

SOLID ADJUSTABLE TAPS - LSA



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Versatility

The LSA Tap is recommended for high production tapping on reversing spindle machines and for automatic screw machines where limited length clearance prohibits the use of a collapsible tap. It is also ideal for hand sizing and salvaging previously tapped threads.

Product Quality

LSA Taps are precision tools of rigid construction and made from suitable alloy steel. All parts subject to wear are nitrided after heat treating.

The drive to the chasers is direct and positive. The chasers are held securely against tapered seats on the plunger and are supported on all sides providing the rigidity necessary for accurate threads.

The chasers are made from high speed steel. The thread form and all supporting or locating surfaces are precision ground after hardening ensuring accuracy and longer chaser life. The chasers can be reground offering lower tooling cost and inventories than comparable taps.

Size Adjustments



Liberal size adjustment is provided, ranging from 1/32" – 3/32" depending on tap size, both over and under nominal chaser size. This wide adjustment range permits various thread fits to be obtained and also supplies a means to compensate for loss of size due to chaser wear or regrinding.

A quick adjustment can be made by rotating the size adjusting screw conveniently located in the nose of the tap. Standard LSA Taps between 1-1/8" to 4" incorporate an adjusting screw having a nylon insert to securely retain the screw at the desired setting. On the larger size taps, the adjustment locking screw located in the side of the tap must be loosened before an adjustment can be made. The locking screw should be tightened firmly to assure a permanent and reliable adjustment.

LSA Tap Chaser Dimensions

	1-1/8"		1-3/16		1-1/4"		1-3/8"		1-1/2"		1-3/4"		2"		2-1/2"						
Range - Inches*	1-1/16	-	1-3/16	1-3/16	-	1-1/4	1-1/4	-	1-3/8	1-3/8	-	1-5/8	1-5/8	-	1-7/8	1-7/8	-	2-5/16	2-5/16	-	2-3/4
Range - mm	27	-	30	30	-	32	32	-	35	35	-	42	42	-	48	48	-	59	59	-	70
Range - Pipe**													1-1/4		1-1/2		2				
Coarsest Pitch - Inches	14		11		11		11		10		10		10		10						
Coarsest Pitch - mm	1.75		2.0		2.0		2.0		2.5		2.5		2.5		2.5						
Chasers per Set	4		4		4		4		4		4		4		4						
Weight - lbs	1.00		1.00		1.13		1.25		2.00		3.00		4.75								
Weight - kg	0.45		0.45		0.51		0.57		0.91		1.36		2.16								

LSA Tap Chaser Dimensions

	3"		3-1/2"		4"		4-1/2"		5"		6"							
Range - Inches*	2-3/4	-	3-1/4	3-1/4	-	3-3/4	3-1/4	-	3-3/4	4-1/4	-	4-3/4	4-3/4	-	5-1/2	5-1/2	-	6-5/8
Range - mm	70	-	83	83	-	95	95	-	108	108	-	121	121	-	140	140	-	168
Range - Pipe**	2-1/2		3		3-1/2		4		4-1/2		5		6					
Coarsest Pitch - Inches	8		8		6		6		6		6		6					
Coarsest Pitch - mm	3.0		3.0		4.0		4.0		4.0		4.0		4.0					
Chasers per Set	4		6		6		6		6		6		6					
Weight - lbs	8.50		9.75		11.00		21.00		23.00		25.00							
Weight - kg	3.86		4.41		5.00		9.52		10.43		11.34							

* In certain instances, standard LSA Taps are available with an oversize capacity for tapping workpieces with fine pitch threads. For additional information, please send complete workpiece specifications to Landis.
 ** Using chasers with 30° throats starting 1/64" below the thread root, the taps will produce NPT pipe full threads.

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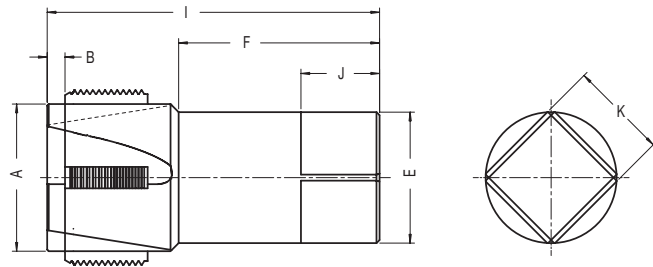
Special Threading

Overhang chasers for bottoming or shoulder work will be supplied when necessary. Special thread form chasers are available upon order. Boring and chamfering tools can also be furnished.



Left-Hand Threading

Taps with suitable chip clearances machined in the tap body and equipped with left-hand chasers can be furnished for left-hand threading.



Dimensional Selections

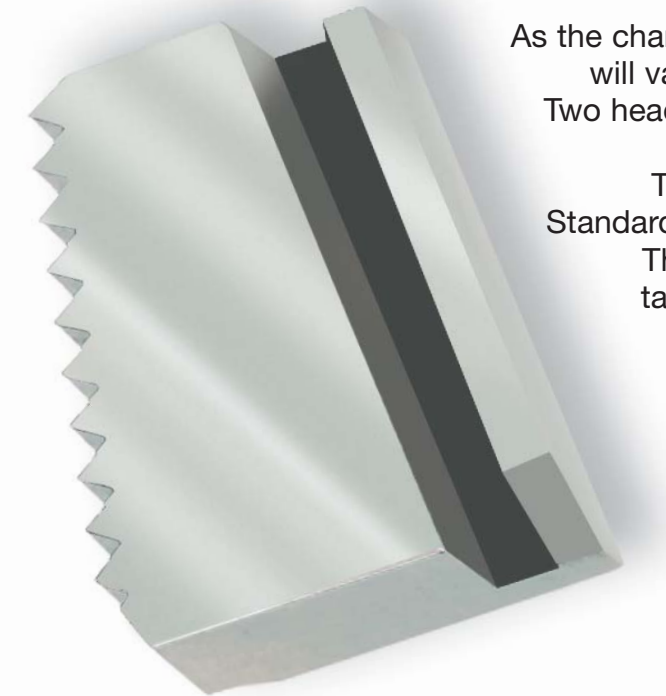
LSA Taps can tap straight or tapered threads by using the proper chaser set. Since these taps produce taper threads by "jam cutting" across the full length of the chasers, the length of the taper thread is limited to the length of the chasers. This method limits the LSA taps to producing American Standard Taper Pipe (NPT), British Standard Taper Pipe (BSTP) and similar taper forms.

As the charts indicate, the dimensions for the different sizes will vary depending on the tap size and its application. Two head sizes are available for thread sizes 1-1/8" to 2".

The body dimensions correspond to the American Standards dimensions for straight thread, solid flute taps. These taps can replace comparable size solid flute taps without requiring any machine set-up change.

Since no American Standard for solid flute taps above 2" exists, the 2" to 6" sizes are offered in one standard size.

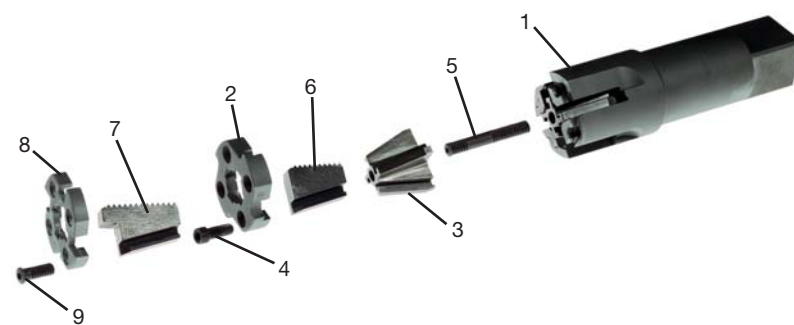
Cylindrical, Morse taper or other shanks can be provided as specials.



LSA Tap Body Dimensions

TAP SIZE	A		B		E		F		I		J		K	
	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM
1-1/8"	0.969	24.6	0.194	4.9	0.896	22.8	2.875	73.0	4.375	111.1	0.875	22.2	0.672	17.1
1-1/4"	1.031	26.2	0.194	4.9	1.021	25.9	3.188	81.0	4.688	119.1	1.000	25.4	0.766	19.5
1-3/8"	1.094	27.8	0.194	4.9	1.108	28.1	1.063	77.8	4.750	120.7	1.063	27.0	0.831	21.1
1-1/2"	1.188	30.2	0.194	4.9	1.233	31.3	3.375	85.7	4.813	122.2	1.125	28.6	0.925	23.5
1-3/4"	1.422	36.1	0.193	4.9	1.430	36.3	3.813	96.8	5.750	146.1	1.250	31.8	1.072	27.2
2"	1.672	42.5	0.193	4.9	1.644	41.8	4.063	103.2	5.875	149.2	1.375	34.5	1.233	31.3
2-1/2"	2.109	53.6	0.256	6.5	1.750	44.5	3.000	76.2	4.875	123.8	1.563	39.7	1.313	33.3
3"	2.500	63.5	0.250	6.4	2.500	63.5	3.938	100.0	6.188	157.2	1.875	47.6	1.875	47.6
3-1/2"	3.000	76.2	0.312	7.9	2.500	63.5	3.938	100.0	6.250	158.8	1.875	47.6	1.875	47.6
4"	3.500	88.9	0.312	7.9	2.500	63.5	3.938	100.0	6.250	158.8	1.875	47.6	1.875	47.6
4-1/2"	4.000	101.6	0.500	12.7	3.500	88.9	4.750	120.7	7.375	187.3	2.563	65.1	2.563	65.1
5"	4.500	114.3	0.500	12.7	3.500	88.9	4.750	120.7	7.375	187.3	2.563	65.1	2.563	65.1
6"	5.250	133.4	0.500	12.7	3.500	88.9	4.313	109.5	7.375	187.3	2.563	65.1	2.563	65.1

These dimensions correspond to standard solid taps.



Solid Adjustable Tap Parts List

No.	NAME
LSA-1	Body (Specify size and style shank wanted)
LSA-2	Chaser Retaining Cap—fits LSA-1
LSA-3	Plunger—fits LSA-1
LSA-4	Chaser Retaining Cap Screw—fits LSA-1 and LSA-2
LSA-5	Size Adjusting Screw—fits LSA-1 and LSA-3
LSA-6	Chaser (regular)—fits LSA-1 and LSA-3
LSA-7	Overhang Chaser—fits LSA-1 and LSA-3
LSA-8	Overhang Chaser Retaining Cap—fits LSA-1
LSA-9	Overhang Chaser Retaining Cap Screw—fits LSA-1 and LSA-8

NOTE: When ordering repair parts, please designate part by number, name and size of tap. Chasers will be supplied according to thread specifications, within the capacity of the tap.

NPT Pipe Dimensions

TAP SIZE	A	B	E	F	I	J	K
	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES	INCHES
1-3/4"	1.422	0.193	1.313	2.250	4.188	0.938	0.984
2"	1.672	0.193	1.500	2.625	4.438	1.000	1.125
2-1/2"	2.109	0.256	1.875	2.875	4.750	1.125	1.406
3"	2.500	0.250	2.250	3.500	5.750	1.250	1.687
3-1/2"	3.000	0.312	2.625	4.000	6.313	1.375	1.968
4"	3.500	0.312	2.813	4.500	6.813	1.500	2.108
4-1/2"	4.000	0.500	3.000	4.625	7.250	1.625	2.250

These dimensions for these taps agree with those of American Standard Taper Pipe (NPT) solid flute taps.

