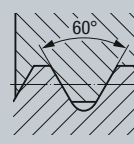
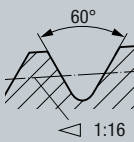
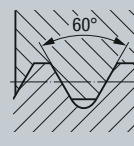
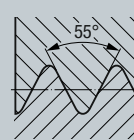
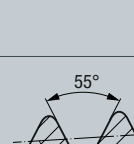
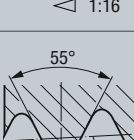
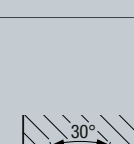

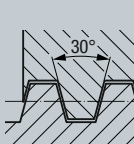
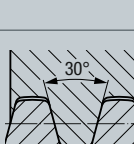
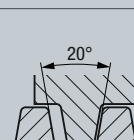
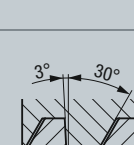
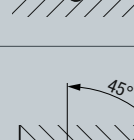
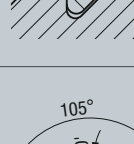

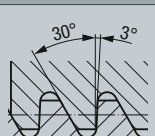
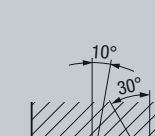
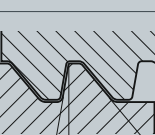

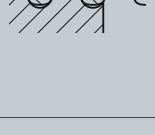

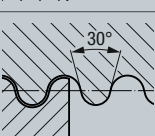
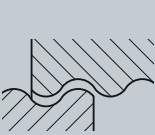
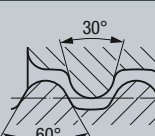

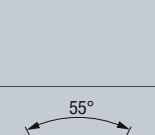
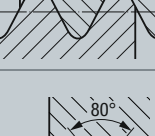

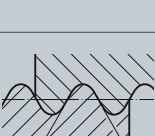
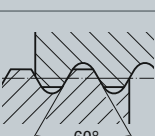
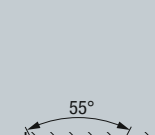

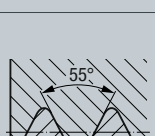


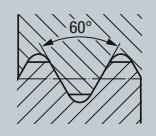
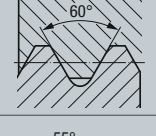
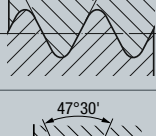
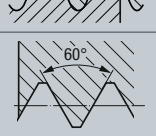
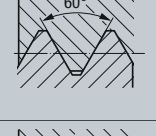
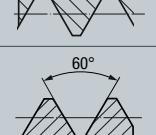
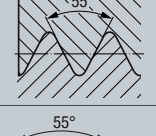
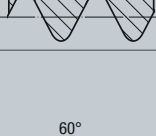

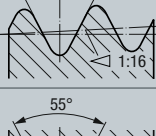
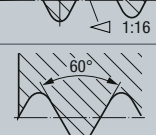
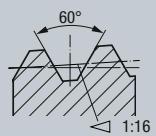
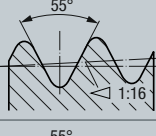
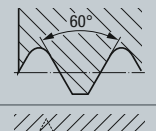
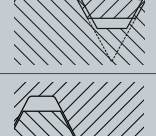
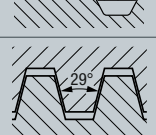
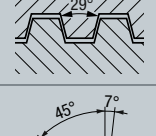
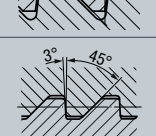
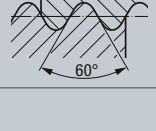
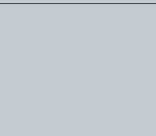


Threads according to international standards

Threads according to DIN or ISO standards

Description	Profile	Thread denomination (abbr.)	Short description example	Nominal sizes	Standard	Application		
ISO Metric coarse thread (one- and multi-start)		M	M 0.8 - 3G 6H	0.3 mm to 0.9 mm	DIN 14-1 to DIN 14-4	for watches and fine mechanics		
			M 8 - 6H	1 mm to 68 mm	DIN 13-1, DIN ISO 965-1	general use (coarse thread)		
			M 24 x 6 P 3 - 6H		DIN 13-52 (multi-start)			
			M 6 x 0.75 - 6H M 8 x 1 - 6H - LH	1 mm to 1000 mm	DIN 13-2 to DIN 13-11, DIN ISO 965-1	general use (fine thread)		
			M 24 x 4 P 2 - 6H		DIN 13-52 (multi-start)			
			M 3 - 4H 6H M 30 x 2 - 4H 5H	1.6 mm to 200 mm	LN 9163	for air- and spacecraft industry		
			M 63 x 1.5 - 7H	6 mm to 110 mm	DIN EN 60423 or DIN EN 50262	electrical installation pipes		
Metric thread			M 10 Sn 4 M 10 SK 6	1 mm to 150 mm	DIN 13-51	for the thread end on worm screws	non-sealing	
ISO Metric coarse thread with transition tolerance zone (formerly, threads for tight fit)			M 10 Sn 4 sealing	1 mm to 150 mm			sealing	
Metric thread with extra large play			M 36 DIN 2510	12 mm to 180 mm	DIN 2510	crew connections with expansion shank		
ISO Metric thread for steel thread inserts		EG M	EG M 20 - 6H mod	2 mm to 52 mm	DIN 8140	nut threads (coarse and fine threads) for steel thread inserts of wire		
ISO Metric thread for tight fit		MFS	MFS 12 x 1.5	5 mm to 16 mm	DIN 8141	for tight fit in aluminium cast alloys (coarse and fine threads)		
Metric tapered external thread		M	M 30 x 2 keg (tapered)	6 mm to 60 mm	DIN 158	for stopper screws and lubricating nipples		
			M 30 x 2 keg (tapered) short					
MJ thread (enlarged root radius or minor dia. in comparison with normal Metric thread)		MJ	MJ 6 x 1 - 4h6h	1.6 mm to 39 mm	DIN ISO 5855	for air- and spacecraft industry		
			MJ 6 x 1 - 4H5H					
Straight pipe thread where pressure-tight joints are not made on the threads		G ≧ PF (BSP, BSPP)	G 1 1/2 A G 1 1/2 B G 1 1/2	1/16 to 6	DIN EN ISO 228	external threads	for pipes, pipe connections and fittings	
						internal threads		
Straight pipe thread where pressure-tight joints are made on the threads		Rp ≧ PS (BSPP)	Rp 1/2	1/16 to 6	DIN EN 10226	internal threads for thread pipes and fittings		
			Rp 1/8	1/8 to 1 1/2	DIN 3858	internal threads for pipe screw connections (not identical with DIN EN 10226)		
Tapered pipe thread where pressure-tight joints are made on the threads		R	R 1/2	1/16 to 6	DIN EN 10226	external threads for thread pipes and fittings		
			R 1/8 - 1	1/8 to 1 1/2	DIN 3858	external threads for pipe screw connections (not identical with DIN EN 10226)		
Tapered pipe thread where pressure-tight joints are made on the threads		Rc ≧ PT (BSPT)	Rc 1/2	1/16 to 6	DIN EN 10226	internal threads for thread pipes and fittings		
ISO Metric trapezoidal thread (one- and multi-start)		Tr	Tr 40 x 7 - 7H	8 mm to 300 mm	DIN 103	general use		
			Tr 40 x 14 P 7 - 7H					
Tr 40 x 7 DIN 380								
Flat Metric trapezoidal thread (one- and multi-start)			Tr 40 x 14 P 7 DIN 380		DIN 380			
Trapezoidal thread (one- and multi-start) with play			Tr 48 x 12 DIN 263	48 mm	DIN 263	for rail vehicles		
			Tr 40 x 16 P 8 DIN 263	40 mm				
			Tr 32 x 1.5 - 7H DIN 6341	12 mm to 32 mm	DIN 6341	for (tension) collets		
Trapezoidal thread with rounded corners			Tr 40 x 5 DIN 30295	26 mm to 80 mm	DIN 30295	for rail vehicles		
Trapezoidal thread		KT	KT 22 DIN 6063	10 mm to 50 mm	DIN 6063-2	for plastic containers in the packaging industry		
Metric buttress thread (one- and multi-start)		S	S 48 x 8 - 7H	10 mm to 640 mm	DIN 513	general use		
			S 40 x 14 P 7 - 7H					
Buttress thread 45°			S 630 x 20 DIN 2781	100 mm to 1250 mm	DIN 2781	for hydraulic presses		
Self-forming tapered external thread				S 8 x 1 DIN 71412	6 mm to 10 mm	DIN 71412	for conical lubricating nipples	

Description	Profile	Thread denomination (abbr.)	Short description example	Nominal sizes	Standard	Application	
Buttress thread		S	S 25 x 1.5 DIN 20401	6 mm to 40 mm	DIN 20401	mining industry	
		S	S 22 (nut thread)				
		GS	GS 22 (bolt thread for glass containers)	10 mm to 50 mm	DIN 55525	for plastic and glass containers in the packaging industry	
		KS	KS 22 (bolt thread for plastic containers)				
Straight round thread (one- and multi-start)		KS	KS 22 DIN 6063	10 mm to 60 mm	DIN 6063-1	for plastic containers in the packaging industry	
Straight round thread		Rd	Rd 40 x 1/6 - 7H Rd 40 x 1/3 P 1/6 - 7H	8 mm to 200 mm	DIN 405	general use	
			Rd 40 x 5 DIN 20400	10 mm to 300 mm	DIN 20400	for extra high stress resistance, in the mining industry	
Straight round thread		Rd	Rd 80 x 10 DIN 15403	50 mm to 320 mm	DIN 15403	for lifting hooks	
			Rd 70 DIN 7273	20 mm to 100 mm	DIN 7273-1	for sheet-metal components and corresponding screw connections	
Straight round thread with play and steep flanks, with pitch 7 mm		Rd	Rd 59 x 7 DIN 262	34 mm to 79 mm, with pitch 7 mm	DIN 262	for rail vehicles	
			Rd 59 x 7 left-hand DIN 262				
Straight round thread with play and low flanks, with pitch 7 mm		Rd	Rd 50 x 7 DIN 264	50 mm, with pitch 7 mm	DIN 264	for rail vehicles	
			Rd 50 x 7 left-hand DIN 264				
Straight round thread		Rd	Rd 110 x 1/3 DIN 3182	110 mm	DIN 3182	for breathing apparatuses and diving equipment	
			Rd 40 x 1/7 DIN EN 148	40 mm	DIN EN 148	for breathing apparatuses	
Straight round thread		GL	GL 25 x 3 DIN 168	8 mm to 125 mm	DIN 168	for glass containers	
Electrical thread		E	E 27 DIN 40400	14 mm to 33 mm	DIN 40400	for D-type safety fuses, lamp fixtures and lamp sockets	
			E 5	5 mm to 40 mm	DIN EN 60061-1	for lamp fixtures and lamp sockets	
Straight Whitworth thread		W	W 3/16 DIN 49301	3/16	DIN 49301 (void)	for D-type safety fuses	
Steel conduit thread		Pg	Pg 21 DIN 40430	7 mm to 48 mm	DIN 40430	for the electrical industry	
Sheet metal screw thread		ST	ST 3.5 ISO 1478	1.5 mm to 9.5 mm	DIN EN ISO 1478	for sheet metal screws	
Wood screw thread		–	4 DIN 7998	1.6 mm to 20 mm	DIN 7998	for wood screws	
Bicycle thread		FG	FG 9.5 DIN 79012	2 mm to 34.8 mm	DIN 79012	for bicycles and mopeds	
			–	1.375 - 24 6H/6g DIN ISO 6698	DIN ISO 6698	for free-wheeling gear wheels and hubs of bicycles	
Valve thread		Vg	Vg 12 DIN 7756	5 mm to 12 mm	DIN 7756	valves for vehicle tires	
			Vg 1 ISO 4570	5.2 mm to 20.5 mm	ISO 4570		
Tapered Whitworth thread		17E	17E (formerly: W19.8 x 1/14 keg.)	19.8 mm	DIN EN ISO 11363 (DIN EN 144-1) (DIN EN ISO 11116-1)	for screwed sockets of gas cylinders	
		25E	25E (formerly: W28.8 x 1/14 keg.)	28.8 mm	(DIN EN 629-1) (ISO 10920)		
		W	W31.3 x 1/14 keg. DIN 477 (tapered)	31.3 mm	DIN 477-1		
Straight Whitworth thread		W	W 21.8 x 1/14 cyl. DIN 477	21.8 mm 24.32 mm 25.4 mm	DIN 477-1	for side connections of gas cylinder valves	
			W 80 x 1/11 DIN EN 962	80 mm	DIN EN 962	for protection caps of gas cylinders	
RMS thread		RMS	W 0.8 x 1/36 DIN ISO 8038	20.32 mm	DIN ISO 8038	for microscope lenses	
Tapered drill pipe thread		Gg	Gg 4 1/2 DIN 20314	3 1/2 4 1/2 5 1/2 6 5/8	DIN 20314	for the mining industry	

Description	Profile	Thread denomination (abbr.)	Short description example	Standard	Country
Unified small screw threads		UNM	0.80 UNM	ASME B1.10M	USA
Unified screw threads		UN UNC UNF UNEF UNS	1/4 - 20 UNC - 2A or 0.250 - 20 UNC - 2A No. 6 (0.138)-32 UNC - 2A 2)	ASME B1.1 BS 1580	USA United Kingdom
		UNR UNRC UNRF UNREF UNRS	7/16 - 20 UNRF - 2A or 0.4375 - 20 UNRF - 2A	ASME B1.1	USA
		UNJ UNJC UNJF UNJEF	0.250 - 28 UNJF - 3A	ASME B1.15 SAE AS8879	USA
American screw threads (outdated)		NC NF NEF NS N	No. 12 - 32 NEF	ASA B1.1 (outdated)	USA
MJ thread (enlarged root radius or minor dia. in comparison with normal Metric thread)		MJ	MJ 6 x 1 - 6H	ASME B1.21M	USA
Whitworth threads		BSW BSF	1/4 in. - 20 B.S.W.	BS 84	United Kingdom
B.A. threads		B.A.	11 B.A.	BS 93	
		NPSC	1/8 - 27 NPSC	ANSI/ASME B1.20.1	
Straight pipe thread		NPSM NPSL			USA
		NPSH NH NHR	1/2 - 14 NPSH 3/4 - 11.5 NH	ASME B1.20.7	
		NPSF NPSI	1/8 - 28 NPSF	ASME B1.20.3	
		NGO	0.903 - 14 NGO-RH-EXT	CGA V-1	
		G ≧ PF (BSPP, BSP)	G 1 1/4	ISO 228 DIN EN ISO 228-1	
		Rp ≧ PS (BSPP)	Rp 1/4	ISO 7/1 DIN EN 10226	
Tapered pipe thread		NPT NPTR	3/8 - 18 NPT	ANSI/ASME B1.20.1	USA
		NPTF PTF-SAE-SHORT PTF-SPL-SHORT PTF-SPL-EXTRA SHORT SPL-PTF	1/8 - 27 NPTF - 1 3)	ANSI B1.20.3	
		NGT	1/8 - 27 NGT	CGA V-1	
		R	R 1/2	ISO 7/1 DIN EN 10226	
Thread for steel thread inserts		UNC-STI UNF-STI	1/4 - 20 UNC - 2B - STI or 0.125 - 20 UNC - 2B - STI	ASME B18.29.1	USA
Thread for tight fit		NC5-IF NC5-HF and others	1/2 - 13 NC5 - IF or 0.500 - 13 NC5 - IF	ASME/ANSI B1.12	
Microscope thread		AMO	0.800 - 36 AMO	ASA B1.11	
Trapezoidal thread		ACME	1 3/4 - 4 ACME - 2G	ASME B1.5 BS 1104	United Kingdom
		STUB-Acme	0.500 - 20 STUB ACME	ANSI B1.8	USA
Buttress thread		BUTT	2.5 - 8 BUTT - 2A	ANSI B1.9	USA
		Buttress	2.0 B.S. Buttress thread 8 tpi medium class	BS 1657	United Kingdom
		ART	ART 120 x 8 Gg.	NF E 03-611	France
Bicycle thread		BSC	1/4 - 26 BSC - Med.	BS 811	United Kingdom
API thread (thread of the American Petroleum Institute for the oil industry)		CSG, LCSG, BCSG, XCSG, LINE PIPE LP, TBG, UP TBG	4 1/2 API TBG	API Std 5 B	USA
		NC ROTARY REG REG LH FH IF	API 4 IF THD	API Spec 7	
		Sucker Rods	API - SR 3/4 1 1/16 - 10 Box - 2B	API Spec 11 B	