

# Support Information



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## Support Information—



**THE** following is available as supplemental support to the information contained in this catalog: 17th Edition Thread and Forming/Thread Data Handbook. In continuous print since 1920, this useful book contains approximately 250 pages of information on: Care and operation of Landis die heads, rolling heads and collapsible taps. Grinding Landis tangential die head chasers. Helix angles for most thread forms. Thread data and dimension charts for the popular forms including UN, British, Acme, Metric, American and British pipe.

### Operator's Manuals

Lanco, Landmatic and Landex Heat Treated die heads manual-I-405  
Lanco Type T internal trip, S type receding chaser and 16 TXX heads for pipe threading manual-I-425

### Repair Parts Lists

MANUAL No.

#### Lanco

3/4" – 6R thru 2-1/2" 20R Heat Treated	H-208-3
4" – 32R Heat Treated	H-265-2
6" – 48R Heat Treated	H-262-2
3/4" – 6S Receding Chaser	H-209-2
1-1/2" – 12S Receding Chaser	H-261-2
2" – 16S & 2-1/2" – 20S Receding Chaser	H-264-1
6" – 48S Receding Chaser	H-263-2

#### Landmatic

5/8"– 5F and 7/8" – 7F Heat Treated	H-255-5
1-1/4" – 10F and 2" – 16F Heat Treated	H-256-5
3" – 24A and 4" – 32A Heat Treated	H-250-4
5/8" – 5DE Heat Treated (repair and operator's manual)	H-251/2/7/8

#### Landex

2" – 16JNK	H-281
1/2" – 4JN	H-228-3
13/16" – 13JN	H-217-3
1-1/4" – 10JN and 2" – 16JN and 16 JNB	H-218-4

# Support Information—

PITCHES APPLIED TO NOMINAL DIE HEAD CHASER WIDTHS

Type of Head	Size of Head	Pitch		Nominal Chaser Width
		Threads Per Inch	M/M	
LANCO TYPES R, T, VV AND VVV	3/8	80 to 16	.5 to 1.5	5/8
	9-1/6 and 5/8	40 to 12	.6 to 2.0	3/4
	3/4 and 7/8	40 to 10	.6 to 2.5	15/16
	1, 1-1/2, 2 and 2-1/2	30 to 8	1.0 to 3.0	1-3/64
	1-1/2, 2 and 2-1/2	7 and 6	3.5 and 4.0	1-7/64
	2 and 2-1/2	5-1/2 to 4	4.5 to 6.0	1-1/2
		30 to 8	1.0 to 4.0	1-3/64
		5-1/2 to 3	4.5 to 7.5	1-1/2
		4 and 6		
		2-3/4 to 2-1/2	8.0 to 10.0	2-1/4
LANDMATIC TYPES A, F, C, Z, H, HH AND DE	1/2 DE	80 to 13	0.6 to 1.75	1/2
	5/8	40 to 11	0.6 to 2.0	5/8
	7/8	32 to 9	0.75 to 2.5	3/4
	1-1/4 and 2	28 to 7	.09 to 3.5	15/16
	2	6 to 4-1/2	4.0 to 5.0	1-1/4
	3 and 4 Z	16 to 9	1.5 to 2.5	1
	3 and 4 Z	8 to 6	3.0 to 4.0	1-1/16
	3 and 4 Z	5-1/2 to 4	4.5 to 6.0	1-1/4
	3 and 4 A and C	16 to 8	1.5 to 3.0	1-3/64
	3 and 4 A and C	7 and 6	3.5 to 4.0	1-7/64
3 and 4 A	5-1/2 to 4	4.5 to 6.0	1-1/2	
LANDEX TYPES JN AND LLL	1/2 LLL	80 to 13	.5 to 1.75	1/2
	1/2 (J & JN) and 5/8	80 to 12	.5 to 2.0	5/8
	13/16 and 7/8	32 to 10	.75 to 2.5	3/4
	1-1/4 and 2	28 to 7	.9 to 3.5	15/16
	2	6 to 4-1/2	4.0 to 5.0	1-1/4

ALLOWABLE HELIX ANGLES FOR LANDIS HEADS

Size of Head	LANCO		LANDMATIC		LANDEX	
	Type R	Type VV and VVV	Types DE, A and F	Types H and HH	Types J and JN	Type LLL
3/8	15°					
1/2			15°		16-1/2°	7-3/4°
9/16	16-1/2°					
5/8		6-3/4°	16-1/2°	8°		6°
3/4	12°					
13/16					12°	
7/8		7°	12°	6-3/4°		6-3/4°
1	20°	5°				
1-1/4			12°	7°	12°	7°
1-1/2	23°	5°				
2	16°	5°	12°	7°	12°	7°
2-1/2	16°	5°				
3			3/4 to 1-1/2 dia. – 13-1/2°			
			1-5/8 to 3 dia. – 12°			
4	10°		1 to 1-1/2 dia. – 15°			
			1-5/8 to 3 dia. – 10°			
			3-1/4 to 4 dia. – 5°			
6	10°					

Helix angles are subject to pitch.  
Helix angles in excess of those listed above should be referred to LANDIS Engineering for recommendations.

TABLE OF AMERICAN STANDARD, B.S.F., WHITWORTH, AND I.S.O. METRIC COARSE STANDARD THREADS

Size (Inches)	U.N.C.		U.N.F.		WHITWORTH		B.S.F.		I.S.O. Metric Coarse		
	Pitch Thds. Per In.	PD	Pitch Thds. Per In.	PD.	Pitch Thds. Per In.	PD.	Pitch Thds. Per In.	PD.	Dia. M/M	Pitch M/M	PD. M/M
4 (.112)	40	.0958	48	.0985					3	0.5	2.675
5 (.125)	40	.1088	44	.1102	1/8 (40)	.1089			3.5	0.6	3.111
6 (.138)	32	.1177	40	.1218	5/32 (32)	.1362			4	0.7	3.545
8 (.164)	32	.1437	36	.1460	3/16 (24)	.1608			4.5	0.75	4.013
10 (.190)	24	.1629	32	.1697	7/32 (24)	.1920			5	0.8	4.480
12 (.216)	24	.1889	28	.1928			28	.1931	6	1.	5.350
1/4	20	.2175	28	.2268	20	.2180	26	.2254	7	1.	6.350
5/16	18	.2764	24	.2854	18	.2769	22	.2834	8	1.25	7.188
3/8	16	.3344	24	.3479	16	.3350	20	.3430	9	1.25	8.188
7/16	14	.3911	20	.4050	14	.3918	18	.4019	10	1.5	9.026
1/2	13	.4500	20	.4675	12	.4466	16	.4600	12	1.75	10.863
9/16	12	.5084	18	.5264	12	.5091	16	.5225	14	2.	12.701
5/8	11	.5660	18	.5889	11	.5668	14	.5793	16	2.	14.701
3/4	10	.6850	16	.7094	10	.6860	12	.6966	18	2.5	16.376
7/8	9	.8028	14	.8286	9	.8038	11	.8168	20	2.5	18.376
1	8	.9188	12	.9459	8	.9200	10	.9360	22	2.5	20.376
1-1/8	7	1.0322	12	1.0709	7	1.0335	9	1.0539	24	3.	22.051
1-1/4	7	1.1572	12	1.1959	7	1.1585	9	1.1789	27	3.	25.051
1-3/8	*6	1.2667	*12	1.3209	6	1.2683	8	1.2950	30	3.5	27.727
1-1/2	6	1.3917	12	1.4459	6	1.3933	8	1.4200	33	3.5	30.727
1-5/8	*5-1/2				5	1.4969	8	1.5450	36	4.	33.402
1-3/4	5	1.6201			5	1.6219	7	1.6585	39	4.	36.402
1-7/8	*5				4.5	1.7327			42	4.5	39.077
2	4-1/2	1.8557			4.5	1.8577	7	1.9085	45	4.5	42.077
2-1/4	4-1/2	2.1057			4	2.0899	6	2.1433	48	5.	44.752
2-1/2	4	2.3376			4	2.3399	6	2.3933	52	5.	48.752
2-3/4	4	2.5876			3.5	2.5670	6	2.6433	56	5.5	52.428
									60	5.5	56.428
3	4	2.8376			3.5	2.8170	5	2.8719	64	6.	60.103
3-1/4	4	3.0876			3.25	3.0530	5	3.1219	68	6.	64.103
3-1/2	4	3.3376			3.25	3.3030	4-1/2	3.3577	72	6.	68.103
									76	6.	72.103
3-3/4	4	3.5876			3	3.5366	4-1/2	3.6077	80	6.	76.103
4	4	3.8376			3	3.7866	4-1/2	3.8577	84	6.	80.103
4-1/4							4	4.0899			

\*The diameter opposite these pitches do not appear in the American Standard on Screw Threads.

# Support Information—

**SURFACE CUTTING SPEED - RPM CONVERSION TABLE  
FOR BOLT THREADING**

Diameter of Bolt (Inches)	Circumferential Cutting Speeds, Feet Per Min.											
	10	12	14	16	18	20	25	30	35	40	50	60
	Revolutions Per Minute											
1/8	306	366	428	488	550	661						
3/16	204	244	285	326	367	407	509	611				
1/4	153	183	214	244	275	306	382	459				
5/16	122	146	171	196	220	244	306	367	428	489		
3/8	102	122	143	163	183	204	255	306	357	408		
7/16	87	105	122	135	158	175	218	262	306	349	437	524
1/2	76	92	107	122	137	153	191	229	267	306	382	459
9/16	72	86	101	115	129	144	180	216	252	288	360	432
5/8	61	73	86	98	110	122	153	183	214	244	306	367
3/4	51	61	71	81	92	102	127	153	178	204	255	306
7/8	44	52	61	70	79	87	109	131	153	175	218	262
1	38	46	53	61	69	76	95	114	134	153	191	229
1-1/8	34	41	48	54	61	68	85	102	119	136	170	204
1-1/4	31	37	43	49	55	61	76	92	107	122	153	183
1-3/8	28	33	39	44	50	56	69	83	97	111	129	167
1-1/2	25	31	36	41	46	51	64	76	89	102	127	153
1-5/8	23	28	33	37	42	47	58	70	82	94	117	141
1-3/4	22	26	31	35	39	44	55	66	76	87	109	131
1-7/8	20	24	29	32	37	41	51	61	71	81	102	122
2	19	23	27	31	34	38	48	57	67	76	96	115
2-1/8	18	21	25	29	32	36	45	54	63	72	90	108
2-1/4	17	20	24	27	31	34	42	51	59	68	85	102
2-3/8	16	19	23	26	29	32	40	48	56	64	80	96
2-1/2	15	18	21	24	27	31	38	46	53	61	76	82
2-3/4	14	17	19	22	25	28	35	42	49	55	69	83
3	13	15	18	20	23	25	32	38	45	51	64	76
3-1/4	12	14	16	19	21	23	29	35	41	47	59	70
3-1/2	11	13	15	17	20	22	27	33	38	44	55	65
3-3/4	10	12	14	16	18	20	25	31	35	41	51	61
4	9	11	13	15	17	19	24	29	33	38	48	57

**SURFACE CUTTING SPEED - RPM CONVERSION TABLE  
FOR PIPE THREADING**

Size of Pipe (Inches)	Cutting Speed, Feet Per Min.									
	10	15	20	25	30	35	40	45	50	
	Revolutions Per Minute									
1/8	94.33	141.50	188.66	235.83	282.99	330.16	377.32	424.49	471.65	
1/4	70.9	106.35	141.8	177.25	212.7	248.15	283.6	319.05	354.50	
3/8	56.5	84.75	113	141.25	169.5	197.75	226	254.25	282.5	
1/2	45.45	68.17	90.90	113.63	136.35	159.08	181.80	204.53	227.25	
3/4	36.4	54.6	72.8	91	109.2	127.4	145.6	163.8	182	
1	29.1	43.65	58.2	72.75	87.30	101.85	116.4	130.95	145.5	
1-1/4	23	34.5	46	57.5	69	80.5	92	103.5	115	
1-1/2	20.1	30.15	40.2	50.25	60.3	70.35	80.4	90.45	100.5	
2	16.1	24.15	32.2	40.25	48.3	56.35	64.4	72.45	80.5	
2-1/2	13.3	19.95	26.60	33.25	39.90	46.55	53.20	59.85	66.5	
3	10.9	16.35	21.8	27.25	32.7	38.15	43.6	49.05	54.5	
3-1/2	9.52	14.28	19.04	23.80	28.56	33.32	38.08	42.84	47.5	
4	8.47	12.71	16.94	21.18	25.41	29.65	33.88	38.12	42.35	
4-1/2	7.63	11.45	15.26	19.02	22.89	26.71	30.52	34.34	38.15	
5	6.87	10.31	13.74	17.18	20.61	24.05	27.48	30.92	34.35	
6	5.77	8.66	11.54	14.43	17.31	20.20	23.08	25.97	28.85	
7	5.01	7.52	10.02	12.53	15.03	17.54	20.04	22.55	25.05	
8	4.43	6.65	8.86	11.08	13.29	15.51	17.72	19.94	22.15	
9	3.97	5.96	7.94	9.93	11.91	13.90	15.88	17.87	19.85	
10	3.55	5.33	7.10	8.88	10.65	12.43	14.2	15.98	17.75	
11	3.25	4.88	6.5	8.13	9.75	11.38	13	14.63	16.25	
12	3	4.5	6	7.5	9	10.5	12	13.5	15	
14	2.73	4.1	5.46	6.83	8.19	9.56	10.92	12.29	13.65	
15	2.55	3.82	5.1	6.38	7.65	8.93	10.2	11.48	12.75	
16	2.39	3.57	4.78	5.98	7.17	8.37	9.56	10.76	11.95	
17	2.25	3.38	4.5	5.63	6.75	7.88	9.00	10.13	11.25	
18	2.12	3.18	4.24	5.3	6.36	7.42	8.48	9.54	10.6	
20	1.91	2.87	3.82	4.78	5.73	6.67	7.64	8.60	9.55	

# Support Information—

## F AND A LANDMATIC HEAT TREATED DIE HEADS

### Chaser Holder Special and Oversize Diameter and Pitch Combination Ranges

Size of Head	DIAMETRICAL RANGE OF CHASER HOLDERS						COARSE PITCH LIMITATIONS			
	Special Chaser Holders for Diameters within the Standard Range**			Oversize Chaser Holders for Diameters Beyond The Standard Range			Standard Range		Oversize Range	
	Inches	MM	Inches	MM	Inches	MM	Per Inch	MM	Per Inch	MM
5/8"	#4 to #12 3/16 to 5/8	4 to 16	3/4 to 1	20 to 24	7/8	22	11	2.0	14	1.75
7/8"	#4 to #12 1/4 to 7/8	6 to 22	1 to 1-1/4 15/16 to 1-1/2	24 to 33	1-5/16	33		9	2.5	14
1-1/4"	1/4 to 3/4 13/16 to 1-1/4	6 to 18 20 to 33	1-9/16 to 2 1-5/16 to 2	39 to 52 33 to 52	1-1/8 1-3/16 or 2	28 30 or 50*	7	3.5	12	2.0
2"	3/8 to 1-1/4 1-3/8 to 3	9 to 33 36 to 52	2-1/8 to 3 3-1/8 to 3-3/4	56 to 76 80 to 95	1-5/16 or 2-1/8* 1-5/16 or 2-1/8*	33 or 54* 33 or 54*	4-1/2	5.0	8	3.0
3"	3/4 to 1-1/2 1-5/8 to 3	18 to 39 42 to 76	3-1/8 to 4-1/4 4-3/8 to 5-1/2	80 to 105 110 to 140	1-1/2 or 3-1/16* 1-13/16	38 or 78* 46	4	6.0	6	4.0
4"	1 to 1-1/2 1-5/8 to 2-1/2	24 to 39 42 to 64 68 to 100	4-1/8 to 4-3/4 5 to 6-1/2	105 to 120 125 to 165	2-5/16 1-7/8 or 2-7/8*	59 48 or 73*	4	6.0	6	4.0

\*Requires special built-up chaser holders.

\*\* Other special chaser holders in addition to those listed may be required to thread all special threads within the die head range.

## J AND JN LANDEX HEAT TREATED DIE HEADS

### Chaser Holder Special and Oversize Diameter and Pitch Combination Ranges

Size of Head	DIAMETRICAL RANGE OF CHASER HOLDERS						COARSE PITCH LIMITATIONS			
	Special Holders - Diameters Within The Standard Range			Oversize Holders - Diameters Beyond The Standard Range			Standard Range		Oversize Range	
	Inches	MM	Inches	MM	Inches	MM	Per Inch	Pitch	Per Inch	Pitch
1/2"	#4 to #12 3/16 to 1/2	4 to 12	3/4 to 1	20 to 24	7/8	22	12	2.0	14	1.75
13/16"	#4 to #12 1/4 to 13/16	6 to 22	15/16 to 1-1/2	24 to 39	1-1/8	28	9	2.5	14	1.75
1-1/4"	1/4 to 3/4 13/16 to 1-1/4	6 to 18 20 to 33	1-9/16 to 2 1-5/16 to 2	39 to 52 33 to 52	1-1/8 1-3/16 to 2*	28 30 or 50*	7	3.5	12	2.0
2"	3/8 to 1-1/4 1-3/8 to 2	9 to 33 36 to 52	2-1/8 to 3 3-1/8 to 3-3/4	56 to 72 80 to 95	1-5/16 to 2-1/8* 1-5/16 to 2-1/8*	33 or 54* 30 or 50*	4-1/2	5.0	8	3.0

\*Requires special built-up chaser holders.

\*\* Other special chaser holders in addition to those listed may be required to thread all special threads within the die head range.

## R LANCO HEAT TREATED DIE HEADS

### Chaser Holder Special and Oversize Diameter and Pitch Combination Ranges

Size of Head	DIAMETRICAL RANGE OF CHASER HOLDERS						COARSE PITCH LIMITATIONS			
	Special Chaser Holders for Diameters within the Standard Range**			Oversize Chaser Holders for Diameters Beyond The Standard Range			Standard Range		Oversize Range	
	Inches	MM	Inches	MM	Inches	MM	Per Inch	MM	Per Inch	MM
3/4"	1/4 to 3/4	6 to 18	1-3/16 to 1-1/4 1-1/4 to 2 1-3/16 to 2*	20 to 32 33 to 52 52 to 72	1-3/8 1-3/16 or 2* 1-3/16 or 2*	33 30 or 50* 30 or 50*	10	2.5	10	2.5
1"	1/4 to 1	6 to 27	1-1/16 to 2-1/8 2-1/8 to 3	28 to 56 60 to 76	1-7/16 or 2-3/16* 2-3/8*	36 or 55* 60*	8	3.0	8	3.0
1-1/2"	3/8 to 1-1/2	8 to 39	1-9/16 to 2-5/8 2-5/8 to 3-3/4	40 to 68 72 to 95	1-1/4 or 2* 1-1/2 or 2-5/16*	33 or 52* 38 or 59*	6	4.0	7	3.5
2"	1/2 to 1-1/2	12 to 39	2-1/16 to 3-1/8 3-1/8 to 4-1/4	56 to 80 84 to 108	1-7/8 or 2-5/8* 2 or 2-3/4*	47 or 67* 51 or 70*	4-1/2	5.0	7	3.5
2-1/2"	1/2 to 1-1/2	12 to 39	2-9/16 to 3-1/8 3-1/8 to 4-1/4	68 to 80 84 to 108	1-7/8 or 2-5/8* 2 or 2-3/4*	47 or 67* 51 or 70*	4	6.0	7	3.5
4"	1 to 1-1/2 1-5/8 to 2-1/2	24 to 39 42 to 64 68 to 100	4-1/8 to 5-1/4 5-1/8 to 6	102 to 134	3-1/8	79	3	7.5	6	4.0
6"	2-1/2 to 2-3/4 2-7/8 to 4 4-1/8 to 5-1/4 5-3/8 to 6-5/8	64 to 68 70 to 100					3	7.5		

Note: The 6" LANCO has no oversize chaser holders.

\* Requires special built-up holders.

\*\* Other special chaser holders in addition to those listed may be required to thread all special threads within the die head range.