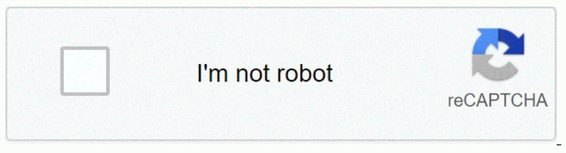

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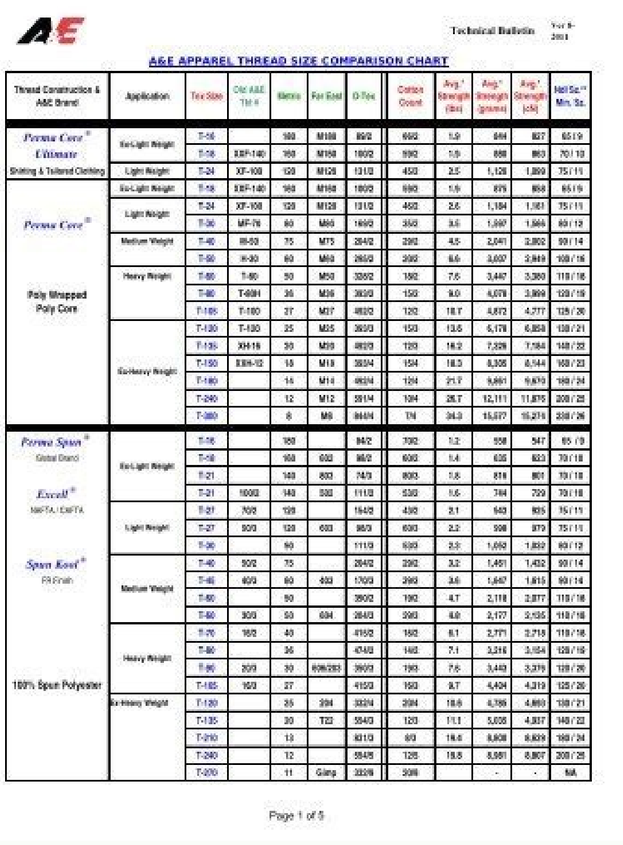
All thread size chart pdf

What do thread size numbers mean. Common all thread sizes.

Junying Metal Manufacturing has developed high-level manufacturing technique in production fields of machining. There are various thread types and sizes to choose from these days. Occasionally, you need to know the dimensions associated with those threads, so we're developing posts like this one to make it easy for you. You'll find a quick reference chart for UNC/UNF - Unified National Threads in this post. If you're new to any of the terminology, scroll down past the chart, and you'll find a list of definitions to help you better. The chart below will focus on the major diameters for external threads and the minor diameters for internal threads. We've included the image below to show these areas better. Thread Designation UNF / UNC Threads per Inch Basic Major Diameter (External Threads) Basic Minor Diameter (Internal Threads) 0-80 UNF 80 0.060 0.047 1-64 UNC 64 0.073 0.056 2-56 UNC 56 0.086 0.067 2-64 UNF 64 0.086 0.069 4-40 UNC 40 0.112 0.085 5-40 UNC 40 0.125 0.098 5-44 UNF 44 0.125 0.100 6-32 UNC 32 0.136 0.104 6-40 UNF 40 0.136 0.111 8-32 UNC 32 0.164 0.130 8-36 UNF 36 0.164 0.134 10-24 UNC 24 0.190 0.145 10-32 UNF 32 0.190 0.156 1/4-20 UNC 20 0.250 0.196 1/4-28 UNF 28 0.250 0.211 5/16-18 UNC 18 0.313 0.252 5/16-24 UNF 24 0.313 0.267 3/8-16 UNC 16 0.375 0.307 3/8-24 UNF 24 0.375 0.330 7/16-14 UNC 14 0.438 0.360 7/16-20 UNF 20 0.438 0.383 1/2-13 UNC 13 0.500 0.417 1/2-20 UNF 20 0.500 0.446 9/16-12 UNC 12 0.563 0.472 9/16-18 UNF 18 0.563 0.502 5/8-11 UNC 11 0.625 0.527 5/8-18 UNF 18 0.625 0.565 3/4-10 UNC 10 0.750 0.642 3/4-16 UNF 16 0.750 0.682 7/8-9 UNC 9 0.875 0.755 7/8-14 UNF 14 0.875 0.798 1-8 UNC 8 1.000 0.865 1-14 UNF 14 1.000 0.910 1 1/8-7 UNC 7 1.125 0.970 1 1/8-12 UNF 12 1.125 1.035 1 1/4-7 UNC 7 1.250 1.095 1 3/8-6 UNC 6 1.375 1.195 1 1/2-6 UNC 6 1.500 1.320 1 3/4-5 UNC 5 1.750 1.534 2-4.5 UNC 4 1/2 2.000 1.759 Fill in your email below to access the full standard thread PDFUNF and UNC threads are the most common types of UN (Unified National) threads. UNC threads are unified coarse pitch threads. Less likely to cross-thread Faster assembly and disassembly (Generally used in mass production) Large thread allowances allow for thicker platings & coatings Fewer threads per distance compared to fine threads UNF threads are unified fine pitch threads. Allow for closer adjustment accuracy due to the smaller helix angle Require less torque to develop equivalent bolt preloads Fine thread is stronger in both tension (due to larger stress area) and shear (larger minor diameter) Less tendency to loosen since the thread incline is smaller Generally used for applications that need high fastener strength Thread fit is a measure of looseness or tightness of mating thread. It is specified to designate the amount of tolerance allowance and installation fit desired. There are three different classes of thread fit that they come in: Classes 1A (external) & 1B (internal): Extremely loose tolerance thread fit. This class is meant for quick and easy assembly/disassembly. (Not Commonly Specified) Classes 2A (external) & 2B (internal): Optimum thread fit that balances performance, manufacturing, economy, and convenience. (Most common - Nearly 90% of all commercial & industrial fasteners use this class of thread fit Classes 3A (external) & 3B (internal): Meant for close tolerance fasteners where the accuracy of thread elements is important, and safety is a critical design consideration There's a variety of different reasons you may have needed to reference the chart, so we hope it was useful for you! Here at Echo, we use it to help powder coaters, e-coaters, anodizers, and platers find the correct sized cap or plug for their specific thread size. So, here are a few tips in case you ever need it. The simple version of finding the right size cap is that we suggest finding one that has an ID (inside diameter) that is 1-2 sizes smaller than the Major Diameter of the thread you're masking off. You want to get a tighter fit for processes like e-coat.For tapered plugs, you'll want to closely match the minor diameter to the middle diameter of the plug (see graphic). If it's not exact, seat the plug deeper in the hole. When you install these plugs, you push them in and then turn them to get a better seal. UNF threads are fine threads, so this will require more turns to tighten the plug into the hole. UNC threads are coarse threads, so they require fewer turns to tighten the seal.Echo Engineering has been providing masking solutions to industrial finishers for well over 50 years. Because of that, we are frequently working closely with paint lines to help them find ways of masking off threaded holes and bolts. We specialize in not only standard catalog options, like powder coating tapes, caps, and plugs, but also in designing, engineering, and manufacturing custom solutions for some of the largest metal finishing lines in the world. If you're in need of a masking solution or simply have a question you'd like to ask us, please fill out the form below and we will get back to you as soon as possible! Posted in Powder Coating, Masking Threads, E-Coating and Plating Item # X-HT-300088 Have you ever wondered what the letters in thread sizes stood for? Or why some threads are sized differently? The thread size tells you the thickness of a thread. Getting the proper thickness affects the strength, diameter, sewing machine used, and visibility. It’s an important decision. We’re going to decode thread sizes and show you what each one means and how they compare with one another. When you go to compare the size of two different threads, you’ll want to make sure you’re comparing apples to apples. There are many different methods of measuring thread size, and different countries and industries use different units of measure.



A&E

Technical Bulletin

Vol 9-2003

A&E APPAREL THREAD SIZE COMPARISON CHART

Thread Construction & A&E Brand	Application	Tex Size	Old A&E TM #	Metric	Fan Reel	O-Tex	Cotton Count	Avg.* Strength (lbs)	Avg.* Strength (grams)	Avg.* Strength (cN)	Nell Se.** Min. Ss.
Perma Core® Ultimate Shirting & Tailored Clothing	Ex-Light Weight	T-16		160	M100	80/2	60/2	1.9	844	827	65 / 9
		T-18	XEF-140	160	M160	180/2	90/2	1.9	888	863	70 / 10
	Light Weight	T-24	XF-100	120	M120	131/2	45/2	2.5	1,128	1,099	75 / 11
Perma Core® Poly Wrapped Poly Core	Ex-Light Weight	T-18	XEF-140	160	M160	180/2	60/2	1.9	875	858	65 / 9
	Light Weight	T-24	XF-100	120	M120	131/2	45/2	2.5	1,184	1,161	75 / 11
		T-36	MF-76	80	M80	196/2	35/2	3.5	1,597	1,566	80 / 12
	Medium Weight	T-40	M-50	75	M75	264/2	22/2	4.5	2,041	2,002	90 / 14
		T-50	M-30	60	M60	265/2	30/2	6.6	3,007	2,949	100 / 16
	Heavy Weight	T-65	T-50	50	M50	328/2	18/2	7.5	3,447	3,380	110 / 16
		T-80	T-40H	35	M35	393/2	15/2	9.0	4,079	3,999	120 / 19
		T-105	T-100	27	M27	493/2	12/2	10.7	4,872	4,777	125 / 20
	Ex-Heavy Weight	T-130	T-120	25	M25	265/3	15/3	13.6	5,178	5,078	130 / 21
		T-135	XH-16	30	M30	493/3	12/3	16.2	7,328	7,184	140 / 22
		T-150	XXH-12	16	M18	393/4	15/4	18.3	8,305	8,144	160 / 23
		T-180		16	M16	493/4	12/4	21.7	9,861	9,670	160 / 24
		T-240		12	M12	591/4	10/4	26.7	12,111	11,875	200 / 28
		T-300		8	M8	864/4	7/4	34.3	15,577	15,276	230 / 26
Perma Spun® Global Brand Excell® NAFTA / EMFTA Spun Kool® FR Finish 100% Spun Polyester	Ex-Light Weight	T-16		160		84/2	70/2	1.2	558	547	65 / 9
		T-18		160	600	98/2	60/2	1.4	635	623	70 / 10
		T-21		140	800	74/3	80/3	1.8	816	801	70 / 10
		T-21	1000	140	800	111/3	53/3	1.5	784	729	70 / 10
	Light Weight	T-27	700	120		164/2	43/2	2.1	943	925	75 / 11
		T-27	900	120	600	98/3	60/3	2.2	998	979	75 / 11
		T-36		90		111/3	60/3	2.5	1,052	1,032	80 / 12
	Medium Weight	T-40	500	75		264/2	22/2	3.2	1,451	1,432	90 / 14
		T-40	600	60	400	170/3	39/3	3.6	1,647	1,615	90 / 14
		T-50		60		350/2	19/2	4.7	2,118	2,077	110 / 16
		T-50	300	50	600	264/3	30/3	6.0	2,177	2,135	110 / 16
	Heavy Weight	T-70	150	40		415/2	16/2	6.1	2,771	2,718	110 / 16
		T-80		35		474/2	14/2	7.1	3,216	3,154	120 / 16
		T-90	200	30	400/280	350/3	19/3	7.5	3,443	3,378	120 / 20
		T-105	150	27		415/3	15/3	8.7	4,424	4,339	125 / 20
	Ex-Heavy Weight	T-120		35	300	332/4	20/4	10.6	4,788	4,698	130 / 21
		T-135		30	T22	554/3	12/3	11.1	5,035	4,937	140 / 22
		T-210		13		831/3	8/3	16.6	8,908	8,829	160 / 24
		T-240		12		554/5	12/5	18.8	8,981	8,807	200 / 28
		T-200		11	Comp	332/6	30/6		-	-	NA

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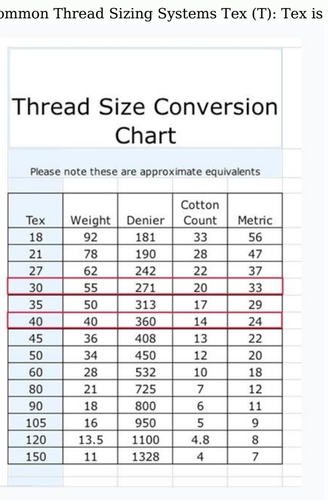
3 Common Thread Sizing Systems Tex (T): Tex is the most consistent of the measuring methods. It uses a fixed length to measure the weight of a thread. Tex is the weight (in grams) of 1,000 meters of thread. Or, in other words, 1,000 meters of thread that weighs 1 gm. = 1 Tex. The higher the tex, the thicker the thread.



Thread Size Conversion Chart

Please note these are approximate equivalents

Tex	Weight	Denier	Cotton Count	Metric
18	92	181	33	56
21	78	190	28	47
27	62	242	22	37
30	55	271	20	33
35	50	313	17	29
40	40	360	14	24
45	36	408	13	22
50	34	450	12	20
60	28	532	10	18
80	21	725	7	12
90	18	800	6	11
105	16	950	5	9
120	13.5	1100	4.8	8
150	11	1328	4	7

Denier Count (Td or d): Denier also measures thread at a fixed length. It is the weight (in grams) of 9,000 meters (or 9 km) of thread. You might recognize the term from descriptions of nylon fabrics, which are often classified by the denier of the threads from which they are woven.

Coarse			Fine			
Diameter		Pitch	Diameter		Pitch	
1st choice	2nd choice		1st choice	2nd choice	1st choice	2nd choice
M2	--	0.40	--	--	--	--
M2.5	--	0.45	--	--	--	--
M3	--	0.50	--	--	--	--
M4	--	0.70	--	--	--	--
M5	--	0.80	--	--	--	--
M6	--	1.00	--	--	--	--
--	M7	1.00	--	--	--	--
M8	--	1.25	M8	--	1.00	--
M10	--	1.50	M10	--	1.25	1.00
M12	--	1.75	M12	--	1.25	1.50
--	M14	2.00	--	M14	1.50	--
M16	--	2.00	M16	--	1.50	--
--	M18	2.50	--	M18	1.50	2.00
M20	--	2.50	M20	--	1.50	2.00
--	M22	2.50	--	M22	1.50	2.00
M24	--	3.00	M24	--	2.00	--
--	M27	3.00	--	M27	2.00	--
M30	--	3.50	M30	--	2.00	--
--	M33	3.50	--	--	--	--
M36	--	4.00	--	--	--	--
--	M39	4.00	--	--	--	--
M33	--	4.50	--	--	--	--
--	M45	4.50	--	--	--	--
M39	--	5.00	--	--	--	--
--	M52	5.00	--	--	--	--
M56	--	5.50	--	--	--	--

Commercial Sizes (V): Commercial sizes are used for heavy-duty threads for sewing heavy upholstery, canvas or webbing. Commercial sizes are set sizes of 30, 46, 69, 92, 138, 207, 277, 346, 415 and 554. They are the thread’s denier divided by 10. Commercial sizes are standard for marine grade thread (you’ll see commercial sizes on the Sailrite website for our outdoor thread). Here’s a helpful chart that shows how the different sizing methods compare: V-69 is the heaviest commercial size recommended for home sewing machines. Heavier threads make your stitching more visible. The thread size measures the thread’s thickness. If another weight is given for thread (like ounces), it refers to the amount of thread on the spool. Thread tends to get stronger as it gets heavier. The tension on your sewing machine will need adjusting when you switch thread weights. Try to use a needle where the eye is 40% larger than the thickness of the thread. Want to learn more about thread? Check out this short video and become a thread expert in minutes!