THORNDIKE CORPORATION

2026 PRODUCTS & MATERIALS CATALOG

TABLE OF CONTENTS

INTRODUCTION	2
PRODUCTS AND MATERIALS	3
STEP AND TONGUE LOADS (TL-XXXX)	4
CONE LOADS (CL-XXXX)	13
WEDGE LOADS (WL-XXXX)	18
DOUBLE TAPERED SPEAR LOADS (DTW-XXXX)	22
TAPERED SPEAR LOADS (THP-XXXX)	23
DUAL ANGLE TAPERED SPEAR LOADS (DTHP-XXXX)	24
LOSSY INSERTS CHANNEL LOADS (CHL-XXXX)	26
RIDGEGUIDE LOADS (RSL-XXXX)	27
ENGINEERING SPECIALTIES SERVICE	



680 North Bedford Street, East Bridgewater, MA 02333

Telephone: (800) 590-3367; (508) 378-9797; Fax: (508) 378-1529

INTRODUCTION

Thorndike Corporation

Thorndike Corporation is a leading design and precision manufacturer of microwave absorbing dielectrics supplying the military, commercial and industrial fields with 80 years of continuous service. We manufacture our own line of high loss absorbers to fit hundreds of old requirements and customize parts for new designs. Our current formulas include the exact equivalents to the old standard materials used in microwave applications for 80 years. Our materials are used in many components such as terminations, attenuators, mode suppressors, EMI suppressors, filters, couplers, and virtually anywhere microwave frequency suppression is desired.

At Thorndike we mold, machine, die cut and grind raw stock materials into precise engineering prototypes or full production runs. Our machine shop includes C.N.C. lathes, C.N.C. millers, lathes, millers, surface grinding, Blanchard grinding, OD and ID grinding and grinders capable of machine all types of dielectrics, plastics, and silicon carbide. We also can centerless grind rod stock to almost any length and diameter. Our machine shop manufactures to print, finished components using either our own materials or yours.

We manufacture based on the customer's needs; from a one-piece sample prototype and finished product to a production run exceeding one million pieces. For new designs, prototypes, or engineering upgrades, we provide the electrical and mechanical design for many types of microwave products, from system specifications.

Our engineering department works with your designers to integrate the right material into your components. We provide the optimum shapes, materials and design for high power applications, low cost, special frequency and wide band applications. Our products are designed into coaxial, waveguide, strip and coplanar waveguide applications. Contact our technical support department for particular requirements.

Custom Orders

If you have a unique need, the design and engineering staff at Thorndike Corporation can custom design the dielectrics that will perform to your specifications. Individual custom test pieces of new designs are available on a quick turn-around basis.

It is also likely that whatever your needs, we may already have a part in our Sample Room that fits your requirements. Simply let us know your area of interest, and we will be happy to show you specific samples. In the event that we do not, we can create original individual custom test pieces to your specs in a remarkably short time.

For more information on custom orders, please contact our design and engineering staff.

Ordering Information and Terms

To request a quote, please email your request to Jim@thorndikecorp.com with your specifications and contact information. A representative will contact you to discuss your needs in detail. Stock items can be shipped within 24 hours. Lead time for custom orders is per customer request.

All major credit cards accepted and discount applies. Please call for discount pricing and terms.

Disclaimer

Thorndike Corporation is continually updating, improving and adding to our product line based on the latest technologies and customer requirements. If you do not see a part that is suitable for your application, it is very possible that we have a new design, not shown in this catalog. Please contact us with any special requirements that you do not see listed within the catalog of components.

PRODUCTS AND MATERIALS

Thorndike Products

Thorndike finished products include thousands of components in a variety of shapes and sizes that were developed and produced to meet customers' needs. Our methods and the special array of tools, dies forms and jigs we have created have made us unique in the industry and have made it possible for us to economically mass produce parts.

Typical low power products include:

- Cone Terminations
- Step Loads
- Single and Double Tongue Loads
- Filler Cavity Backs
- Choke Rings and Bearings
- Damping Rings
- Attenuator Bushings
- Rotary Joint Bushings
- Wedge & Double Wedge Attenuators

Typical high-power products include:

- Tapered Spear Loads
- Wedge Loads
- Channel Loads

Other Capabilities include:

- Machining! Grinding! Die Cutting! EDM
- Ferrites
- Garnets
- Magnets
- Gaskets
- Preforms
- Windows (High Power Boron)

Thorndike Materials

Using our own formulations, the Thorndike Raw Material Lab produces high and low power raw materials such as silicon carbide and polyiron from which the dielectrics and absorbers are made. Material can be prepared to meet your specifications using any of our 75+ standard formulations, or in any range between these formulas.

Our raw material, which meets NASA aerospace criteria, can be milled, bored, threaded, tapped and ground. It is available in bars, rods, and sheet stock. Most material is also available as pour-able kits.

We machine a variety of materials including but not limited to:

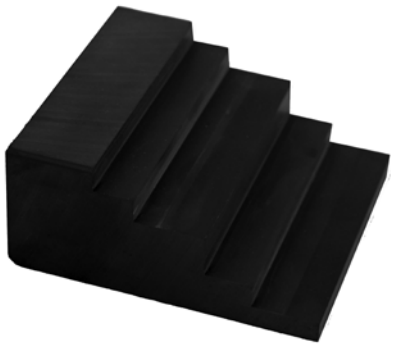
- ferrites
- garnets
- magnets
- ceramics
- ferrous and non-ferrous materials
- boron nitride
- plastics

Refractory grade silicone carbide is available upon request. We also manufacture silicone and urethane-based rubber. For technical data or additional information on our material, please contact our technical department.

Catalog Part Number Notes

HP = HIGH POWER POLYIRON
HPC = HIGH POWER CERAMIC
HH = HALF HEIGHT
ALL OTHERS ARE POLYIRON

TL-XXXX

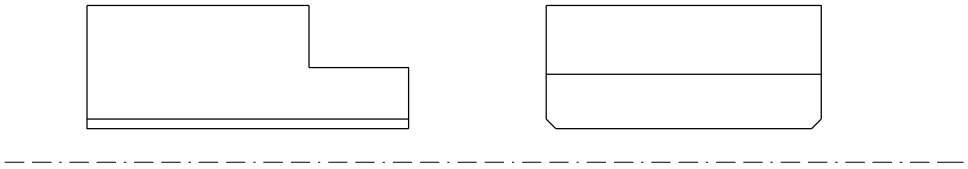
Step Loads	Tongue Loads
	

Thorndike Step and Tongue loads come in both low and high-power versions. The low power versions use an iron loaded lossy material and the high-power versions are made from silicon carbide. Because of the small size of these parts, it is difficult for these to operate at very high powers unless high operating temperatures within the assembly can be realized. Typical power levels of silicon carbide Step or Tongue loads range from 2 to 100 watts depending on the waveguide size, mounting technique and cooling system employed by user.

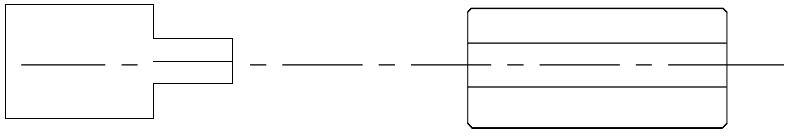
They are typically used for low bandwidth applications where good performance is required over narrow frequency bands. Typical performance for a single step or tongue load is 1.10:1 over 10% waveguide band. Increased performance can be obtained by adding additional steps; however, this causes the length to increase as well. These parts are used when space is a concern and the system has a defined frequency band.

Thorndike designs and manufactures hundreds of different Step loads ranging in frequency from 1 - 40 GHz, covering waveguide sizes from WR-650 to WR-22.

STEP LOAD



TONGUE LOAD



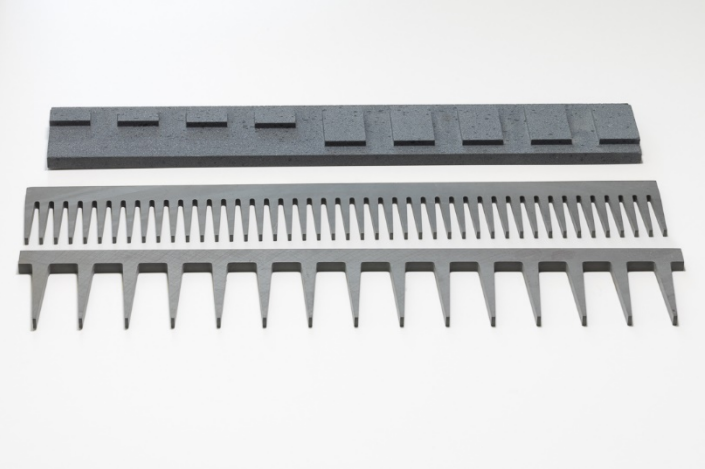
Thorndike Corporation is continually updating, improving and adding to our product line for step loads based on the latest technologies and customer requirements. If you do not see a part that is suitable for your application, it is very possible that we have a new design, not shown on this sheet. Please contact us with any special requirements that you do not see listed on this list of components.

Materials Disclaimer

Thorndike Corporation uses silicon carbide for our high power, high temperature absorbing applications. This material has been analyzed and tested over many years and is a proven product used in high power microwave applications. The nature of this material results in batch-to-batch variations that could cause different electrical performance characteristics.

When purchasing our standard part numbers and products from the catalog using silicon carbide, we adjust for this material variation by testing and verifying each batch of material to ensure our electrical specifications are consistent with the end product. Our adjustments do not affect the outline dimensions, or form-fit-function of the part being sold. Typically, a minor adjustment in the front matching section is required to maintain electrical continuity between all parts.

Our internal processes control the material to ensure all parts shipped will meet the specifications as defined in the purchase order. This guarantee does not pertain and does not carry over to any part used for different applications, customer requested modified dimensions, or when used outside of the specified frequency range for which it is designed or advertised in our catalog. If your application requires a modification in frequency, VSWR, power level, or geometry to our standard part number, that product is NOW a new part and must be designed and tested to meet any electrical or mechanical performance. This design may result in additional engineering and/or testing charges.



TL-XXXX Tongue Load / Step Load - Low Power

WR-	P/N	FREQ	VSWR	LEN
340	TL005	2.2-2.6	1.10	2.25
284	TL018	2.7-3.1	1.10	2.40
284	TLD031	2.9-4.0	1.06	1.25
284	TL041	2.9-3.1	1.10	1.92
284	TL040	2.9-3.1	1.10	2.00
284	TL022HH	2.9-3.1	1.10	2.5
284	TL020	2.7-2.9	1.10	2.40
229	TL064HH	3.4-4.2	1.20	1.25
229	TL060	3.2-3.5	1.10	1.35
229	TL064	3.4-4.2	1.10	1.68
229	TL065	3.5-4.2	1.06	1.9
229	TLD059	3.10-3.50	1.2	.95
229	TLD064	3.5- 5.1	1.10	0.98
229	TL063	3.4 -4.4	1.10	2.50
229	TL061	4.25-4.55	1.10	1.60
187	TL120	5.4-6.0	1.10	1.30
187	TL085	4.2-5.2	1.10	1.75
187	TL086	4.4-5.1	1.08	1.50
187	TL090	4.4-5.1	1.06	2.35
187	TL120	5.4-6.0	1.07	1.30
187	TL125	5.4-5.9	1.12	1.50
187	TLD080	4.2-5.8	1.10	0.85
187	TL105	4.9-5.2	1.06	1.25
159	TL145	4.9 -7.05	1.15	1.80
159	TL160	5.8-7.0	1.05	1.00
137	TL180	5.45-5.82	1.10	1.00
137	TL192	5.86-6.47	1.07	1.33
137	TL213HP	5.85-6.45	1.06	1.00
137	TL185	5.45-5.90	1.05	1.25
137	TL225	7.125-7.75	1.06	0.87
137	TL190M	5.9-6.5	1.08	1.25
137	TL192	5.9-6.5	1.05	1.25
137	TL200	5.9-6.50	1.07	1.00
137	TL202	5.9-6.45	1.08	1.04
137	TL205	5.925-6.425	1.06	.690
137	TL206	5.9-6.5	1.06	1.25
137	TL220	6.2-7.0	1.06	1.20
137	TL220	6.1-7.2	1.10	1.20
137	TL230	6.4 - 7.2	1.15	.77
137	TL260	7.25-7.75	1.05	0.63
137	TL280	7.2-8.4	1.06	0.75
137	TLD208	5.85-6.45	1.10	0.50

Thorndike Corporation is continually updating, improving and adding to our product line for step loads based on the latest technologies and customer requirements. If you do not see a part that is suitable for your application, it is very possible that we have a new design, not shown on this sheet. Please contact us with any special requirements that you do not see listed on this list of components.

680 North Bedford Street, East Bridgewater, MA 02333
Telephone: (800) 590-3367; (508) 378-9797; Fax: (508) 378-1529

TL-XXXX Tongue Load / Step Load - Low Power

WR-	P/N	FREQ	VSWR	LEN
112	TL320	7.75-8.4	1.10	.895
112	TL300	7.1-7.75	1.10	1.00
112	TL325	7.9-8.4	1.06:1	.800
112	TL325B	7.9-8.4	1.10	0.80
112	TL341	8.4-9.6	1.12	1.30
112	TL345	8.4-9.8	1.07	0.75
112	TL342	8.5-9.6	1.10	1.26
90	TL390	9.1-9.5	1.05	.60
90	TL395	9.0-10.5	1.05	.875
90	TL442	8.7-10.2	1.10	.65
90	TL435	8.5-9.6	1.10	.572
90	TL430	9.4-10.7	1.12	.800
90	TL422	9.325-9.425	1.10	.585
90	TL422	8.5-9.6	1.15:1	.585
90	TL422	8.2-12.4	1.50	.585
90	TL421	9.34-9.80	1.06	.500
90	TL420	9.25-10.3	1.10	.800
90	TL405	8.6-9.6	1.10	0.63
90	TL375	9.0-10.7	1.10	.500
90	TL400	8.55-10.4	1.10	1.00
90	TL390	9.1-9.5	1.05	.60
90	TL385	8.5-9.4	1.15	
90	TL384HH	9.4-9.9	1.10	.600
90	TL382M	8.5-9.6	1.12	.350
90	TL445	10.0-10.3	1.05:1	.75
90	TL382	8.5-9.6	1.10	.375
90	TL360	8.8-9.6	1.08	.800
90	TL442HH	8.8-9.0	1.04	1.25
90	TL356	8.2-9.2	1.10	.410
90	TLD350	8.3-9.5	1.20	.630
90	TL400	8.55-10.4	1.10	1.00
90	TLD383	8.9-9.5	1.07	.400
90	TL442	8.7-9.2	1.05	1.50
90	TLD384	9.4-9.9	1.05	.380
90	TL780	10.7-11.7	1.05	.850
90	TL535B	9.9-10.3	1.05	.800
90	TL535	9.9-10.3	1.05	.800
90	TL531	9.8-10.6	1.05	.880
90	TL500	10.1-11.7	1.10	.850

Thorndike Corporation is continually updating, improving and adding to our product line for step loads based on the latest technologies and customer requirements. If you do not see a part that is suitable for your application, it is very possible that we have a new design, not shown on this sheet. Please contact us with any special requirements that you do not see listed on this list of components.

Tongue Load/Step Load Low Power

TL-XXXX

WR-	P/N	FREQ	VSWR	LEN
112	TL320	7.75-8.4	1.10	.895
112	TL300	7.1-7.75	1.10	1.00
112	TL325	7.9-8.4	1.06:1	.800
112	TL325B	7.9-8.4	1.10	0.80
112	TL341	8.4-9.6	1.12	1.30
112	TL345	8.4-9.8	1.07	0.75
112	TL342	8.5-9.6	1.10	1.26
90	TL390	9.1-9.5	1.05	.60
90	TL395	9.0-10.5	1.05	.875
90	TL442	8.7-10.2	1.10	.65
90	TL435	8.5-9.6	1.10	.572
90	TL430	9.4-10.7	1.12	.800
90	TL422	9.325-9.425	1.10	.585
90	TL422	8.5-9.6	1.15:1	.585
90	TL422	8.2-12.4	1.50	.585
90	TL421	9.34-9.80	1.06	.500
90	TL420	9.25-10.3	1.10	.800
90	TL405	8.6-9.6	1.10	0.63
90	TL375	9.0-10.7	1.10	.500
90	TL400	8.55-10.4	1.10	1.00
90	TL390	9.1-9.5	1.05	.60
90	TL385	8.5-9.4	1.15	
90	TL384HH	9.4-9.9	1.10	.600
90	TL382M	8.5-9.6	1.12	.350
90	TL445	10.0-10.3	1.05:1	.75
90	TL382	8.5-9.6	1.10	.375
90	TL360	8.8-9.6	1.08	.800
90	TL442HH	8.8-9.0	1.04	1.25
90	TL356	8.2-9.2	1.10	.410
90	TLD350	8.3-9.5	1.20	.630
90	TL400	8.55-10.4	1.10	1.00
90	TLD383	8.9-9.5	1.07	.400
90	TL442	8.7-9.2	1.05	1.50
90	TLD384	9.4-9.9	1.05	.380
90	TL780	10.7-11.7	1.05	.850
90	TL535B	9.9-10.3	1.05	.800
90	TL535	9.9-10.3	1.05	.800
90	TL531	9.8-10.6	1.05	.880
90	TL500	10.1-11.7	1.10	.850

Thorndike Corporation is continually updating, improving and adding to our product line for step loads based on the latest technologies and customer requirements. If you do not see a part that is suitable for your application, it is very possible that we have a new design, not shown on this sheet. Please contact us with any special requirements that you do not see listed on this list of components.

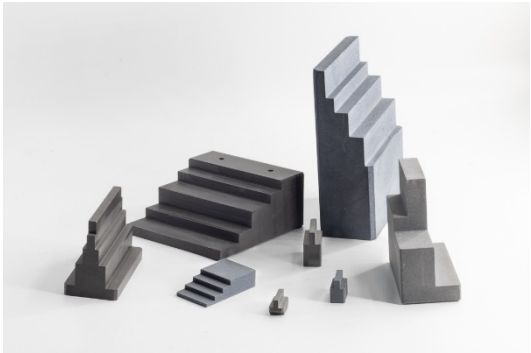
TL-XXXX Tongue Load / Step Load - Low Power

WR-	P/N	FREQ	VSWR	LEN
90	TL490	9.5-11.0	1.10	0.75
90	TL486	9.9-10.35	1.05	.850
90	TL485B	9.9-10.3	1.05	.800
90	TL485	9.9-10.3	1.05	.800
90	TL482	10.1-10.4	1.05	.60
90	TL450	9.1-9.7	1.05	.600
90	TL447HH	9.0-10.0	1.15:1	0.310
90	TL442HHM	8.70-9.10	1.10	0.80
75	TL548	12.4-13.6	1.07	.575
75	TL549	12.6-14.50	1.08	.800
75	TL560	13.0-14.8	1.10	.550
75	TL580	14-14.5	1.05	0.50
75	TL580B	14 – 14.5	1.10	.500
75	TL580	14.0 – 14.5	1.06	.500
75	TL527	11.7-13.3	1.10	.550
75	TL540	10.9-11.7	1.07	0.60
75	TL545	10.0-15.0	1.15	.700
75	TL546	11.7-12.2	1.05	.550
75	TL525	11.5-12.5	1.12	.550
75	TL600	11.7-13.3	1.15	.750
62	TL622	15-17	1.10	.275
62	TL620	13.275-13.38	1.05	.800
62	TL660	15.8- 17.1	1.06	.55
62	TL618B	11.7-15.3	1.25	.388
62	TL625	13.7-15.0	1.10	.780
62	TL630	13.6-15.1	1.10	0.475
62	TLD619	12.6-13.6	1.10	.380
62	TL640	14.0-16.0	1.10	.400
62	TL265	13.275-13.375	1.02	
62	TL640HH	14.75-15.25	1.08	.500
62	TL661	17.0-18.5	1.10	.510
62	TL662	16.5-17.5	1.10	.330
62	TLD618	12.4-14.2	1.10	.400
62	TLD620	13.0-14.5	1.07	.388
62	TLD623	14-15.5	1.10	.340
62	TL670	16.23-16.43	1.02	.618
62	TL660M	15.8 -17.1	1.06	0.75
51	TL570	10.7-13.2	1.15	
51	TL550	12.2-12.7	1.05	
51	TL565	10.7-12	1.10	

Thorndike Corporation is continually updating, improving and adding to our product line for step loads based on the latest technologies and customer requirements. If you do not see a part that is suitable for your application, it is very possible that we have a new design, not shown on this sheet. Please contact us with any special requirements that you do not see listed on this list of components.

TL-XXXX Tongue Load / Step Load - Low Power

WR-	P/N	FREQ	VSWR	LEN
51	TL575	10.7-13.2	1.15	
51	TL665	16-17	1.07	.427
51	TL665HH	15.75-16.25	1.10	0.40
51	TL667	14.8-16.2	1.10	0.50
51	TL686	19.5 - 21.5	1.07	0.375
51	TL687	21-21.25	1.05	0.50
51	TL555	12.2-13.2	1.05	
51	TL666	17.0-18.6	1.10	.50
42	TL690	21.0-23.0	1.07	.75
42	TL680	23-26.5	1.10	.400
42	TL695	19.9-21.7	1.10	.45
42	TL697	19.2-21.2	1.12	0.40
42	TL700	19-24	1.20	.31
42	TL790			.340
42	TL696	20 - 22	1.15	0.50
34	TL853	20.2 -21.2	1.07	0.37
34	TL850	24.5-26.5	1.15:1	.45
34	TL851	21-24	1.10	.31
28	TL813	28.1 -31.3	1.15	0.22
28	TL900	37-40	1.15	.220
28	TL806	27.5-29.5	1.15:1	.220
28	TL805	35-36	1.10	.40
28	TL803	27.5-31.3	1.15:1	0.22
28	TL802	28-31	1.10	.450
28	TL801	27-31	1.15	.300
28	TL800B	30.875-31.825	1.04	.340
28	TL800	30-32.5	1.10	.275
22	TL950	37-40	1.15	.250



Thorndike Corporation is continually updating, improving and adding to our product line for step loads based on the latest technologies and customer requirements. If you do not see a part that is suitable for your application, it is very possible that we have a new design, not shown on this sheet. Please contact us with any special requirements that you do not see listed on this list of components.

TL-XXXX Tongue Load / Step Load - High Power

WR-	P/N	FREQ	VSWR	LEN
650	TL001HPC	1.25 -1.45	1.20	7.00
340	TL005HPC	2.3 - 2.4	1.10	3.25
284	TL038HPC	2.8 -2.9	1.30	2.00
284	TL045HPC	2.7-2.9	1.10	3.00
284	TL041HPC	2.9 -3.3	1.10	4.00
284	TL040HPC	2.9-3.1	1.10	2.60
284	TL037HPC	2.851 - 2.861	1.15	2.50
284	TL035HPC	3.1-3.7	1.15	2.75
284	TL030HPC	3.1-3.5	1.10	1.65
284	TL025HPC	2.85-3.15	1.50	3.25
284	TL018HHPC	2.7-3.1	1.20	2.25
284	TL010HPC	3.65-3.75	1.08	3.40
187	TL100HPC	4.8-6.0	1.10	2.00
159	TL160HPC	5.8 - 8.0	1.10	1.25
159	TL156HPC	5.7-6.0	1.10	1.50
159	TL155HPC	5.85-6.5	1.10	1.25
159	TL150HPC	4.95-5.2	1.15	1.25
137	TL202HPC	5.85 - 7.00	1.20	1.17
137	TL211HPC	5.35-5.45	1.14	1.00
137	TL209HPC	5.85-6.45	1.15	1.40
137	TL204HPC	6.425-8.2	1.30	1.00
137	TL204HPC	5.85-6.425	1.15	1.00
137	TL203HPC	5.8-6.1	1.10	1.00
137	TL201HPC	5.85-7.00	1.08	1.40
137	TL187HPC	5.84 - 6.7	1.06	2.00
137	TL199HPC	5.9 - 6.4	1.10	1.00
137	TL205HPC	7.0 -7.4	1.10	1.75
137	TL180HPC	5.45-6.5	1.10	1.75
137	TL181HPC	5.725 -6.725	1.10	2.2
137	TL217HPC	6.5 -8.0	1.15	1.30
137	TL183HPC	5.73-6.73	1.15	1.8
137	TL200HPC	5.8 - 6.5	1.10	.850
112	TL322HPC	7.5- 8.5	1.08	1.00
112	TL295HPC	7.05-8.9	1.15	1.00
112	TL346HPC	8.5-11.0	1.08:1	1.50
112	TL345HPC	7.5 -10.0	1.08	1.50
112	TL340HPC	8.5 - 9.6	1.08	1.00
112	TL326HPC	7.9-8.4	1.06	1.00
112	TL320HPC	7.7-8.4	1.10	.895
112	TL310HPC	7.7-8.4	1.10	.650
112	TL330HPC	7.4-7.75	1.07	0.90
90	TL500HPC	9.5-12.4	1.10	.850
90	TL455HPC	9.2-9.5	1.10	.680

Thorndike Corporation is continually updating, improving and adding to our product line for step loads based on the latest technologies and customer requirements. If you do not see a part that is suitable for your application, it is very possible that we have a new design, not shown on this sheet. Please contact us with any special requirements that you do not see listed on this list of components.

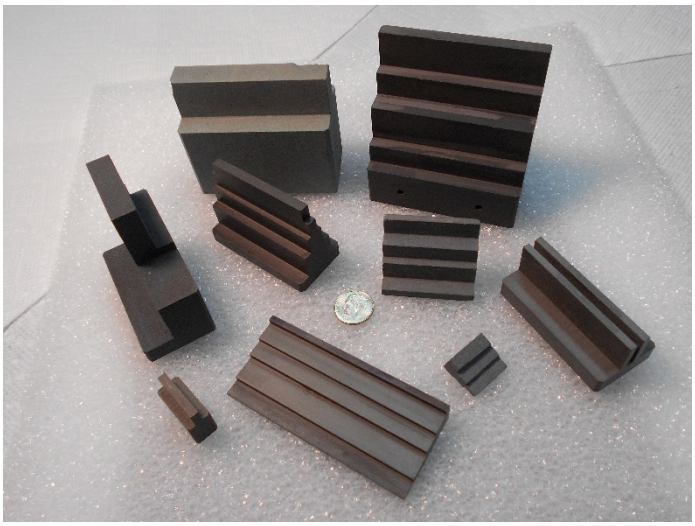
TL-XXXX Tongue Load / Step Load - High Power

WR-	P/N	FREQ	VSWR	LEN
90	TL776HPC	9.9-10.3	1.08	1.00
90	TL487HPC	9.7-10.7	1.10	1.24
90	TL457HPC	9.4-10.0	1.12	.630
90	TL777HPC	10.0-10.25	1.06	.60
90	TL450HPC	9.0- 10.0	1.10	0.75
90	TL450HHPC	9.2 -10.2	1.15	1.00
90	TL447HHPC	9.10 -10	1.10	1.25
90	TL447HPC	9.0-10.0	1.20:1	0.500
90	TL444HHPC	8.4 - 9.3	1.15	1.00
90	TL436HPC	8.5-9.6	1.10	0.75
90	TL421HPC	9.2 -9.6	1.10	0.65
90	TL384HPC	9.4-9.9	1.08	.900
90	TL360HPC	8.8-9.4	1.10	0.75
90	TL458HPC	9.2-9.5	1.08	1.00
90	TL775HPC	10.0-10.6	1.10	1.30
90	TL778HPC	9.35 -10.15	1.15	0.80
90	TL456HPC	9.38 -9.44	1.06	0.625
90	TL447HPC	9.0 -10.1	1.15	0.95
75	TL600HPC	11.6-12.3	1.10	.750
75	TL530HPC	10.5-12.2	1.10	.680
75	TL532HPC	10.5 -13.5	1.10	1.25
75	TL580HPC	13.75-15.0	1.10	.650
75	TL533HPC	10.7 -12.75	1.10	0.76
75	TL590FB-HPC	10-15	1.10	1.07
75	TL534HPC	10.9 - 12.8	1.10	0.90
75	TL529HPC	10.7 -12.4	1.10	.750
75	TL586HPC	12.75 -14.5	1.10	.750
75	TL581HPC	13.75 - 14.5	1.08	0.65
75	TL540HPC	10.9 -11.7	1.12	0.60
62	TL621HPC	13.4 - 13.8	1.10	.700
62	TL623HPC	13.75-14.5	1.10	.500
62	TL624HPC	14.0-14.5	1.06	0.650
62	TL625HPC	14.0-14.5	1.06	.650
62	TL626HPC	14.4 -15.4	1.10:1	0.63
62	TL650HPC	15.4-15.7	1.06:1	0.55
62	TL655HPC	15.0-17.0	1.07	.520
62	TL618HPC	12.5 -13.5	1.15	0.75
62	TL627HPC	12.5-14.75	1.15	0.90
62	TL651HPC	17-18	1.10	.500
51	TL686HPC	20.5- 21.5	1.07	0.40
51	TL685HPC	20.2-22.0	1.10	1.00
51	TL666HPC	16.8-18.6	1.07	.55
42	TL690HPC	21-23	1.10	.50

Thorndike Corporation is continually updating, improving and adding to our product line for step loads based on the latest technologies and customer requirements. If you do not see a part that is suitable for your application, it is very possible that we have a new design, not shown on this sheet. Please contact us with any special requirements that you do not see listed on this list of components.

TL-XXXX Tongue Load / Step Load - High Power

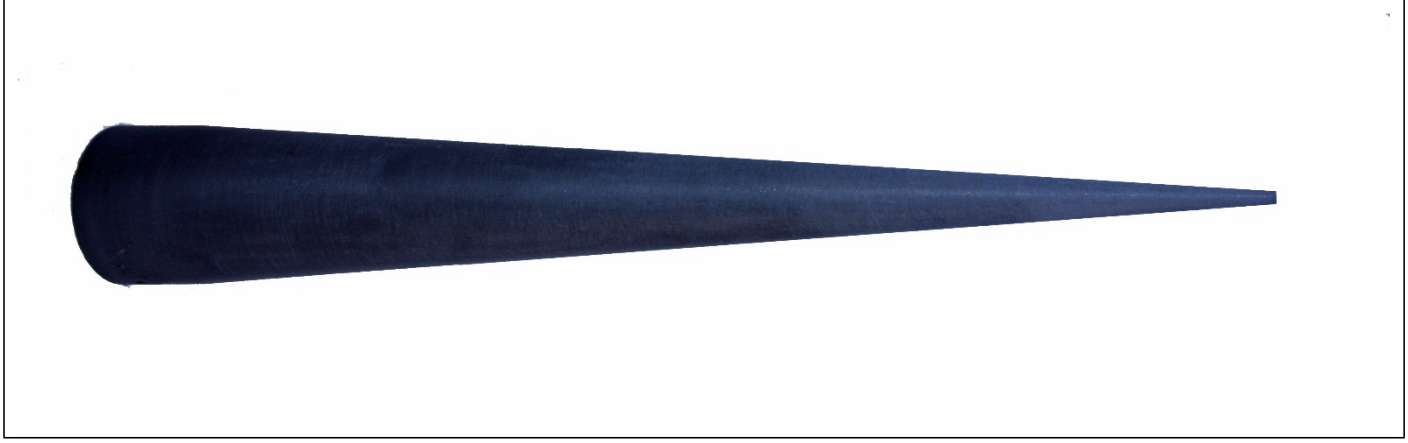
WR-	P/N	FREQ	VSWR	LEN
34	TL852HPC	27.5 - 31	1.10	0.5
28	TL810HPC	27.5 - 29.5	1.15	0.35
28	TL802HPC	29 - 31.5	1.20	.35
28	TL803HPC	29 -31	1.15	0.35
28	TL805HPC	35-36	1.10	.230
22	TL960HPC	43.5 -45.5	1.15	0.27



680 North Bedford Street, East Bridgewater, MA 02333
Telephone: (800) 590-3367; (508) 378-9797; Fax: (508) 378-1529

CL-XXXX

Cone Loads

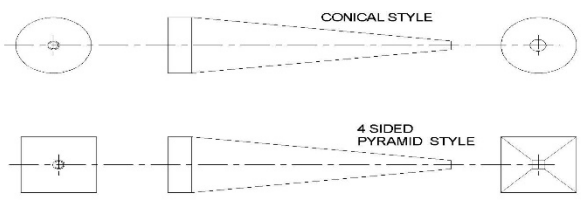


Thorndike Cone loads are precision machined, linear tapered, lossy inserts to give the best VSWR over the widest frequency range. They can be used for precision bench measurements and calibrations when the most accurate measurement results are required. They are typically used as calibration loads when making return loss or VSWR measurements using vector network analysis techniques. These are used in waveguide calibration kits to remove equipment errors during reflection measurements.

The cone load is installed into the center of a waveguide cavity with a short circuit plate directly behind the larger diameter. Typical VSWR values for cone loads are less than 1.02:1 over the waveguide operating frequency band. Thorndike manufactures cone loads ranging is frequency from 1 – 110 GHz. covering waveguide sizes from WR-650 to WR-10.

Thorndike manufactures high power equivalent versions of cone loads however we do not recommend using them at excessive power levels to the limited heat sinking availability of the parts. Depending on the design and application, loads can be circular or pyramidal. Many ceramic style, high power loads are pyramid.

CL-XXXX



CL-XXXX Conical Load - Low Power

WR-	P/N	FREQ	VSWR	LEN
770	CL050B	.96-1.45	1.02	20.00
770	CL050	.96-1.45	1.05	15.00
650	CL0207	1.12 -1.7	1.04	11.50
650	CLS1200	6.5-18.0	1.03	11.0
650	CL4900	1.12-1.7	1.02	18.00
650	CL0200	1.12-1.7	1.02	13.00
650	CL0100	1.12-1.7	1.02	16.50
510	CL0250	1.45-2.20	1.03	12.00
430	CL0300	1.7-2.6	1.035	9.50
430	CL0325	1.7-2.6	1.02	11.00
430	CL0400	1.7-2.6	1.02	13.50
430	CL4200	1.7-2.6	1.02	13.38
430	CL3200	1.7-2.6	1.02	13.50
369	CL0500	2.32-2.68	1.01	8.50
340	CL0625	2.20 - 3.30	1.02	10.0
340	CL0605	2.4 -3.3	1.2	6.0
340	CL0600HH	2.2 - 3.3	1.05	8.00
340	CL0600	2.2-3.3	1.02	8.50
340	CL0505	2.2-3.3	1.03	8.50
284	CL0655	2.6-3.95	1.08	5.50
284	CL0700M	2.7 - 3.95	1.02	6.50
284	CL5100	2.6-3.95	1.01	9.50
284	CL0700HH	2.6 -3.95	1.02	9.50
284	CL0700	2.6-3.95	1.02	7.50
284	CL0650	2.6-3.95	1.01	12.00
284	CL0800	2.6-3.95	1.02	9.00
284	CL3300	2.6-3.95	1.01	9.50
284	CL5500	2.40 -3.95	1.02	13.00
284	CL700M	2.7-3.95	1.02	6.50
284	CL5300	2.6-3.95	1.01	12.00
229	CL0951H	3.6-4.2	1.01	6.50
229	CL0950	3.6-5.0	1.03	3.50
229	CL0900HH	3.3 -4.9	1.06	8.0
229	CL5600	3.3-4.9	1.01	9.50
229	CL0900	3.3-4.9	1.01	6.50
187	CL3600	3.95-5.85	1.01	7.00
187	CL3550	4.0-5.85	1.005	11.00
187	CL3500	3.95-5.85	1.01	7.0
187	CL1000	3.95-5.85	1.01	5.50
159	CL1110	4.9 -7.1	1.15	2.75"
159	CL3700	4.90-7.05	1.01	7.00
159	CL1100	4.9-7.05	1.01	5.00
159	CL1050	4.9-7.05	1.01	6.00

CL-XXXX Conical Load - Low Power

WR-	P/N	FREQ	VSWR	LEN
137	CL1250	5.3-8.2	1.01	6.00
137	CL4000	5.85-8.2	1.01	6.00
137	CL5200	5.85-8.2	1.02	4.50
137	CL1200	5.85-8.2	1.01	4.50
137	CL1300	5.85-8.2	1.02	3.25
112	CL1400	7.05-10	1.01	4.50
112	CL1450	7.05-10.0	1.005	6.00
112	CL4300	7.05-10	1.01	4.50
112	CL1600M	8.0-10.0	1.015	3.00
112	CL1600	7.0-11.0	1.01	2.750
112	CL1500	7.05-10	1.01	4.00
102	CL1520	7.00-11.00	1.02	5.00
96	CL8000	7 - 17	1.03	4.5
90	CL1821HH	9.0 -12.4	1.07	4.50
90	CL1825	8.2-12.4	1.10	1.372
90	CL5400C	8.2-12.4	1.10	1.225
90	CL1650	8.2-12.4	1.02	3.75
90	CL1675	8.2- 12.4	1.01	4.00
90	CL1700	8.2-12.4	1.015	3.00
90	CL1700-1	8.2-12.4	1.02	3.00
90	CL1800	8.2-12.4	1.15	.90
90	CL1820	9.0-12.0	1.10	1.100
90	CL1820HH	9.0-10.0	1.02	4.5
90	CL1822HH	8.2 - 12.4	1.02	4.50
90	CL1650	8.2-12.4	1.02	3.75
90	CL1875HH	8.2-12.4	1.05	3.00
90	CL1900	8.2-12.4	1.005	4.500
90	CL1950	8.20 - 12.40	1.01	4.75
90	CL2000	8.2-12.4	1.05	1.850
90	CL2001	8.2-12.4	1.05	2.00
90	CL1700-3	9.0-12.4	1.05	3.00
90	CL5400B	8.2-12.4	1.04	1.50
90	CL5400D	9.5-12.4	1.07	.500
90	CL5400	8-10.2	1.05	1.300
90	CL1850HH	8.7-12.4	1.03	2.10
75	CL2050	8.2 -15.0	1.02	4.00
75	CL2025HH	10.0-15.0	1.03	3.50
75	CL5700	10-15	1.01	4.25
75	CL2105	10.7-15.0	1.20	1.125
75	CL2100	10.0-15.0	1.01	3.00
62	CL2250	12.4-18.0	1.01	3.00
62	CL2150	12.4-18.0	1.02	3.63
62	CL2200	12.4-18	1.01	2.875

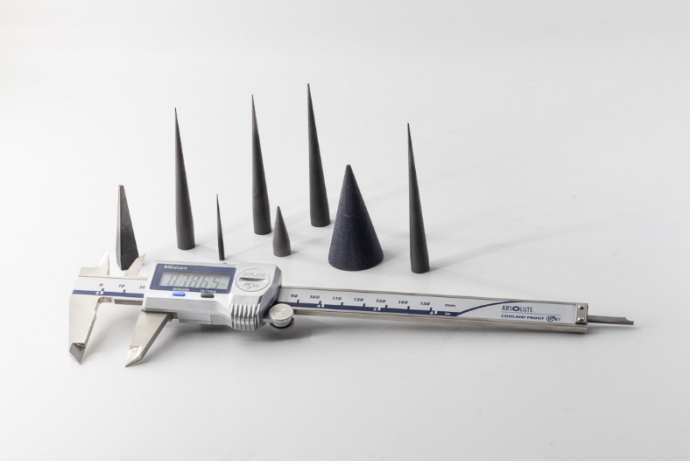
CL-XXXX Conical Load - Low Power

WR-	P/N	FREQ	VSWR	LEN
62	CL3400	12.4-18	1.01	3.5
62	CL2250	12.4-18.0	1.01	3.00
62	CL2275	14.0-18.0	1.04	2.00
62	CL2280	12.4 -18.0	1.15	1.35
62	CL2300	12.4-18	1.01	2.75
62	CL2225HH	13.5-18.0	1.02	2.50
51	CL2400	15-22	1.01	2.60
51	CL2420	15 -22	1.10	1.00
42	CL2550	17.5-26.5	1.01	3.25
42	CL2580	18.0 - 26.0	1.05	1.40
42	CL2500	18-26.5	1.01	2.2
42	CL2576	18.0 -26.5	1.15	1.00
42	CL2575	18.0 -26.5	1.10	1.25
42	CL2550M	18.5-26.5	1.01	3.25
34	CL2610	22.00-33.00	1.01	3.00
34	CL2600	22.0-33.0	1.01	2.2
34	CL2623	22 -33	1.07	1.0
28	CL2650	26.5-40.0	1.01	2.00
28	CL2625	35-40	1.05	0.50
28	CL2650M	26.5-40	1.01	2.00
28	CL2700	26.5-40.0	1.01	1.625
28	CL2750	26.5-40	1.01	1.70
28	CL2775	28 - 40.0	1.10	0.60
28	CL4700	26.5-40	1.5	.500
28	CL5900	26.5-40.0	1.03	1.10
22	CL2850	33-50	1.02	1.16
22	CL2800	33.0-50.0	1.03	1.180
22	CL5000	33-50	1.01	1.180
19	CL2900	40.0-60.0	1.01	.925
15	CL3010	55-75	1.06	.90
15	CL3000	50.0-75.0	1.06	.745
12	CL3100	60.0-90.0	1.01	.610
	CL2525	16.5-25.0	1.04	2.50
	CL2180	7.0-17.0	1.05	6.00

680 North Bedford Street, East Bridgewater, MA 02333
Telephone: (800) 590-3367; (508) 378-9797; Fax: (508) 378-1529

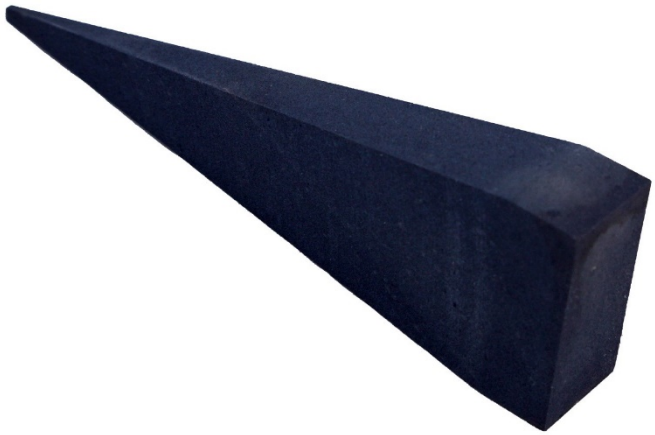
CL-XXXX Conical Load - High Power

WR-	P/N	FREQ	VSWR	LEN
187	CL7500HPC	3.95-5.85	1.04	6.00
187	CL7100HPC	3.95-5.85	1.04	6.00
187	CL187HPC	4.10-5.85	1.10	3.00
137	CL7600HPC	5.85-8.2	1.03	4.50
137	CL137HPC	5.9-8.2	1.06	3.00
112	CL7700HPC	7.05-10	1.03	4.50
112	CL1400HPC	7.1 -10.0	1.02	4.50
112	CL7750HPC	7.05-10.0	1.02	5.50
90	CL1800HPC	8.5-12.4	1.10	1.00
90	CL5400HPC	8.2 -12.4	1.20	1.50
90	CL7200HPC	8.2-12.4	1.04	3.00
90	CL7800HPC	8.2-12.4	1.04	3.00
90	CL2000HPC	8.2 -12.4	1.15	2.00
90	CL5410HPC	8.2 -12.4	1.20	1.40"
90	CL7225HPC	8.2-12.4	1.03	4.00
75	CL2107HPC	11.0 -15.0	1.05	1.90
75	CL7400HPC	10-15	1.02	3.00
62	CL7300HPC	12.4-18	1.03	3.00
62	CL2300HPC	12.4-18.0	1.15	1.00
62	CL2280HPC	12.4 -18	1.20	0.75
51	CL2420HPC	15 -22	1.10	1.00
51	CL2410HPC	15-22	1.012	2.75
51	CL2400HPC	15-22	1.04	2.00
34	CL2660HPC	22 -33	1.20	0.65
28	CL2625HPC	34-40	1.07	.40
28	CL2650HPC	26.5-40	1.02	2.00



WL-XXXX

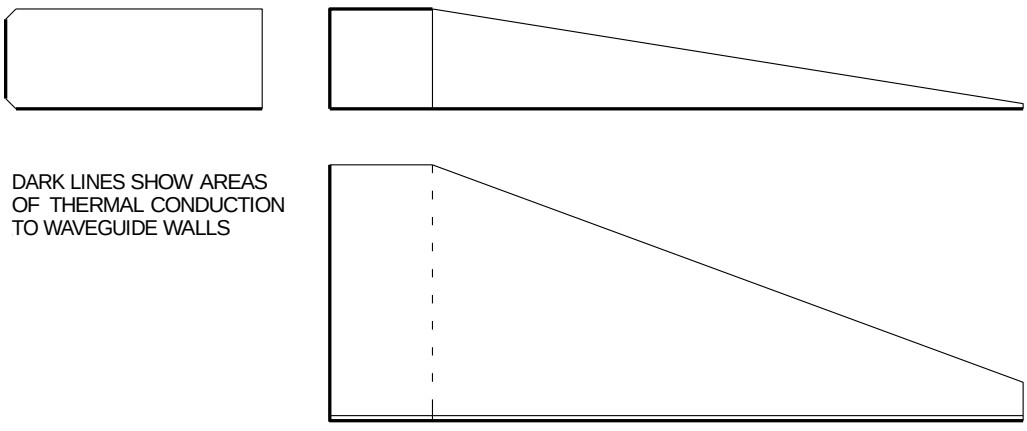
Wedge Loads



Thorndike Wedge loads come in both low and high-power versions. They are typically used for semi-precision applications and higher power applications where the heat generated can be removed through the waveguide walls. These loads typically cover full waveguide bandwidths with an estimated VSWR of 1.10:1 or better. Performance at the very low end of waveguide bands may deteriorate slightly for shorter length wedge loads.

Thorndike manufactures Wedge loads ranging is frequency from 1 – 50 GHz. covering waveguide sizes from WR-650 to WR-22.

Typical power levels of Wedge loads range from 50 to 500 watts depending on the waveguide size, length of wedge and cooling system employed by user.



Thorndike Corporation is continually updating, improving and adding to our product line for wedge loads based on the latest technologies and customer requirements. If you do not see a part that is suitable for your application, it is very possible that we have a new design, not shown on this sheet. Please contact us with any special requirements that you do not see listed on this list of components.

WL-XXXX Wedge Load

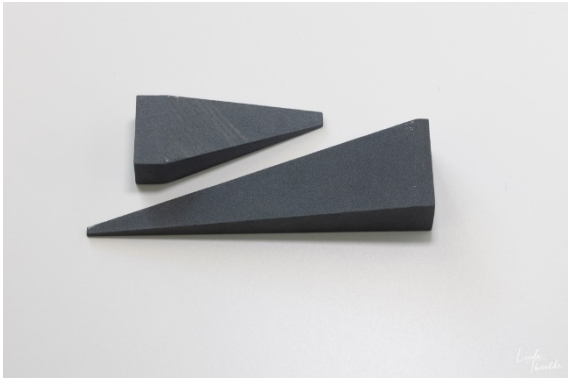
WR-	P/N	FREQ	VSWR	LEN
650	WL0032	1.2-1.7	1.15	14.5
650	WL0060	1.12-1.7	1.10	12.25
650	WL0070	1.12-1.7	1.10	12.00
650	WL0035	1.2 -1.7	1.15	12.00
650	WL0030	1.2 - 1.7	1.15	12.00
430	WL0100HH	1.75-2.60	1.15	6.00
430	WL0100	1.7-2.6	1.10	9.50
430	WL0125	1.7 -2.6	1.10	11.0
430	WL0160	2.0 - 2.6	1.10	6.0
430	WL0150	1.7 - 2.6	1.10	11.0
340	WL0250	2.2-3.3	1.10	11.00
340	WL0200	2.2-3.3	1.10	10.00
340	WL0275	2.2 - 3.3	1.10	10.0
284	WL0325	2.9 - 3.1	1.10	4.00
284	WL0305	2.6-3.95	1.09	8.00
284	WL0300HH	2.6 -3.95	1.02	10.50
284	WL0300	2.8 3.95	1.10	7.00
284	WL0350	3.1-3.95	1.15	5.50
229	WL0400	3.3-4.90	1.10	7.00
187	WL0518	3.95 - 5.85	1.15	3.50
187	WL0550HH	4.3-5.85	1.10	6.00
187	WL0550	3.95-5.85	1.20	3.15
187	WL0525	3.95-5.85	1.06	5.50
187	WL0510	3.95-5.85	1.07	7.80
187	WL0500	3.95-5.85	1.10	6.75
159	WL0600M	4.9-7.05	1.10	6.00
159	WL0600	4.90-7.05	1.1	5.63
137	WL0702	5.85-8.20	1.01	8.50
137	WL0704	6.7 - 8.2	1.15	2.20
137	WL0703	6.8-8.2	1.10	2.36
137	WL0701	5.40-7.4	1.10	4.15
137	WL0700M	5.85-8.20	1.10	6.00
137	WL0700	5.85-8.20	1.10	4.50
137	WL0703	5.7-6.8	1.15	2.36
112	WL0800	7.05-10.00	1.08	4.50
112	WL0903	7.1-10.00	1.05	3.00
112	WL0900	7.05-10.00	1.10	2.50
112	WL0900-2	7.05-10.0	1.10	2.75
102	WL1000	7.0-11.00	1.10	5.50
90	WL1200-01	8.2-12.4	1.20	2.25
90	WL1250	8.2-12.40	1.20	1.81

WL-XXXX Wedge Load

90	WL1225	9.0-12.4	1.20	1.24
90	WL1200	9.10-12.40	1.07	2.10
90	WL1100M	8.2-12.4	1.10	4.00
90	WL1100	8.20-12.40	1.10	4.00
90	WL1100MHH	8.2-12.4	1.10	4.00
90	WL1152	9.0-12.0	1.20	1.40
75	WL1301	12.75 - 15.0	1.10	2.00
75	WL1300	10.0-15.00	1.10	2.50
75	WL1303	10.0-15.0	1.07	6.00
62	WL1400	12.4-18.00	1.10	2.75
62	WL1415	12.4 -18.0	1.10	1.90
62	WL1402	12.4 -18	1.10	1.00
62	WL1450	13-18.00	1.10	1.10
51	WL1555	15-22	1.10	1.50
51	WL1550	14.4 -20	1.08	2.25
51	WL1500	15.0-22.00	1.10	2.25
42	WL1615	18-26.5	1.10	.90
42	WL1610	20-25	1.20	.400
42	WL1616	18-26.5	1.07	2.50
42	WL1620	18-26.5	1.10	1.50
42	WL1622	20 -26	1.10	1.40
42	WL1618	18 - 26.5	1.10	2.50
42	WL1600	18.0-26.50	1.10	2.25
42	WL1613	17 -24	1.08	0.90
34	WL1672	22 - 33	1.07	2.40
34	WL1670	22-33	1.10	2.10
34	WL1674	22-33	1.10	1.5
34	WL1673	22-33	1.10	1.25
34	WL1657	22 - 33	1.05	2.80
34	WL1671	22 -33	1.10	0.80
28	WL28-100	26.5-40	1.05	2.50
28	WL1625	26.5-40.0	1.10	3.00
28	WL1650	26.5-40.0	1.15	2.00
28	WL1675	30.0-40.0	1.20	0.375
28	WL1676	33-40	1.10	.750
28	WL1677	26.5-40	1.15	.450
28	WL1678	26.5-40.0	1.10	1.00
28	WL28HPC	32-37	1.10	1.00
28	WL1681	28-40	1.10	1.00
28	WL1669	27 - 40	1.10	0.80
28	WL1668	29 -40	1.20	0.78
28	WL1679	32.1- 33.1	1.05	0.60
28	WL1651	26.5 - 40	1.15	1.50
28	WL1680	35-40	1.12	.400
22	WL1760	34-38	1.25	.39
22	WL1750	35-50	1.05	.800
22	WL1700	33.0-50.00	1.10	2.00

WL-XXXX Wedge Load

19	WL1900	40 -60	1.10	0.90
15	WL15	50.75	1.10	0.75
10	WL10	75 -110	1.15	0.50



Thorndike Corporation is continually updating, improving and adding to our product line for wedge loads based on the latest technologies and customer requirements. If you do not see a part that is suitable for your application, it is very possible that we have a new design, not shown on this sheet. Please contact us with any special requirements that you do not see listed on this list of components.

680 North Bedford Street, East Bridgewater, MA 02333
Telephone: (800) 590-3367; (508) 378-9797; Fax: (508) 378-1529

DTW-XXXX

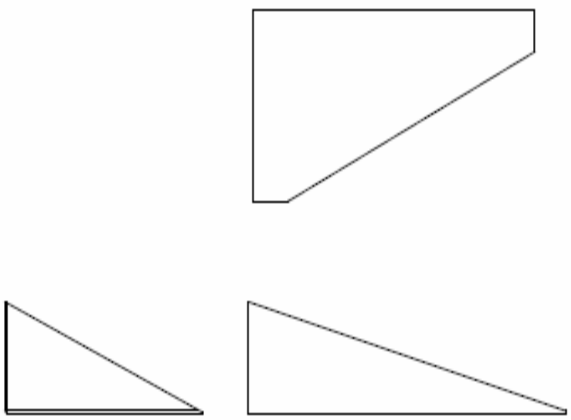
Two Piece Compound Spear Loads



Thorndike spear loads come in a variety of shapes for various applications. These are both low and high-power versions of each of these parts however most applications include some type of medium to high power requirement. They are typically used for semi-precision applications and higher power applications where the heat generated can be removed through the waveguide walls. These loads typically cover full waveguide bandwidths with estimated VSWR values of 1.10:1 or better, depending on the part chosen. Performance at the very low end of waveguide bands may deteriorate slightly for shorter length parts. For specific electrical requirements, we suggest ordering the parts tested to performance.

Thorndike manufactures Tow Piece Tapered spear loads ranging in frequency from 1 – 50 GHz. covering waveguide sizes from WR-650 to WR-22.

Typical power levels of Spear loads range from 50 to 600 watts depending on the waveguide size, and cooling system employed by user. These types of loads are used when short lengths, wide band performance and high power are of equal importance.



DTW-XXXX

Waveguide	Part_Number	Frequency	VSWR	Length
284	DTW100	2.60-3.95	1.1	5.130
187	DTW200	3.95-5.85	1.1	3.380
137	DTW300	5.85-8.20	1.1	3.250
112	DTW400	7.05-10.0	1.1	2.990
90	DTW500	8.20-12.4	1.1	1.630
75	DTW600	10.0-15.0	1.1	1.380
62	DTW700	12.4-18.0	1.1	1.00

680 North Bedford Street, East Bridgewater, MA 02333
Telephone: (800) 590-3367; (508) 378-9797; Fax: (508) 378-1529

THP-XXXX

Spear Loads



Thorndike spear loads come in a variety of shapes for various applications. These are both low and high-power versions of each of these parts however most applications include some type of medium to high power requirement. They are typically used for semi-precision applications and higher power applications where the heat generated can be removed through the waveguide walls. These loads typically cover full waveguide bandwidths with estimated VSWR values of 1.10:1 or better, depending on the part chosen. There are multiple lengths available based on power level, required performance and space requirements. Performance at the very low end of waveguide bands may deteriorate slightly for shorter length parts. For specific electrical requirements, we suggest ordering the parts tested to performance.

Thorndike manufactures Tapered spear loads ranging in frequency from 1 – 50 GHz. covering waveguide sizes from WR-650 to WR-22.

Typical power levels of Spear loads range from 50 to 1000 watts depending on the waveguide size, and cooling system employed by user.

Waveguide	Part Number	Frequency	VSWR	Length
284	THP100	2.60-3.95	1.10	10.500
229	THP200	3.30-4.90	1.10	9.25
187	THP300	3.95-5.85	1.10	7.875
159	THP400	4.90-7.05	1.10	7.625
137	THP500	5.85-8.20	1.10	7.500
112	THP600	7.05-10.0	1.10	6.500
102	THP700	7.00-11.0	1.10	6.00
90	THP800	8.2-12.4	1.10	5.00
75	THP900	10.0-15.0	1.10	4.00
62	THP1000	12.4-18.0	1.10	3.00
51	THP1100	15.0-22.0	1.10	3.130
42	THP1200	18.0-26.5	1.10	3.250
28	THP1300	26.5-40.0	1.10	3.750
28	THP1400	26.5-40.0	1.10	2.750
22	THP1500	33.0-50.0	1.10	1.380

Thorndike Corporation is continually updating, improving and adding to our product line for tapered wedge loads based on the latest technologies and customer requirements. If you do not see a part that is suitable for your application, it is very possible that we have a new design, not shown on this sheet. Please contact us with any special requirements that you do not see listed on this list of components.

680 North Bedford Street, East Bridgewater, MA 02333
Telephone: (800) 590-3367; (508) 378-9797; Fax: (508) 378-1529

DTHP-XXXX

Dual Angle Spear Loads



Thorndike spear loads come in a variety of shapes for various applications. These are both low and high-power versions of each of these parts however most applications include some type of medium to high power requirement. They are typically used for semi-precision applications and higher power applications where the heat generated can be removed through the waveguide walls. These loads typically cover full waveguide bandwidths with estimated VSWR values of 1.10:1 or better, depending on the part chosen. There are multiple lengths available based on power level, required performance and space requirements. Performance at the very low end of waveguide bands may deteriorate slightly for shorter length parts. For specific electrical requirements, we suggest ordering the parts tested to performance.

Thorndike manufactures Tapered spear loads ranging in frequency from 1 – 50 GHz. covering waveguide sizes from WR-430 to WR-28.

Typical power levels of Spear loads range from 50 to 2000 watts depending on the waveguide size, and cooling system employed by user.

Waveguide	Part Number	Frequency	VSWR	Length
430	DTHP-100	1.70-2.60	1.06	8.20
430	DTHP-200	1.70-2.60	1.05	12.50
340	DTHP-300	2.20-3.30	1.05	11.50
284	DTHP-400	2.60-3.95	1.05	9.630
229	DTHP-500	3.30-4.90	1.05	7.750
187	DTHP-600	4.40-5.00	1.07	8.00
187	DTHP-700	5.52-5.58	1.05	4.813
159	DTHP-800	4.90-7.05	1.10	6.00
137	DTHP-900	5.59-8.20	1.05	6.50
137	DTHP-1000	5.59-8.20	1.05	7.00
137	DTHP-1100	5.93-6.43	1.07	4.00
112	DTHP-1200	7.05-10.0	1.05	4.50
112	DTHP-1300	7.65-10.0	1.05	6.50
102	DTHP-1400	7.00-11.0	1.05	3.75
90	DTHP-1500	8.20-12.4	1.05	4.00
75	DTHP-1600	10.0-15.0	1.06	3.75
62	DTHP-1700	12.4-18.0	1.06	2.50
42	DTHP-1800	18.0-26.5	1.05	2.75
28	DTHP-1900	26.5-40.0	1.06	1.125

Thorndike Corporation is continually updating, improving and adding to our product line for tapered wedge loads based on the latest technologies and customer requirements. If you do not see a part that is suitable for your application, it is very possible that we have a new design, not shown on this sheet. Please contact us with any special requirements that you do not see listed on this list of components.

680 North Bedford Street, East Bridgewater, MA 02333
Telephone: (800) 590-3367; (508) 378-9797; Fax: (508) 378-1529

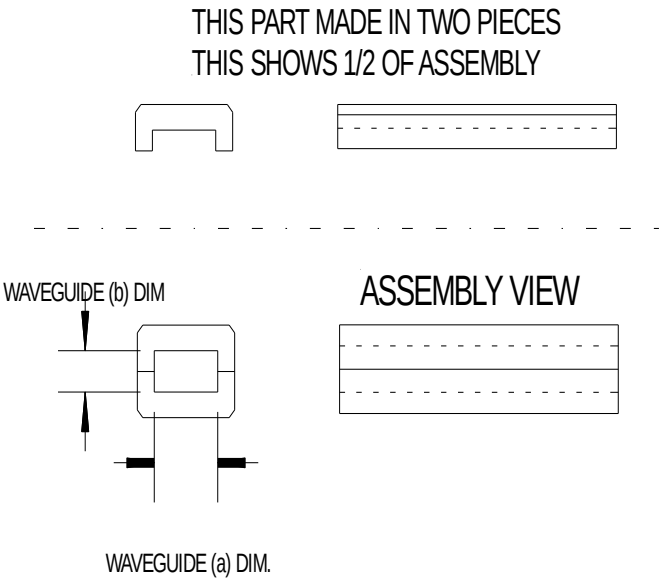
CHL-XXXX
LOSSY INSERTS

Channel Loads





Thorndike High power channel loads are used in applications where the highest power is required. We build these two-piece channels in many lengths, thicknesses and dimensions custom to your housing design. These loads are made to remove power and the generated heat through all four waveguide walls. These loads typically cover full waveguide bandwidths with an estimated VSWR of 1.15:1. Better VSWR performance can be obtained over narrow band with additional tuning inside the waveguide housing. Usually, customer defined external dimensions and housing designs define operating performance and power ratings. We manufacture channel loads to customer prints.



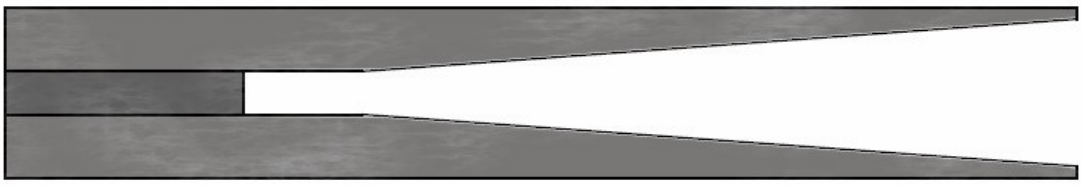
CHL-XXXX

Waveguide	Part_Number
WR28	CHL28
WR34	CHL34
WR75	CHL75
WR90	CHL90
WR102	CHL102
WR112	CHL112
WR137	CHL137
WR187	CHL187
WR284	CHL284
WR340	CHL340

680 North Bedford Street, East Bridgewater, MA 02333
Telephone: (800) 590-3367; (508) 378-9797; Fax: (508) 378-1529

RSL-XXXX

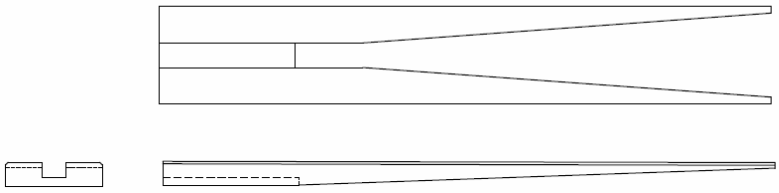
Single Piece Ridgeguide Load



Thorndike Ridgeguide insert loads come in both low and high-power basic materials. They are also manufactured in one- or two-piece versions for more customer versatility. They are typically used for semi-precision and higher power applications where the heat generated can be removed through the waveguide walls. These loads typically cover full bandwidths with an estimated VSWR of 1.10:1 or better. Performance at the lower end of the band may deteriorate slightly on the shorter length wedges loads. Please contact us for technical consultation if there are any questions.

Thorndike manufactures Ridgeguide loads ranging in frequency from 2 – 40 GHz with power levels ranging from 50 to 500 watts depending on the guide size, length and customer cooling configuration.

SINGLE PIECE RIDGEGUIDE LOAD INSERT



Part Number	WRD_Type	Frequency	A. Max	Ave. Power	Power
RSL100	650 D 28	6.5-18.0	8	210	180
RSL200	650 D 24	6.5-18.0	7	200	175
RSL300	580 D 24	5.8-18.0	8	250	200
RSL400	750 D 24	7.5-18.0	8	210	180
RSL500	750 D 24	7.5-18.0	3	100	80
RSL600		4.75-11.0	10	220	160
RSL700	475 D 24	4.75-11.0	10	250	200
RSL800	475 D 24	4.75-11.0	8	240	200
RSL900	350 D 24	3.5-8.2	12	560	450

E.S.S. (Engineering Specialties Service helps design and test all of our components to meet our customers' requirements. ***Electrical testing is incorporated into our pricing so no additional expense for testing is required from our customers.***

E.S.S.
ENGINEERING SPECIALTIES SERVICE

Your High Frequency Connection...

680 North Bedford Street, 2nd Floor
East Bridgewater, MA. 02333
Tel: 508-378-1112
Fax: 508-378-2410

www.engineeringspecialties.net

My name is Richard Pavadore and I am the owner of Engineering Specialties Service, E.S.S. Although we are a separate entity from Thorndike Corporation, my company works very closely with them in developing, maintaining and testing their absorber designs. We provide the design and test support for Thorndike Corporation as well as support them in working with their customer base in choosing the right product the application.

This insert is included in the Thorndike catalog to introduce you to our Microwave and high frequency design services and products that may interest your business. In addition to supporting Thorndike Corporation, we have expertise in the design of many passive microwave products. If you would like a more detailed purview of our company, I would encourage you to visit out our website or contact me directly for more information. You can find us on the web at www.engineeringspecialties.net

Engineering Specialties Service is a High frequency Engineering, testing, and consulting company. We specialize in high frequency work in most types of passive microwave devices ranging in frequency from below 1 MHz to over 50 GHz. We have a full complement of microwave test equipment and lab to support your design and/or testing needs.

Our design specialties include rotary joints, ferrite devices, couplers, adapters, transitions, microwave absorbers and most any passive high frequency product. We provide the paper design, prototype or production parts ready for your applications. In addition to this, we offer a host of testing services such as high power, qualification, and full production testing on your components.

Our in-house equipment is capable of every day test and evaluation, design support and very special "niche" testing. Some of these special tests include, volume resistivity, dielectric constant testing for dielectric properties, high power testing, environmental and qualification testing, microwave absorber analysis, failure analysis, and RF leakage on cable assemblies, connectors, and other microwave components. Our modern offices and laboratory are in one building with over 2500 square feet of testing space. We have a full complement of microwave test equipment, prototype shop, and other related support capabilities.

If you have any particular questions, please feel free to call or e-mail me by going to our website where you can find all of our contact information including a direct link to my email.

Thank you, Richard J. Pavadore, President, ESS

E.S.S.
ENGINEERING SPECIALTIES SERVICE

680 North Bedford Street, 2nd Floor
East Bridgewater, MA. 02333
Tel: 508-378-1112
Fax: 508-378-2410

Your High Frequency Connection…

On the WEB at: www.engineeringspecialties.net

High Frequency and Microwave Engineering

Engineering Specialties Service, E.S.S., is a High Frequency, engineering, design and test company that provides independent, high quality, technical services at reasonable costs.

Our goal is to ensure our customers receive professional, prompt and complete engineering services as you demand to get from within your company.

Our offices and test facility include over 3000 square feet of engineering design space with hundreds of specialty test fixtures, components, and setups to facilitate your testing needs. We have a full complement of general lab and microwave test equipment to evaluate products from DC to over 40 GHz. Supported by a prototype shop, and high frequency software ESS offers complete high frequency design, test and engineering solutions.

We integrate our high frequency engineering experience, small company atmosphere, testing capabilities and facilities with your products and experience. This allows our partnership to work together, integrating technologies, labor and equipment, in the most efficient manner.

Thank you for your time,
Richard J. Pavadore,
Owner and Engineer, E.S.S.

Design and Test Services

- High Frequency Consulting
- Production Testing
- Qualification Testing
- Over 30 years working with waveguide, coax, stripline and microstrip components and circuit design.
- Microwave Absorbers design
- Couplers, dividers, combiners
- Rotary Joints, and Ferrite Devices
- Test Fixture Design and Fabrication
- High Power Design and Testing
- Multipaction Testing and Analysis
- Circuit Design
- Dielectric Materials testing and Analysis
- Rf Leakage Measurements.
- Failure Analysis and Evaluation
- Hi-Pot, Current tests, Corona, Voltage breakdown, thermal protection…

Analysis and Software

- High Frequency Analysis and Modeling.
- High Power Analysis.
- Smith Chart Analysis.
- Transmission Line Models.
- Multipaction theoretical Analysis.
- Mathematical and CAD Support
- VSWR matching and component design.
- Test Procedures and Reports