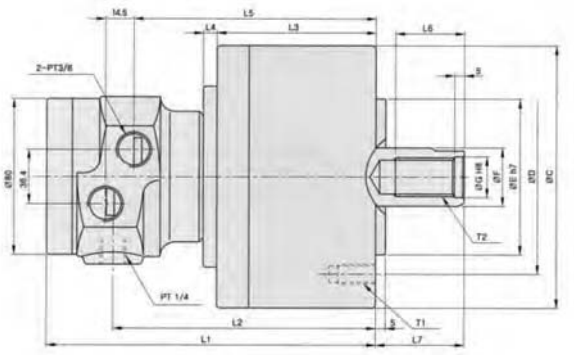
Part Number	C	D	E	F	G	H	J	K	M	N	O	P	Q
3-797-2050	5.3937	4.5276	3.9370	2.5591	1.8898	1.4961	4.2520	2.9921	2.5197	1.6535	1.4173	1.7717	3.8583
3-797-2060	6.4961	5.1181		3.1496	2.5591	1.9685	4.7244	3.4646	2.9134	1.9685	1.8110	2.0866	4.3701
3-797-2080	7.4803	6.6929	5.1181	3.5433	2.7559	2.1654	4.9606	3.5433	3.1890	2.2047	2.0472	2.3622	4.4488
3-797-2080G	8.2677	7.4803	6.2992	4.7244	3.3465	2.7559	6.0630	4.3701	3.9370	2.8150	2.6772	2.9528	5.7087
3-797-2100	8.7402				3.7402	3.1496	6.4567	4.7638	4.3307	3.1890	3.0315	3.3465	6.1024

Part Number	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10 max	L10 min
3-797-2050	3.7087	0.3504	2.7165	0.2362	0.5906	0.9843	0.2756	0.1969	3.9173	1.4173	0.8268
3-797-2060	3.9409		2.9134			1.1811			4.1417		
3-797-2080										1.6929	
3-797-2080G	4.1417	0.5000	2.9921	0.1969		1.3780			4.0354	1.8110	
3-797-2100	4.5354		3.3858						4.4291		

Part Number	L11 max	L11 min	L12	L13	L14	L15	L16	T1	T2	T3	T4	T5
3-797-2050	0.5906	0	5.2795	2.6181	1.3386	4.5276	2.1654	6-M10x18	M42xP1.5	M44xP1.5	PT-3/8	4-M5x10
3-797-2060			5.5118	2.9528	1.4173	4.7244			M55xP1.5	M52xP1.5	PT-1/2	
3-797-2080	0.8661			3.1496		5.1181			M60xP2.0	M58xP1.5		
3-797-2080G	0.9843		6.1024	3.4646	1.5748	5.8661			M75xP2.0	M74xP1.5		
3-797-2100			6.4961	3.6417		6.4961			M85xP2.0	M84xP2.0		

High Speed Hydraulic Cylinders with Closed Center



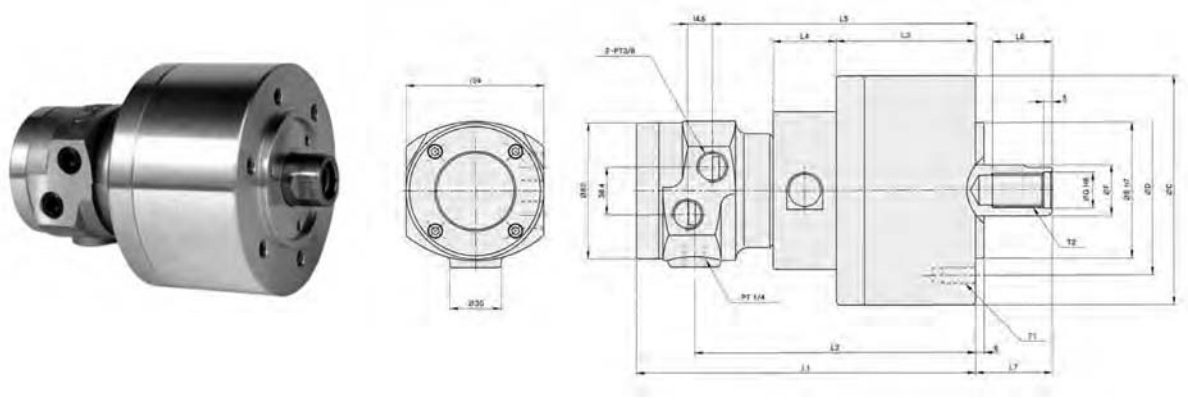


Part Number	Cylinder Dia	Piston Stroke	Piston Surface Area Extend	Piston Surface Area Retract	Max Draw Bar Pull Extend	Max Draw Bar Pull Retract	Max Operating Pressure	Max Permissable Speed	Total Leakage	Wt	Moment of Inertia	Matching Chuck
	in		in^2		lbf		lbs/in^2	RPM	gal/min	lbs	$lbs*ft^2$	Size
3-796-065	2.5591	0.5906	5.1150	4.65	2745	3181	580.31	6000	0.26	7.1	0.0023	4"
3-796-080	3.1496	0.5906	7.7500	6.975	4138	3713				9.5	0.0061	5"
3-796-100	4.1339	0.7874	13.4075	12.3225	7152	6590				11.7	0.0102	6"
3-796-125	5.1181	0.9843	20.5375	19.065	10975	10188				16.3	0.0184	8" & 10"
3-796-150	5.9055	1.1811	27.2801	24.8	14573	13493		5500		22.7	0.0307	10" & 12"
3-796-200	8.0709	1.3780	51.1501	47.4301	27347	25365				43	0.0758	15"

Dimensions

Part Number	C	D	E	F	G	L1	L2	L3	L4	L5	L6	L7 max	L7 min	T1	T2
3-796-065	3.9370	3.1496	2.3622	20.0000	0.5118	5.7087	4.3701	2.5591	–	3.9567	1.1811	1.7717	1.1811	6-M6x16	M12xP1.5
3-796-080	4.3307	3.5433	2.5591	25.0000	0.6693				–					6-M8x16	M16xP2.0
3-796-100	5.3150	3.9370	3.1496	1.1811	0.8268	6.6142	5.2756	3.2087	0.2559	4.8622	1.3780		0.9843	6-M10x19	M20xP2.5
3-796-125	6.2992	5.1181	4.3307	1.3780	0.9843	7.0079	5.6693	3.6024		5.2559	1.5748	1.9685		6-M12x22	M24xP3.0
3-796-150	7.2835			1.7717	1.2008	7.2835	5.9449	3.8780		5.5315	1.7717	2.1654		6-M12x20	M30xP3.5
3-796-200	9.6457	5.7087	4.7244	2.1654	1.4567	8.2087	6.8701	4.8031		6.4567	2.3622	2.7165	1.3386	6-M16x29	M36xP4.0

Hydraulic Cylinders, Closed Center, Check Valve Type

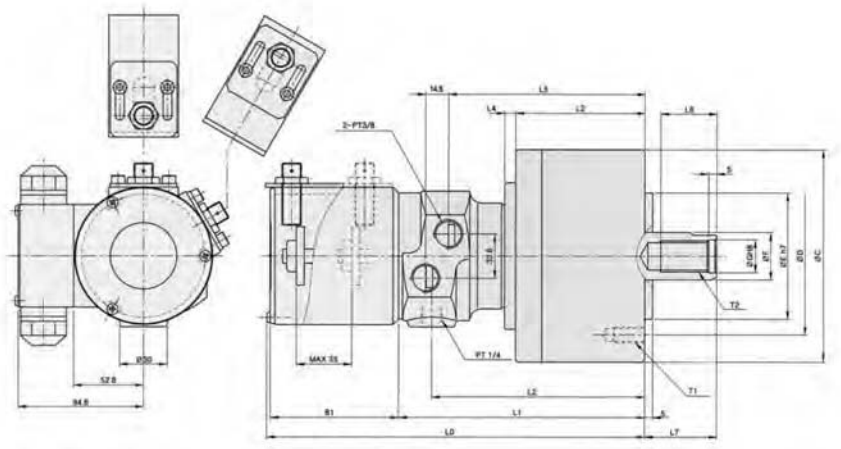


Part Number	Cylinder Dia	Piston Stroke	Piston Surface Area Extend	Piston Surface Area Retract	Max Draw Bar Pull Extend	Max Draw Bar Pull Retract	Max Operating Pressure	Max Permissable Speed	Total Leakage	Wt	Moment of Inertia	Matching Chuck
	in		in^2		lbf		lbs/in^2	RPM	gal/min	lbs	$lbs*ft^2$	Size
3-796-2100	4.1339	0.7874	13.4075	580.31	7152	0.26	580.31	6000	0.26	11.7	0.0102	6"
3-796-2125	5.1181	0.9843	20.5375		10975					16.3	0.0184	8" & 10"
3-796-2150	5.9055	1.1811	27.2801		14573			5500		22.7	0.0307	10" & 12"
3-796-2200	8.0709	1.3780	51.1501		27347					43	0.0758	15"

Dimensions

Part Number	C	D	E	F	G	L1	L2	L3	L4	L5	L6	L7 max	L7 min	T1	T2
3-796-2100	5.3150	3.9370	3.1496	1.1811	0.8268	7.8150	6.4764	3.2087	1.4567	6.0630	1.3780	1.7717	0.9843	6-M10x19	M20xP2.5
3-796-2125	6.2992	5.1181	4.3307	1.3780	0.9843	8.2087	6.8701	3.6024		6.4567	1.5748	1.9685		6-M12x22	M24xP3.0
3-796-2150	7.2835			1.7717	1.2008	8.4843	7.1457	3.8780		6.7323	1.7717	2.1654		6-M12x20	M30xP3.5
3-796-2200	9.6457	5.7087	4.7244	2.1654	1.4567	9.4094	8.0709	4.8031		7.6575	2.3622	2.7165	1.3386	6-M16x29	M36xP4.0

Hydraulic Cylinders, Closed Center Proximity Switch Type

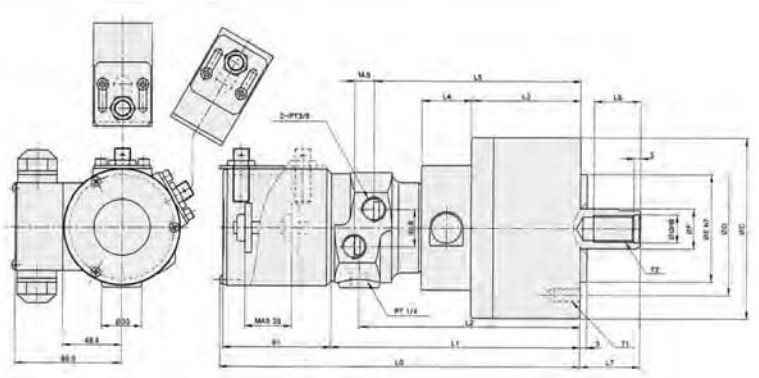


Part Number	Cylinder Dia	Piston Stroke	Piston Surface Area Extend	Piston Surface Area Retract	Max Draw Bar Pull Extend	Max Draw Bar Pull Retract	Max Operating Pressure	Max Permissable Speed	Total Leakage	Wt	Moment of Inertia	Matching Chuck
	in		in^2		lbf		lbs/in^2	RPM	gal/min	lbs	$lbs*ft^2$	Size
3-796-3100	4.1339	0.7874	13.4075	12.3225	7152	6590	580.31	6000	0.26	12.8	0.0102	6"
3-796-3125	5.1181	0.9843	20.5375	19.065	10975	10188				17.4	0.0184	8" & 10"
3-796-3150	5.9055	1.1811	27.2801	24.8	14573	13493		5500		23.8	0.0307	10" & 12"
3-796-3200	8.0709	1.3780	51.1501	47.4301	27347	25365				44.1	0.0758	15"

Dimensions

Part Number	C	D	E	F	G	L0	L1	L2	L3	L4	L5	L6	L7 max	L7 min	T1	T2
3-796-3100	5.3150	3.9370	3.1496	1.1811	0.8268	9.2913	6.1024	5.2756	3.2087	0.02559	4.8622	1.3780	1.7717	0.9843	6-M10x19	M20xP2.5
3-796-3125	6.2992	5.1181	4.3307	1.3780	0.9843	9.6850	6.4961	5.6693	3.6024		5.2559	1.5748	1.9685		6-M12x22	M24xP3.0
3-796-3150	7.2835			1.7717	1.2008	9.9606	6.7717	5.9449	3.8780		5.5315	1.7717	2.1654		6-M12x20	M30xP3.5
3-796-3200	9.6457	5.7087	4.7244	2.1654	1.4567	10.8858	7.6969	6.8701	4.8031		6.4567	2.3622	2.7165	1.3386	6-M16x29	M36xP4.0

Closed Center Hydraulic Cylinders, Check Valve plus Proximity Switch Type

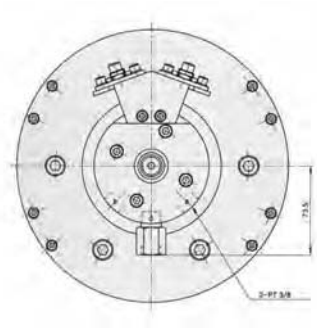


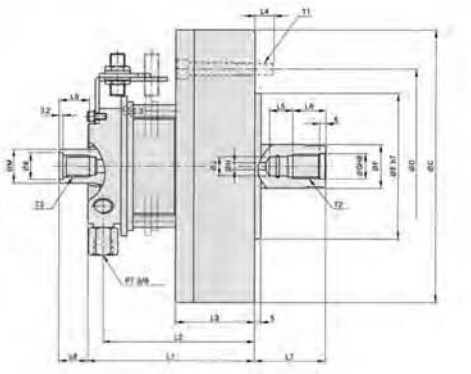
Part Number	Cylinder Dia	Piston Stroke	Piston Surface Area Extend	Piston Surface Area Retract	Max Draw Bar Pull Extend	Max Draw Bar Pull Retract	Max Operating Pressure	Max Permissable Speed	Total Leekage	Wt	Moment of Inertia	Matching Chuck
	in		in^2		lbf		lbs/in^2	RPM	gal/min	lbs	$lbs*ft^2$	Size
3-796-4100	4.1339	0.7874	13.4075	12.3225	7152	6590	580.31	6000	0.26	16.5	0.0102	6"
3-796-4125	5.1181	0.9843	20.5375	19.065	10975	10188				22.7	0.0184	8" & 10"
3-796-4150	5.9055	1.1811	27.2801	24.8	14573	13493		5500		30.4	0.0307	10" & 12"
3-796-4200	8.0709	1.3780	51.1501	47.4301	27347	25365				48.9	0.0758	15"
3-796-4245	9.6457	2.3622	72.9741	68.0141	38961	36268		2000		83.8	–	40" thru 63"

Dimensions

Part Number	C	D	E	F	G	L0	L1	L2	L3	L4	L5	L6	L7 max	L7 min	T1	T2
3-796-4100	5.3150	3.9370	3.1496	1.1811	0.8268	10.4961	7.3031	6.4764	3.2087	1.4567	6.0630	1.3780	1.7717	0.9843	6-M10x19	M20xP2.5
3-796-4125	6.2992	5.1181	4.3307	1.3780	0.9843	10.8858	7.6969	6.8701	3.6024		6.4567	1.5748	1.9685		6-M12x22	M24xP3.0
3-796-4150	7.2835			1.7717	1.2008	11.1614	7.9724	7.1457	3.8780		6.7323	1.7717	2.1654		6-M12x20	M30xP3.5
3-796-4200	9.6457	5.7087	4.7244	2.1654	1.4567	12.0866	8.8976	8.0709	4.8031		7.6575	2.3622	2.7165	1.3386	6-M16x29	M36xP4.0
3-796-4245	12.0079	8.6614	6.2992	2.5591	1.9685	15.6299	11.8898	10.0787	6.5354	1.7717	9.8031	2.6378	3.3465	0.9843	6-M20x30	M42xP3.0

Closed Center Hydraulic Cylinders, Short Length, Proximity Switch Type





Part Number	Cylinder Dia	Piston Stroke	Piston Surface Area Extend	Piston Surface Area Retract	Max Draw Bar Pull Extend	Max Draw Bar Pull Retract	Max Operating Pressure	Max Permissable Speed	Total Leekage	Wt	Moment of Inertia	Matching Chuck
	in		in^2	in^2	lbf		lbs/in^2	RPM	gal/min	lbs	$lbs*ft^2$	Size
3-796-5105	4.1339	0.7874	13.4075	12.3225	7152	6590	580.31	6000	0.26	16.5	0.0021	6"
3-796-5120	5.1181	0.9843	20.5375	19.065	10975	10188				22.7	0.0038	8" & 10"
3-796-5135	5.9055	1.1811	27.2801	24.8	14573	13493		5500		30.4	0.0063	10" & 12"
3-796-5140	8.0709	1.3780	51.1501	47.4301	27347	25365				48.9	0.0155	15"
3-796-5150	9.6457	2.3622	72.9741	68.0141	38961	36268		2000		83.8	–	40" thru 63"

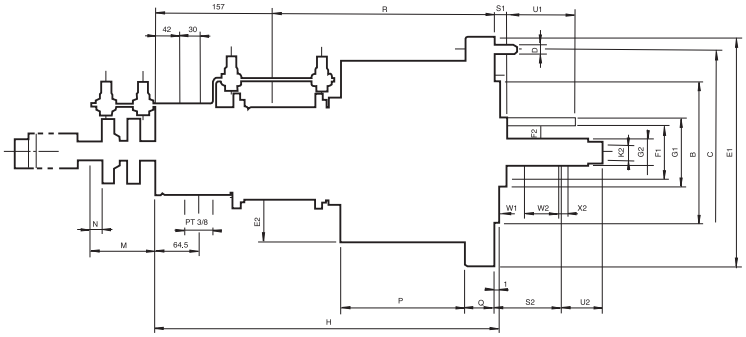
Dimensions

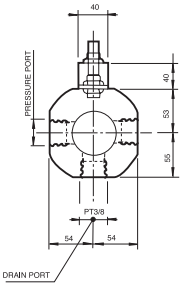
Part Number	C	D	E	F	G	H	J	K	M
3-796-5105	5.3150	3.9370	3.1496	1.1811	0.8268	0.8268	0.8268	0.8268	0.8268
3-796-5120	6.2992	5.1181	4.3307	1.3780	0.9843	0.9843	0.9843	0.9843	0.9843
3-796-5135	7.2835			1.7717	1.2008	1.2008	1.2008	1.2008	1.2008
3-796-5140	9.6457	5.7087	4.7244	2.1654	1.4567	1.4567	1.4567	1.4567	1.4567
3-796-5150	12.0079	8.6614	6.2992	2.5591	1.9685	1.9685	1.9685	1.9685	1.9685

Part Number	L1	L2	L3	L4	L5	L6	L7 max	L7 min	L8	L9	T1	T2	T3
3-796-5105	7.3031	6.4764	3.2087	1.4567	6.0630	1.3780	1.7717	0.9843	3.2087	1.4567	6-M10x19	M20xP2.5	M20xP2.5
3-796-5120	7.6969	6.8701	3.6024		6.4567	1.5748	1.9685		3.6024		6-M12x22	M24xP3.0	M24xP3.0
3-796-5135	7.9724	7.1457	3.8780		6.7323	1.7717	2.1654		3.8780		6-M12x20	M30xP3.5	M30xP3.5
3-796-5140	8.8976	8.0709	4.8031		7.6575	2.3622	2.7165	1.3386	4.8031		6-M16x29	M36xP4.0	M36xP4.0
3-796-5150	11.8898	10.0787	6.5354	1.7717	9.8031	2.6378	3.3465	0.9843	6.5354	1.7717	6-M20x30	M42xP3.0	M42xP3.0

Closed Center Rotating Double Cylinder with Safety Device and Stroke Control

- Has two pistons inside which move individually





Part Number	Piston Area				Piston Stroke		Max Speed	Max Pressure	Wt
	Piston 1		Piston 2						
	in^2	in^2	in^2	in^2	in	in	RPM	lbf/in	lbs
3-7230-0020	17.515 / 19.375		4.96 / 5.58		88.2	2204.6	5000	711.2	66.1
3-7230-0030	29.14 / 34.1				2645.5	2645.5	4000		110.2

Dimensions

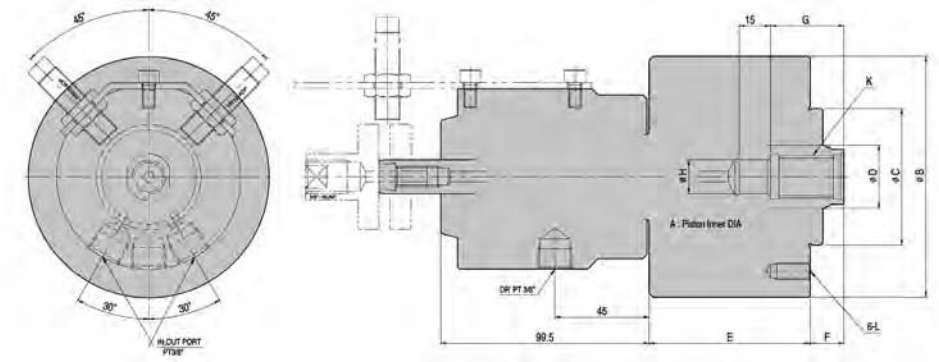
Part Number	A1	A2	B	C	D	E1	E2	F1	F2
3-7230-0020	5.1181	2.7559	5.1181	7.4803	6-M12	8.4646	6.6929	M42xP1.5	M16
3-7230-0030	6.6929		6.6929	9.2520		10.6299	8.2677	M55xP1.5	

Part Number	G1	G2	H	I	K1	K2	M	N	P	Q	R
3-7230-0020	1.9685	1.1024	15.0394	0.1969	1.1024	0.7087	2.5591	0.5906	5.1969	1.0236	8.6614
3-7230-0030	2.7559		15.9055		1.9685				5.7480	1.3386	9.5276

Part Number	S1 (min)	S2 (min)	T	U1	U2	W1	W2	X1	X2
3-7230-0020	0.3937	3.7008	0.5512	2.7559	0.7874	0.7087	0.9843	0.4724	0.4724
3-7230-0030	0.3937	2.8346	0.7087	3.2283		0.7874			

Closed Center Rotating Double Cylinder with Coolant Connection

- Cylinder has coolant, air blow and air sensor equipment
- Special double acting cylinder has two separate piston actuations
- Available with stroke control
- Can be used vertically or horizontally
- Optional add rotary union to for air sensing, air blow or coolant
- Cylinder is dual media air and coolant thru



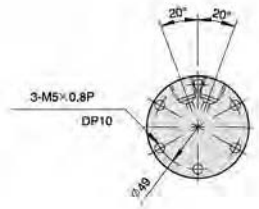
Part Number	Piston Area Push	Piston Area Pull	Piston Stroke	Max Speed	Max Draw Bar Pull	Moment of Inertia GD²	Wt
	in²	in²	in	RPM	lbf	lbf*ft²	lbs
3-7231-0080	6.6960	7.5175	0.5906	5000	77.2	0.5	11.9
3-7231-0100	11.0670	11.8885	0.7874	5000	77.2	0.9	15.4
3-7231-0125	17.5150	18.7395	0.9843	5000	77.2	1.9	20.9
3-7231-0140	21.9015	23.5600	1.3780	4000	77.2	2.8	27.8

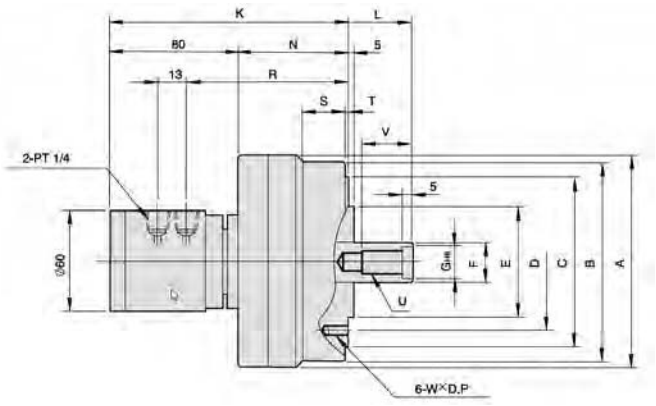
Dimensions

Part Number	A	B	C	D	E	F Max	F Min	G	H	K	L
3-7230-0020	3.1496	4.5276	2.5591	1.1811	3.0315	1.2205	0.6299	1.3780	0.6299	M20x2.5	M8x1.25
3-7230-0030	3.9370	5.3150	3.1496		3.4646	1.4173					M10x1.5
3-7230-0020	4.9213	6.2992	4.3307	1.3780	3.7402	1.6142		1.5748	0.7087	M24x3.0	M12x1.75
3-7230-0030	5.5118	7.0866	4.3307	1.5748	4.2913	2.0079		1.7717	0.8661	M27x3.0	M12x1.75

Closed Center Rotating Air Cylinder

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





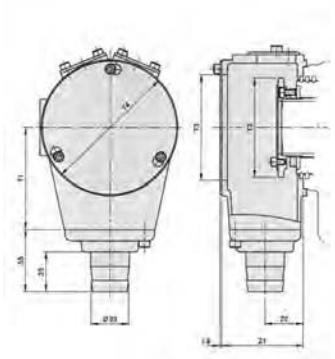
Part Number	Piston Area Push	Piston Area Pull	Piston Stroke	Max Speed	Max Draw Bar Pull	Max Pressure	Moment of Inertia GD²	Wt
	in²	in²	in	RPM	lbf	lbf*in²	lbf*ft²	lbs
3-7232-0130	20.3050	19.8400	0.5906	5000	1078.1	116.6	0.9	11.0
3-7232-0170	35.1850	34.1000	0.7874		1843.1		2.6	18.1
3-7232-0220	58.5900	57.5050	0.9843	4000	3123.9		7.6	21.6

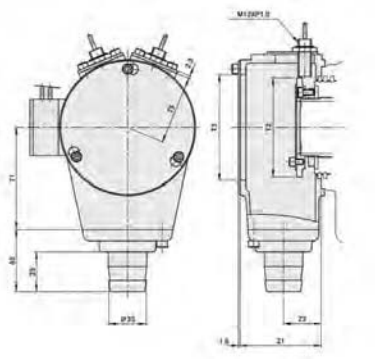
Dimensions

Part Number	A	B	C	D	E (h7)	F	G (h8)	K
3-7230-0020	6.1417	5.9055	4.7244	3.5433	2.5591	0.7874	0.5118	5.6299
3-7230-0030	7.8740	7.6772	5.5118	3.9370	3.1496	0.9843	0.6693	6.3780
3-7230-0020	10.0394	9.6457	6.6929	5.1181	4.3307	1.1811	0.8268	6.8110

Part Number	L Max	L Min	N	R	S	T	U	V	W
3-7230-0020	1.3780	0.7874	2.4803	3.8976	1.0630	0.0787	M12	0.8661	M6x10
3-7230-0030	2.5591	1.7717	3.2283	4.6457	1.7717	0.1969	M16	1.1811	M10x16
3-7230-0020	2.7953	1.8110	3.6614	5.0787	1.2992		M20	1.3780	N12x20

Coolant Collectors





Coolant Collector Part Number	Coolant Collector + Proximity Switch Part Number	T1	T2	T3	T4	T5	Z1	Z2
		in						
3-795-060A	3-795-060B	3.5433	3.4646	3.7008	4.7638	2.4016	2.8543	1.3386
3-795-080A	3-795-080B	3.9370	3.9370	4.1732	5.1969	2.6378	3.0906	
3-795-100A	3-795-100B	4.9213	4.9213	5.1969	6.2205	3.1496	3.2480	
3-795-120A	3-795-120B	5.5118	5.7087	6.1024	7.2835	3.7402	3.4449	

Matching Cylinder Part Number
3-797-060
3-797-080
3-797-100
3-797-120

Power Chucks

Workholding Solutions

Soft Top Jaws, Serration 1.5mm x 60

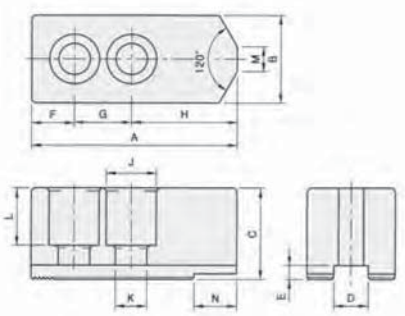


Fig. 1

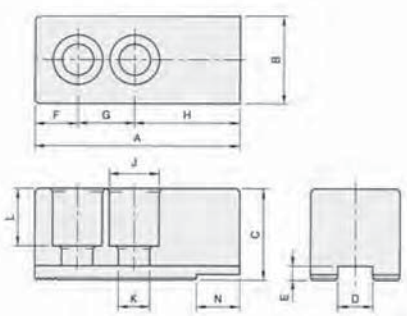


Fig. 2

Chuck Dia	Part Number	Fig	Serration	A	B	C	D	E	F	G	H	J	K	L	M	N
6"	3-788-306	1	1.5x60°	2.8346	1.2205	1.2402	0.4724	0.1969	0.5906	0.7874	1.4567	0.6890	0.4331	0.7677	0.4724	0.5906
8"	3-788-308			3.7402	1.4567	1.4764	0.5512		0.7874	0.9843	1.9685	0.7874	0.5512	0.8858		0.7874
10"	3-788-310			4.3307	1.7323	1.752	0.6299		1.1811	1.1811				1.122	0.5906	
12"	3-788-312	2		4.3701	1.9291	1.9488	0.8268		0.8268		2.3622	0.9843	0.6693	1.2402	–	–
15 & 18"	3-788-315			6.4961	2.3228	2.3425	0.8661	0.315	1.8504	1.6929	2.9528	1.2598	0.8661	1.4173	–	–
21"	3-788-321		3.0x60°	7.0866			0.9843	0.374	1.5748	2.3622	3.1496				–	–

Hard Top Jaws, Serration 1.5mm x 60

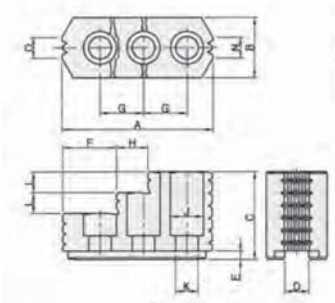


Fig. 1

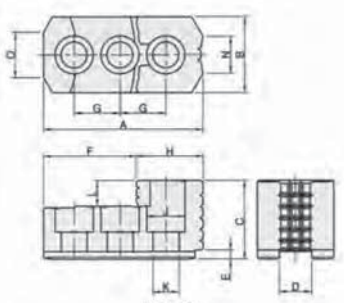


Fig. 2

Chuck Dia	Part Number	Fig	Serration	A	B	C	D	E	F	G	H	J	K	L	M	N	O
6"	3-787-306	1	1.5x60°	2.9724	1.2205	1.6142	0.4724	0.1969	1.1811	0.7874	0.4724	0.6890	0.4331	0.3937	0.3937	0.5906	–
8"	3-787-308			3.4252	1.5354	2.0079	0.5512		1.0630	0.9843	0.8661	0.7480	0.5118	0.4724	0.4724	0.4724	0.5906
10"	3-787-310			3.9764	0.3937	2.1260	0.6299		1.6929	1.1811	6.8504			0.5118	0.5906	0.5906	0.7087
12"	3-787-312	2		4.1654	1.9685	2.0472	0.8268		2.3819		1.7835	0.9843	0.6693	0.6693	1.1811	1.1811	0.5906
15 & 18"	3-787-315	1		6.2677	2.4409	3.3858	0.8661	0.3150	2.5984	1.6929	1.3780	1.2598	0.8268	0.7874	1.5748	1.5748	1.1811
21"	3-787-321	2	3.0x60°	6.2795	3.1496	3.5433	0.9843	0.0787	4.0740	1.9685	2.2126		0.8661	1.5748	2.1654	–	1.5748

T-nuts

Chuck Dia	Part Number	A	B	C	F	G	H (h6)	Bolt Size
6-1/4"	3-789-906	0.0271	0.0543	0.0287	0.0310	0.0116	0.0186	M10*P1.5
8"	3-789-908	0.0318	0.0713	0.8071	0.0318	0.0131	0.0217	M12*P1.75
10"	3-789-910	0.0348	0.0790	0.0333	0.0440	0.0131	0.0248	M12*P1.75
12-1/2"	3-789-912	0.0456	0.0829	0.0426	0.0465	0.0178	0.0325	M16*P2.0
15-3/4"	3-789-915	0.0519	0.1240	0.0705	0.0666	0.0256	0.0372	M20*P2.5

Draw Tube Nut Blanks

Chuck Dia	Part Number
6"	3-789-0601
8"	3-789-0801
10"	3-789-1001
12"	3-789-1201
15"	3-789-1501

2 Year WARRANTY

ON ALL CHUCKS

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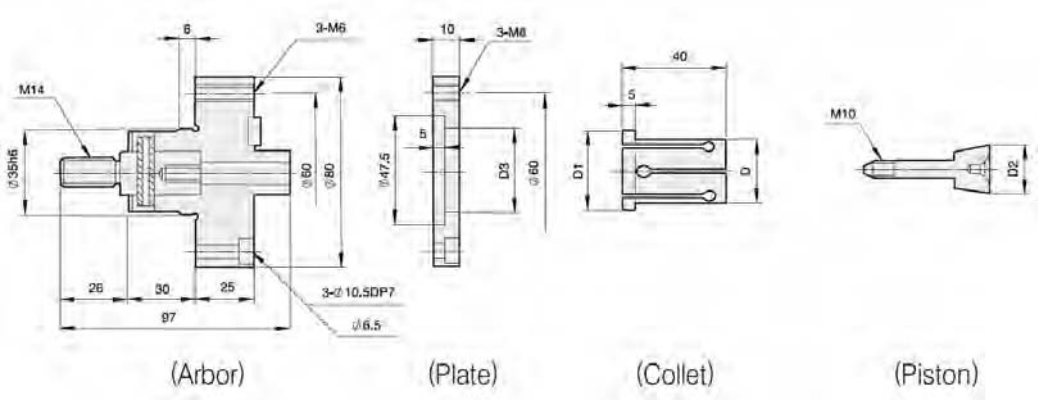
POWER COLLET CHUCKS

Small Inside Collet Chucks

- Used for machining work that requires light machining or high precision

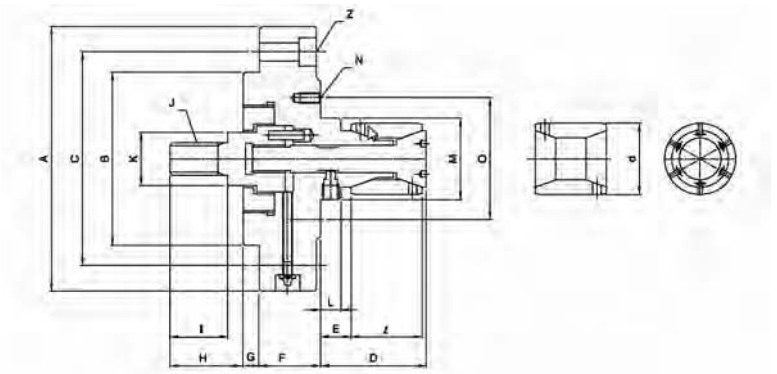
Part Number	Collet Capacity Dia	Max Draw Bar Pull	Draw Bar Stroke	Collet Range Dia
	mm	kgf	mm	
3-7228-001	20 ~ 40.5	1000	2.5	0.5
3-7228-002	35 ~ 60.5	1200	2.5	0.5
3-7228-003	55 ~ 81	1600	4.5	1



Part Number	Collet Capacity Dia	D1	D2	D3
	mm			
3-7228-001 (11)	20 ~ 21	25.5	16	22
3-7228-001 (12)	21.5 ~ 23	28	16	24.5
3-7228-001 (13)	24 ~ 25	30	16	26
3-7228-001 (21)	25.5 ~ 28	33	20	29
3-7228-001 (22)	28.5 ~ 31	36.5	20	32.5
3-7228-001 (23)	32 ~ 35	40	20	36
3-7228-001 (31)	35.5 ~ 37.5	42.5	30	38.5
3-7228-001 (32)	38 ~ 40	45	30	41
3-7228-002 (11)	35 ~ 37	40	30	38
3-7228-002 (12)	37.5 ~ 40	44	30	41
3-7228-002 (21)	40.5 ~ 43	48	35	44
3-7228-002 (22)	43.5 ~ 46	51	35	47
3-7228-002 (23)	46.5 ~ 50	54	35	51
3-7228-002 (31)	50.5 ~ 53	58	410	54
3-7228-002 (32)	53.5 ~ 56	61	40	57
3-7228-002 (33)	56.5 ~ 60	64	40	61
3-7228-003 (11)	55 ~ 57	62	48	55
3-7228-003 (12)	58 ~ 60	65	48	62
3-7228-003 (21)	61 ~ 63	68	55	65
3-7228-003 (22)	64 ~ 66	71	55	68
3-7228-003 (23)	67 ~ 70	75	55	72
3-7228-003 (31)	70 ~ 73	78	65	75
3-7228-003 (32)	74 ~ 76	81	65	78
3-7228-003 (33)	77 ~ 80	85	65	82

Inside Collet Chucks

- Has a long inside collet
- Strong clamping force



Dimensions

Part Number	d	I	A	B	C	D	E	F	G	H
	in									
3-7229-0020	15≤ d ≥20	0.7874	3.3465	1.9685	2.5591	1.5354	0.6693	0.9843	0.1969	0.8268
3-7229-0030	20≤ d ≥30	1.0236	3.9370	2.5591	3.1496	1.8898	0.7874	1.0630	0.2756	1.0236
3-7229-0040	30≤ d ≥40	1.3780	5.1181	3.3465	4.1339	2.4409	0.9843	1.1811	0.3150	1.4173
3-7229-0050	35≤ d ≥50	1.7717	5.7087	3.5433	4.7244	2.8346	0.9843	1.1811		
3-7229-0080	50≤ d ≥80	2.9528	7.4803	5.3150	6.2992	4.2126	1.1811	1.8898		1.9882
3-7229-0120	80≤ d ≥120	4.1339	9.4488	6.4961	7.8740	5.4331				2.6772

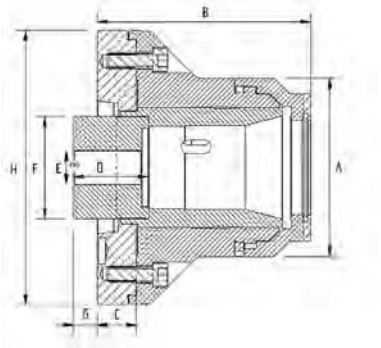
Part Number	I	J	Z	K	L	M	N	O	Max Draw Bar Pull
	in								lbf
3-7229-0020	15≤ d ≥20	0.7874	3.3465	1.9685	2.5591	1.5354	0.6693	0.9843	0.1969
3-7229-0030	20≤ d ≥30	1.0236	3.9370	2.5591	3.1496	1.8898	0.7874	1.0630	0.2756
3-7229-0040	30≤ d ≥40	1.3780	5.1181	3.3465	4.1339	2.4409	0.9843	1.1811	0.3150
3-7229-0050	35≤ d ≥50	1.7717	5.7087	3.5433	4.7244	2.8346	0.9843	1.1811	
3-7229-0080	50≤ d ≥80	2.9528	7.4803	5.3150	6.2992	4.2126	1.1811	1.8898	
3-7229-0120	80≤ d ≥120	4.1339	9.4488	6.4961	7.8740	5.4331			

Quick Change Collet Chucks

- Quick change cap design, allows for quick collet changeover
- Fixed Length design ensures consistent part lengths and tool offsets
- High speed operation with minimal centrifugal forces
- Available in several mounting configurations (flat, A5, A6, A8, etc.)
- Part Stops available

3-751 series				
Part Number Series		**3-751-04xx**	**3-751-05xx**	**3-751-06xx**
Gripping Range	**Max in**	1.6535	2.126	2.3622
	Min in	0.1575	0.063	0.0394
Collet Increment	in	0.0787	0.1181	0.0787
Sleeve Stroke	in	0.2756	0.3937	0.2756
Max Input Force	lbf	5620	6744	6744
Max Gripping Force	lbf	12364	13488	13488
Max Speed	RPM	7100	6300	6300
Net Weight	lb	30	64	64
Matching Cylinder		3-797-060	3-797-080	3-797-080
Collet Ref	Spring	3-135-4200	3-135-5400	3-135-6500

Part Number	Mount	A	B	C	D	E Max	F	G Max	G Min	H
3-751-0425	A5	4.4488	5.6299	0.9843	2.3622	M58 x 1.5	0.9055	0.9055	0.6299	6.4961
3-751-0426	A6									
3-751-0546	A6	5.6299	6.8898	1.2402	2.3622	M75 x 1.5	0.8268	0.8268	0.4331	8.6614
3-751-0548	A8									
3-751-0606	A6	5.6299	6.7323	1.2402	2.3622	M75 x 1.5	0.8268	0.8268	0.5512	8.6614
3-751-0608	A8									



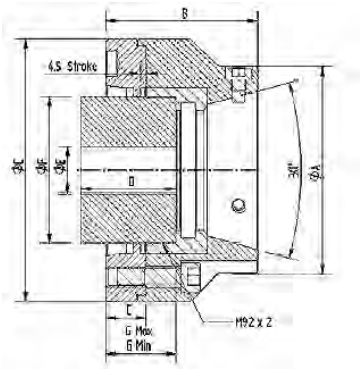
Spring Collets		Capacity mm			Dimensions mm		
Toolmex Series	**Type**	**Round**	**Hex**	**Square**	**Length**	**Dia**	**Taper**
3-135-4200	D173E	1.6535	1.4961	1.1811	3.7008	2.3622	14.75°
3-135-5400	D-853	2.0079	1.7323	1.4173	4.9370	3.4685	15°
3-135-6000	D185E	2.3622	2.0472	1.6535	4.3307	3.3071	14.75°

Pull Back Series Collet Chucks

- Quick change design, allows for quick collet changeover
- Pull-back design allows for secure and accurate clamping
- Compact body allows more room inside work area
- High speed operation with minimal centrifugal forces
- Available in several mounting configurations (flat, A5, A6, A8, etc.)
- Part stops available
- Compatible with quick change collet clamping heads

3-752 series			
Part Number Series		**3-752-052x**	**3-752-065x**
Gripping Range	**Max in**	2.0472	2.5591
	Min in	.1575	.1575
Collet Increment	in	.0197	.0197
Sleeve Stroke	in	.1772	.1772
Max Input Force	lbf	8992	10116
Max Gripping Force	lbf	21131	23604
Max Speed	RPM	6500	6000
Matching Cylinder		3-797-080	3-797-100
Collet Changing Device		3-750-952	3-750-965

Part Number	Mount	A	B	C	D	E Max	F	G Max	G Min	Wt
3-752-0525	A5	4.7244	3.5039	6.4961	2.3622	M70 x 2	3.1102	1.7323	1.5551	4.1
3-752-0526	A6					M85 x 2	3.6220			
3-752-0528	A6		4.2913	8.2677				2.5197	2.3425	5
3-752-0655	A8	5.1181	3.7402	8.2677	2.3622	M70 x 2	3.1102	1.7323	2.7362	4.1
3-752-0658	A6		4.5276	1.2402		M85 x 2	3.6220	2.5197	2.3425	5

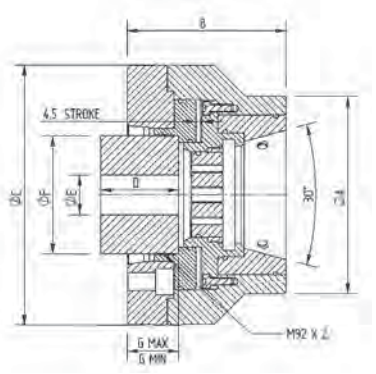


DC Collets		Capacity			Dimensions		
Part Number	**Type**	**Round**	**Hex**	**Square**	**Length**	**Dia**	**Taper**
3-136-5200	DC-52 (Smooth)	.2362 - 2.0472	0.2756	–	1.8110	3.1181	15°
3-136-5200	DC-52 (Radial Groove)	.3150 - .4331	.3150 - 1.7717	.3150 - 2.2047	1.8110	3.1181	15°
3-136-5200	DC-52 (Serrated)	.4724 - 2.0472	–	–	1.8110	3.1181	15°
3-136-6500	DC-65 (Smooth)	.1575 - 2.5591	0.2756	–	2.0866	3.9173	15°
3-136-6500	DC-65 (Radial Groove)	.3150 - .4134	.3150 - 2.2047	.3150 - 1.8110	2.0866	3.9173	15°
3-136-6500	DC-65 (Serrated)	.4331 - 2.5591	–	–	2.0866	3.9173	15°

Fixed Length Quick Change Power Collet Chucks

- Quick change design allows for quick collet changeover
- Compact design allows more room inside work area
- Fixed Length design ensures consistent part lengths and tool offsets
- High speed operation with minimal centrifugal forces
- Available in several mounting configurations (flat, A5, A6, A8, etc.)
- Part stops available
- Compatible with quick change collet clamping heads

3-750 series		
Part Number Series		**3-750-065x**
Gripping Range	**Max in**	2.5591
	Min in	.1575
Collet Increment	in	.0197
Sleeve Stroke	in	.1772
Max Input Force	lbf	10116
Max Gripping Force	lbf	23604
Max Speed	RPM	6000
Net Weight	lb	26
Matching Cylinder		3-797-100
Collet Changing Device		3-750-965



Part Number	Mount	A	B	C	D	E Max	F	G Max	G Min
3-750-0655	A5	4.7244	4.9213	8.2677	2.3622	M85 x 2	3.6220	1.7323	1.5551
3-750-0656	A6					M85 x 2			
3-750-0638	A6					M85 x 2			

DC Collets		Capacity in			Dimensions		
Toolmex Series	**Type**	**Round**	**Hex**	**Square**	**Length A**	**Diameter B**	**Taper C**
3-134-6500	DC-42 (Smooth)	0.1575 - 1.6535	0.2756 -	0.2756 -	.0000	.0000	15°
3-134-6500	DC-42 (Radial)	0.315 - 0.3937	0.315 - 1.4173	0.315 - 1.1811			
3-134-6500	DC-42 (Serrated)	0.4331 - 0.9449	–	–			

2 Year WARRANTY
ON ALL CHUCKS

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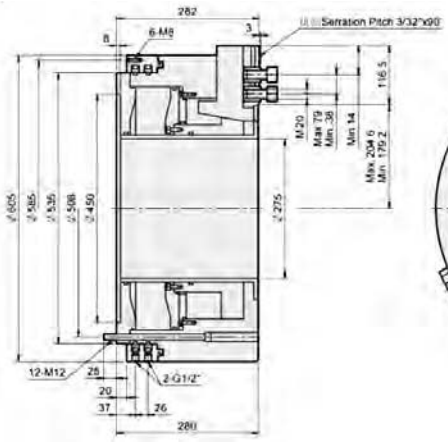
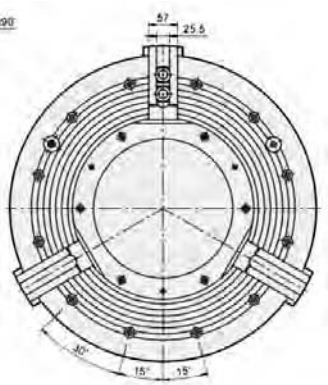
OIL COUNTRY CHUCKS

Pneumatic Oil Country Chucks

- Built-in cylinder, no drawtube to reduce lathe spindle bore.
- Grip force easily adjusted through pressure reducing valve
- Through holes up to 20"
- Easy mounting
- Twin check valves for safety in the event of a sudden loss of pressure
- Safety pressure control device that stops the chuck rotation when pressure loss is detected
- Complete installation of chuck package
- 2-Year warranty when installed by TMX Workholding Solutions Team



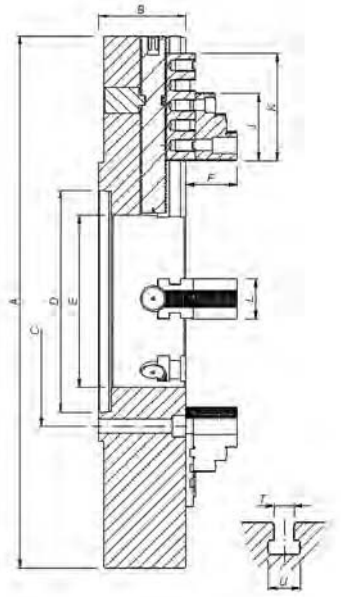


Specifications

Part Number	Chuck Dia	Thru Hole	Jaw Stroke	Gripping Force (6 Bar)	Max Speed
		in	in	lbf	RPM
24"	3-785-2400	12.20	0.378	52809.0	1000
32"	3-785-3200	16.14	0.378	75730.3	750
40"	3-785-4000	20.08	0.378	47191.0	450

4-Jaw Independent Extra Heavy Duty Oil Country Chucks with Extra Large Thru Hole

- Forged Steel Body
- Extra heavy duty American Standard Hard Top and Master Jaws
- Gripping surfaces serrated for more holding power
- Large Thru-hole
- Direct "A" type Mount



Part Number	Chuck Dia A		Taper	Hole Dia E	Max Speed	Max Torque on Key	Gripping Force	Wt	D	C	B	K	F	L	T	U
	mm	in		inches	RPM	lbt*ft	lbf	lbs	inches							
3-859-2033	530	21	A2-11	6.5748	1150	368.8	28101.1	463.0	7.7480	9.2520	5.7480	6.4961	3.2677	2.3622	0.8661	1.5748
3-859-2043			A2-15						11.2520	13.0000						
3-859-2543	600	24	A2-15	10.5118	970	442.5	33721.3	661.4	11.2520	13.0000	6.1024	7.9921	3.6220	2.9528		
3-859-2550			A2-20	10.5					16.2520	18.2520						
3-859-2555			A2-20	12.5												
3-859-2845	700	28	A2-15	10.5118	873			826.7	11.2520	13.0000						
3-859-2853			A2-20	12.5197					16.2520	18.2520						
3-859-3243	800	32	A2-15	10.5118	764	516.3	42713.7	1190.5	11.2520	13.0000	6.4961					
3-859-3255			A2-20	12.5					16.2520	18.2520						
3-859-3257			A2-20	14.5												
3-859-3258			A2-20	15.2												
3-859-3615	900	36	A2-15	10.5118	679			1543.2	11.2520	13.0000						
3-859-3620			A2-20	12.5197					16.2520	18.2520						
3-859-4043	1000	40	A2-15	10.5118	611			1807.8	11.2520	13.0000						
3-859-4053			A2-20	12.5197					16.2520	18.2520						
3-859-4063			A2-28													

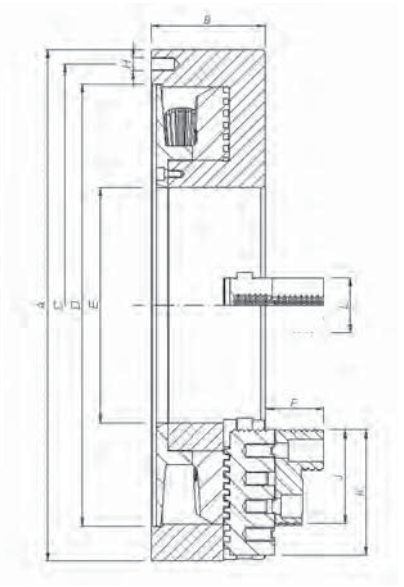
For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025

TMX High Pressure Chuck Lubricant

TMX Chuck Lubricant	Part Number
16 oz	3-799-025

3-Jaw Self-Centering Extra Heavy Duty Oil Country Chucks

- Forged Steel Body
- Extra heavy duty American Standard Hard Top and Master Jaws
- Gripping surfaces serrated for more holding power
- Large Thru-hole
- Direct "A" type Mount



Part Number	Chuck Dia A		Taper	Hole Dia E	Max Speed	Max Torque on Key	Gripping Force	Wt	D	C	B	F	L	K
	mm	in		inches	RPM	lbf*ft	lbf	lbs	inches					
3-825-2025	500	20	A2-15	7.8740	1222	177.0	20232.8	507.1	11.2520	9.7480	6.3386	3.2677	2.3622	6.4961
3-825-2515	630	25	A2-15	11.0236	970.0	191.8	20682.4	650.4	11.2520	13.0000	6.6142			
3-825-2520			A2-20	12.5197					16.2520	14.5000	6.6929			
3-825-2815	700	28	A2-15	11.0236	873.0	516.3	26302.6	815.7	11.2520	13.0000	6.8110	3.6220	2.9528	8.5827
3-825-2820			A2-20	12.5197					16.2520	14.5000	6.8898			
3-825-3215	800	32	A2-15	11.0236	764.0		27651.5	992.1	11.2520	13.0000	7.0079			9.8425
3-825-3220			A2-20	14.5669					16.2520	18.2520	7.0866			8.5827
3-825-3615	900	36	A2-15	11.0236	679.0		28101.1	1433.0	11.2520	13.0000	7.4803			9.8425
3-825-3620			A2-20	14.5669					16.2520	18.2520	7.4803			
3-825-4020	1000	40	A2-20	16.0236	611.0			1719.6	16.2520	18.2520	7.4803			9.8425
3-825-4028			A2-28	18.5039					23.0020	25.4961	7.6378			8.5827

For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025

Workholding Solutions

2 Year WARRANTY
ON ALL CHUCKS

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SPECIAL PURPOSE CHUCKS

12-Jaw Hydraulic Chuck

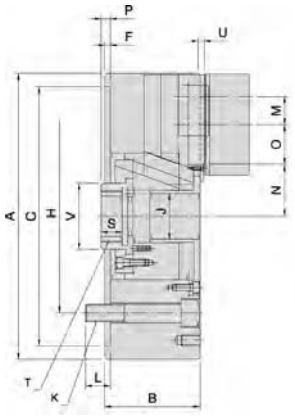
TMX Workholding specialty chuck manufactured for your specific application.

TMX engineers perform a full project review with you to get an in-depth understanding of your application. After the review, we provide a concept drawing that we discuss with your engineering teams. Once the final concept is fully understood and agreed upon, detailed designs are completed and production begins. The workholding solution is fully tested and delivered to your site where we are there during the full installation.

Call the TMX Workholding Solutions Team at 508-653-8897 or 800-992-4766 and begin the discussion today.

2 and 3-Jaw Open Center Power Chucks

- Chuck uses 2 Jaws or 3 Jaws to clamp round, angular, and shaped work pieces



Chuck Dia	Part Number	Jaw Stroke	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Draw Bar Pull 2-Jaw	Max Draw Bar Pull 3-Jaw	Gripping Force 2-Jaw	Gripping Force 2-Jaw	Max Speed	Wt	Moment of Inertia GD^2
		in				lbf				RPM	lbs	lbs*ft²
8"	3-7201-0800	0.3780	0.7087	7.8740	1.1811	3306.9	4409.2	7275.2	9700.3	3000	44.1	10.4
10"	3-7201-1000	0.7165	0.9843	9.8425		5070.6	7716.2	9038.9	13668.6		70.5	24.9
12"	3-7201-1200	0.8031	1.1024	11.8110	1.9685	6613.9	9920.8	11684.5	17637.0	2500	121.3	60.3
15"	3-7201-1500			13.7795	2.7559	8818.5	13227.7	15652.8	23148.5	2000	218.3	178.0

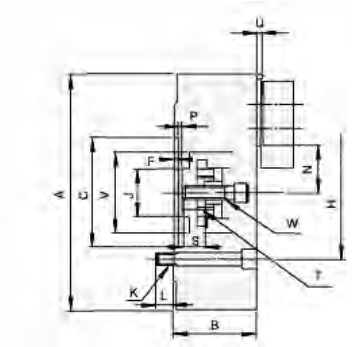
Dimensions

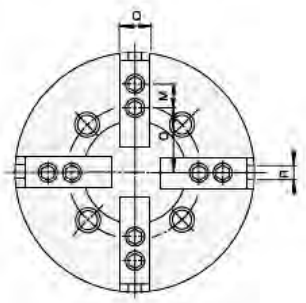
Chuck Dia	Part Number	A	B	C (H6)	F	H	J	K	L	M	N Max	N Min
8"	3-7201-0800	8.2677	2.8740	7.4803	0.1969	5.2500	1.3780	6-M12	0.7874	0.7874	1.8031	1.6142
10"	3-7201-1000	10.0000	3.3465	9.0551		6.7500	1.5748	6-M16	0.9843	0.9843	2.0197	1.6614
12"	3-7201-1200	11.9685	3.8189	11.0236		7.8740	2.1654	6-M20	1.1811	1.1811	2.5906	2.1890
15"	3-7201-1500	15.0000	4.8031	13.7795	0.2756	9.8425	2.9528		1.0630	1.5748	3.3780	2.9764

Chuck Dia	Part Number	O Max	O Min	P Max	P Min	Q	R	S	T	U	V
8"	3-7201-0800	1.1811	0.2953	0.8268	0.1181	1.1811	0.4724	1.0630	M42	0.1969	1.8898
10"	3-7201-1000	1.6535	0.3740	0.9843	0.0000	1.3780	0.6299	1.1024	M50		2.2835
12"	3-7201-1200	1.8307	0.4134			1.5748		1.1811	M65		2.9528
15"	3-7201-1500	2.0079	0.5906	1.1024		1.9685	0.8268	1.5748	M85		3.7402

4-Jaw, 2+2 Power Chucks

- For machining square and angular work pieces
- High clamping force





Chuck Dia	Part Number	Jaw Stroke	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Draw Bar Pull	Gripping Force	Max Speed	Wt	Moment of Inertia GD²
		in				lbf		RPM	lbs	lbs*ft²
10"	3-7202-1000	0.6299	0.8661	10.0000	1.5748	5070.6	18518.8	2000	110.2	59.3
12"	3-7202-1200			11.9685				4500	138.9	73.6
15"	3-7202-1500	0.6693	0.9843	15.0000	2.0472	6613.9	238099.0	1200	264.6	213.6

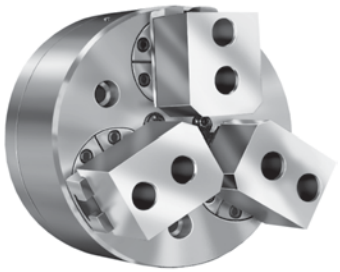
Dimensions

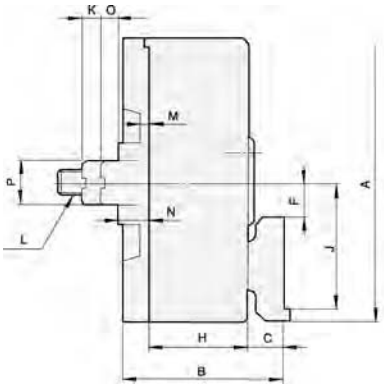
Chuck Dia	Part Number	A	B	C (H6)	F	H	J	K	L	M	N Max	N Min
10"	3-7202-1000	10.6299	4.3307	4.7244	0.2165	6.7500	2.2835	4-M16	0.9449	1.1811	2.5197	2.2047
12"	3-7202-1200	11.9685										
15"	3-7202-1500	15.0000	5.3150	7.6772	0.2953	9.2520	3.0709	4-M20	1.1811	1.4961	3.0709	2.7362

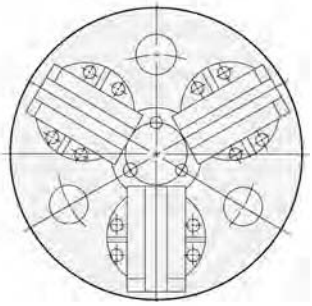
Chuck Dia	Part Number	O Max	O Min	P Max	P Min	Q	R	S	T	U	V	W
10"	3-7202-1000	3.4646	2.8740	0.4921	-0.3740	1.5748	0.6299	1.7126	M42x1.5	0.1969	4.0551	M16x2.0
12"	3-7202-1200	4.2913										
15"	3-7202-1500	5.6890	3.5630			1.9685	0.7087	2.1654	M55x2.0	–	5.1181	M20x2.5

Universal Ball Lock Power Chucks

- Used for chucking castings or forgings
- Pulls in work during chucking so that it can chuck a tapered surface (up to 10°)
- Jaw's orientation can automatically change right and left by 5° in each direction resulting in extremely strong clamping power







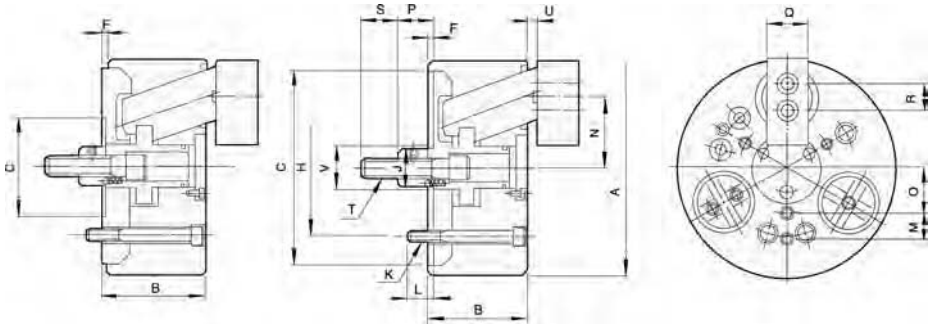
Chuck Dia	Part Number	Jaw Stroke	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Draw Bar Pull	Gripping Force	Max Speed	Wt	Moment of Inertia GD²
		in				lbf		RPM	lbs	lbs*ft²
6"	3-7203-0600	0.3110	0.4449	4.7244	0.5000	5952.5	17857.4	4000	39.7	3.6
8"	3-7203-0800	0.3740	0.5630	5.9843	0.6299	7936.6	23809.9	3500	59.5	11.4
10"	3-7203-1000	0.5000	0.6890	7.9921	1.9685	9920.8	29762.4	3000	99.2	29.2
12"	3-7203-1200			9.4882	2.4803		35714.8	2500	148.8	57.4
15"	3-7203-1500	0.6220	0.8780	12.4803	2.9921	14991.4	44974.2	2000	186.3	201.5
18"	3-7203-1800			15.5118	3.5039			1500	264.6	360.0
21"	3-7203-2100			18.5039	6.3780			1000	396.8	593.3

Dimensions

Chuck Dia	Part Number	A	B	C	F	H	J Outer Dia	J Inner Dia	K Max	K Min	L	P
6"	3-7203-0600	6.3780	4.1181	0.7598	0.7992	3.3150	2.8799	0.8720	0.6575	0.2126	M16	1.1874
8"	3-7203-0800	7.8740	4.8504	0.9173	0.9902	3.9409	3.5031	0.9980	0.6811	0.1181		1.2500
10"	3-7203-1000	10.0000	5.7913	1.1457	1.1811	4.6575	4.4370	1.1850	0.7953	0.1063	M18	1.6248
12"	3-7203-1200	11.8110			1.9882	4.5669	5.2441	1.9984	0.9016	0.2126		1.6248
15"	3-7203-1500	15.0000	6.4331	1.2756	2.5906	5.5748	6.7500	2.7461	0.9488	0.0709	M24	2.2504
18"	3-7203-1800	17.9921			4.0906		8.2500	4.2461				3.5000
21"	3-7203-2100	20.9843			5.5906		9.7500	5.7461				3.5000

Draw Down Power Chucks

- Chuck pulls in work during chucking where squareness and parallelism is required
- Has wide chucking range so that it can be used in various types of work by changing only top jaws
- Long Stroke
- High Performance
- Stable Gripping Accuracy
- OD Clamping



Chuck Dia	Part Number	Jaw Stroke	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Draw Bar Pull	Gripping Force	Max Speed	Wt	Moment of Inertia GD²
		in				lbf		RPM	lbs	lbs*ft²
4"	3-7204-0400	0.1969	0.2756	1.9685	0.5906	1322.8	3306.9	3500	9.9	0.7
5"	3-7204-0500			2.5591		2204.6	4409.2	3500	16.1	1.7
6"	3-7204-0600	0.2835	0.3937	3.3465	1.3780	3306.9	5511.6	3500	30.4	4.3
8"	3-7204-0800			7.8740	1.5748	5511.6	9920.8	3000	59.5	15.7
10"	3-7204-1000	0.4252	0.5906	9.8425	1.9685	7716.2	13227.7	2500	101	35.6
12"	3-7204-1200			11.8110		9920.8	16534.7	2000	149.9	75.9
15"	3-7204-1500		0.7874	14.9606	2.3622	12125.4	19841.6	1500	242.5	213.6

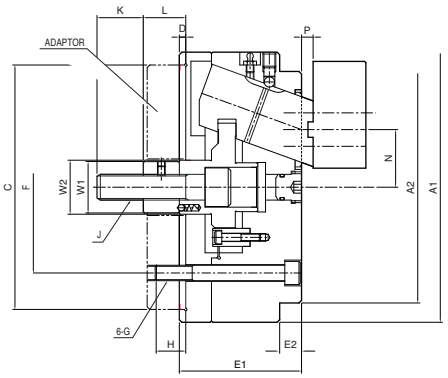
Dimensions

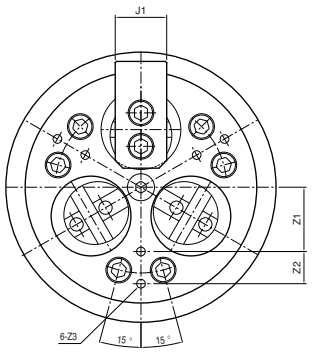
Chuck Dia	Part Number	A	B	C (H6)	F	H	J	K	L	M	N Max	N Min
4"	3-7204-0400	4.3307	2.3622	2.3622	0.1969	3.1496	0.9843	3-M8	0.5512	–	1.4567	1.3583
5"	3-7204-0500	5.1181	2.7559	3.1496		3.937	1.1024			–	1.7323	1.6339
6"	3-7204-0600	6.4961	3.3465	5.5118		4.1248	1.2598	6-M10	0.6299	0.7874	2.2835	2.1417
8"	3-7204-0800	8.2677	3.7402	7.4803		5.25	1.4961	6-M12	0.9055	0.9843	2.7953	2.6535
10"	3-7204-1000	10	4.3307	9.0551		6.75	1.9685	6-M16	0.8661	1.1811	3.3465	3.1339
12"	3-7204-1200	11.8504	4.9213				2.0472		1.063	1.378	4.0157	3.8031
15"	3-7204-1500	15	5.5118	11.811		9.0551	2.3622	6-M20	1.1811	1.7717	5.2614	4.8567

Chuck Dia	Part Number	O	P Max	P Min	Q	R	S	T	U Max	U Min	V
4"	3-7204-0400	0.9843	0.748	0.4724	0.9843	–	0.7874	M10x1.5	0.4134	0.1378	1.1024
5"	3-7204-0500	1.1811			1.1811	–	0.9843	M12x1.75			1.1811
6"	3-7204-0600	1.378	1.2992	0.9055	1.378	–	1.4173	M16x2.0	0.5512	0.1575	1.3780
8"	3-7204-0800	1.7717	1.4961	1.1024	1.5748	1.0236		M20x2.5			1.6535
10"	3-7204-1000	2.1654	1.8504	1.2598	1.9685	1.2598	1.811	M24x3.0	0.748		2.0472
12"	3-7204-1200	2.7559			2.3622	1.4173	1.9685	M27x3.0			2.1654
15"	3-7204-1500	3.7402	2.7953	2.0079	2.7559	1.5748	1.9685	M30x3.5	1.0236	0.2362	3.5433

3-Jaw Inside Draw Down Power Chucks

- Used when the squareness and parallelism are critical in machining of workpiece
- Chucks the workpiece by pulling the inner diameter of workpiece
- Workpiece Pulled Back
- Long Stroke
- High Performance
- Stable Gripping Accuracy
- ID Clamping





Chuck Dia	Part Number	Jaw Stroke Dia	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Draw Bar Pull	Gripping Force	Max Speed	Wt	Moment of Inertia GD²
		in				lbf		RPM	lbs	lbs*ft²
6"	3-7205-0600	0.2283	0.315	5.5118	1.5748	3306.9	5511.6	5000	28.7	4.3
8"	3-7205-0800	0.2835	0.3937	7.0866	1.8898	5511.6	9920.8	4500	57.3	15.7
10"	3-7205-1000	0.4252	0.5906	8.6614	2.5591	7716.2	13227.7	4000	95.9	36.1
12"	3-7205-1200	0.4252	0.5906	10.6299	3.1496	9920.8	16534.7	3500	149.9	69.3

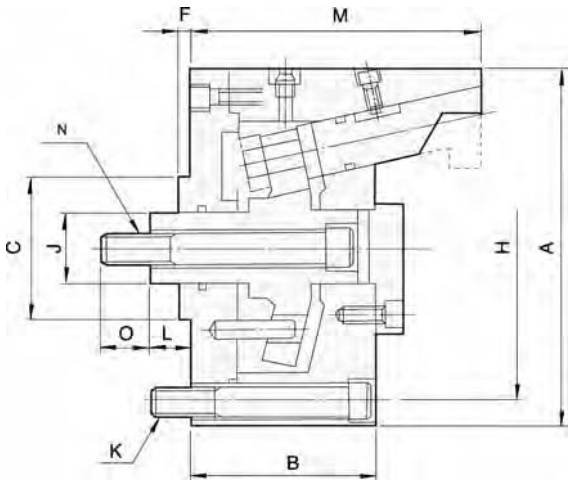
Dimensions

Chuck Dia	Part Number	A1	A2	C (H7)	D	E1	E2	F	G	H	J	J1
6"	3-7205-0600	6.4961	5.5118	5.5118	0.1969	3.1496	0.5906	4.1260	M10x1.5	0.6299	M16x2.0	1.3780
8"	3-7205-0800	8.2677	7.0866	7.4803		3.7402	0.6693	5.2520	M12x1.75	0.7087	M20x2.5	1.5748
10"	3-7205-1000	10.0000	8.6614	9.0551		4.3307	0.7874	6.7480	M16x2.0	0.8661	M24x3.0	1.9685
12"	3-7205-1200	11.9685	9.8425			4.9213	0.9843			1.0630	M27x3.0	2.3622

Chuck Dia	Part Number	K	L Max	L Min	N Max	N Min	P Max	P Min	W1	W2	Z1	Z2	Z3
6"	3-7205-0600	1.4173	1.2205	0.9055	1.4921	1.3780	0.4724	0.1575	1.2598	1.3780	1.5748	0.7874	M6x1.0
8"	3-7205-0800		1.4961	1.1024	1.8346	1.6929	0.5512		1.4961	1.6535	1.9685	0.9843	M8x1.25
10"	3-7205-1000	1.8110	1.8504	1.2598	2.2795	2.0669	0.7480		1.9685	2.0472	2.3622	1.1811	
12"	3-7205-1200	1.9685			2.5748	2.3622			2.0472	3.1496	2.7559	1.5748	M10x1.5

Outside Pin Arbor Power Chucks

- Pull lock for external gripping
- For machining work that requires precision, squareness, and parallelism



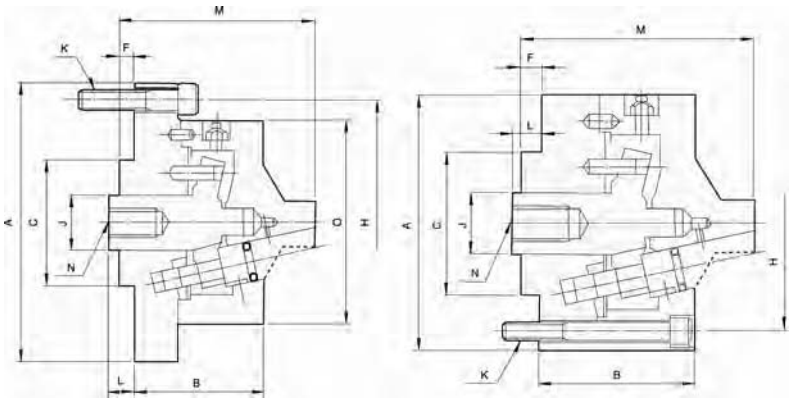
Chuck Dia	Part Number	Jaw Stroke Dia	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Draw Bar Pull	Gripping Force	Max Speed	Wt	Moment of Inertia GD²
		in				lbf		RPM	lbs	lbs*ft²
5"	3-7206-0500	0.1339	0.3150	3.1496	0.5906	2645.5	12125.4	4000	17.6	1.6
6"	3-7206-0600	0.1654	0.3937	3.9370	0.7874	4409.2	20723.4	3600	35.3	4.7
8"	3-7206-0800			5.5118	2.3622	5511.6	25794.1	3400	59.5	12.8
10"	3-7206-1000			7.0866	3.9370	6613.9	30864.7	3000	101.4	33.9
12"	3-7206-1200			9.0551	4.7244	8818.5	39683.2	2500	154.3	83.1

Dimensions

Chuck Dia	Part Number	A	B	C (H6)	F	H	J	K	L Max	L Min	M	N	O
5"	3-7206-0500	5.1181	2.8346	2.3622	0.1969	3.9370	0.9449	3-M8	0.7087	0.3937	4.0551	M12x1.75	0.7874
6"	3-7206-0600	6.3780	3.5433	3.1496	0.2756	5.1181	1.1811	3-M12	0.8858	0.4921	5.1181	M16x2.0	1.1811
8"	3-7206-0800	8.2677	3.9370		0.2756	6.6929	1.5748	3-M16	0.9843	0.5906	6.1024		
10"	3-7206-1000	9.8425	4.3307		0.2756	8.2677	1.7717	3-M16			6.4961	M18x2.5	
12"	3-7206-1200	12.5984	5.1181	5.1181	0.2756	10.6299	1.9685	6-M16	1.1811	0.7874	7.874	M20x2.5	1.5748

Inside Pin Arbor Power Chucks

- Pull Lock for internal gripping
- For machining work that requires precision, squareness, and parallelism



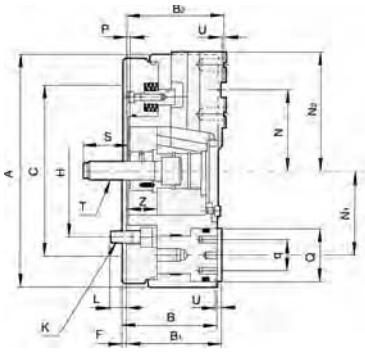
Chuck Dia	Part Number	Jaw Stroke Dia	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Draw Bar Pull	Gripping Force	Max Speed	Wt	Moment of Inertia GD²
		in				lbf		RPM	lbs	lbs*ft²
5"	3-7208-0500	0.0669	0.1575	0.9843	0.6693	2645.5	12345.9	4000	7.7	0.3
6"	3-7208-0600			1.3780	0.9843	3968.3	18518.8	3600	9.5	0.6
8"	3-7208-0800	0.1654	0.3937	2.1654	1.3780	6613.9	30864.7	3000	40.6	7.8
10"	3-7208-1000			2.9528	2.1654	8377.6	37478.5	2500	77.2	20.9

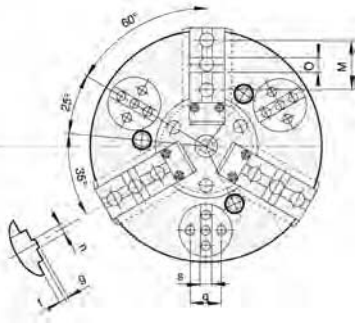
Dimensions

Chuck Dia	Part Number	A	B	C (H6)	F	H	J	K	L Max	L Min	M	N	O
5"	3-7208-0500	5.3150	2.3622	2.3622	0.2756	4.6457	0.7874	3-M10	0.4724	0.3150	3.4252	M12x1.75	3.3465
6"	3-7208-0600		2.4803				0.9843				3.7559	M16x2.0	3.8898
8"	3-7208-0800	7.4803	3.6614	3.1496		5.9055	1.2598	3-M16	0.7087		5.0000		–
10"	3-7208-1000	8.8583	3.7402			7.0866	1.9685	6-M16			5.4921	M24x3.0	–

Outside Pull Down Power Chucks

- Pull Down for external gripping
- For machining work that requires precision, squareness, and parellelism
- Suitable for chucking on narrow grip surface





Chuck Dia	Part Number	Jaw Stroke Dia	Plunger Stroke	Gripping Dia	Wt	Max Draw Bar Pull	Stops Tractions
		in		lbf		lbs	lbf
8"	3-7209-0800	0.3331	0.9449	17996.3	46.3	6748.3	449.7
10"	3-7209-1000	0.4161	1.1811	24294.9	81.6	8997.1	674.6
12"	3-7209-1200	0.4720	1.3386	30368.6	119	11248.0	
15"	3-7209-1500			37117.0	209.4	13496.7	1011.9

Dimensions

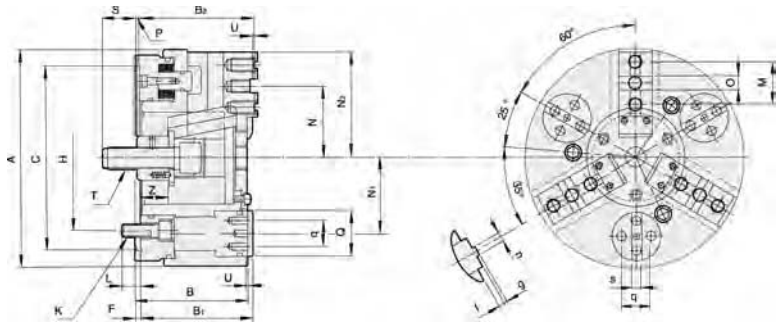
Chuck Dia	Part Number	A	B	B1	B2	C	F	H	K	L	M
8"	3-7209-0800	7.8740	4.1339	4.1339	4.1929	6.6929	0.1969	5.2520	M12	0.6693	1.7520
10"	3-7209-1000	9.8425	4.5276	4.5276	4.6142	8.6614		6.7480	M16	0.8268	2.1260
12"	3-7209-1200	11.8110	4.8425	4.8425	4.9213	8.6614					2.5039
15"	3-7209-1500	14.9606	5.3150	5.3150	5.3937	11.8110		9.2520	M20	1.1024	3.0000

Chuck Dia	Part Number	N Max	N Min	N1	N2	O	P Max	P Min	Q	S	T
8"	3-7209-0800	2.8181	2.6528	2.7559	4.0551	0.4992	0.0394	0.9843	1.6535	2.0472	M20x1.5
10"	3-7209-1000	3.4169	3.2083	3.4252	5.0394	0.7480	0.0394	1.2205	1.9685	2.3622	
12"	3-7209-1200	4.1339	3.8976	4.2520	6.0236		-0.1575	1.1811	2.6772		M24x2
15"	3-7209-1500	5.2559	5.0197	5.1181	7.5984	0.8268	-0.5906	0.7480	3.1496	2.9528	

Chuck Dia	Part Number	U	U1	Z Max	Z Min	f	g	n	s
8"	3-7209-0800	0.1654	0.0394	1.3386	0.3937	0.2559	0.1181	0.3126	0.4724
10"	3-7209-1000	0.2087		1.2992	0.1181	0.2835		0.5000	0.5512
12"	3-7209-1200	0.2362		1.5354	0.1969	0.2756			0.5512
15"	3-7209-1500	0.2362		1.9685	0.6299				0.7087

Inside Pull Down Power Chucks

- Pull Down for internal gripping
- For machining work that requires precision, squareness, and parellelism



Chuck Dia	Part Number	Jaw Stroke Dia	Plunger Stroke	Gripping Dia	Wt	Max Draw Bar Pull	Stops Tractions
		in		lbf		lbs	lbf
8"	3-7210-0800	0.3331	0.9449	17996.3	46.3	6748.3	449.7
10"	3-7210-1000	0.4161	1.1811	24294.9	81.6	8997.1	674.6
12"	3-7210-1200	0.4720	1.3386	30368.6	119	11248.0	
15"	3-7210-1500			37117.0	209.4	13496.7	1011.9

Dimensions

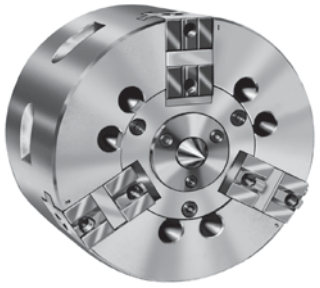
Chuck Dia	Part Number	A	B	B1	B2	C	F	H	K	L	M
8"	3-7210-0800	7.8740	4.1339	4.1339	4.2126	6.6929	0.1969	5.2520	M12	0.6693	1.7520
10"	3-7210-1000	9.8425	4.5276	4.5276	4.6063	8.6614	0.1969	6.7480	M16	0.8268	2.1260
12"	3-7210-1200	11.8110	4.8425	4.8425	4.9213		0.1969				2.5000
15"	3-7210-1500	14.9606	5.3150	5.3150	5.3937	11.8110	0.1969	9.2520	M20	1.1024	3.0000

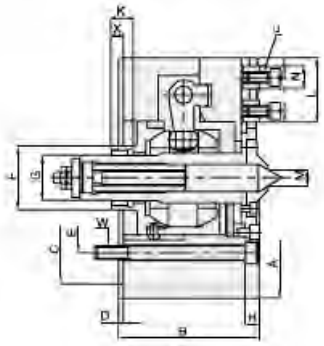
Chuck Dia	Part Number	N Max	N Min	N1	N2	O	P Max	P Min	Q	S	T
8"	3-7210-0800	2.8181	2.6528	2.7559	4.0551	0.4992	0.0394	0.9843	1.6535	2.0472	M20x1.5
10"	3-7210-1000	3.4169	3.2083	3.4252	5.0394	0.7480	0.0394	1.2205	1.9685	2.3622	
12"	3-7210-1200	4.1339	3.8976	4.2520	6.0236		-0.1575	1.1811	2.6772		M24x2
15"	3-7210-1500	5.2559	5.0197	5.1181	7.5984	0.8268	-0.5906	0.7480	3.1496	2.9528	

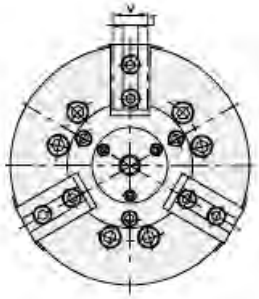
Chuck Dia	Part Number	U	U1	Z Max	Z Min	f	g	n	s
8"	3-7210-0800	0.1654	0.0394	1.3386	0.3937	0.2559	0.1181	0.3126	0.4724
10"	3-7210-1000	0.2087		1.2992	0.1181	0.2835		0.5000	0.5512
12"	3-7210-1200	0.2362		1.5354	0.1969	0.2756			
15"	3-7210-1500			1.9685	0.6299				0.7087

Floating Type Compensating Power Chucks

- Machining Shaft
- Jaws compensate based on the center of shaft







Chuck Dia	Part Number	Jaw Stroke Dia	Plunger Stroke	Comp Range Dia	Min Gripping Dia	Max Draw Bar Pull	Gripping Force	Max Speed	Wt	Moment of Inertia GD^2
		in				lbf		RPM	lbs	lbs*ft²
7"	3-7211-0700	0.3937	0.7874	0.1575	0.7874	3179.1	5555.6	4000	33.1	5.9
8"	3-7211-0800	0.7874	0.9843		0.9843	4415.9	6613.9	3200	61.7	19.0
12"	3-7211-1200	0.9843	1.1811	0.2362	1.1811	5685.7	9259.4	2000	127.9	74.3
16"	3-7211-1600	1.1811	1.6339	0.3937	1.5748	6854.2	19841.6	1000	374.8	427.1

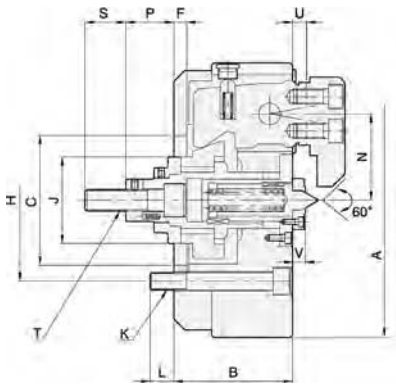
Dimensions

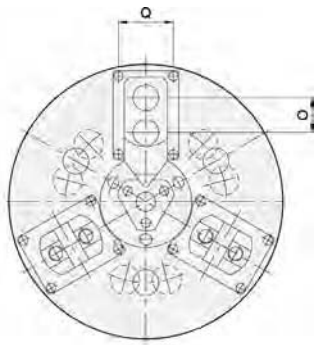
Chuck Dia	Part Number	A	B	C (H6)	D	E	F	G	H	J
7"	3-7211-0700	6.6929	3.8976	5.5118	0.1575	4.1248	1.6535	26	0.4331	M34x1.5
8"	3-7211-0800	8.4646	4.9685	7.4803	0.1654	5.2500	2.2441	40	0.5118	M50x1.5
12"	3-7211-1200	11.0236	6.0906	10.0394	0.2244	6.7480	2.8346	50	0.6693	M65x1.5
16"	3-7211-1600	16.5354	7.2835	14.9606		8.6614	3.5433		1.1024	M710x1.5

Chuck Dia	Part Number	K	L	M	N	T	U	V	W	X
7"	3-7211-0700	0.7874	1.7717	0.4331	0.6299	0.4331	M8	1.0827	3-M10x100	1.1024
8"	3-7211-0800		2.2638	0.5906	0.7874	0.5512	M10	1.3386	6-M12x125	1.0630
12"	3-7211-1200		2.8346	20.0000	1.0236	0.7874	M12	1.7323	6-M16x160	
16"	3-7211-1600		5.2953		1.1024	0.8268	M16	17.6772	9-M20x180	0.9843

Pull Compensating Power Chucks

- For machining cast or forged workpiece
- Jaws calibrated on the basis of center





Chuck Dia	Part Number	Jaw Stroke Dia	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Draw Bar Pull	Gripping Force	Max Speed	Wt	Moment of Inertia GD²
		in				lbf		RPM	lbs	lbs*ft²
6"	3-7212-0600	0.3150	0.5906	1.9685	0.3937	3306.9	5511.6	2800	33.1	4.7
8"	3-7212-0800		0.7874	2.5591	0.5906	4409.2	11904.9	2800	49.6	11.9
10"	3-7212-1000	0.3937	0.9843	3.5433	0.7874	6613.9	15211.9	2400	73.9	26.1
12"	3-7212-1200			4.3307	0.9843	8818.5	19841.6	2000	119.3	54.6

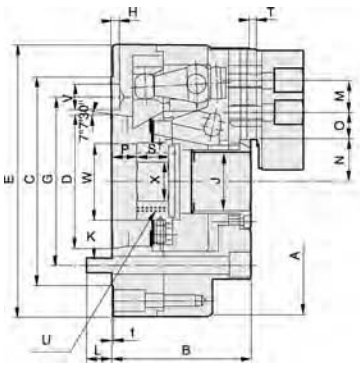
Dimensions

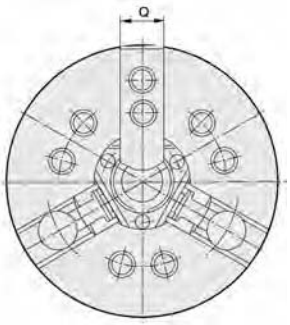
Chuck Dia	Part Number	A	B	C (H6)	F	H	J	K	L	M
6"	3-7212-0600	6.8898	3.1496	3.5433	0.1969	5.1181	2.3622	3-M16	0.8661	0.2362
8"	3-7212-0800	8.2677	3.9370	4.1339			2.7559			0.4724
10"	3-7212-1000	10.0000	4.3307	4.7244		5.9055	3.1496			0.5906
12"	3-7212-1200	11.9685	4.7244	5.5118		6.6929	3.3465	6-M16		0.6693

Chuck Dia	Part Number	N Max	N Min	O	P Max	P Min	Q	S	T	U	V
6"	3-7212-0600	2.2441	2.0866	0.7874	1.8504	1.2598	1.2205	1.4961	M16x2.0	0.3937	0.5906
8"	3-7212-0800	2.6772	2.5197	1.0236	1.9882	1.2008	1.5748			0.4724	0.3937
10"	3-7212-1000	3.2480	3.0512	1.2598	2.2441	1.2598			M20x2.5	0.5118	0.4724
12"	3-7212-1200	4.0354	3.8386	1.4173	2.4016	1.4173	1.9685	1.8110	M24x3.0	0.5512	

Ultra High Speed Open Power Chucks

- For high speed rotation





Chuck Dia	Part Number	Thru Hole Dia	Jaw Stroke Dia	Plunger Stroke	Max Draw Bar Pull	Gripping Force	Max Speed	Wt	Moment of Inertia GD²
		in			lbf		RPM	lbs	lbs*ft²
6"	3-7213-0600	1.2992	0.2165	0.4724	4409.2	11243.6	6700	32.8	5.7
8"	3-7213-0800	1.8110	0.2913	0.6299	6834.3	17196.0	5600	56.2	14.0
10"	3-7213-1000	2.5591	0.3465	0.7480	8377.6	21825.7	4500	79.6	30.1
12"	3-7213-1200	3.0709	0.4173	0.9055	10802.6	28439.6	3500	133.2	71.2
15"	3-7213-1500	4.6260			15652.8	39683.2	2800	244.7	215.9

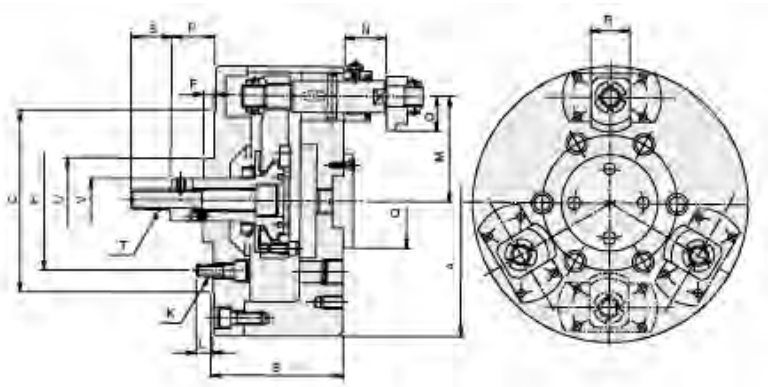
Dimensions

Chuck Dia	Part Number	A	B	C	D	E	G	H	J	K	L	M	Q
6"	3-7213-0600	6.4961	3.8583	5.3150	3.2501	6.8898	4.1252	0.2559	1.2992	6-M10	0.5906	0.7874	1.2205
8"	3-7213-0800	8.2677	4.3307	6.4961	4.1880	8.4646	5.2500		1.8110	6-M12	0.7087	0.9843	1.3780
10"	3-7213-1000	10.0000	4.4882	8.2677	5.5007	10.0000	6.7500	0.3150	2.5591	6-M16	0.9449	1.1811	1.5748
12"	3-7213-1200	11.9685	4.9213			11.9685			3.0709		0.9055		1.9685
15"	3-7213-1500	15.0000	6.0630	11.0236	7.7507	15.0000	9.2520	0.3937	4.6260	6-M20	1.1811	1.6929	2.4409

Chuck Dia	Part Number	N Max	N Min	O Max	O Min	P Max	P Min	S	T	U Max	V	W	X
6"	3-7213-0600	1.0827	0.9744	1.0335	0.3248	1.1811	0.7087	0.7874	0.1575	M42x1.5	0.6409	1.9213	0.6299
8"	3-7213-0800	1.4055	1.2598	1.2303	0.4035	1.0630	0.4331	0.9843	0.1969	M55x2	0.7661	2.4016	1.1811
10"	3-7213-1000	1.9685	1.7953	1.3287	0.4429	0.5512	-0.1969	1.1811		M75x2	0.9531	3.3268	1.7717
12"	3-7213-1200	2.2835	2.0748	1.9193		1.1417	0.2362	1.2992		M88x2		3.7795	1.9685
15"	3-7213-1500	3.2283	3.0197	1.8406	0.5413	1.4961	0.5906	1.2992		M130x2	1.1559	5.4724	2.3622

Finger Power Chucks

- Ideally suited for aluminium wheel machining for motorcycles. The floating mechanism ensures firm chucking and high stability.
- This is suitable for clamping the work whose inside and outside can not be clamped properly or can be damaged



Chuck Dia	Part Number	Jaw's Compensation	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Draw Bar Pull	Gripping Force	Max Speed	Wt	Moment of Inertia GD²
		in				lbf		RPM	lbs	lbs*ft²
6"	3-7214-0600	0.0787	0.5512	2.9134	1.1811	3968.3	3086.5	3600	19.8	2.8
8"	3-7214-0800		0.5906	4.3307	1.9685	3747.9	4629.7	2900	39.7	9.7
10"	3-7214-1000		0.7874	5.7480	2.3622	7936.6	6172.9	2400	66.1	24.9
12"	3-7214-1200			7.7165	4.3307			2100	90.4	51.5
15"	3-7214-1500		0.9843	10.2362	7.0866	9920.8	7936.6	1800	160.9	134.1
18"	3-7214-1800			13.1496	8.4646			1600	224.9	275.3

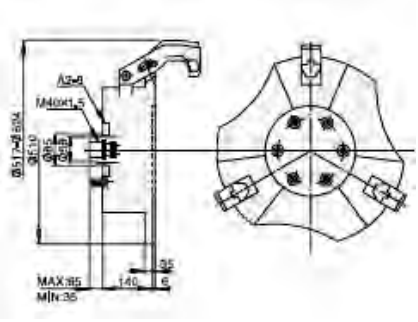
Dimensions

Chuck Dia	Part Number	A	B	C	F	H	K	L	M	N Max	N Min
6"	3-7214-0600	6.4961	2.9528	5.5118	0.3150	4.1248	3-M10	0.6299	2.1654	2.1260	1.1811
8"	3-7214-0800	8.2677	3.5433	6.6929		5.2500	3-M12	0.7480	2.9528	2.3228	1.3780
10"	3-7214-1000	10.0000	4.1339	8.6614		6.7500	3-M16	0.9055	3.7402	2.8346	1.5748
12"	3-7214-1200	11.9685							4.7244	2.8346	1.7717
15"	3-7214-1500	15.0000	4.7244	11.8110		9.2520	3-M20	1.2598	6.1024	3.3071	1.9685
18"	3-7214-1800	17.9921	5.1181		–				7.5591		

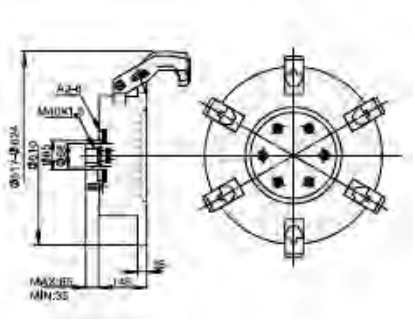
Chuck Dia	Part Number	O	P Max	P Min	Q	R	S	T	U	V
6"	3-7214-0600	1.5748	1.7323	1.1811	1.7717	0.9449	1.4173	M16x2.0	1.6535	1.2598
8"	3-7214-0800	1.9685	1.9685	1.3780	2.5591	1.0630	1.4173	M20x2.5	1.9685	1.4961
10"	3-7214-1000	2.5591	2.3622	1.5748	3.3465	1.2598	1.8110	M24x3.0	2.1260	1.7323
12"	3-7214-1200				4.3307			M24x3.0		1.7323
15"	3-7214-1500	3.3465	2.9528	1.9685	5.5118	1.4173	1.9685	M27x3.0	2.8346	2.0472
18"	3-7214-1800				6.8898					2.0472

Wheel Cutting Finger Power Chucks

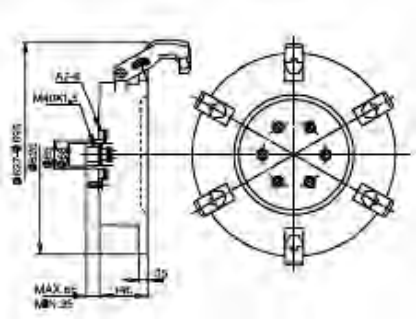
- Manufactured exclusively for chucking aluminium wheels for automobile and motor cycles
- Light and small
- Has strong and stable clamping power as finger clamps by cam arm
- Can clamp wheels ranging from 13inch to 26inch by changing jaw and stopper depending on the size of wheel



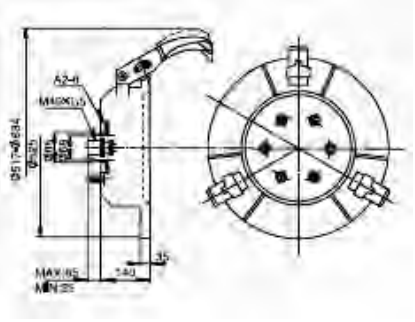
A-Type



B-Type



C-Type

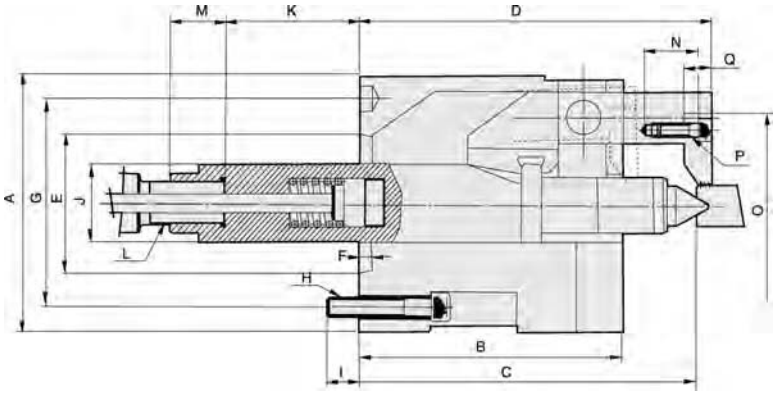


D-Type

Part Number	Jaw Stroke	Plunger Stroke	Max Draw Bar Pull	1 Jaw's Gripping Force	Max Speed	Wt	Moment of Inertia GD^2
	in		lbf		RPM	lbs	$lbs*ft^2$
3-7215-A	1.0630	1.0630	6743.9	2136.3	3000	213.8	223.1
3-7215-B				1011.9		253.5	358.3
3-7215-C					2500	313.1	536.3
3-7215-D			4720.1	1461.7	2000	240.3	303.7

Face Drive and Finger Combination Chucks

- This chuck is used for chucking long shafts
- Shortens the number of machining processes from two to one for improved productivity
- Chuck clamps side of work with face drive and then work outside is machined



Chuck Dia	Part Number	Max Gripping Force	Max Speed	Gripping Dia Min	Gripping Dia Max	Face Driver Dia Min	Face Driver Dia Max	Wt	Moment of Inertia GD²
		lbf	RPM	in				lbs	lbs*ft²
6"	3-7216-0600	4629.7	3500	0.7087	2.3622	0.4724	1.1811	41.9	1.8
7"	3-7216-0700	6613.9	4000		3.1496		2.7559	83.8	4.5
8"	3-7216-0800	13227.7		0.7874	4.1339		3.5433	110.2	7.1
9"	3-7216-0900	15873.3	3500		3.9370			141.1	10.0
10"	3-7216-1000	22046.2		0.9843	4.3307		3.9370	176.4	18.7
12"	3-7216-1200	26455.4	2500	1.5748	5.9055	1.1811		264.6	32.0
16"	3-7216-1600	28660.1	1500	3.5433	9.0551	3.1496	5.9055	546.7	116.3
18"	3-7216-1800			7.4803	11.8110	3.9370	0.7087	683.4	187.5

Dimensions

Chuck Dia	Part Number	A	B	C	D Max	D Min	E	F	G	H	I
6"	3-7216-0600	6.2992	6.5354	8.3071	6.8898	8.6614	3.4646	0.3150	5.1181	3-M12	0.7874
7"	3-7216-0700	7.8740	7.6772	9.8425	7.9134	10.2362	4.1880	0.6693	5.2520		0.7087
8"	3-7216-0800	8.6614	7.4803	8.6614	7.4803	9.1339					
9"	3-7216-0900	9.0551	8.5433	10.1969	8.6220	10.6693	5.5007	0.7480	6.7480	3-M16	0.9843
10"	3-7216-1000	9.8425	8.8583	10.3937	8.8976	10.8661					
12"	3-7216-1200	11.8110	9.6063	11.5748	9.7638	12.1260	7.7507	0.8268	9.2520	6-M20	1.1811
16"	3-7216-1600	15.7480	10.8268	13.1890	11.4961	13.7008	7.7114				
18"	3-7216-1800	17.7165	10.8268	13.4646	12.0866	14.0551	7.7507				

Chuck Dia	Part Number	J	K Max	K Min	L	M	N	O	P	Q
6"	3-7216-0600	1.8898	3.3071	5.9055	M27x1.5	1.1811	1.4173	4.2126	2-M8	0.6693
7"	3-7216-0700	2.5197	4.0551	7.2047	M32x1.5		1.9291	5.7087	M12	0.8268
8"	3-7216-0800	2.2835	4.9213	7.3228	M30x1.5	1.3780	1.1811	6.2992	2-M10	0.7874
9"	3-7216-0900	3.0315	4.0551	7.0079	M40x1.5		1.5748	6.4961		0.9843
10"	3-7216-1000	2.9134	4.0945	7.0472			1.4961	6.8898	2-M12	0.8661
12"	3-7216-1200	2.9134	2.5984	5.7480			1.8110	8.8583		0.9843
16"	3-7216-1600	3.3071	2.7953	6.0236			1.6929	–	M20	1.2205
18"	3-7216-1800	4.3307		5.7480			1.3780	–	M20	1.6142

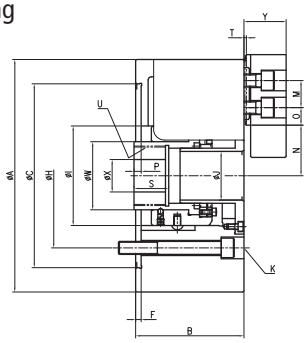
Bevel Gear Chucks

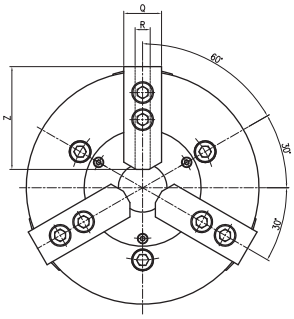
- Designed for rough and finished machining or grinding on the reverse surface of the gear
- Used when concentricity of inner and outer diameters against pitch circle diameter of gear is important

Chuck Dia	Part Number	Gripping Dia Max	Gripping Dia Min
		in	
7"	3-7217-007	5.8071	0.8740
10"	3-7217-010	8.0000	3.5000
13"	3-7217-013	11.0000	5.7874
17"	3-7217-017	15.0000	8.0000

3-Jaw Long Stroke Power Chucks

- Used when large chucking range is required





Chuck Dia	Part Number	Jaw Stroke Dia	Plunger Stroke	Gripping Dia Max	Gripping Dia Min	Max Draw Bar Pull	Gripping Force	Max Speed	Wt	Moment of Inertia GD^2
		in				lbf		RPM	lbs	$lbs*ft^2$
6"	3-7219-0600	0.7874	0.5906	6.4961	1.1024	6272.1	7015.1	4500	30.9	1.0
8"	3-7219-0800	0.9843	0.7480	8.4646	1.2598	9239.6	11016.5	3300	55.1	4.7
10"	3-7219-1000	1.1811	0.8661	10.0000	1.6535	12094.5	14169.1	3000	99.2	7.3
12"	3-7219-1200	1.3780	0.9843	11.9685	1.6929	15580.0	18075.7	2200	172	21.8

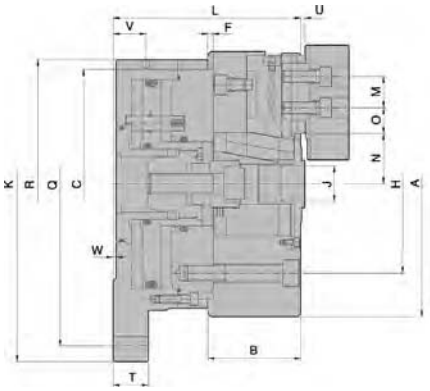
Dimensions

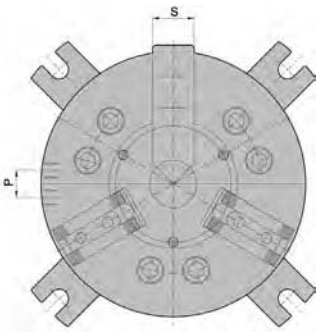
Chuck Dia	Part Number	A	B	C (H6)	F	H	I	J	K	M	N Max	N Min	O Max
6"	3-7219-0600	6.4961	3.4252	5.5118	0.1969	4.1252	2.7559	1.1024	3-M10	0.7874	1.5453	1.1516	0.6594
8"	3-7219-0800	8.4646	3.9370	6.6929		5.2500	3.1496	1.7717	3-M12	0.9843	2.0866	1.5945	0.8169
10"	3-7219-1000	10.0000	4.6063	8.6614		6.7500	4.0157	2.0866	3-M16	1.1811	2.4606	1.8701	1.0531
12"	3-7219-1200	11.9685	5.4331				4.7244	2.4803			2.9331	2.2441	1.5059

Chuck Dia	Part Number	O Min	P Max	P Min	Q	R	S	T	U max	W	X	Y	Z
6"	3-7219-0600	0.3642	0.3937	-0.1969	1.0236	0.4724	0.9449	0.0787	M38x1.5P	1.7717	0.7874	1.1417	2.5984
8"	3-7219-0800	0.4626	0.1181	-0.6299	1.4173	0.5512	1.2598		M55x2.0P	2.4803	1.1811	1.5354	3.7402
10"	3-7219-1000	0.4429	-0.2362	-1.1024	1.5748	0.6299	1.5748		M65x2.0P	2.8740	1.7717	1.6929	4.3307
12"	3-7219-1200	0.5020	0.3228	-0.6614	1.9685	0.8268	1.4961		M75x2.0P	1.4961	1.9685	2.0472	4.3701

Wedge Type Stationary Power Chucks

- Fixed Peneumatic Closed Center Chuck used for Drilling, Milling, and Machining Center





Chuck Dia	Part Number	Jaw Stroke Dia	Cylinder Stroke	Gripping Dia Max	Gripping Dia Min	Gripping Force	Cylinder Dia	Wt	Pressure Used Min	Pressure Used Max
		in				lbf	in	lbs	lbf/in²	lbf/in²
6"	3-7220-0600	0.2756	0.5906	6.4961	0.5906	9259.4	7.8740	83.8	14.2	106.7
8"	3-7220-0800		0.7874	8.2677	0.7874	15211.9		105.8		113.8
10"	3-7220-1000	0.3386	0.9843	10.0000	1.1811	21164.4	8.6614	176.4	71.1	213.4
12"	3-7220-1200	0.3465		11.9685	1.5748	27778.2	9.8425	286.6		284.5
15"	3-7220-1500	0.4165	1.1811	14.9606	2.3622	33069.3	12.5984	429.9	113.8	355.6

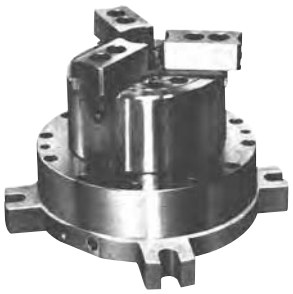
Dimensions

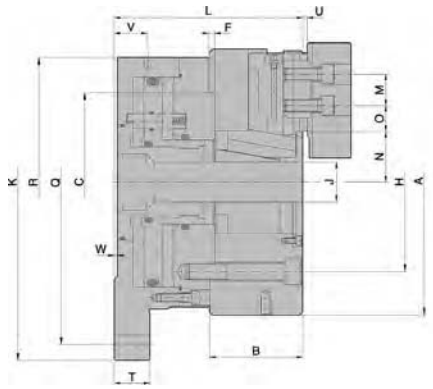
Chuck Dia	Part Number	A	B	C (H6)	F	H	J	K	L	M	N Max	N Min
6"	3-7220-0600	6.4961	2.8346	3.5433	0.2953	5.1181	1.1024	12.0079	6.3386	0.7874	1.6535	1.5157
8"	3-7220-0800	8.2677	3.3465	4.7244		5.9055	1.4961		6.8504	0.9843		
10"	3-7220-1000	10.0000	3.7402				1.3386	13.7795	7.4803	1.1811	1.9094	1.7362
12"	3-7220-1200	11.9685	4.5276	5.5118		6.6929	1.5354	15.7480	8.6614		2.0472	1.8740
15"	3-7220-1500	15.0000	4.9213	6.6929	0.3150	8.2677	–	18.5039	9.3701	1.9685	2.7752	2.5669

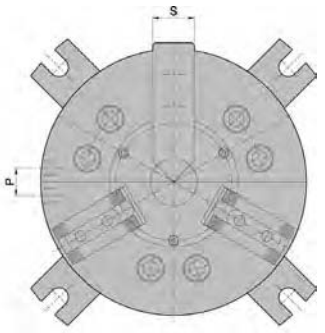
Chuck Dia	Part Number	O Max	O Min	p	Q	R	S	T	U	V	W
6"	3-7220-0600	0.5118	0.2756	1.0236	10.8268	9.5276	1.2205	1.1024	0.1969	1.2008	0.1181
8"	3-7220-0800	1.0630	0.4724	1.0236	10.8268		1.3386				
10"	3-7220-1000	1.4764	0.5315	1.1811	12.2047	11.0236	1.5748	1.3780		1.2992	0.1969
12"	3-7220-1200	2.0472	0.6299	1.5748	13.7795	12.5984	1.9685				
15"	3-7220-1500	2.1457	0.8465	1.9685	16.5354	15.7480	2.5591		0.3937		

Wedge Type Thru-hole Stationary Power Chucks

- Fixed Peneumatic Thru-Hole Chuck used for Drilling, Milling, and Machining Center







Chuck Dia	Part Number	Jaw Stroke Dia	Cylinder Stroke	Gripping Dia Max	Gripping Dia Min	Gripping Force	Cylinder Dia	Wt	Pressure Used Min	Pressure Used Max
		in				lbf	in	lbs	lbf/in²	lbf/in²
6"	3-7221-0600	0.2480	0.5906	6.4961	0.3937	7936.6	7.8740	83.8	14.2	106.7
8"	3-7221-0800	0.2992	0.7087	8.2677	0.5906	8598.0		108	14.2	113.8
10"	3-7221-1000	0.3661	0.8661	10.0000	0.7874	9920.8	8.6614	176.4	71.1	213.4
12"	3-7221-1200	0.4173	0.9843	11.9685	1.1811	11684.5	9.8425	286.6	71.1	284.5
15"	3-7221-1500	0.4291	1.1024	15.0000	2.3622	13227.7	12.5984	429.9	113.8	355.6

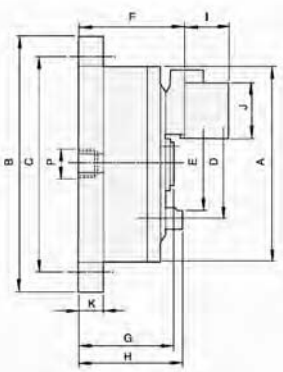
Dimensions

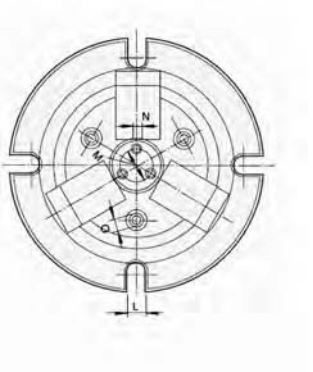
Chuck Dia	Part Number	A	B	C (H6)	F	H	J	K	L	M	N Max	N Min
6"	3-7221-0600	6.4961	3.2283	5.5118	0.1969	4.1248	1.3780	12.0079	6.7323	0.7874	1.2520	1.1280
8"	3-7221-0800	8.2677	3.6220	7.4803		5.2500	1.8110		7.1260	0.9843	1.5276	1.3780
10"	3-7221-1000	10.0000	4.1339	9.0551		6.7500	2.5591	13.7795	7.8740	1.1811	2.3937	1.8169
12"	3-7221-1200	11.9685	4.5276	11.0236		7.8740	3.0709	15.7480	8.6614	1.3780	2.2165	2.0079
15"	3-7221-1500	15.0000	5.3937	13.7795	0.2756	9.8425	4.6457	18.5039	9.8425	1.6535	3.2087	2.9744

Chuck Dia	Part Number	O Max	O Min	P	Q	R	S	T	U	V	W
6"	3-7221-0600	0.8858	0.1772	1.0236	10.8268	9.5276	1.3780	1.3780	0.1969	1.4764	0.3937
8"	3-7221-0800	1.2402	0.2953	1.0236			1.5748				
10"	3-7221-1000	1.4764	0.4134	1.1811	12.2047	11.0236	1.7717			1.4961	
12"	3-7221-1200	1.8898		1.5748	13.7795	12.5984	1.9685	1.5748		1.5748	
15"	3-7221-1500	2.0079	0.4724	1.9685	16.5354	15.7480	2.3622				

Diaphragm Power Chucks

- Used for grinding machine as it guarantees high precision concentricity, squareness, and roundness on machining





Chuck Dia	Part Number	Jaws	Gripping Dia Max	Gripping Dia Min	Operating Gripping Force (P=3.5 bar)	Max Gripping Force (P=3.5 bar)
			in		lbf	
6"	3-7222-0600	3-Jaw	0.1181	2.9921	1011.6	1427.5
8"	3-7222-0800	3-Jaw, 6-Jaw	0.4724	4.7244	1629.9	2248.1
10"	3-7222-1000	3-Jaw, 6-Jaw	0.9843	5.9843	2697.7	3934.2
12"	3-7222-1200	3-Jaw, 6-Jaw	2.9528	7.9921	4159.0	6294.6
16"	3-7222-1600	6-Jaw	5.5118	10.6299	7868.3	10116.4

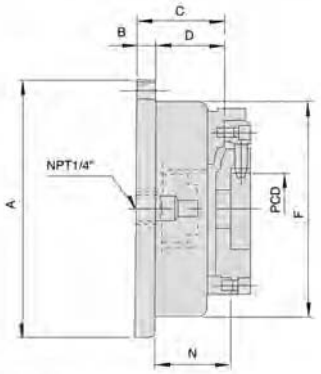
Dimensions

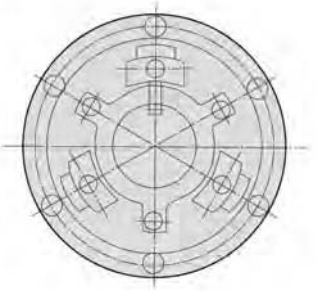
Chuck Dia	Part Number	Jaws	A	B	C	D	E	F	G	H
6"	3-7222-0600	3 Jaw	6.2992	7.8740	6.8898	3.5433	3.0709	3.3661	2.9528	3.3661
8"	3-7222-0800	3 Jaw, 6 Jaw	7.8740	9.8425	8.8583	4.9213	4.3701	3.5039	3.1496	3.5039
10"	3-7222-1000	3 Jaw, 6 Jaw	9.8425	12.0079	10.8268	5.9055	5.3150	3.8189	3.3858	3.8189
12"	3-7222-1200	3 Jaw, 6 Jaw	12.4016	14.7638	13.3858	8.1102	7.4803	4.2126	3.8189	4.2126
16"	3-7222-1600	6 Jaw	15.7480	18.7008	17.1260	8.9764	8.2677	5.5118	4.7244	5.5118

Chuck Dia	Part Number	Jaws	I	J	K	L	M	N	O	P
6"	3-7222-0600	3 Jaw	1.8504	1.7323	0.6693	3-12	0.7283	3-M6	3-M6	1/4"
8"	3-7222-0800	3 Jaw, 6 Jaw	2.3622	2.3622	0.7087	4-12	1.1417		3-M8	
10"	3-7222-1000	3 Jaw, 6 Jaw	2.7953	2.9921	0.7874	4-15	1.9685	3-M8		
12"	3-7222-1200	3 Jaw, 6 Jaw	3.1496	3.1496	0.8661		2.1260			
16"	3-7222-1600	6 Jaw	3.5433	3.5433	0.9843	4-20	2.7559		3-M10	

Gear Diaphragm Power Chucks

- Used for clamping gear P.C.D., Pitch Circle Diameter, and suitable for chucking work which requires high precision





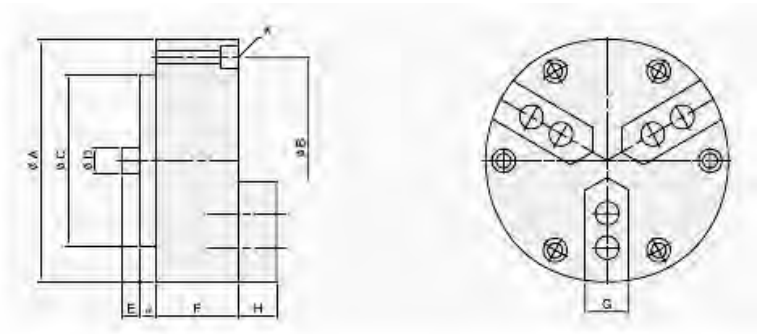
Chuck Dia	Part Number	Jaw	Jaw Stroke Dia	Gripping Dia Max	Gripping Dia Min	Operating Air Pressure	Max Gripping Force Single	Max Gripping Force Double	Wt
			in			lbf/in²	lbf		lbs
9"	3-7223-0900	0.2480	0.5906	6.4961	0.3937	7936.6	7.8740	83.8	14.2
11"	3-7223-1100	0.2992	0.7087	8.2677	0.5906	8598.0		108	14.2
14"	3-7223-1400	0.3661	0.8661	10.0000	0.7874	9920.8	8.6614	176.4	71.1
19"	3-7223-1900	0.4173	0.9843	11.9685	1.1811	11684.5	9.8425	286.6	71.1

Dimensions

Chuck Dia	Part Number	A	B	C	D	F	N
9"	3-7223-0900	9.6850	0.7520	3.8110	3.0591	8.3819	2.7559
11"	3-7223-1100	11.1811				9.8819	3.3465
14"	3-7223-1400	14.1732		4.2520	3.5000	12.8819	
19"	3-7223-1900	18.7402		4.3110	3.5591	16.8858	

Ultra Precision 3-Jaw Air Chucks

- Used for Machining Precision Electronic Parts



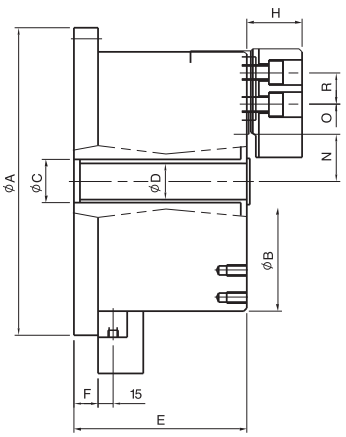
Chuck Dia	Part Number	Jaw Stroke Dia	Gripping Dia Min	Gripping Dia Max	Plunger Stroke	Recommended Pressure	Gripping Force	Max Speed
		in	in		in	lbf/in²	lbf	RPM
3"	3-7224-0300	0.0984	0.1181	2.7559	0.2835	64.0	948.0	6000
4"	3-7224-0400			3.4252			1675.5	4500
6"	3-7224-0600			5.3150			2557.4	4000
8"	3-7224-0800		0.3937	7.4803			5013.3	3000
10"	3-7224-1000			9.0551			7989.5	3000
12"	3-7224-1200	0.3752	0.7874	10.6299	1.0827		9451.2	1600

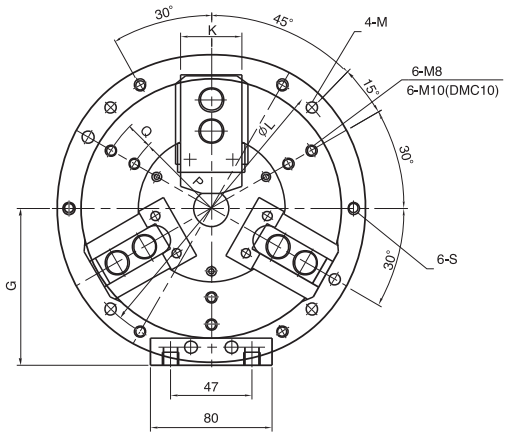
Dimensions

Chuck Dia	Part Number	A	B	C	D	E Max	E Min	F	G	H	J	K
3"	3-7224-0300	3.1496	2.7559	2.3622	0.8110	0.6693	0.3858	2.1654	0.7874	0.7480	0.0787	3-M5
4"	3-7224-0400	3.9370	3.5000	3.2500		0.7087	0.4252					6-M5
6"	3-7224-0600	5.9055	5.3465	4.9201		0.6929	0.4094	2.2047	0.9843			6-M6
8"	3-7224-0800	7.9921	7.2008	6.6000	0.9370	0.6260	0.3425	0.2756	2.0000	2.0000	0.2992	6-M10
10"	3-7224-1000	10.0000	9.2008	8.5000				3.1890		2.0039	0.2992	
12"	3-7224-1200	11.9685	10.9843	10.3000	1.3110	0.9016	-0.1772	4.6850		3.0000	0.3110	6-M12

Machining Center 3-Jaw Air Chucks

- Fixed Air Chucks Used for Drilling, Milling, and Tapping





Chuck Dia	Part Number	Jaw Stroke Dia	Gripping Dia Min	Gripping Dia Max	Recommended Pressure	Gripping Force	Wt
		in			lbf/in²	lbf	lbs
4"	3-7225-0400	0.2047	0.3937	4.3307	99.6	1686.5	16.1
6"	3-7225-0600		0.9055	6.4961		4717.9	35.3
8"	3-7225-0800	0.2480	1.1811	8.2677		7418.5	61.1
10"	3-7225-1000		1.9685	10.0000		10791.6	93.7

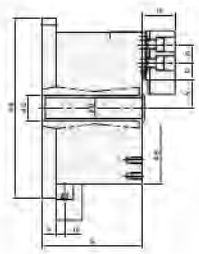
Dimensions

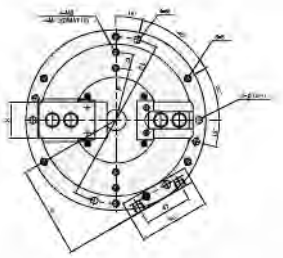
Chuck Dia	Part Number	A	B	C	D	E	F	G	H	J	K	L
4"	3-7225-0400	5.8268	4.3307	0.7874	–	3.5433	0.5906	2.9724	1.0630	2.1654	0.9055	5.1181
6"	3-7225-0600	7.9921	6.4961	0.9843	0.7874	3.7402		4.0551	1.4173	2.8346	1.2205	7.2835
8"	3-7225-0800	9.7638	8.2677	1.4173	1.1811	4.1732		4.9409	1.6535	3.7402	1.3780	9.0551
10"	3-7225-1000	11.8110	10.0000	1.9685	1.5748	4.3307	0.6299	5.8071	1.8110	4.3307	1.5748	11.0236

Chuck Dia	Part Number	M	N Max	N Min	O Max	O Min	P	Q	R	S
4"	3-7225-0400	0.3543	1.0039	0.9016	0.3839	0.2657	–	–	0.5512	M8
6"	3-7225-0600	0.4331	1.7520	1.6496	0.3642	0.1870	2.1654	0.7087	0.7874	M10
8"	3-7225-0800	0.4331	2.0866	1.9626	0.5807	0.3445	2.6772	0.9843	0.9843	
10"	3-7225-1000	0.5118	2.5984	2.4744	0.6299	0.3346	3.3465	1.1811	1.1811	M12

Machining Center 2-Jaw Air Chucks

- Fixed Air Chucks used for Drilling, Milling, and Tapping





Chuck Dia	Part Number	Jaw Stroke Dia	Gripping Dia Min	Gripping Dia Max	Recommended Pressure	Gripping Force	Weight
		in			lbf/in²	lbf	lbs
4"	3-7227-0400	0.2047	0.3937	4.3307	85.3	1686.5	15.2
6"	3-7227-0600		0.9055	6.4961		4717.9	33.1
8"	3-7227-0800	0.2480	1.1811	8.2677		7418.5	58.9
10"	3-7227-1000		1.9685	10.0000		10791.6	89.9

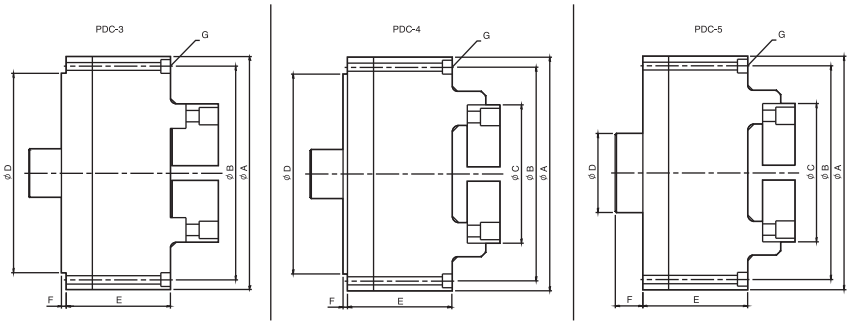
Dimensions

Chuck Dia	Part Number	A	B	C	D	E	F	G	H	J	K
4"	3-7227-0400	5.8268	4.3307	0.7874	–	3.5433	0.5906	2.9724	1.0630	2.1654	0.9055
6"	3-7227-0600	7.9921	6.4961	0.9843	0.7874	3.7402		4.0551	1.4173	2.8346	1.2205
8"	3-7227-0800	9.7638	8.2677	1.4173	1.1811	4.1732		4.9409	1.6535	3.7402	1.3780
10"	3-7227-1000	11.8110	10.0000	1.9685	1.6929	4.3307	0.6299	5.8071	1.8110	4.3307	1.5748

Chuck Dia	Part Number	L	M	N Max	N Min	O Max	O Min	P	Q	R	S
4"	3-7227-0400	5.1181	0.3543	1.0039	0.9016	0.3839	0.2657	–	–	0.5512	M8
6"	3-7227-0600	7.2835	0.4331	1.7520	1.6496	0.3642	0.1870	2.1654	0.7087	0.7874	M10
8"	3-7227-0800	9.0551		2.0866	1.9626	0.5807	0.3445	2.6772	0.9843	0.9843	
10"	3-7227-1000	11.0236	0.5118	2.5984	2.4744	0.6299	0.3346	3.3465	1.1811	1.1811	M12

Ultra Precision 6-Jaw Diaphragm Chucks

- Used for machining precision electronic parts
- Can freely clamp inner or outer diameter by only changing the jaws



Chuck Dia	Part Number	Jaw Stroke Dia	Gripping Dia Min	Gripping Dia Max	Max Speed	Wt
		in			RPM	lbs
3"	3-7226-0300	0.0197	0.1181	2.5000	12000	2.4
4"	3-7226-0400	0.0236		3.5000		5.7
5"	3-7226-0500			4.5008		10.8

Dimensions

Chuck Dia	Part Number	A	B	C	D	E	F	G
3"	3-7226-0300	3.1496	2.7520	0.9449	2.3748	1.7717	0.0787	6-M5
4"	3-7226-0400	3.9370	3.5000	2.2835	3.2500	1.9685		
5"	3-7226-0500	5.1181	4.5630	2.8740	2.4398	2.4409	0.6299	

2 Year WARRANTY
ON ALL CHUCKS

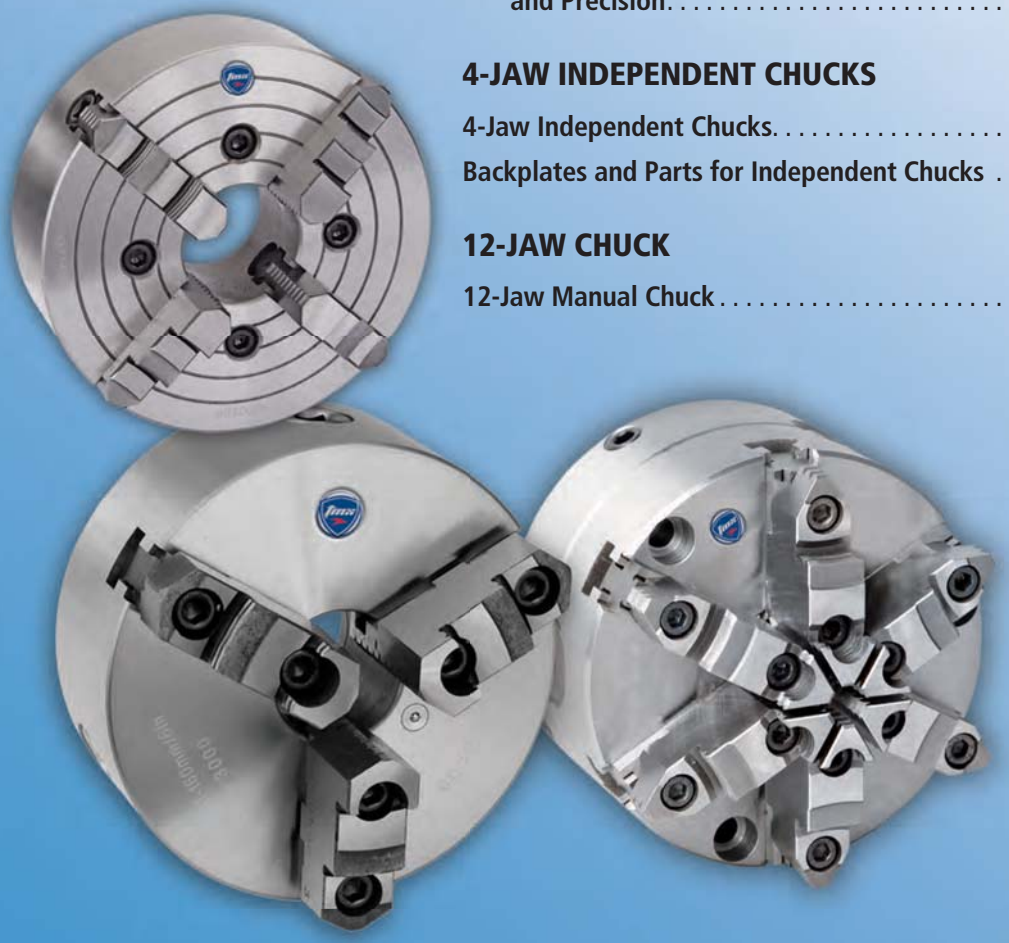
TABLE OF CONTENTS

MANUAL CHUCKS

3-JAW SCROLL CHUCKS

4-JAW INDEPENDENT CHUCKS

12-JAW CHUCK



Application of Chucks and Centers

Lathe Chucks

Backplate Plates (Chuck Backplates)

Types of Spindle Nose

Determining the Proper Spindle Type and Size

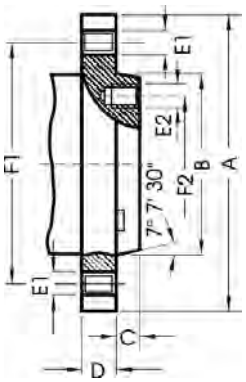
TMX Chucks meet all of the requirements of ASA Standard B5.9-1960

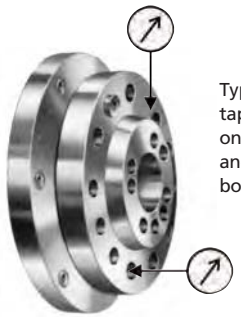
- For spindle nose accuracy (T.I.R.) see page 73
- For chuck accuracy (T.I.R.) see page 73
- If further assistance is desired, please contact Toolmex Customer Service at 800-992-4766 or +1 508-653-8897

Selecting the chuck mounting:

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

Spindle Type A1 and A2



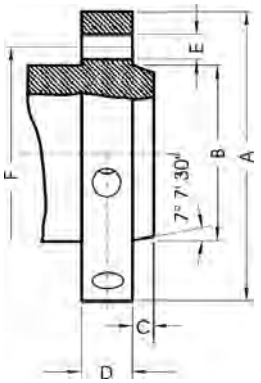


Type A1 has tapped holes on both inner and outer bolt circles

Spindle Nose	F1	F2	B	C max	Thread E1 = E2 UNC-3B
A-4	3.2500	-	2.5005 + .0005	.4375	7/16-14
A-5	4.1250	2.4374	3.2505 +.0005	.5625	7/16-14
A-6	5.2500	3.2500	4.1880 + .0005	.6250	1/2-13
A-8	6.7500	4.37500	5.50075 + .0005	.6875	5/8-11
A-11	9.2500	6.5000	7.75075 + .0005	.7500	3/4-10
A-15	13.0000	9.7500	11.251 + .001	.8125	7/8-9
A-20	18.2500	14.5000	16.251 +.001	.8750	1-8
A-28	25.5000	20.8750	23.001 + .001	1.000	1 1/4-7

Type A2 does not have holes in the inner bolt circle

Camlock Spindle Type D1

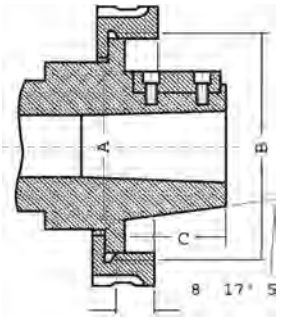


Spindle Nose	A	F	B	C max	E	Number of Holes	Camlock Stud Dia
D1-3	3.622	2.7820	2.1250 + .00025	.4375	.5937	3	9/16
D1-4	4.606	3.2500	2.5005 + .0005	.4375	.6562		5/8
D1-5	5.748	4.1250	3.2505 + .0005	.5000	.8750	6	3/4
D1-6	7.126	5.2500	4.1880 + .0005	.5625	1.000		7/8
D1-8	8.858	6.7500	5.50075 +.0005	.6250	1.125		1
D1-11	11.732	9.2520	7.75075 +.0005	.6875	1.250		1 3/16
D1-15	15.866	13.0000	11.251 + .001	.7500	1.375		1 3/8

Determining the Proper Spindle Type and Size

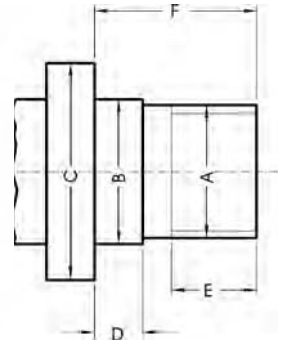
Long Taper Key Drive, Spindle Type L

Spindle Nose	Thread B	C	A	Key
L00	3 3/4" - 6"	2	2.75	3/8 x 3/8 x 1 1/2
L0	4 1/2" - 6"	2 3/8	3.250	3/8 x 3/8 x 1 3/4
L1	6" - 6"	2 7/8	4.125	5/8 x 5/8 x 2 3/8
L2	7 3/4" - 5"	3 3/8	5.250	3/4 x 3/4 x 2 7/8
L3	10 3/8" - 4"	3 7/8	6.500	1 x 1 x 3 1/4



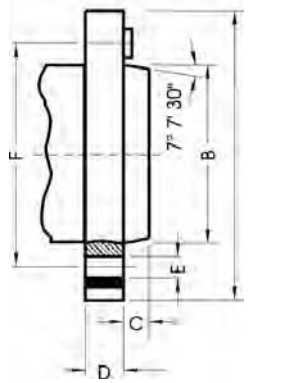
Threaded Spindle

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

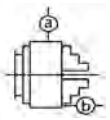
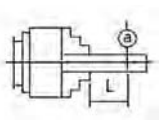
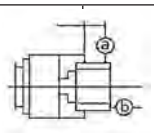
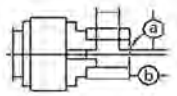


German Standard DIN 55027, Spindle Type C

Spindle Nose	F	B	C max	E	Number of Holes
C-4	3.2500	2.5005	.4331	.83	3
C-5	4.1250	3.2505	.5118	.83	4
C-6	5.2500	4.1880	.5512	.91	4
C-8	6.7500	5.50075	.6299	1.14	4
C-11	9.2520	7.75075	.7087	1.42	6



Self-Centering Scroll Chuck Accuracy

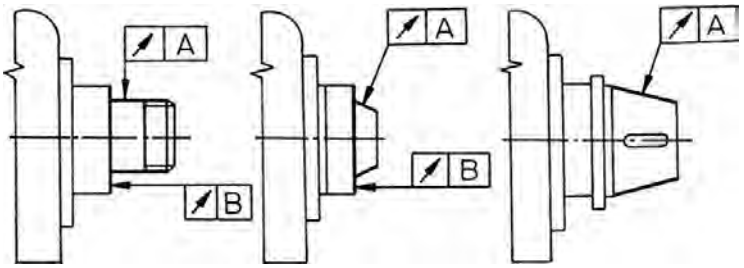
Test Description								
Chuck Dia	a Radial Runout	b Face Runout	Radial Runout	L	a Radial Runout	b Face Runout	a Radial Runout	b Face Runout
6-1/4"	.0016	.0012	.0016	1.9685	.0016	.0010	.0016	.0012
8"	.0020	.0016	.0020		.0020	.0012	.0024	.0016
10"							.0028	.0020
12-1/2"	.0024	.0020	.0024	2.9528	.0024	.0016	.0031	
15-3/4"	.0028	.0024	.0031		.0028		.0035	

Permissible Spindle Runout

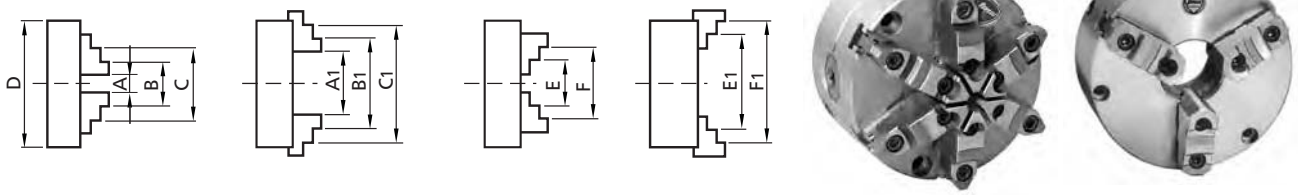
To obtain the specified clamping accuracy of a chuck mounted on a machine tool, it is necessary to:

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

Chuck Dia	Spindle Runout
3500 Steel Body Chucks	
3" - 16"	.00012" max.
20" - 25"	.0002" max.
3200 Semi-Steel Body	
3" - 6"	.00012" max.
8" - 32"	.0002" max.



Clamping Ranges for 3 and 6-Jaw SET-TRU Forged Steel Chucks, 3-866 and 3-868 Series



Chuck Dia		5"	6-1/4"	8"	10"	12"	15-3/4"
Two-Piece Jaws	A-A1	0.24 - 1.69	0.31 - 2.52	0.31 - 3.54	0.47 - 4.65	0.47 - 5.16	0.59 - 7.95
	B-B1	1.30 - 2.76	1.77 - 3.82	2.05 - 5.12	2.68 - 6.85	2.68 - 7.17	2.87 - 9.92
	C-C1	2.99 - 4.69	3.62 - 5.75	4.29 - 7.48	5.91 - 10.08	5.91 - 10.43	6.65 - 13.86
	E-E1	1.97 - 3.43	2.64 - 4.76	2.91 - 6.14	3.23 - 7.40	4.25 - 8.90	5.20 - 11.65
	F-F1	3.70 - 4.92	4.65 - 6.30	5.28 - 7.87	6.46 - 9.84	6.02 - 12.4	9.29 - 15.75

Clamping Ranges for 3-Jaw Forged Steel Chucks, 3-820 Series

Chuck Dia		6-1/4"	8"	10"	12"
Two-Piece Jaws	A-A1	0.12 - 2.52	0.16 - 3.54	0.20 - 4.65	0.39 - 5.16
	B-B1	1.65 - 3.94	2.05 - 5.31	2.44 - 6.85	3.07 - 7.87
	C-C1	3.70 - 6.06	4.72 - 7.95	5.71 - 10.08	6.77 - 11.77
	E-E1	1.97 - 4.21	2.36 - 5.71	3.03 - 7.40	3.54 - 8.46
	F-F1	3.86 - 6.30	5.12 - 7.87	6.30 - 9.84	7.48 - 12.4

Clamping Ranges for 3-Jaw Semi-Steel Chucks

Chuck Dia		6-1/4"	8"	10"	12"	15-3/4"
Solid Jaws	A-A1	0.12 - 2.05	0.16 - 3.27	0.20 - 4.21	0.39 - 5.51	0.39 - 8.27
	B-B1	1.69 - 3.94	2.05 - 5.32	2.44 - 6.85	3.15 - 7.87	3.35 - 9.92
	C-C1	3.70 - 6.06	4.72 - 7.95	5.71 - 10.08	6.93 - 12.4	8.27 - 15.75
	E-E1	2.09 - 4.02	2.36 - 5.43	3.03 - 7.01	3.70 - 8.46	4.06 - 10.71
	F-F1	4.06 - 5.98	5.12 - 7.87	6.30 - 9.84	7.48 - 12.4	9.06 - 15.75
Two-Piece Jaws	A-A1	0.12 - 2.01	0.16 - 3.50	0.20 - 4.65	0.39 - 5.51	0.39 - 8.27
	B-B1	1.73 - 3.82	2.05 - 5.12	2.40 - 6.50	2.76 - 7.17	2.91 - 8.98
	C-C1	3.46 - 5.75	4.25 - 7.48	4.92 - 9.25	5.94 - 11.81	6.50 - 13.78
	E-E1	2.44 - 4.29	2.83 - 5.98	3.39 - 7.76	4.06 - 8.90	5.00 - 11.57
	F-F1	4.53 - 6.14	5.12 - 7.87	6.30 - 9.84	7.48 - 12.40	9.06 - 15.75

Lathe Chuck Safety Conditions

- Due to chuck rotating speeds and cutting forces during machining, care should be taken to ensure the proper and safe use of your Toolmex chuck
- Cleaning should be done often for safety purposes as well as to provide a long work life for your chuck
- Proper maintenance ensures longer life of the product

PRIOR TO OPERATING YOUR TMX LATHE CHUCK, PLEASE:

- Read the chuck manual
- Do not start the lathe until all is clear. A collision between the chuck and lathe will cause damage to both
- Do not use the chuck on heavy work where the chuck jaws project appreciably from the chuck body. Refer to the tables on pages 73-74 to select the correct size chuck for the application
- Do not clamp long work pieces in the chuck without additional support as this can cause heavy damage to the lathe and work environment
- Always remove the chuck wrench before starting the machine
- Do not remove the safety spring from the chuck wrench
- Never operate the chuck if any parts are damaged, missing, or cracked
- Do not tamper with the chuck. If an inaccuracy is found, check the spindle nose or backplate for true-running and make sure there is no dirt or foreign matter between the mounting faces
- Never exceed maximum speed (RPM) of the chuck.
- Periodically inspect and service chucks for wear to avoid inadequate workholding conditions
- Be sure top jaws are securely bolted to the master jaws
- Never do any unauthorized chuck modifications
- Always keep your chuck clean and lubricated

Maximum Torque Values for mounting bolts, chuck spindle, for common machining parameters

Bolt Diameter		Torque on Wrench	
Metric	Inch	foot lbf	N m
M 5	3/16"	4	5
M 6	1/4"	6	8
M 8	5/16"	14	19
M 10	3/8"	27	37
M 11	7/16"	37	50
M 12	1/2"	48	65
M 14	9/16"	77	105
M 16	5/8"	114	155
M 18	11/16"	158	215
M 20	3/4"	225	305
M 22	7/8"	306	415
M 24	1"	391	530
M 27	1-1/8"	575	780
M 30	1-1/4"	774	1050

Do not exceed torque values.

Maximum Torque Values for mounting bolts, top jaws to master jaws, for common machining parameters

Bolt Diameter		Wrench Torque	
Metric	Inch	foot lbf	N m
M 5	3/16"	6	8
M 6	1/4"	10	14
M 8	5/16"	26	35
M 10	3/8"	51	69
M 11	7/16"	70	95
M 12	1/2"	88	120
M 14	9/16"	140	190
M 16	5/8"	217	295
M 18	11/16"	298	405
M 20	3/4"	428	580
M 22	7/8"	575	780
M 24	1"	737	1000
M 27	1-1/8"	1106	1500
M 30	1-1/4"	1475	2000

Do not exceed torque values.

Torque conversion from ISO to American standard

1 foot = 12 inch

8,85 lbf inch = 1 N m

0,7375 lbf foot = 1 N m

$$\frac{8,85}{0,7375} = 12$$

Maximum Torque Values for mounting bolts, chuck spindle, for common machining parameters

Bolt Diameter		Torque on Wrench	
Metric	Inch	foot lbf	N m
M 5	3/16"	4	5
M 6	1/4"	6	8
M 8	5/16"	14	19
M 10	3/8"	27	37
M 11	7/16"	37	50
M 12	1/2"	48	65
M 14	9/16"	77	105
M 16	5/8"	114	155
M 18	11/16"	158	215
M 20	3/4"	225	305
M 22	7/8"	306	415
M 24	1"	391	530
M 27	1-1/8"	575	780
M 30	1-1/4"	774	1050

Do not exceed torque values.

Maximum Torque Values for mounting bolts, top jaws to master jaws, for common machining parameters

Bolt Diameter		Wrench Torque	
Metric	Inch	foot lbf	N m
M 5	3/16"	6	8
M 6	1/4"	10	14
M 8	5/16"	26	35
M 10	3/8"	51	69
M 11	7/16"	70	95
M 12	1/2"	88	120
M 14	9/16"	140	190
M 16	5/8"	217	295
M 18	11/16"	298	405
M 20	3/4"	428	580
M 22	7/8"	575	780
M 24	1"	737	1000
M 27	1-1/8"	1106	1500
M 30	1-1/4"	1475	2000

Do not exceed torque values.

Torque conversion from ISO to American standard

1 foot = 12 inch

8,85 lbf inch = 1 N m

0,7375 lbf foot = 1 N m

$$\frac{8{,}85}{0{,}7375} = 12$$

3-Jaw SET-TRU Scroll Chucks, 0.0006" T.I.R.*

- TMX SET-TRU Scroll Chucks can be used for all machining operations where universal chucks are used, along with applications where Universal Scroll Chucks require tighter tolerances
- Outstanding accuracy, versatility and long life make TMX SET-TRU chucks invaluable in the modern workshop and indispensable in the toolroom

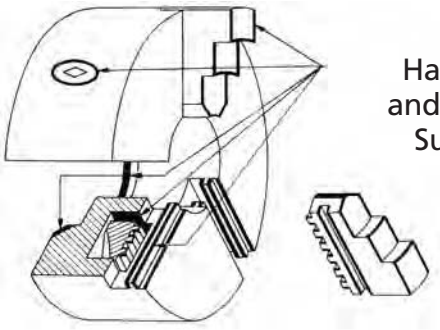
Outstanding
Accuracy and Quality

SET-TRU Chuck Features and Benefits:

- Fine adjustment
- Available in both Forged Steel and Semi-Steel Body
- 3 pinion design
- 4 micro adjustment screws provide .0.0006" T.I.R. repeatability
- Two piece top and master jaws are American Standard tongue and groove
- Scrolls are forged and fully hardened with thread flanks ground on both sides, then precisely balanced for longer life and higher accuracy
- Each scroll is precisely balanced
- Jaw teeth and guides on both sides are fully hardened and ground. Hardened and ground bushings are pressed into the pinion seats. Pinions in 3 pinion models are hardened and ground
- Steel mounting plates are interchangeable with Toolmex SET-TRU chucks of the same size so that one chuck can be used on different spindles
- The life of your Toolmex chuck can be extended significantly through proper maintenance and must be cleaned on a regular basis as recommended

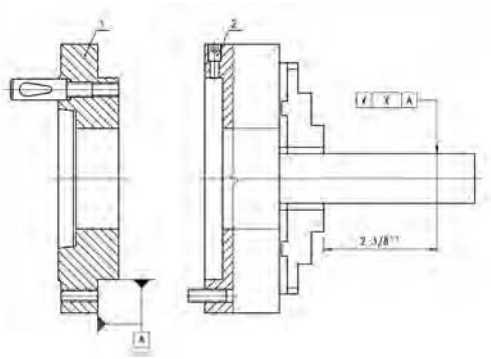
* Applies to runout of chuck body not of workpiece

Steel Backplate
Front View



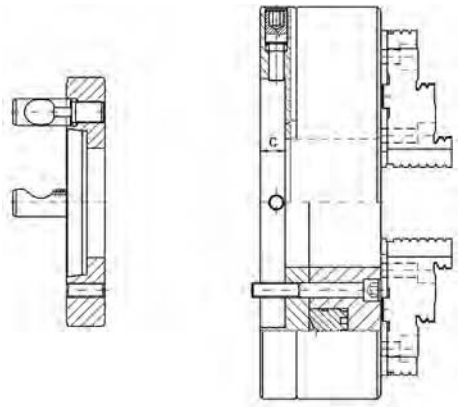
Hardened
and Ground
Surfaces

3-Jaw SET-TRU Scroll Chucks, 0.0006" T.I.R.*



Backplate and Chuck Mounting Principles for 4" through 12-1/2" Diameter Chucks

- The backplate outside diameter, d, is the same as the chuck's outside diameter, D
- The clearance range between the chuck counterbore and backplate boss OD is from 0.0078" to 0.0129"



Backplate and Chuck Mounting Principles for 15-3/4" through 25" Diameter Chucks

- The backplate outside diameter, d, is the same as chuck's counterbore diameter, D
- The clearance range between the chuck counterbore and backplate OD is from 0.0141" to 0.0236"

* Applies to runout of chuck body not of workpiece

3-Jaw Forged Steel SET-TRU Scroll Chucks, 0.0006" T.I.R.*

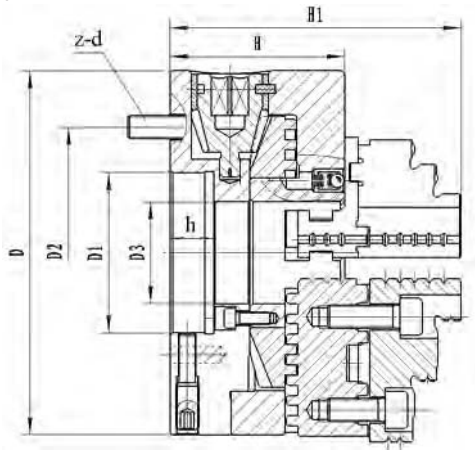
3-Jaw Scroll Chucks
2-Piece Hard Reversible Jaws

- Forged-Steel body
- 3 pinion design, hardened and ground

Each chuck is provided with:

- 1 Set of hard master jaws
- 1 Set of Hard Top Reversible Jaws
- 1 Self-ejecting chuck wrench
- 1 Set of mounting bolts
- 1 Set of fine adjustment screws
- 2 Hex keys

* Applies to runout of chuck body not of workpiece



3-Jaw (2pc jaw) SET-TRU Self-Centering

Chuck Dia	Part Number	D_1	D_2	D_3	H	H_1	h	z-d	Wt lbs	Fine Adjustment Screws	
5"	3-866-0500	2.1654	4.2520	1.3780	2.3622	3.9409	0.5906	3-M8	14.5	M8x1	4
6-1/4"	3-866-0600	3.3858	5.5118	1.6535	2.7953	4.5039	0.7087	3-M10	22.5	M12x1.5	4
8"	3-866-0800	4.3307	6.9291	2.1654	3.1693	4.9409	0.7874	3-M10	39.0	M18x1	4
10"	3-866-1000	5.7087	8.8189	2.9921	3.7205	5.8071	0.7874	3-M12	68.0	M18x1	4
12"	3-866-1200	7.0866	11.2598	4.0551	3.7205	5.9646	0.7874	3-M16	125.0	M18x1	4
15-1/4"	3-866-1600	11.781	6.7520	5.3543	4.1339	6.8307	0.8661	6-5/8"-11	247.0	M18x1	8

For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025

TMX High Pressure Chuck Lubricant

TMX Chuck Lubricant	Part Number
16 oz	3-799-025

6-Jaw Forged Steel SET-TRU Scroll Chucks, 0.0006" T.I.R.*

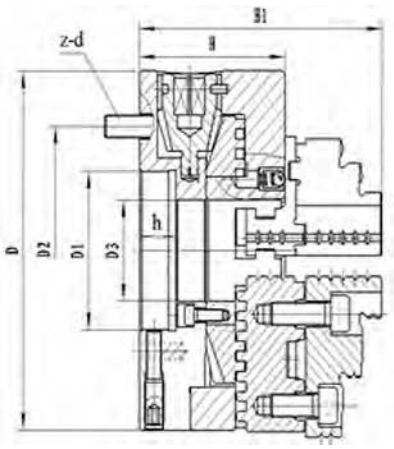
6-Jaw Scroll Chucks
2-Piece Hard Reversible Jaws

- Forged-Steel body
- 3 pinion design, hardened and ground

Each chuck is provided with:

- 1 Set of hard master jaws
- 1 Set of Hard Top Reversible Jaws
- 1 Self-ejecting chuck wrench
- 1 Set of mounting bolts
- 1 Set of fine adjustment screws
- 2 Hex keys

* Applies to runout of chuck body not of workpiece



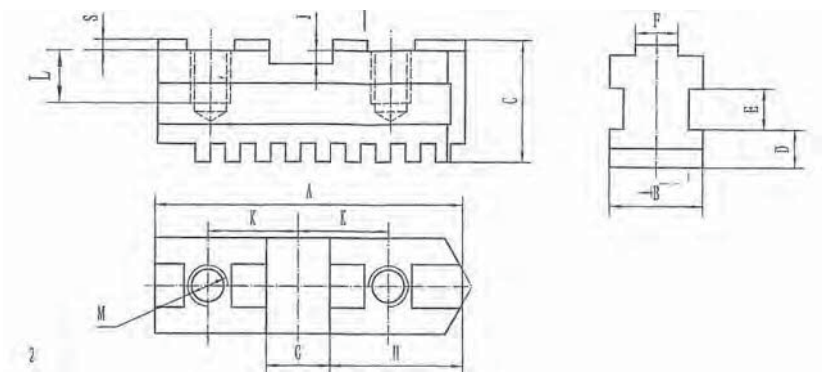
6-Jaw (2pc jaw) SET-TRU Self-Centering

Chuck Dia	Part Number	D_1	D_2	D_3	H	H_1	h	z-d	Wt lbs	Fine Adjustment Screws	
6-1/4"	3-868-0600	3.3858	5.5118	1.6535	2.7953	4.5039	0.7087	3-M10	24.0	M12x1.5	4
8"	3-868-0800	4.3307	6.9291	2.1654	3.1693	4.9409	0.7874	3-M10	41.0	M18x1	4
10"	3-868-1000	5.7087	8.8189	2.9921	3.7205	5.8071	0.7874	3-M12	70.0	M18x1	4
12"	3-868-1200	7.0866	11.2598	4.0551	3.7205	5.9646	0.7874	3-M16	125.0	M18x1	4
15-1/4"	3-868-1600	11.7810	6.7520	5.3543	4.1339	6.8307	0.8661	6-5/8"-11	248	M18x1	8

For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025

Hard Master Jaws for 3 and 6-Jaw SET-TRU Forged Steel Scroll Chucks

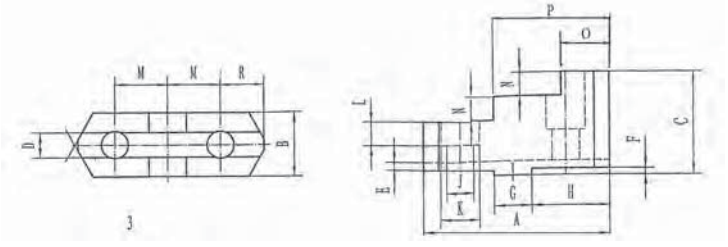
- American Standard tongue and groove jaws
- Sold in 3 or 6 piece sets



Chuck Dia	3-Jaw Part Number	6-Jaw Part Number	A	B	C	D	E	F	G	H	J	K	L	M	O	P	S
5"	3-885-305S	3-885-605S	2.13	0.79	1.10	0.31	0.31	0.31	0.50	0.89	0.16	0.63	0.53	M8	0.49	1.38	0.51
6-1/4"	3-885-306S	3-885-606S	2.56	0.79	1.14	0.31	0.31	0.31	0.50	1.13	0.16	0.75	0.55	M10	0.70	1.76	0.63
8"	3-885-308S	3-885-608S	3.11	0.98	1.30	0.35	0.39	0.31	0.50	1.37	0.16	0.87	0.55	M10	0.75	2.14	0.75
10"	3-885-310S	3-885-610S	3.62	1.10	1.42	0.43	0.47	0.50	0.75	1.56	0.16	1.06	0.63	M12	0.84	2.28	0.87
12-1/2"	3-885-312S	3-885-612S	4.33	1.26	1.57	0.50	0.47	0.50	0.75	1.87	0.16	1.25	0.79	M12	1.10	2.78	1.00
15-3/4"	3-885-316S	3-885-616S	5.12	1.42	1.93	0.59	0.55	0.50	0.75	2.25	0.28	1.50	1.10	M16	0.94	2.97	1.12

Hard Top Jaws for 3 and 6-Jaw SET-TRU Forged Steel Scroll Chucks

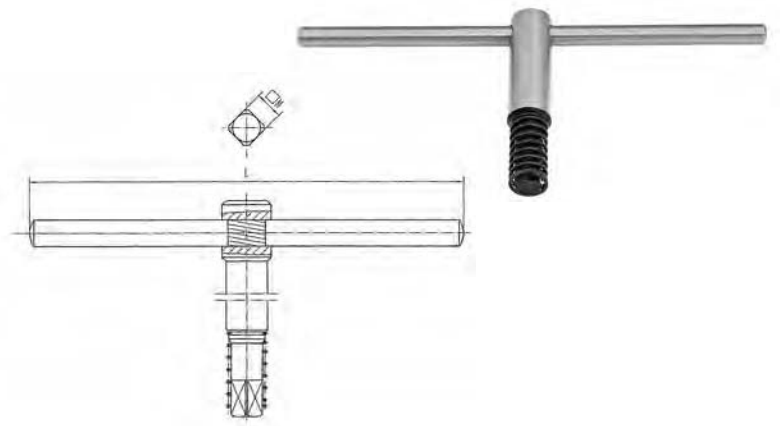
- American Standard tongue and groove jaws
- Sold in 3 or 6 piece sets
- Jaws are interchangeable with most chucks



Chuck Dia	3-Jaw Part Number	6-Jaw Part Number	A	B	C	D	E	F	G	H	J	K	L	M	N	R
5"	3-883-305S	3-883-605S	2.20	0.87	1.52	0.31	0.16	0.13	0.50	0.89	0.35	0.59	0.39	0.63	0.31	0.51
6-1/4"	3-883-306S	3-883-606S	2.64	0.98	1.63	0.31	0.16	0.13	0.50	1.13	0.43	0.67	0.47	0.75	0.33	0.63
8"	3-883-308S	3-883-608S	3.15	1.06	1.71	0.31	0.16	0.13	0.50	1.37	0.43	0.67	0.47	0.87	0.37	0.75
10"	3-883-310S	3-883-610S	3.74	1.28	2.03	0.50	0.16	0.13	0.75	1.56	0.55	0.79	0.55	1.06	0.47	0.87
12-1/2"	3-883-312S	3-883-612S	4.33	1.46	2.17	0.50	0.16	0.13	0.75	1.87	0.51	0.79	0.51	1.25	0.51	1.00
15-3/4"	3-883-316S	3-883-616S	5.04	1.65	2.54	0.50	0.16	0.24	0.75	2.25	0.71	1.02	0.67	1.50	0.53	1.12

Spare Parts for 3 and 6-Jaw SET-TRU Forged Steel Scroll Chucks

Chuck Dia	Wrench		
	Part Number	Square Size	Length
5"	3-889-006	10	8.46
6-1/4"			
8"	3-889-008	12	7.87
10"	3-889-010	12	12.20
12"	3-889-012	14	12.40
15-1/4"	3-889-016	15	15.75



Chuck Dia	Scroll Plate
	Part Number
5"	3-887-505
6-1/4"	3-887-506
8"	3-887-508
10"	3-887-510
12"	3-887-512
15-1/4"	3-887-516

Pinion
Part Number
3-886-505
3-886-506
3-886-508
3-886-510
3-886-512
3-886-516

Pinion Sleeve
Part Number
3-888-505
3-888-506
3-888-508
3-888-510
3-888-512
3-888-516

Chuck Dia	Half Ring
	Part Number
5"	3-888-705
6-1/4"	3-888-706
8"	3-888-708
10"	3-888-710
12"	3-888-712
15-1/4"	3-888-716

Fine Adjustment Screw
Part Number
3-897-6051S
3-897-6061S
3-897-6081S
3-897-6101S
3-897-6121S
3-897-6161S

3-Jaw SET-TRU Scroll Chucks, 0.0006" T.I.R.*

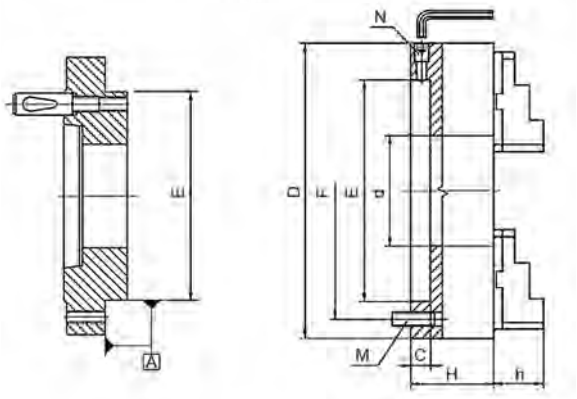
3-Jaw Scroll Chucks
2-Piece Hard Reversible Jaws

- Semi-Steel body
- 3 pinion design, hardened and ground

Each chuck is provided with:

- 1 Set of hard master jaws
- 1 Set of Hard Top Reversible Jaws
- 1 Self-ejecting chuck wrench
- 1 Set of mounting bolts
- 1 Set of fine adjustment screws
- 2 Hex keys

* Applies to runout of chuck body not of workpiece

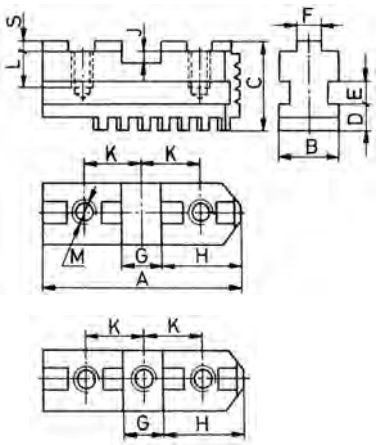


Chuck Dia D		Part Number	F	E	Hole Dia d	H	h	C	RPM max		Mounting Bolts M		Fine Adjustment Screws N	
inch	mm	3-Jaw							3-Jaw	6-Jaw	Thread	Qty	Thread	Qty
6-1/4"	160	3-866-0600Z	5.5118	3.3858	1.7717	2.9528	1.7323	0.7283	3000	0	M10x1.5	3	M18x1	4
8"	200	3-866-0800Z	6.9291	4.3307	2.1654	3.3465	1.8504	0.7480	2500	0	M10x1.5	3	M18x1	4
10"	250	3-866-1000Z	8.8189	5.7087	3.1496	3.5433	2.1457	0.7874	2000	0	M12x1.75	3	M18x1	4
12-1/2"	317	3-866-1200Z	11.2598	7.0866	4.0945	3.9370	2.3031	0.7874	1500	0	M16x2	3	M18x1	4
15-3/4"	400	3-866-1600Z	6.7500	11.7820	5.3543	4.2520	2.6378	0.8268	1000	0	5/8"-11	6	M18x1	8

For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025
See page 74 for clamping ranges

Hard Master Jaws for 3-Jaw Scroll Chucks

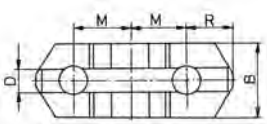
- American Standard tongue and groove jaws
- Sold in 3 piece sets

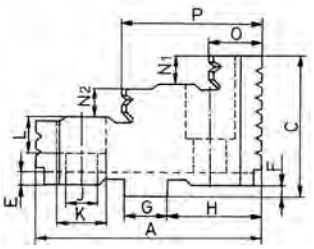


Chuck Dia	Part Number	K	H	G	F	J	L	D	E	B	A	S	Thread M	C	Wt lbs
6-1/4"	3-885-306	0.748	1.1260	0.4996	0.3126	0.1575	0.6299	0.3543	0.3937	0.7874	2.5591	0.1181	3/8"-16	0.0511	0.08
8"	3-885-308	0.874	1.3799				0.7087	0.3937		0.9843	3.1496			0.0543	0.14
10"	3-885-310	1.063	1.5669	0.7496	0.5000			0.4724		1.1024	3.7402		1/2"-13	0.0589	0.22
12-1/2"	3-885-312	1.250	1.8740				0.8268	0.5315	0.5118	1.2598	4.4882			0.0666	0.35
15-3/4"	3-885-316	1.500	2.2500			0.2756	0.9449			1.4173	5.1181		5/8"-11	0.0713	0.50

Hard Top Jaws for 3-Jaw Scroll Chucks

- American Standard tongue and groove jaws
- Sold in 3 piece sets
- Jaws are interchangeable with most chucks



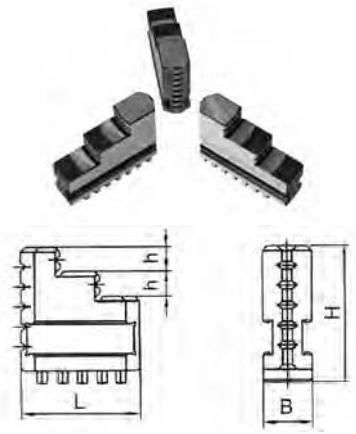


Chuck Dia	Part Number	M	H	G	J	K	L	D	E	F	N1	N2	C	B	A	O	P	Wt lbs
6-1/4"	3-883-306	0.7480	1.1260	0.4996	0.4173	0.6496	0.4331	0.3126	0.1575	0.1181	0.3150	0.3543	1.6142	0.9843	2.6378	0.7047	1.6063	0.12
8"	3-883-308	0.8740	1.3799				0.5118				0.3543	0.3937	1.7717	1.0630	3.1496	0.8465	2.0079	0.16
10"	3-883-310	1.0630	1.5669	0.7496	0.5394	0.8268	0.5512	0.5000			0.4528	0.4921	2.0276	1.2992	3.8189	0.9724	2.3228	0.28
12-1/2"	3-883-312	1.2500	1.8740		0.5394	0.8268	0.5906				0.4921	0.5315	2.1654	1.4567	4.4307	1.0354	2.6811	0.41
15-3/4"	3-883-316	1.5000	2.2500		0.6890	1.0236	0.7283			0.2362	0.5315	0.5709	2.5394	1.6535	5.0000	0.9567	2.9724	0.61

ID Hard Solid Jaws for 3-Jaw Chucks

- Sold in 3 piece sets

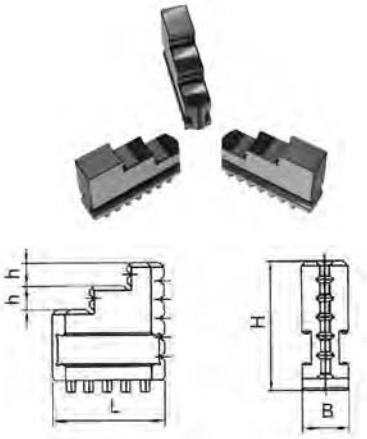
Chuck Dia	Part Number ID Jaws	L	B	H	h
6-1/4"	3-881-306	2.756	0.787	2.126	0.4724
8"	3-881-308	3.347	0.984	2.402	
10"	3-881-310	4.134	1.102	2.717	
12-1/2"	3-881-312	4.921	1.260	2.953	0.7087
15-3/4"	3-881-316	5.709	1.417	3.622	



OD Hard Solid Jaws for 3-Jaw Chucks

- Sold in 3 piece sets

Chuck Dia	Part Number OD Jaws	L	B	H	h
6-1/4"	3-880-306	2.756	0.787	2.126	0.4724
8"	3-880-308	3.347	0.984	2.402	
10"	3-880-310	4.134	1.102	2.717	
12-1/2"	3-880-312	4.921	1.260	2.953	0.7087
15-3/4"	3-880-316	5.709	1.417	3.622	



Spare Parts for 3-Jaw Chucks with Semi-Steel Body

- Sold by the piece
- OD = outside diameter
- L = overall length

Chuck Dia	Scroll	
	Part Number	OD
6-1/4"	3-887-306	4.8031
8"	3-887-308	6.1811
10"	3-887-310	7.7559
12-1/2"	3-887-312	10.1181
15-3/4"	3-887-316	12.6772

Pinion
Part Number
3-886-306
3-886-308
3-886-310
3-886-312
3-886-316

Chuck Dia	Wrench
	Part Number
6-1/4"	3-889-306
8"	3-889-308
10"	3-889-310
12-1/2"	3-889-312
15-3/4"	3-889-316

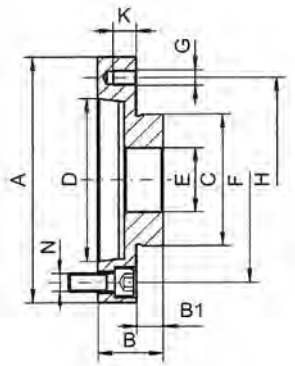
Pinion Screw
Part Number
3-889-3060
3-889-3080
3-889-3120

Fully Machined Type A Steel Backplates for SET-TRU Chucks

- Designed to mount on A1 and A2 American Standard spindles

Spindle Nose

Type A



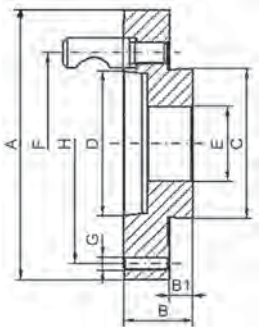
Chuck Dia	Part Number	Taper Size	A	D	E	F	C	H	Chuck Mounting Holes G	K	B1	B	Spindle Mounting Bolts N	Bolts Qty	Wt lbs
6-1/4"	3-874-065	A5	6.2992	3.252	1.6535	4.1260	3.3858	5.5118	M10x1.5	0.8268	0.6299	1.4567	7/16"-14	4	6.8
8"	3-874-085	A5	7.8740	4.189	2.1654	4.1260	4.3307	6.9291	M10x1.5	0.6299	0.7480	1.2992	7/16"-14	4	9.3
	3-874-086	A6				5.2520				1.1024		1.7717	1/2"-13		13.5
10"	3-874-105	A5	9.8425	3.252	2.9921	4.1260	5.7087	8.8189	M12x1.75	0.7480	0.7480	1.4961	7/16"-14	4	17.3
	3-874-106	A6		4.189		5.2520							1/2"-13		
12-1/2"	3-874-126	A6	12.4016	4.189	4.0551	5.2520	7.0866	11.2598	M16x2	0.7480	0.7480	1.4961	1/2"-13	4	27.3
	3-874-128	A8		5.500		6.7480				1.0630		1.8110	5/8"-11		35.7

Fully Machined Type D1 Steel Backplates for SET-TRU Chucks

- Type D1 American Standard camlock spindles

Spindle Nose

Type D



Chuck Dia	Part Number	Taper Size	Stud Dia	Number of Studs	A	F	D	E	C	H	Chuck Mounting Holes G	B1	B	Wt lbs
5"	3-875-054	D1-4	5/8	3	4.9213	3.2520	2.5000	1.3780	2.1654	4.2520	M8x1.25	0.5512	1.5354	5.7
	3-875-056	D1-6	7/8	6	7.1260	5.2520	4.1890						1.8898	13
6-1/4"	3-875-063	D1-3	9/16	3	6.2992	2.7795	2.1260	1.6535	3.3858	5.5118	M10x1.5	0.6299	1.8110	10.8
	3-875-064	D1-4	5/8			3.2520	2.5000							9.9
8"	3-875-084	D1-4	5/8	3	7.8740	3.2520	2.5000	2.1654	4.3307	6.9291	M10x1.5	0.6693	1.2992	10.4
	3-875-085	D1-5	3/4	6		4.1339	3.2520						1.8504	15.9
	3-875-086	D1-6	7/8			5.2520	4.1890						2.0079	17.6
10"	3-875-106	D1-6	7/8	6	9.8425	5.2520	4.1890	2.9921	5.7087	8.8189	M12x1.75	0.7480	2.0866	28.4
	3-875-108	D1-8	1			6.7520	5.5000						2.3622	32.4
12-1/4"	3-875-126	D1-6	7/8	6	12.4016	5.2520	4.1890	4.0551	7.0866	11.2598	M16x2	0.7480	1.4961	28.4
	3-875-128	D1-8	1			6.7520	5.5000						2.2441	47.8

Camlock Studs and Set Screws

- Sold in 3 or 6 piece sets

Taper Size	Camlock Studs		
	Part Number	Diameter	Thread
D1-4	3-899-104	5/8"	M10 x 1
D1-5	3-899-105	3/4"	M12 x 1
D1-6	3-899-106	7/8"	M16 x 1.5
D1-8	3-899-108	1"	M20 x 1.5
D1-11	3-899-111	1-3/16"	M22 x 1.5

Set Screw Part Number	Number of Studs
3-899-305	3
3-899-310	6

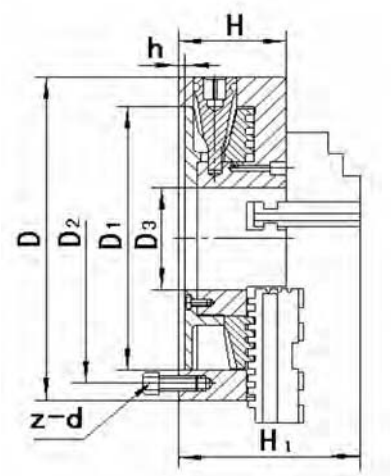
3-Jaw Precision Forged Steel Scroll Chucks

3-Jaw Scroll Chucks
2-Piece Hard Reversible Jaws

- Forged-Steel body
- 3 pinion design, hardened and ground

Each chuck is provided with:

- 1 Set of hard master jaws
- 1 Set of Hard Top Reversible Jaws
- 1 Self-ejecting chuck wrench
- 1 Set of mounting bolts
- 2 Hex keys



3-Jaw (2pc jaw) Self-Centering Precision

Chuck Dia	Part Number	D_1	D_2	D_3	H	H_1	h	z-d	Wt lbs
6-1/4"	3-820-0600	4.9213	5.5118	1.6535	2.5591	3.8307	0.1575	6-M10	23
8"	3-820-0800	6.2992	6.9291	2.1654	3.1102	4.252	0.1575	6-M10	39
10"	3-820-1000	7.874	8.8189	2.9921	3.5039	4.8819	0.1969	6-M12	68
12"	3-820-1200	10.2362	11.2598	4.0551	3.622	5.248	0.1969	6-M16	123

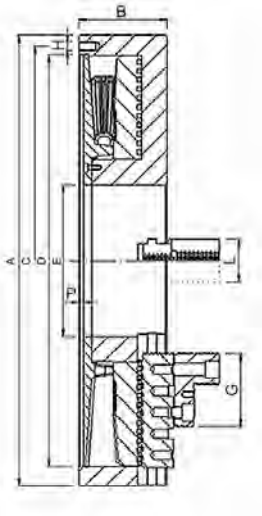
For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025

TMX High Pressure Chuck Lubricant

TMX Chuck Lubricant	Part Number
16 oz	3-799-025

3-Jaw Self-Centering Chucks with Steel Body and Two-Piece Reversible Jaws ideal for VTL Machines

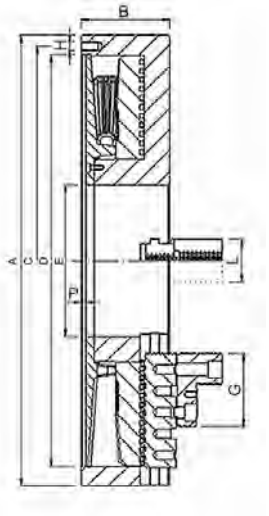
- Steel Body
- Less friction between jaw and guide
- Greater Clamping force
- Less wear due to direct pressure



Part Number	Chuck Dia A		Max Speed	Max Torque on Key	Gripping Force	Wt	Max Clamping	Min Clamping	B	C	D	E max	F	G	H	L	P
	mm	in	RPM	lbt*ft	lbf	lbs	inches										
3-820-2800	700	28	873	516.3	26302.6	738.5	27.5591	3.3465	5.7087	25.9843	24.8031	8.8583	3.2283	8.5827	6xM20	2.3622	0.3150
3-820-3600	900	36	679		28101.1	1245.6	35.4331	5.9055	6.4961	33.4646	31.8898	14.7638			6xM22		
3-820-4000	1000	40	611			1589.5	39.3701	7.8740	6.4961	37.4016	35.8268	15.3543		11.6535	6xM24		0.3937
3-820-4800	1200	48	509			2645.5	47.2441	9.4488	7.2835				3.1496	16.9291		2.9528	
3-820-5500	1400	55	437			4078.5	55.1181										
3-820-6300	1600	63	382			6172.8	62.9921										

4-Jaw Self-Centering Chucks with Steel Body and Two-Piece Reversible Jaws ideal for VTL Machines

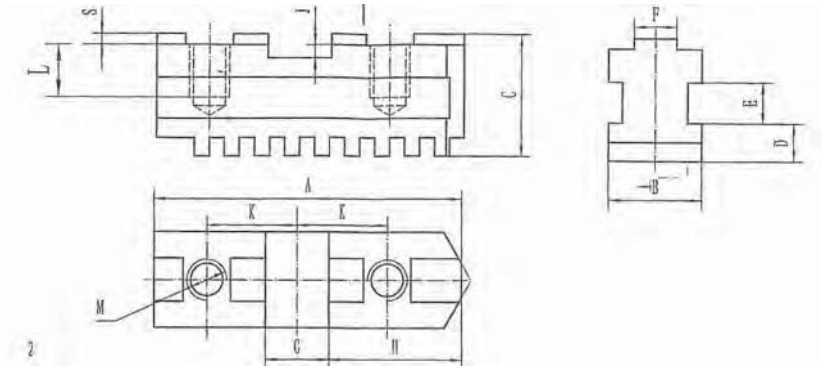
- Steel Body
- Less friction between jaw and guide
- Greater Clamping force
- Less wear due to direct pressure



Part Number	Chuck Dia A		Max Speed	Max Torque on Key	Gripping Force	Wt	Max Clamp-ing	Min Clamp-ing	B	C	D	E max	F	G	H	L	P
	mm	in	RPM	lbt*ft	lbf	lbs	inches										
3-841-2800	700	28	873	516.3	26302.6	751.8	27.5591	3.3465	5.7087	25.9843	24.8031	8.8583	3.2283	8.5827	6xM20	2.3622	0.3150
3-841-3200	800	32	764		27651.5	914.9	31.4961	4.9213	6.1024	29.9213	28.7402	10.5512					
3-841-3600	900	36	679		28101.1	1256.6	35.4331	5.9055	6.4961	33.4646	31.8898	14.7638			6xM22		
3-841-4000	1000	40	611			1609.3	39.3701	7.8740		37.4016	35.8268	15.3543		11.6535	6xM24		0.3937
3-841-4800	1200	48	509			2711.6	47.2441	9.4488	7.2835				3.1496	16.9291		2.9528	
3-841-5500	1600	48	382			6327.2	62.9921		7.4803	41.3386					6xM30		

Hard Master Jaws for 3-Jaw Precision Forged Steel Scroll Chucks

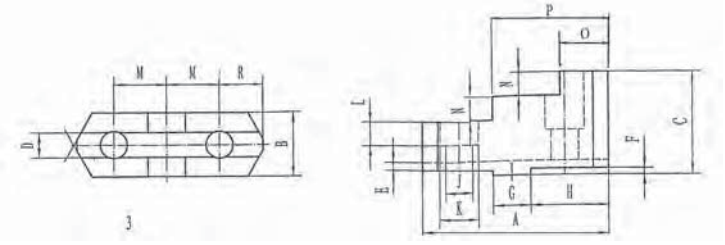
- American Standard tongue and groove jaws
- Sold in 3 or 6 piece sets



Chuck Dia	3-Jaw Part Number	A	B	C	D	E	F	G	H	J	K	L	M	O	P	S
6-1/4"	3-885-306S	2.56	0.79	1.14	0.31	0.31	0.31	0.50	1.13	0.16	0.75	0.55	M10	0.70	1.76	0.63
8"	3-885-308S	3.11	0.98	1.30	0.35	0.39	0.31	0.50	1.37	0.16	0.87	0.55	M10	0.75	2.14	0.75
10"	3-885-310S	3.62	1.10	1.42	0.43	0.47	0.50	0.75	1.56	0.16	1.06	0.63	M12	0.84	2.28	0.87
12-1/2"	3-885-312S	4.33	1.26	1.57	0.50	0.47	0.50	0.75	1.87	0.16	1.25	0.79	M12	1.10	2.78	1.00

Hard Top Jaws for 3-Jaw Precision Forged Steel Scroll Chucks

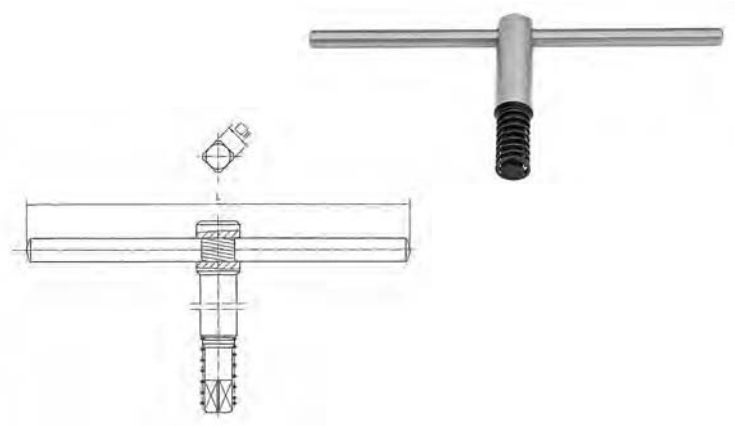
- American Standard tongue and groove jaws
- Sold in 3 piece sets
- Jaws are interchangeable with most chucks



Chuck Dia	3-Jaw Part Number	A	B	C	D	E	F	G	H	J	K	L	M	N	R
6-1/4"	3-883-306S	2.64	0.98	1.63	0.31	0.16	0.13	0.50	1.13	0.43	0.67	0.47	0.75	0.33	0.63
8"	3-883-308S	3.15	1.06	1.71	0.31	0.16	0.13	0.50	1.37	0.43	0.67	0.47	0.87	0.37	0.75
10"	3-883-310S	3.74	1.28	2.03	0.50	0.16	0.13	0.75	1.56	0.55	0.79	0.55	1.06	0.47	0.87
12-1/2"	3-883-312S	4.33	1.46	2.17	0.50	0.16	0.13	0.75	1.87	0.51	0.79	0.51	1.25	0.51	1.00

Spare Parts for Precision Forged Steel Scroll Chucks

Chuck Dia	Wrench		
	Part Number	Square Size	Length
6-1/4"	3-889-006	10	8.46
8"	3-889-008	12	7.87
10"	3-889-010	12	12.20
12"	3-889-012	14	12.40



Chuck Dia	Scroll Plate	Pinion	Pinion Screw
	Part Number	Part Number	Part Number
6-1/4"	3-887-306S	3-886-306S	3-888-306S
8"	3-887-308S	3-886-308S	3-888-308S
10"	3-887-310S	3-886-310S	3-888-310S
12"	3-887-312S	3-886-312S	3-888-312S

3-Jaw Universal Self-Centering Scroll Chucks

- TMX chucks can be used on all types of lathes, and different kinds of milling, drilling, and CNC attachments
- TMX chucks come with either American Standard two-piece tongue and groove jaws, or two sets of hard solid jaws, one OD and one ID
- Plain Back and Direct Mount
- Semi-Steel body
- Chuck body is made of high quality Cast Iron All guideways and bearing surfaces are precisely machined
- Scroll plate is drop forged of fine Alloy Steel, and carefully case hardened, thread flanks are ground on both sides
- The jaw's teeth and guideways are hardened and fully ground on both sides
- Pinions are hardened and ground

A – Jaws
B – Scroll
C – Pinion
D – Front
E – Back
G – Operating Wrench

3-Jaw Scroll Chucks with Two-Piece Hard Reversible Jaws

TMX chucks are provided with:

- 1 Set of hard master jaws
- 1 Set of Hard Top Reversible Jaws
- 1 Self-ejecting chuck wrench
- 1 Set of mounting bolts
- 2 Hex keys
- Eye bolts provided with 12-1/2" and 15-3/4" chucks

Chuck Lifting Eye Bolt
12-1/2" and 15-3/4" only

Chuck Dia	Part Number	Hole Dia	RPM max	Wt lbs
6-1/4"	3-800-0600	1.7717	3000	19.4
8"	3-800-0800	2.5591	2500	34
10"	3-800-1000	3.1496	2000	57
12-1/2"	3-800-1200	4.0945	1500	104
15-3/4"	3-800-1600	5.3543	1200	157
20"	3-800-2000	7.8750	800	275

For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025
See below

TMX High Pressure Chuck Lubricant

TMX Chuck Lubricant	Part Number
16 oz	3-799-025

3-Jaw Scroll Chucks with Hard Solid Jaws

Chucks are provided with:

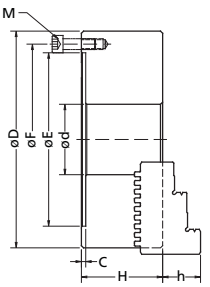
- 1 Set of hard solid ID jaws
- 1 Set of hard solid OD jaws
- 1 Self-ejecting wrench
- 1 Set of mounting bolts
- 1 Hex key for mounting bolts
- Eye bolts for chuck sizes 12-1/2" and 15-3/4"

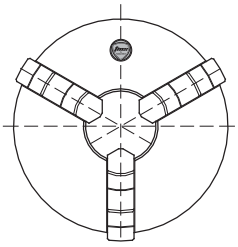
Chuck Dia	Part Number	Hole Dia	RPM max	Wt lbs
6-1/4"	3-810-0600	1.7717	3000	19.4
8"	3-810-0800	2.5591	2500	34
10"	3-810-1000	3.1496	2000	57
12-1/2"	3-810-1200	4.0945	1500	104
15-3/4"	3-810-1600	5.3543	1200	157

For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025

Principal Dimensions 3-Jaw Chucks

Chuck Dia D	E (H7)	F	d	H	h	C	Bolt Size M
6-1/4"	4.9213	5.5118	1.7717	2.5591	1.7323	0.1575	6xM10
8"	6.2992	6.9291	2.5591	2.9528	1.8504		
10"	7.8740	8.8189	3.1496	3.1496	2.1457	0.1969	6xM12
12-1/2"	10.2362	11.2598	4.0945	3.5433	2.3031		6xM16
15-3/4"	12.9921	14.2520	5.3543	3.9370	2.6378		





3-Jaw Chucks, Type A1 and A2, Direct Mount

2-Piece Hard Reversible Jaws

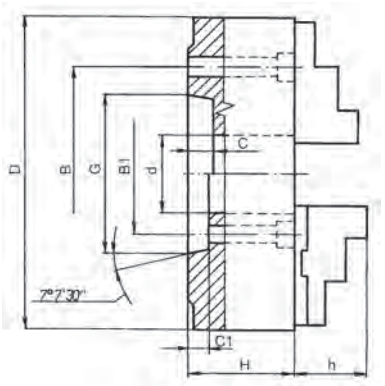
- All chucks with A1 mount can be installed on A1 spindle nose only
- All chucks with A2 mount can be installed on either A1 or A2 spindle nose

Standard Parts

- 2-Piece hard reversible jaws
- 1 Self-ejecting wrench
- 1 Set of mounting bolts
- 1 Hex key for mounting bolts
- 1 Hex key for jaw bolts
- Eye bolts provided with 12-1/2" and 15-3/4" chucks

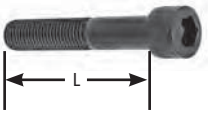
Type A1 Mount Bolt Hole Pattern

Type A2 Mount Bolt Hole Pattern



Spindle Nose

Type A



Chuck Dia D	Part Number	Taper Size	Hole Dia d	B (A2)	B1 (A1)	G	C	H	h	Chuck Mounting Bolts			RPM max	Wt lbs
										Thread	L	Qty		
8"	3-801-0816	A1-6	2.1654	–	3.2500	4.1880	0.6250	3.6220	1.8504	1/2-13	3-1/8	3	2500	42
10"	3-801-1016	A1-6	2.1654	–	3.2500	4.1880	0.6250	–	–	1/2-13	4-1/8	6	2000	71
12-1/2"	3-801-1216	A2-6	3.9370	5.2520	–	4.1880	0.6303	4.4094	2.3031	1/2-13	4-3/4	6	1500	121
	3-801-1218	A1-8	3.1496	–	4.3750	5.5008	0.6880			5/8-11	4-3/16			
15-3/4"	3-801-1619	A1-11	4.9213	–	6.5000	7.7507	0.7500	4.8031	2.6378	3/4-10	4-1/4	6	1000	203

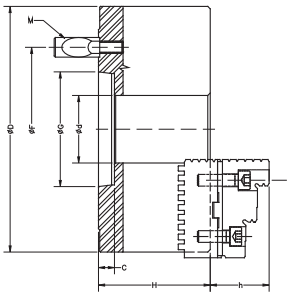
For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025

3-Jaw Chucks, Camlock Type D1, Direct Mount

2-Piece Hard Reversible Jaws

Standard Parts

- 2-Piece hard reversible jaws
- 1 Self-ejecting wrench
- 1 Set of mounting bolts
- 1 Hex key for mounting bolts
- 1 Hex key for jaw bolts
- Eye bolts provided with 12-1/2" and 15-3/4" chucks



Spindle Nose

Type D

D1-6 to D1-11

D1-4

Chuck Dia D	Part Number	Taper Size	Hole Dia d	F	G	C	H	h	Camlock Studs			RPM max	Wt lbs
									Diameter	Thread	Qty M		
6-1/4"	3-803-0634	D1-4	1.7717	3.2520	2.5005	0.5118	3.0709	1.7323	5/8	M10x1	3	3000	20
8"	3-803-0834	D1-4	2.1654	3.2520	2.5005	0.5118	3.6220	1.8504	5/8	M10x1	3	2500	42
	3-803-0836	D1-6		5.2520	4.1880				7/8	M16x1.5	6		
10"	3-803-1036	D1-6	3.1496	5.2520	4.1880	0.6299	3.8976	2.1457	7/8	M16x1.5		2000	71
	3-803-1038	D1-8		6.7480	5.5007	0.7087			1	M20x1.5			
12-1/2"	3-803-1236	D1-6	3.9370	5.2520	4.1880	0.6299	4.4094	2.3031	7/8	M16x1.5		1500	112
	3-803-1238	D1-8		6.7480	5.5007	0.7087			1	M20x1.5			
15-3/4"	3-803-1638	D1-8	5.3543	6.7480	5.5007	0.7087	4.8031	2.6378	1	M20x1.5		1000	223
	3-803-1639	D1-11		9.2520	7.7507	0.7874			1-3/16	M22x1.5			

For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025

Camlock Studs and Set Screws

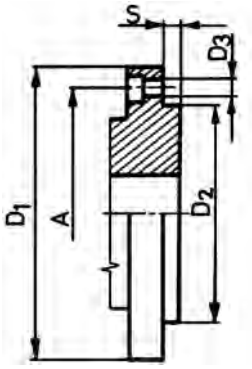
- Sold in 3 or 6 piece sets

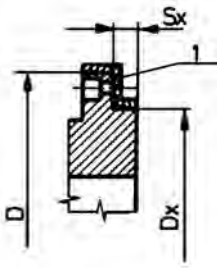
Taper Size	Camlock Studs		
	Part Number	Diameter	Thread
D1-4	3-899-104	5/8"	M10 x 1
D1-5	3-899-105	3/4"	M12 x 1
D1-6	3-899-106	7/8"	M16 x 1.5
D1-8	3-899-108	1"	M20 x 1.5
D1-11	3-899-111	1-3/16"	M22 x 1.5

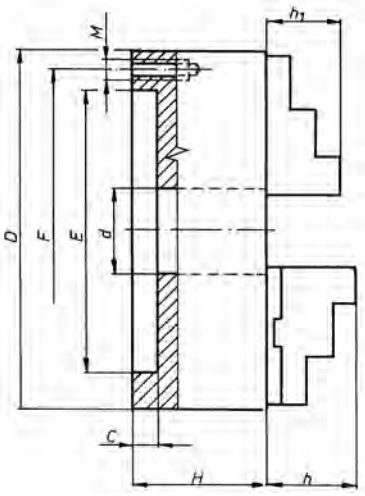
Set Screw Part Number	Number of Studs
3-899-305	3
3-899-310	6

TMX Principal Mounting Dimensions for Toolmex Backplates

- After selecting a suitable backplate for the lathe, mount it onto the spindle nose of the lathe
- Proper mounting is very important in order to secure concentricity between the lathe's spindle and the chuck
- The back of the lathe chuck has a counterbore diameter, E, finished in H7 class, with depth, C
- Prior to maching the backplate, accurately measure the chuck's counterbore diameter, E, and depth, C
- A good press fit, H6/k5, is most desirable
- To ensure satisfactory concentricity, it is important that this procedure is done accurately







See full back plate machining instructions on page 99

Chuck Dia	A = F	D	D1	D3	D2	E (H7)	Dx (k5)	S*	Sx**	C
5"	4.2520	4.9213	4.9409	0.3307	3.8189	3.7402	3.7402	0.1181	0.1378	0.1575
6-1/4"	5.5118	6.2992	6.3189	0.4134	5.0000	4.9213	4.9213			
8"	6.9291	7.8740	7.9134	0.5118	6.3780	6.2992	6.2992			
10"	8.8189	9.8425	9.8819	0.6693	7.9528	7.8740	7.8740	0.1575	0.1772	0.1969
12-1/2"	11.2598	12.4016	12.4409		10.3150	10.2362	10.2362			
15-3/4"	14.2520	15.7480	15.8268		13.1102	12.9221	12.9221			

* S = length of the boss of the supplied backplate
** Sx = length of the boss after machining

WARNING: READ CARFULLY BEFORE MOUNTING BACKPLATES ONTO SPINDLES

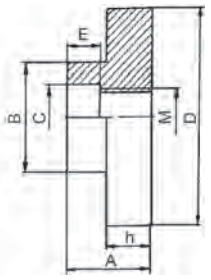
Installation Instructions for Mounting Backplates onto Spindles

All BISON-BIAL semi-machined and fully machined backplates will have the mounting dimensions for their respective spindles fully machined. The fully machined backplates are designed for scroll plain back chucks. They can be used on other styles/models, but the existing bolt hole patterns have to be reviewed for mounting interference.

1. With an indicator check the spindle to see if there is any radial or axial runout. Refer to the chuck manual for spindle nose accuracy.
2. Wipe the protective factory grease off the backplate, then mount it to the respective spindle making sure that all fastening components are torqued appropriately.
3. When initially installing the bolts, leave finish tightening to a second pass, and make sure to alternate to the opposite bolt to evenly distribute pressure across the spindle's taper. Using the dial indicator, recheck the radial and axial backplate runout. If there are major differences, loosen the backplate and refit it.
4. Once the backplate is in place, a technique used to further ensure a close tolerance to the chuck would be to blue the front face of the backplate and take a skim cut. **In most cases this is not required.**
5. Next, measure the OD and depth of the counterbore on the backside of the chuck; these will become your working dimensions for final sizing. Depending on the size of the chuck, the OD should be .001" to .005" less than the OD dimension and the length can be approximately .015" to .030" shorter. This minus tolerance will eliminate the possibility of the projection pressing against the back of the chuck, which can impact the scroll and create unnecessary friction with the jaw teeth. This could make it difficult for the wrench to turn the pinions and in turn the jaws. Machine the backplate until a snug fit has been achieved; this may require removing the backplate.

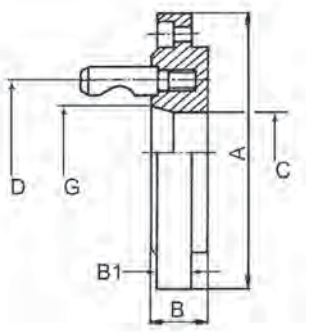
   Note: The purpose of this backplate projection to the chuck counterbore is to relieve the stress on the mounting bolts, and is a critical part of maintaining chuck concentricity.
6. The semi-machined backplates recommended for independent chucks do not have mounting holes, and will have to be machined to the chucks bolt hole pattern. Dimensions are available in the Toolmex full-line catalog, or online at www.toolmex.com, or by calling a customer service representative at +1-800-992-4766 or +1-508-653-8897.
7. Bolt hole patterns may require removal of the backplate for machining. Once machined, follow the procedures from steps 2 and 3 before mounting.
8. Re-indicate the chuck for basic run out on the OD and Face.
9. Take a round piece of ground stock and enclose the jaws. Then, indicate the part for runout at the jaws, ½ way across its length, and at the end. This will give you an idea of the parameters that will have to be accounted for part production.

Semi-Finished Threaded Backplates for Scroll Chucks with Threaded Spindles



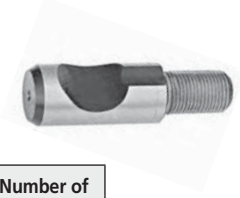
Chuck Dia	Thread M	Part Number	A	B	C	D	h	E	Wt lbs
5"	1-1/2"-8	3-871-052	1.535	2.677	1.514	5.079	0.709	0.5	9.9
6-1/4"	1-1/2"-8	3-871-062	1.535	3.189	1.514	6.535	0.787	0.5	11.9
	2-1/4"-8	3-871-063	1.791		2.26			0.626	
8"	2-1/4"-8	3-871-083	1.791	3.583	2.26	8.11	0.866	0.626	13

Fully Machined Type D1 Backplates



Chuck Dia	Taper Size	Part Number	Stud Dia	Number of Studs	Hole Dia C	D	G	A	B	B1	Wt lbs
5"	D1-4	3-878-054	5/8	3	2.40	3.25	2.50	4.92	1.02	0.87	5.3
	D1-6	3-878-056	7/8	6	3.13	5.25	4.19	7.09	1.61	1.43	11.5
6-1/4"	D1-4	3-878-064	5/8	3	2.40	3.25	2.50	6.30	1.06	0.71	9.5
8"	D1-4	3-878-084	5/8	3	2.40	3.25	2.50	7.87	1.06	0.71	15.4
	D1-6	3-878-086	7/8	6	4.06	5.25	4.19		1.44	1.26	15.4
10"	D1-6	3-878-106	7/8	6	4.06	5.25	4.19	9.84	1.44	0.87	24.3
	D1-8	3-878-108	1		5.35	6.75	5.50		1.54	1.36	39.7
12-1/2"	D1-6	3-878-126	7/8		4.06	5.25	4.19	12.40	1.56	0.94	39.7
	D1-8	3-878-128	1		5.35	6.75	5.50		1.65	0.94	

Camlock Studs and Set Screws

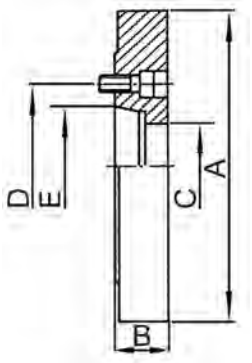


- Sold in 3 or 6 piece sets

Taper Size	Camlock Studs		
	Part Number	Diameter	Thread
D1-4	3-899-104	5/8"	M10 x 1
D1-5	3-899-105	3/4"	M12 x 1
D1-6	3-899-106	7/8"	M16 x 1.5
D1-8	3-899-108	1"	M20 x 1.5
D1-11	3-899-111	1-3/16"	M22 x 1.5

Set Screw Part Number	Number of Studs
3-899-305	3
3-899-310	6

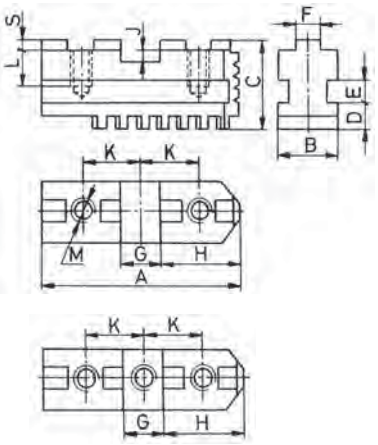
Semi-Machined Type A1/A2 Backplates



Chuck Dia	Taper Size	Part Number	A	B	C	D	E	Wt lbs
6-1/4"	A-5	3-873-065	6.4	1	3.13	4.125	3.25	6.5
8"	A-5	3-873-085	7.99	1.5	1.50	4.125	3.25	19
	A-6	3-873-086	7.99	1.3	1.50	5.252	4.19	15.5
10"	A-6	3-873-106	9.96	1.3	3.17	0.207	4.19	38
	A-8	3-873-108	9.96	1.97	3.17	6.75	5.50	33
12-1/2"	A-6	3-873-126	12.52	1.3	4.06	5.252	4.19	45
	A-8	3-873-128	12.52	2.17	4.06	6.75	5.50	62

Hard Master Jaws

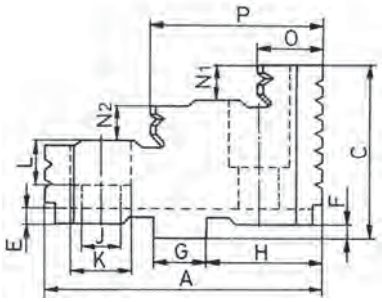
- American Standard tongue and groove jaws
- Sold in 3 piece sets

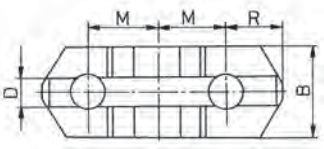


Chuck Dia	Part Number	K	H	G	F	J	L	D	E	B	A	S	Thread M	C	Wt lbs
6-1/4"	3-885-306	0.0294	1.1260	0.4996	0.3126	0.1575	0.6299	0.3543	0.3937	0.7874	2.5591	0.1181	3/8"-16	0.0511	0.08
8"	3-885-308	0.0344	1.3799				0.7087	0.3937		0.9843	3.1496			0.0543	0.14
10"	3-885-310	0.0419	1.5669	0.7496	0.5000			0.4724		1.1024	3.7402		1/2"-13	0.0589	0.22
12-1/2"	3-885-312	0.0492	1.8740				0.8268	0.5315	0.5118	1.2598	4.4882			0.0666	0.35
15-3/4"	3-885-316	0.0591	2.2500			0.2756	0.9449			1.4173	5.1181		5/8"-11	0.0713	0.50

Hard Top Jaws for 3-Jaw Scroll Chucks

- American Standard tongue and groove jaws
- Sold in 3 piece sets

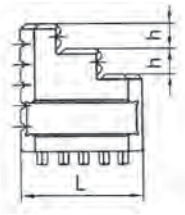


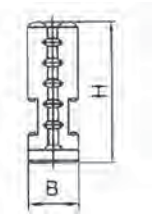


Chuck Dia	Part Number	M	H	G	J	K	L	D	E	F	N1	N2	C	B	A	O	P	Q	Wt lbs
6-1/4"	3-883-306	0.7480	1.1260	0.4996	0.4173	0.6496	0.4331	0.3126	0.1575	0.1181	0.3150	0.3543	1.6142	0.9843	2.6378	0.7047	1.6063	0.8268	0.12
8"	3-883-308	0.8740	1.3799				0.5118				0.3543	0.3937	1.7717	1.0630	3.1496	0.8465	2.0079	0.9449	0.16
10"	3-883-310	1.0630	1.5669	0.7496	0.5394	0.8268	0.5512	0.5000			0.4528	0.4921	2.0276	1.2992	3.8189	0.9724	2.3228	1.0039	0.28
12-1/2"	3-883-312	1.2500	1.8740				0.5906				0.4921	0.5315	2.1654	1.4567	4.3307	1.0354	2.6811	1.1024	0.41
15-3/4"	3-883-316	1.5000	2.2500		0.6890	1.0236	0.7283			0.2362	0.5315	0.5709	2.5394	1.6535	5.0000	0.9567	2.9724	1.2795	0.61

ID Hard Solid Jaws for 3-Jaw Scroll Chuck

- Sold in 3 piece sets

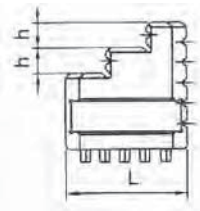


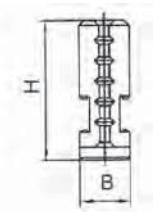


Chuck Dia	Part Number	Retail Price	L	B	H	h
6-1/4"	3-881-306	98.58	2.756	0.787	2.126	0.4724
8"	3-881-308	106.88	3.347	0.984	2.402	
10"	3-881-310	156.18	4.134	1.102	2.717	
12-1/2"	3-881-312	306.36	4.921	1.260	2.953	0.7087
15-3/4"	3-881-316	374.95	5.709	1.417	3.622	

OD Hard Solid Jaws for 3-Jaw Scroll Chuck

- Sold in 3 piece sets





ChuckDia	Part Number	L	B	H	h
6-1/4"	3-880-306	2.756	0.787	2.126	0.4724
8"	3-880-308	3.347	0.984	2.402	
10"	3-880-310	4.134	1.102	2.717	
12-1/2"	3-880-312	4.921	1.260	2.953	0.7087
15-3/4"	3-880-316	5.709	1.417	3.622	

Spare Parts for 3-Jaw Chucks with Semi-Steel Body

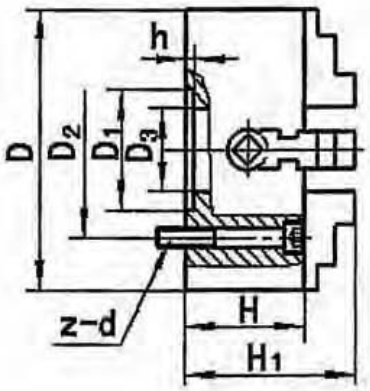
- Sold by the piece
- OD = outside diameter

Chuck Dia	Scroll		Pinion	Wrench	Pinion Screw
	Part Number	OD	Part Number	Part Number	Part Number
6-1/4"	3-887-306	4.8031	3-886-306	3-889-306	3-888-306
8"	3-887-308	6.1811	3-886-308	3-889-308	3-888-308
10"	3-887-310	7.7559	3-886-310	3-889-310	
12-1/2"	3-887-312	10.1181	3-886-312	3-889-312	3-888-312
15-3/4"	3-887-316	12.6772	3-886-316	3-889-316	

4-Jaw Semi-Steel Body Plain Back Chucks with Solid Jaws

Chucks are provided with hard solid reversible jaws
Jaws are made of high quality Steel and are hardened

- 1 Set of hard solid reversible jaws
- 1 Self-ejecting wrench
- 1 Set of mounting bolts
- 1 Hex key for mounting bolts
- Eye bolts provided with 12-1/2" to 20" chucks



Chuck Dia D	Part Number	D1	D2	D3	H	H1	h	z-d	Max. input torque Nm/lbf*Ft	Max. speed r/min
3"	3-850-0300	2.165	2.598	0.866	1.654	2.205	0.138	4-M6	5625 / 4149	4000
4"	3-850-0400	2.835	3.307	0.984	2.126	2.913	0.138	4-M8	6750 / 4978.8	3500
5"	3-850-0500	3.74	4.252	1.181	2.205	3.071	0.177	4-M8	11250 / 8298	3000
6"	3-850-0600	2.559	3.74	1.772	2.559	3.661	0.197	4-M10	15750 / 11617.2	2500
8"	3-850-0800	3.15	4.409	2.205	2.953	4.213	0.236	4-M10	22500 / 16596	2000
10"	3-850-1000	4.331	5.118	2.953	3.15	4.724	0.236	4-M12	33750 / 24894	1600
12"	3-850-1200	5.512	6.496	3.74	3.543	5.276	0.236	4-M16	45000 / 33192	1200
16"	3-850-1600	6.299	7.283	4.921	3.74	5.63	0.315	4-M16	63000 / 46468.8	1000
20"	3-850-2000	7.874	9.291	6.299	4.173	6.339	0.315	4-M20	78750 / 58086	800
25"	3-850-2500	8.661	10.16	7.087	4.646	7.087	0.394	4-M20	90000 / 66384	600
32"	3-850-3200	9.843	11.81	8.268	5.197	7.953	0.472	8-M20	112500 / 82980	500
40"	3-850-4000	12.6	14.57	10.236	5.906	9.055	0.591	8-M20	135000 / 99576	400

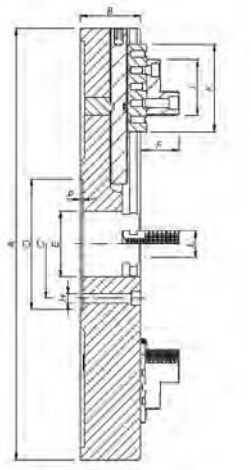
For best gripping results, use the recommended chuck lubricant: Part Number 3-799-025

TMX High Pressure Chuck Lubricant

TMX Chuck Lubricant	Part Number
16 oz	3-799-025

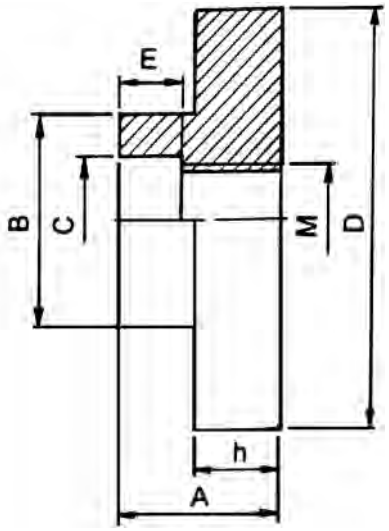
4-Jaw Independent Chucks with Steel Body and Two Piece Jaws

- Steel body
- Two piece jaws made according to ASA norm
- Operating screws hardened and ground
- "T" slots for 20 inches and above



Part Number	Chuck Dia A		Max Speed	Max Torque on Key	Gripping Force	Wt	Max Clamping	Min Clamping	B	C	D	E	F	G	J	L	K
	mm	in	RPM	lbt*ft	lbf	lbs	inches										
3-855-2000	500	20	1222	265.5	17984.7	277.8	19.6850	0.7874	3.1496	8.6614	9.8425	3.9370	3.3976	6.4961	5	2.3622	11.0236
3-855-2500	600	25	970	368.8	31473.2	449.7	23.6220	1.1811	3.9370				3.2953	6.8898		2.9528	13.7795
3-855-2800	700	28	873	442.5	35969.4	716.5	27.5591		4.7244			4.7244					16.7323
3-855-3200	800	32	764			992.1	31.4961		4.9213			5.3150					20.0787
3-855-3600	900	36	679			1355.8	35.4331		5.3150			5.5118					
3-855-4000	1000	40	611	516.3	49458	1741.6	39.3701	2.1654	5.5118	9.8425	11.8110	5.9055	3.5039	7.8740		3.5433	21.6535
3-855-4800	1200	48	509			2303.8	47.2441		5.7087			6.2992					25.5906
3-855-6000	1500	60	407			4321.0	59.0551		6.4961								

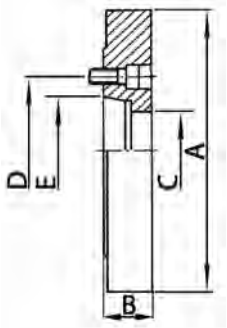
Semi-Finished Threaded Backplates



Recommended Chuck Dia	Thread M	Part Number	A	B	C	D	h	E	Wt lbs
6" to 8"	1-1/2"-8	3-871-052	1.535	2.677	1.514	5.079	0.709	0.5	9.9
8"	1-1/2"-8	3-871-062		3.189		6.535	0.787		11.9
6-1/4"	2-1/4"-8	3-871-063	1.791		2.26			0.626	
10"	2-1/4"-8	3-871-083		3.583		8.11	0.866		13

Semi-Machined Type A1/A2 Backplates

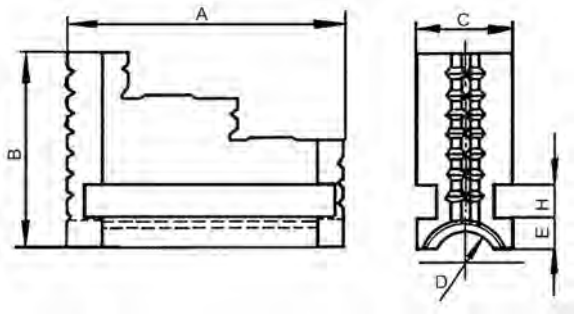
- For plain back chucks
- Designed for direct mounting on A1 and A2 spindle nose
- May be used for both scroll and independent chucks
- See mounting instructions on page 411



Recommended Chuck Dia	Taper Size	Part Number	A	B	C	D	E	Wt lbs
10"	A-5	3-873-085	7.99	1.5	2.17	4.125	3.2503	19
10" to 12-1/2"	A-6	3-873-086	7.99	1.3	2.17	5.25	4.1878	15.5
15-3/4"	A-6	3-873-106	9.96	1.3	3.17	5.25	4.1878	38
	A-8	3-873-108	9.96	1.97	3.17	6.75	5.5	33
20"	A-6	3-873-126	12.52	1.3	4.06	5.25	4.1878	45
20"-25"	A-8	3-873-128	12.52	2.17	4.06	6.75	5.50055	62

Hard Solid Jaws

- Sold in 4 piece sets



Chuck Dia	Part Number	A	B	C	D Thread	H	E
6-1/4"	3-890-106	2.3622	2.0866	0.7874	22 x 4	0.3937	0.2953
8"	3-890-108	3.3465	2.3622	1.0630	24 x 4	0.3937	0.3937
10"	3-890-110	3.4252	2.4409				0.4528
12-1/2"	3-890-112	4.3307	3.0315	1.3386	32 x 6	0.5118	0.5512
15-3/4"	3-890-116	4.7244	3.1890	1.4961			
20"	3-890-120	5.7087	3.7402	1.7717	36 x 6	0.6299	0.6299

TMX Spare Parts

- Sold by the piece

Chuck Dia	Operating Screw		
	Part Number	OD	L
6-1/4"	3-890-606	0.8661	2.2047
8"	3-890-608	0.9449	2.9134
10"	3-890-610		3.5433
12-1/2"	3-890-612	1.2598	4.3307
15-3/4"	3-890-616		5.3150
20"	3-890-620	1.4173	6.4961

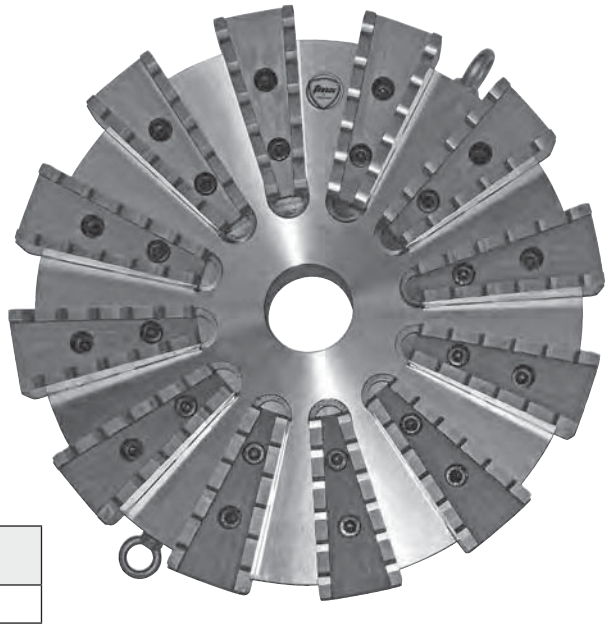
Chuck Dia	Wrench
	Part Number
6-1/4"	3-889-006
8"	3-889-010
10"	
12-1/2"	3-889-012
15-3/4"	3-889-016
20"	3-889-020

Chuck Dia	Thrust Bearing		
	Part Number	OD	L
6-1/4"	3-890-706	0.8268	1.2992
8"	3-890-708	0.9055	1.6535
10"	3-890-710		1.9291
12-1/2"	3-890-712	1.2598	2.0079
15-3/4"	3-890-716		2.2047
20"	3-890-720	1.4173	2.3228

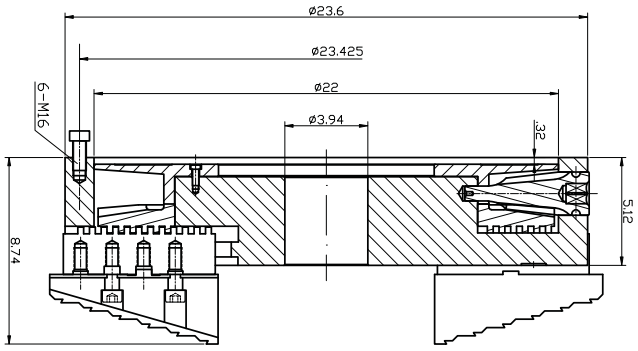
12-Jaw Manual Chuck

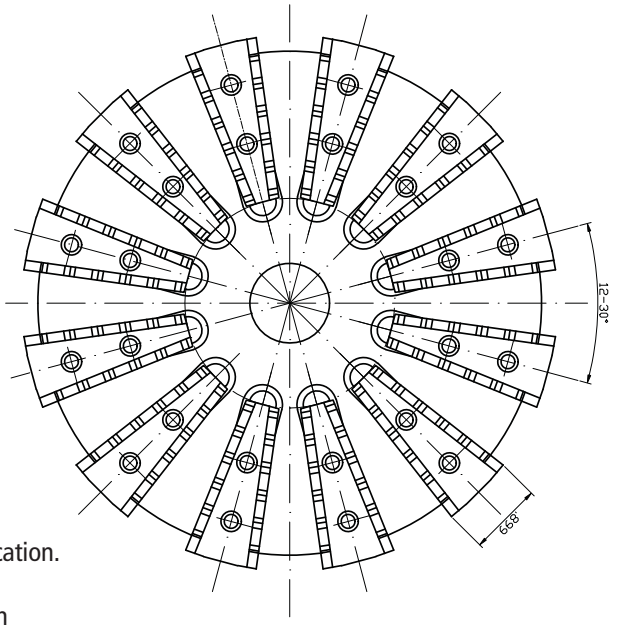
Specifications

- Chuck Height: 222mm (8.74")
- Chuck OD: 630mm (25")
- Net Weight: 335KG (738.5 lb)
- Max rpm: 300r/min
- Hold Max. Weight: 500KG (1102.3 lb) Standard Jaw
- Max Griping Force: 72KN (16186.2 lb)
- Clamping Range: OD: 370-790mm (14.57"~31.1")
  ID: 300-720mm (11.81"~28.35")
- Master Jaw Size: Width: 50mm (1.97"),
  Length: 183mm (7.2")
- Clamp: Min. 2mm (.079") wall thickness tubing
- Accuracy (run out): OD Clamping: .012"
  ID Clamping: .012"



Chuck Dia	Part Number	Chuck Height	Max RPM	Max Griping Force	Wt lbs
25"	3-996-2512	8.74"	300r/min	16186.2lb	738.5





TMX Workholding specialty chuck manufactured for your specific application.

TMX engineers perform a full project review with you to get an in-depth understanding of your application. After the review, we provide a concept drawing that we discuss with your engineering teams. Once the final concept is fully understood and agreed upon, detailed designs are completed and production begins. The workholding solution is fully tested and delivered to your site where we are there during the full installation.

Call the TMX Workholding Solutions Team at 508- 653 -8897 or 800-992-4733 and begin the discussion today.

Workholding Solutions

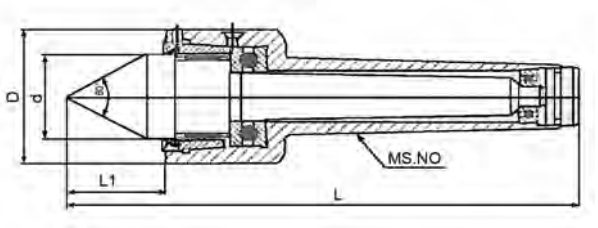
10 Year WARRANTY
ON ALL VISES

TABLE OF CONTENTS

LIVE CENTERS AND VISES

Precision Live Centers 0.005mm / 0.0002"

- Machined from one piece of forging
- Hardened and precisely ground
- Spindle is made of high quality Alloy Steel, heat treated to RC 60 – 62
- Centers are provided with three selected heavy duty precision bearings
- Bearings are protected against dust and coolant



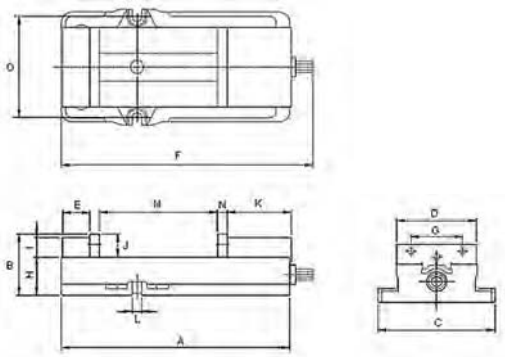
Morse Taper	Part Number	Maximum Wt of Workpiece lbs	RPM max	Accuracy Radial Run Out	D	d	L	L1	Wt lbs
1	3-901-001	220	6000	0.0002	1.3386	0.7087	4.5669	0.95	0.64
2	3-901-002	750	6000	0.0002	1.4173	0.8661	4.9213	1.00	0.79
3	3-901-003	900	5000	0.0002	1.8504	1.1811	6.378	1.26	1.9
4	3-901-004	2866	4000	0.0002	2.1654	1.378	7.6378	1.48	3.15
5	3-901-005	4409	3500	0.0002	2.7559	1.7717	9.4488	1.85	6.7
6	3-901-006	8818	2500	0.0002	3.5433	2.3622	12.5197	2.44	15.9

Precision Clamping Vises

For all of your CNC Milling Machines needs whether heavy milling, boring, tapping, drilling, or grinding. TMX vises deliver the same proven accuracy every time. Improving on industry standards; TMX Vises are ultra precision in flatness, parallelism and verticality.

Features

- 10 Year Warranty
- Body made from high quality ductile Iron hardened to 45RC
- Sealed bearing system increases the life of the vise
- Close tolerance bed heights for excellent accuracy
- Anti-lift mechanism keeps the work piece from lifting
- Chip cover for lead screw protection
- Wrench included



Part Number	A	B	C	D	E	F	G	H (Bed height)	I	J	K	L	M	N	O	Wt lbs	Max Clamping Force
3-220-006	17.008	4.627	9.252	5.984	2.047	19.094	3.875	2.875" +/- 0.0005"	1.496	1.752	4.843	0.688	7.559	0.709	7.64	79	8,200 lbs
3-220-0068	17.205	4.627	8.750	5.984	2.047	18.937	3.875	2.875" +/- 0.0005"	1.496	1.752	4.843	0.688	8.898	0.709	7.64	80	9,840 lbs
3-220-0081	21.850	5.515	11.614	7.992	2.283	23.031	4.724	3.310" +/- 0.0005"	1.969	2.205	6.181	0.813	10.433	0.953	10.00	150	11,600 lbs

Terms and Conditions

Workholding Solutions

- Prices are subject to change without notice
- F.O.B. Natick Massachusetts warehouse
- Latin America export sales are shipped EX-WORKS-Natick, MA or EX-WORKS-Schaumburg, IL
- Payment: net 30

Return Policy

1. All returns are subject to the discretion of Toolmex Industrial Solutions

2. All returns require prior approval, and an assigned Return Merchandise Authorization number to the requested return

3. When calling to request an RMA, please have the following information available:

(a) Your purchase order number

(b) Our order number or invoice number

(c) Our part number

(d) Reason for return

4. Merchandise must be in original packaging and in resalable condition

5. All returns are subject to inspection prior to credit issued to the customer

6. The following return charges may apply:

(a) Toolmex error – No restocking charge and no freight charge

(b) Customer error – returned in original carton – in resalable condition
- New order of equal or greater value placed at time of return – no restocking charge
- No Replacement order – 10% restocking charge

(c) Customer error – not in original carton – 25% repackaging charge

(d) Customer error – merchandise not in resalable condition – no credit due

(e) Large authorized returns not packaged well – 25% repackaging charge

Customer error – the customer is responsible for all freight charges – original order and returns

7. Defective returns are subject to evaluation prior to credit being issued. Immediate replacement orders will be billed. Credit will be issued after the returned product has been evaluated

8. No credit will be issued on authorized returns due to the following conditions:

(a) Item has been used – not in resalable condition

(b) Item has been modified by customer

(c) Item has been damaged

(d) Item returned does not match item authorized to return

The material will be returned to the customer at their expense or disposed of at our end

9. Cancellation of order: such requests may be subjected to a maximum 50% cancellation charge, depending on our availability to cancel with our suppliers

10. Unauthorized returns with no paperwork will not be processed, and no credit due to customer.

Such returns are subject to be returned to customer with all freight charges the responsibility of the customer

11. Claims: All Claims must be made within seven days from receipt of merchandise

12. Short Shipments: Toolmex must be notified within 30 days of all short shipments

13. Damaged or lost shipments:

(a) UPS – Notify your local UPS office and Toolmex Industrial Solutions immediately. Keep damaged tools and packaging until you are advised to dispose of them

(b) TRUCK – Toolmex Industrial Solutions is not liable for merchandise damaged or lost by trucking companies

Please have the driver note the damage or shortage on the freight bill. The customer should file a claim with the trucking company, and reorder the product with Toolmex immediately

14. Warranty: Our products have a one year Limited Warranty. Warranty coverage begins on the day the product is purchased by the customer. After one year from the date of purchase the product is non-returnable

continued on next page

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Workholding Solutions

Workholding Solutions

TMX Workholding Quality Assurance Certification
Two Year Warranty

CERTIFIED, TESTED, INSPECTED AND QUALIFIED FOR ACCURACY AND WORKMANSHIP. QA LAB APPROVED.

Register your TMX chuck @ www.toolmex.com

Product Warranty*

LIMITED TWO YEAR WARRANTY

(a) Toolmex warrants to the Buyer that the Equipment will be free from defects in material and workmanship under normal storage, use and service for a period of two (2) years after date of purchase*. Toolmex's sole responsibility under this warranty shall be to adjust, repair or replace, at its option, any part or component which is or becomes defective in material or workmanship during said two (2) year period, provided that the Buyer promptly and completely reports such failure to Toolmex Industrial Solutions in writing and Toolmex, upon inspection, finds such part or component to be defective in material or workmanship. Ordinarily, but solely at the option of Toolmex, such adjustment, repair or replacement will be performed at the Toolmex facility. Buyer must obtain shipping instructions from Toolmex for the return of any item covered by this warranty and compliance with such shipping instructions shall be a condition of Toolmex Industrial Solutions obligations under this warranty.

(b) Said warranty is contingent upon proper use of the equipment by the Buyer in the application for which the equipment was intended and does not cover equipment which has been modified or altered or which has been subjected to unusual physical or electrical stress or on which the original identification marks or serial or model numbers have been removed or altered. Said warranty will not apply if adjustment, repair or replacement is required because of accident, neglect, misuse, damage in transportation, functional difficulties or defects due to improper handling or maintenance, or any cause whatsoever other than normal use.

(c) Said warranty extends only to Buyer and not to any third parties to whom Buyer might furnish the equipment.

(d) EXCEPT AS SPECIFICALLY AND EXPRESSLY PROVIDED HEREIN, TOOLMEX MAKES NO WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO ANY EQUIPMENT. THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY EXPRESSLY EXCLUDED. BUYER ACKNOWLEDGES THAT IT HAS NOT RELIED ON TOOLMEX'S SKILL OR JUDGMENT TO SELECT OR FURNISH EQUIPMENT SUITABLE FOR ANY PARTICULAR PURPOSE AND THAT TOOLMEX HAS MADE NO WARRANTIES EXCEPT THE WARRANTY EXPRESSLY SET FORTH HEREIN, WHETHER IN CONNECTION WITH ANY DEMONSTRATION, PROPOSAL, SAMPLE, THESE TERMS AND CONDITIONS OR OTHERWISE.

(e) The sole remedy of Buyer, and the sole liability of Toolmex, for breach of warranty shall be limited to the adjustment, repair or replacement set forth herein.

**Proof of purchase is required for all warranty coverage and services*

Natick, MA
Corporate Headquarters
1075 Worcester Street
Natick, MA 01760

Schaumburg, IL
Regional Headquarters
2015 S. Mitchell Blvd.
Schaumburg, IL 60193

Customer Service & Support 508-653-8897 • 855-869-2425 (855-TMX-CHCK)

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