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**ISO general purpose metric screw  
threads — Tolerances —**

**Part 3:**  
**Deviations for constructional screw threads**

*Filetages métriques ISO pour usages généraux — Tolérances —  
Partie 3: Écarts pour filetages de construction*  
**(standards.iteh.ai)**

[ISO 965-3:1998](https://standards.iteh.ai/catalog/standards/sist/315a06c7-c74f-4fa2-86e4-7c2702c98893/iso-965-3-1998)

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 965-1 was prepared by Technical Committee ISO/TC 1, *Screw threads*, Subcommittee SC 2, *Tolerances*.

This third edition cancels and replaces the second edition (ISO 965-3:1980), which has been technically revised.

ISO 965 consists of the following parts, under the general title *ISO general purpose metric screw threads – Tolerances*

- Part 1: Principles and basic data
- Part 2: Limits of sizes for general purpose bolt and nut threads – Medium quality
- Part 3: Deviations for constructional screw threads
- Part 4: Limits of sizes for hot-dip galvanized external threads to mate with internal threads tapped with tolerance position H or G after galvanizing
- Part 5: Limits of sizes for internal screw threads to mate with hot-dip galvanized external screw threads with maximum size of tolerance position h before galvanizing

STANDARD PREVIEW

(standard details)

ISO 965-3:1998

<https://standards.iteh.ai/catalog/standards/sist/315a06c7-e74f-462-86e4-7c2702c98893/iso-965-3-1998>

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# ISO general purpose metric screw threads — Tolerances —

## Part 3: Deviations for constructional screw threads

### 1 Scope

This part of ISO 965 specifies deviations for pitch and crest diameters for ISO general purpose metric screw threads (M) conforming to ISO 261 having basic profile according to ISO 68-1.

The deviations specified are derived from the fundamental deviations and tolerances specified in ISO 965-1.

### 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 965. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 965 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 68-1:1998, *ISO general purpose screw threads — Basic profile — Part 1: Metric screw threads*.

<https://standards.iteh.ai/catalog/standards/sist/315a06c7-c74f-4fa2-86e4-7e2701b99283/iso-68-1-1998>

ISO 261:1998, *ISO general purpose metric screw threads — General plan*.

ISO 965-1:1998, *ISO general purpose metric screw threads — Tolerances — Part 1: Principles and basic data*.

ISO 5408:1983, *Cylindrical screw threads — Vocabulary*.

### 3 Definitions

For the purpose of this part of ISO 965 the definitions given in ISO 5408 apply.

### 4 Deviations

For internal threads as well as external threads, the actual root contour shall not in any point transgress the basic profile.

The tabulated deviation values for the minor diameter of the external thread are calculated on the basis of  $\frac{H}{6}$  truncation and

may be used for stress calculations  $\left[ \text{deviation} = - \left( |e_s| + \frac{H}{6} \right) \right]$ .

For coated threads, the tolerances apply to the parts before coating, unless otherwise stated. After coating the actual thread profile shall not in any point transgress the maximum material limits for position H or h respectively.

NOTE These provisions are intended for thin coatings, for example those obtained by electroplating.

Table 1

ES, es = upper deviation; EI, ei = lower deviation

Basic major diameter		Pitch mm	Internal thread					External thread							
over mm	up to mm		Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter		
				ES	EI	ES	EI		es	ei	es	ei			
$-\left( es  + \frac{H}{6}\right)$ for stress calculation															
$\mu\text{m}$															
0,99	1,4	0,2	—	—	—	—	—	3h4h	0	-24	0	-36	-29		
			4H	+40	0	+38	0	4h	0	-30	0	-36	-29		
			5G	—	—	—	—	5g6g	-17	-55	-17	-73	-46		
			5H	—	—	—	—	5h4h	0	-38	0	-36	-29		
			—	—	—	—	—	5h6h	0	-38	0	-56	-29		
			—	—	—	—	—	6e	—	—	—	—	—		
			—	—	—	—	—	6f	—	—	—	—	—		
			6G	—	—	—	—	6g	-17	-65	-17	-73	-46		
			6H	—	—	—	—	6h	0	-48	0	-56	-29		
			—	—	—	—	—	7e6e	—	—	—	—	—		
		7G	—	—	—	—	7g6g	—	—	—	—	—			
		7H	—	—	—	—	7h6h	—	—	—	—	—			
		8G	—	—	—	—	8g	—	—	—	—	—			
		8H	—	—	—	—	9g8g	—	—	—	—	—			
		—	—	0,25	—	—	—	—	—	3h4h	0	-26	0	-42	-36
		4H	+45		0	+45	0	4h	0	-34	0	-42	-36		
		5G	+74		+18	+74	+18	5g6g	-18	-60	-18	-85	-54		
		5H	+56		0	+56	0	5h4h	0	-42	0	-42	-36		
		—	—		—	—	—	5h6h	0	-42	0	-67	-36		
		—	—		—	—	—	6e	—	—	—	—	—		
		—	—		—	—	—	6f	—	—	—	—	—		
		6G	—		—	—	—	6g	-18	-71	-18	-85	-54		
		6H	—		—	—	—	6h	0	-53	0	-67	-36		
		—	—		—	—	—	7e6e	—	—	—	—	—		
		7G	—	—	—	—	7g6g	—	—	—	—	—			
		7H	—	—	—	—	7h6h	—	—	—	—	—			
		8G	—	—	—	—	8g	—	—	—	—	—			
		8H	—	—	—	—	9g8g	—	—	—	—	—			
		—	—	0,3	—	—	—	—	—	3h4h	0	-28	0	-48	-43
		4H	+48		0	+53	0	4h	0	-36	0	-48	-43		
5G	+78	+18	+85		+18	5g6g	-18	-63	-18	-93	-61				
5H	+60	0	+67		0	5h4h	0	-45	0	-48	-43				
—	—	—	—		—	5h6h	0	-45	0	-75	-43				
—	—	—	—		—	6e	—	—	—	—	—				
—	—	—	—		—	6f	—	—	—	—	—				
6G	+93	+18	+103		+18	6g	-18	-74	-18	-93	-61				
6H	+75	0	+85		0	6h	0	-56	0	-75	-43				
—	—	—	—		—	7e6e	—	—	—	—	—				
7G	—	—	—	—	7g6g	—	—	—	—	—					
7H	—	—	—	—	7h6h	—	—	—	—	—					
8G	—	—	—	—	8g	—	—	—	—	—					
8H	—	—	—	—	9g8g	—	—	—	—	—					
1,4	2,8	0,2	—	—	—	—	—	3h4h	0	-25	0	-36	-29		
			4H	+42	0	+38	0	4h	0	-32	0	-36	-29		
			5G	—	—	—	—	5g6g	-17	-57	-17	-73	-46		
			5H	—	—	—	—	5h4h	0	-40	0	-36	-29		
			—	—	—	—	—	5h6h	0	-40	0	-56	-29		

(continued)

Table 1 (continued)

Basic major diameter		Pitch	Internal thread				External thread								
over	up to		Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter		
				<i>ES</i>	<i>EI</i>	<i>ES</i>	<i>EI</i>		<i>es</i>	<i>ei</i>	<i>es</i>	<i>ei</i>			
mm	mm	mm	$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$		$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$			
1,4	2,8	0,2	—	—	—	—	6e	—	—	—	—	—	—		
			—	—	—	—	6f	-32	-82	-32	-88	-61			
			6G	—	—	—	6g	-17	-67	-17	-73	-46			
			6H	—	—	—	6h	0	-50	0	-56	-29			
			—	—	—	—	7e6e	—	—	—	—	—			
			7G	—	—	—	7g6g	—	—	—	—	—			
			7H	—	—	—	7h6h	—	—	—	—	—			
			8G	—	—	—	8g	—	—	—	—	—			
			8H	—	—	—	9g8g	—	—	—	—	—			
		—	—	0,25	—	—	—	—	3h4h	0	-28	0	-42	-36	
		—	—		4H	+48	0	+45	0	4h	0	-36	0	-42	-36
		—	—		5G	+78	+18	+74	+18	5g6g	-18	-63	-18	-85	-54
		—	—		5H	+60	0	+56	0	5h4h	0	-45	0	-42	-36
		—	—		—	—	—	—	—	5h6h	0	-45	0	-67	-36
		—	—		—	—	—	—	—	6e	—	—	—	—	—
		—	—		—	—	—	—	—	6f	-33	-89	-33	-100	-69
		—	—		6G	—	—	—	—	6g	-18	-74	-18	-85	-54
		—	—		6H	—	—	—	—	6h	0	-56	0	-67	-36
		—	—		—	—	—	—	—	7e6e	—	—	—	—	—
		—	—		7G	—	—	—	—	7g6g	—	—	—	—	—
		—	—		7H	—	—	—	—	7h6h	—	—	—	—	—
		—	—	8G	—	—	—	—	8g	—	—	—	—	—	
		—	—	8H	—	—	—	—	9g8g	—	—	—	—	—	
		—	—	0,35	—	—	—	—	3h4h	0	-32	0	-53	-51	
		—	—		4H	+53	0	+63	0	4h	0	-40	0	-53	-51
		—	—		5G	+86	+19	+99	+19	5g6g	-19	-69	-19	-104	-70
		—	—		5H	+67	0	+80	0	5h4h	0	-50	0	-53	-51
		—	—		—	—	—	—	—	5h6h	0	-50	0	-85	-51
		—	—		—	—	—	—	—	6e	—	—	—	—	—
		—	—		—	—	—	—	—	6f	-34	-97	-34	-119	-85
		—	—		6G	+104	+19	+119	+19	6g	-19	-82	-19	-104	-70
		—	—		6H	+85	0	+100	0	6h	0	-63	0	-85	-51
		—	—		—	—	—	—	—	7e6e	—	—	—	—	—
		—	—		7G	—	—	—	—	7g6g	-19	-99	-19	-104	-70
		—	—		7H	—	—	—	—	7h6h	0	-80	0	-85	-51
		—	—	8G	—	—	—	—	8g	—	—	—	—	—	
		—	—	8H	—	—	—	—	9g8g	—	—	—	—	—	
		—	—	0,4	—	—	—	—	3h4h	0	-34	0	-60	-58	
		—	—		4H	+56	0	+71	0	4h	0	-42	0	-60	-58
		—	—		5G	+90	+19	+109	+19	5g6g	-19	-72	-19	-114	-77
—	—	5H	+71		0	+90	0	5h4h	0	-53	0	-60	-58		
—	—	—	—		—	—	—	5h6h	0	-53	0	-95	-58		
—	—	—	—		—	—	—	6e	—	—	—	—	—		
—	—	—	—		—	—	—	6f	-34	-101	-34	-129	-92		
—	—	6G	+109		+19	+131	+19	6g	-19	-86	-19	-114	-77		
—	—	6H	+90		0	+112	0	6h	0	-67	0	-95	-58		
—	—	—	—		—	—	—	7e6e	—	—	—	—	—		

(continued)

Table 1 (continued)

Basic major diameter		Pitch	Internal thread					External thread					
over	up to		Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter
				<i>ES</i>	<i>EI</i>	<i>ES</i>	<i>EI</i>		<i>es</i>	<i>ei</i>	<i>es</i>	<i>ei</i>	
mm	mm	mm	μm	μm	μm	μm	μm	μm	μm	μm	μm	μm	
1,4	2,8	0,4	7G	—	—	—	—	7g6g	-19	-104	-19	-114	-77
			7H	—	—	—	—	7h6h	0	-85	0	-95	-58
			8G	—	—	—	—	8g	—	—	—	—	—
			8H	—	—	—	—	9g8g	—	—	—	—	—
		0,45	—	—	—	—	—	3h4h	0	-36	0	-63	-65
			4H	+60	0	+80	0	4h	0	-45	0	-63	-65
			5G	+95	+20	+120	+20	5g6g	-20	-76	-20	-120	-85
			5H	+75	0	+100	0	5h4h	0	-56	0	-63	-65
			—	—	—	—	—	5h6h	0	-56	0	-100	-65
			—	—	—	—	—	6e	—	—	—	—	—
			—	—	—	—	—	6f	-35	-106	-35	-135	-100
			6G	+115	+20	+145	+20	6g	-20	-91	-20	-120	-85
			6H	+95	0	+125	0	6h	0	-71	0	-100	-65
			—	—	—	—	—	7g6g	-20	-110	-20	-120	-85
			7H	—	—	—	—	7h6h	0	-90	0	-100	-65
			8G	—	—	—	—	8g	—	—	—	—	—
8H	—	—	—	—	9g8g	—	—	—	—	—			
2,8	5,6	0,35	—	—	—	—	—	3h4h	0	-34	0	-53	-51
			4H	+56	0	+63	0	4h	0	-42	0	-53	-51
			5G	+90	+19	+99	+19	5g6g	-19	-72	-19	-104	-70
			5H	+71	0	+80	0	5h4h	0	-53	0	-53	-51
			—	—	—	—	—	5h6h	0	-53	0	-85	-51
			—	—	—	—	—	6e	—	—	—	—	—
			—	—	—	—	—	6f	-34	-101	-34	-119	-85
			6G	+109	+19	+119	+19	6g	-19	-86	-19	-104	-70
			6H	+90	0	+100	0	6h	0	-67	0	-85	-51
			—	—	—	—	—	7e6e	—	—	—	—	—
			7G	—	—	—	—	7g6g	-19	-104	-19	-104	-70
			7H	—	—	—	—	7h6h	0	-85	0	-85	-51
		8G	—	—	—	—	8g	—	—	—	—	—	
		8H	—	—	—	—	9g8g	—	—	—	—	—	
		0,5	—	—	—	—	—	3h4h	0	-38	0	-67	-72
			4H	+63	0	+90	0	4h	0	-48	0	-67	-72
			5G	+100	+20	+132	+20	5g6g	-20	-80	-20	-126	-92
			5H	+80	0	+112	0	5h4h	0	-60	0	-67	-72
			—	—	—	—	—	5h6h	0	-60	0	-106	-72
			—	—	—	—	—	6e	-50	-125	-50	-156	-122
—	—		—	—	—	6f	-36	-111	-36	-142	-108		
6G	+120		+20	+160	+20	6g	-20	-95	-20	-126	-92		
6H	+100	0	+140	0	6h	0	-75	0	-106	-72			
—	—	—	—	—	7e6e	-50	-145	-50	-156	-122			
7G	+145	+20	+200	+20	7g6g	-20	-115	-20	-126	-92			
7H	+125	0	+180	0	7h6h	0	-95	0	-106	-72			
8G	—	—	—	—	8g	—	—	—	—	—			
8H	—	—	—	—	9g8g	—	—	—	—	—			

(continued)

Table 1 (continued)

Basic major diameter		Pitch	Internal thread				External thread							
over	up to		Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter	
				<i>ES</i>	<i>EI</i>	<i>ES</i>	<i>EI</i>		<i>es</i>	<i>ei</i>	<i>es</i>	<i>ei</i>		
mm	mm	mm	µm	µm	µm	µm	µm	µm	µm	µm	µm	µm		
2,8	5,6	0,6	—	—	—	—	3h4h	0	-42	0	-80	-87		
			4h	+71	0	+100	4h	0	-53	0	-80	-87		
			5G	+111	+21	+146	5g6g	-21	-88	-21	-146	-108		
			5H	+90	0	+125	5h4h	0	-67	0	-80	-87		
			—	—	—	—	5h6h	0	-67	0	-125	-87		
			—	—	—	—	6e	-53	-138	-53	-178	-140		
			—	—	—	—	6f	-36	-121	-36	-161	-123		
			6G	+133	+21	+181	6g	-21	-106	-21	-146	-108		
			6H	+112	0	+160	6h	0	-85	0	-125	-87		
			—	—	—	—	7e6e	-53	-159	-53	-178	-140		
			7G	+161	+21	+221	7g6g	-21	-127	-21	-146	-108		
			7H	+140	0	+200	7h6h	0	-106	0	-125	-87		
			8G	—	—	—	8g	—	—	—	—	—		
		8H	—	—	—	9g8g	—	—	—	—	—			
		—	—	0,7	—	—	—	—	3h4h	0	-45	0	-90	-101
		4H	+75		0	+112	4h	0	-56	0	-90	-101		
		5G	+117		+22	+162	5g6g	-22	-93	-22	-162	-123		
		5H	+95		0	+140	5h4h	0	-71	0	-90	-101		
		—	—		—	—	5h6h	0	-71	0	-140	-101		
		—	—		—	—	6e	-56	-146	-56	-196	-157		
		—	—		—	—	6f	-38	-128	-38	-178	-139		
		6G	+140		+22	+202	6g	-22	-112	-22	-162	-123		
		6H	+118		0	+180	6h	0	-90	0	-140	-101		
		—	—		—	—	7e6e	-56	-168	-56	-196	-157		
		7G	+172		+22	+246	7g6g	-22	-134	-22	-162	-123		
		7H	+150		0	+224	7h6h	0	-112	0	-140	-101		
		8G	—		—	—	8g	—	—	—	—	—		
		8H	—	—	—	9g8g	—	—	—	—	—			
		—	—	0,75	—	—	—	—	3h4h	0	-45	0	-90	-108
		4H	+75		0	+118	4h	0	-56	0	-90	-108		
		5G	+117		+22	+172	5g6g	-22	-93	-22	-162	-130		
		5H	+95		0	+150	5h4h	0	-71	0	-90	-108		
		—	—		—	—	5h6h	0	-71	0	-140	-108		
		—	—		—	—	6e	-56	-146	-56	-196	-164		
		—	—		—	—	6f	-38	-128	-38	-178	-146		
		6G	+140		+22	+212	6g	-22	-112	-22	-162	-130		
		6H	+118		0	+190	6h	0	-90	0	-140	-108		
		—	—		—	—	7e6e	-56	-168	-56	-196	-164		
		7G	+172		+22	+258	7g6g	-22	-134	-22	-162	-130		
		7H	+150		0	+236	7h6h	0	-112	0	-140	-108		
		8G	—		—	—	8g	—	—	—	—	—		
		8H	—	—	—	9g8g	—	—	—	—	—			
		—	—	0,8	—	—	—	—	3h4h	0	-48	0	-95	-115
		4H	+80		0	+125	4h	0	-60	0	-95	-115		
		5G	+124		+24	+184	5g6g	-24	-99	-24	-174	-140		
		5H	+100		0	+160	5h4h	0	-75	0	-95	-115		
		—	—		—	—	5h6h	0	-75	0	-150	-115		

(continued)

Table 1 (continued)

Basic major diameter		Pitch	Internal thread				External thread									
over	up to		Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter			
				<i>ES</i>	<i>EI</i>	<i>ES</i>	<i>EI</i>		<i>es</i>	<i>ei</i>	<i>es</i>	<i>ei</i>				
mm	mm	mm	$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$		$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$	Deviation $-\left( es  + \frac{H}{6}\right)$ for stress calculation				
2,8	5,6	0,8	—	—	—	—	6e	-60	-155	-60	-210	-176				
			—	—	—	—	6f	-38	-133	-38	-188	-153				
			6G	+149	+24	+224	+24	6g	-24	-119	-24	-174	-140			
			6H	+125	0	+200	0	6h	0	-95	0	-150	-115			
			—	—	—	—	—	7e6e	-60	-178	-60	-210	-176			
			7G	+184	+24	+274	+24	7g6g	-24	-142	-24	-174	-140			
			7H	+160	0	+250	0	7h6h	0	-118	0	-150	-115			
			8G	+224	+24	+339	+24	8g	-24	-174	-24	-260	-140			
			8H	+200	0	+315	0	9g8g	-24	-214	-24	-260	-140			
5,6	11,2	0,75	—	—	—	—	3h4h	0	-50	0	-90	-108				
			4H	+85	0	+118	0	4h	0	-63	0	-90	-108			
			5G	+128	+22	+172	+22	5g6g	-22	-102	-22	-162	-130			
			5H	+106	0	+150	0	5h4h	0	-80	0	-90	-108			
			—	—	—	—	—	6e	-56	-156	-56	-196	-164			
			—	—	—	—	—	6f	-38	-138	-38	-178	-146			
			6G	+154	+22	+212	+22	6g	-22	-122	-22	-162	-130			
			6H	+132	0	+190	0	6h	0	-100	0	-140	-108			
			—	—	—	—	—	7e6e	-56	-181	-56	-196	-164			
			7G	+192	+22	+258	+22	7g6g	-22	-147	-22	-162	-130			
			7H	+170	0	+236	0	7h6h	0	-125	0	-140	-108			
			8G	—	—	—	—	8g	—	—	—	—	—			
		8H	—	—	—	—	9g8g	—	—	—	—	—				
		1	1	1	—	—	—	—	3h4h	0	-56	0	-112	-144		
					4H	+95	0	+150	0	4h	0	-71	0	-112	-144	
					5G	+144	+26	+216	+26	5g6g	-26	-116	-26	-206	-170	
					5H	+118	0	+190	0	5h4h	0	-90	0	-112	-144	
					—	—	—	—	—	5h6h	0	-90	0	-180	-144	
					—	—	—	—	—	6e	-60	-172	-60	-240	-204	
					—	—	—	—	—	6f	-40	-152	-40	-220	-184	
					6G	+176	+26	+262	+26	6g	-26	-138	-26	-206	-170	
					6H	+150	0	+236	0	6h	0	-112	0	-180	-144	
					—	—	—	—	—	7e6e	-60	-200	-60	-240	-204	
					7G	+216	+26	+326	+26	7g6g	-26	-166	-26	-206	-170	
7H	+190				0	+300	0	7h6h	0	-140	0	-180	-144			
8G	+262	+26	+401	+26	8g	-26	-206	-26	-306	-170						
8H	+236	0	+375	0	9g8g	-26	-250	-26	-306	-170						
1,25	1,25	1,25	—	—	—	—	3h4h	0	-60	0	-132	-180				
			4H	+100	0	+170	0	4h	0	-75	0	-132	-180			
			5G	+153	+28	+240	+28	5g6g	-28	-123	-28	-240	-208			
			5H	+125	0	+212	0	5h4h	0	-95	0	-132	-180			
			—	—	—	—	—	5h6h	0	-95	0	-212	-180			
			—	—	—	—	—	6e	-63	-181	-63	-275	-243			
			—	—	—	—	—	6f	-42	-160	-42	-254	-222			
			6H	+160	0	+265	0	6h	0	-118	0	-212	-180			

(continued)



Table 1 (continued)

Basic major diameter		Pitch	Internal thread					External thread					
over	up to		Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter
				<i>ES</i>	<i>EI</i>	<i>ES</i>	<i>EI</i>		<i>es</i>	<i>ei</i>	<i>es</i>	<i>ei</i>	
mm	mm	mm	$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$		$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$	Deviation $-\left( es  + \frac{H}{6}\right)$ for stress calculation	
5,6	11,2	1,25	—	—	—	—	7e6e	-63	-213	-63	-275	-243	
			7G	+228	+28	+363	+28	7g6g	-28	-178	-28	-240	-208
			7H	+200	0	+335	0	7h6h	0	-150	0	-212	-180
			8G	+278	+28	+453	+28	8g	-28	-218	-28	-363	-208
		8H	+250	0	+425	0	9g8g	-28	-264	-28	-363	-208	
		1,5	—	—	—	—	—	3h4h	0	-67	0	-150	-217
			4H	+112	0	+190	0	4h	0	-85	0	-150	-217
			5G	+172	+32	+268	+32	5g6g	-32	-138	-32	-268	-249
			5H	+140	0	+236	0	5h4h	0	-106	0	-150	-217
			—	—	—	—	—	5h6h	0	-106	0	-236	-217
			—	—	—	—	—	6e	-67	-199	-67	-303	-284
			—	—	—	—	—	6f	-45	-177	-45	-281	-262
			6G	+212	+32	+332	+32	6g	-32	-164	-32	-268	-249
			6H	+180	0	+300	0	6h	0	-132	0	-236	-217
			—	—	—	—	—	7e6e	-67	-237	-67	-303	-284
			7G	+256	+32	+407	+32	7g6g	-32	-202	-32	-268	-249
			7H	+224	0	+375	0	7h6h	0	-170	0	-236	-217
			8G	+312	+32	+507	+32	8g	-32	-244	-32	-407	-249
8H	+280		0	+475	0	9g8g	-32	-297	-32	-407	-249		
11,2	22,4	1	—	—	—	—	3h4h	0	-60	0	-112	-144	
			4H	+100	0	+150	0	4h	0	-75	0	-112	-144
			5G	+151	+26	+216	+26	5g6g	-26	-121	-26	-206	-170
			5H	+125	0	+190	0	5h4h	0	-95	0	-112	-144
			—	—	—	—	—	5h6h	0	-95	0	-180	-144
			—	—	—	—	—	6e	-60	-178	-60	-240	-204
			—	—	—	—	—	6f	-40	-158	-40	-220	-184
			6G	+186	+26	+262	+26	6g	-26	-144	-26	-206	-170
			6H	+160	0	+236	0	6h	0	-118	0	-180	-144
			—	—	—	—	—	7e6e	-60	-210	-60	-240	-204
		7G	+226	+26	+326	+26	7g6g	-26	-176	-26	-206	-170	
		7H	+200	0	+300	0	7h6h	0	-150	0	-180	-144	
		8G	+276	+26	+401	+26	8g	-26	-216	-26	-306	-170	
		8H	+250	0	+375	0	9g8g	-26	-262	-26	-306	-170	
		1,25	—	—	—	—	—	3h4h	0	-67	0	-132	-180
			4H	+112	0	+170	0	4h	0	-85	0	-132	-180
			5G	+168	+28	+240	+28	5g6g	-28	-134	-28	-240	-208
			5H	+140	0	+212	0	5h4h	0	-106	0	-132	-180
			—	—	—	—	—	5h6h	0	-106	0	-212	-180
			—	—	—	—	—	6e	-63	-195	-63	-275	-243
			—	—	—	—	—	6f	-42	-174	-42	-254	-222
			6G	+208	+28	+293	+28	6g	-28	-160	-28	-240	-208
6H	+180		0	+265	0	6h	0	-132	0	-212	-180		
—	—		—	—	—	7e6e	-63	-233	-63	-275	-243		
7G	+252		+28	+363	+28	7g6g	-28	-198	-28	-240	-208		
7H	+224		0	+335	0	7h6h	0	-170	0	-212	-180		
8G	+308	+28	+453	+28	8g	-28	-240	-28	-363	-208			

(continued)

Table 1 (continued)

Basic major diameter		Pitch	Internal thread					External thread						
over	up to		Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter	
				<i>ES</i>	<i>EI</i>	<i>ES</i>	<i>EI</i>		<i>es</i>	<i>ei</i>	<i>es</i>	<i>ei</i>		
mm	mm	mm	$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$		$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$		
11,2	22,4	1,25	8H	+ 280	0	+ 425	0	9g8g	- 28	- 293	- 28	- 363	- 208	
			1,5	—	—	—	—	—	3h4h	0	- 71	0	- 150	- 217
		4H		+ 118	0	+ 190	0	4h	0	- 90	0	- 150	- 217	
		5G		+ 182	+ 32	+ 268	+ 32	5g6g	- 32	- 144	- 32	- 268	- 249	
		5H		+ 150	0	+ 236	0	5h4h	0	- 112	0	- 150	- 217	
		—		—	—	—	—	5h6h	0	- 112	0	- 236	- 217	
		—		—	—	—	—	6e	- 67	- 207	- 67	- 303	- 284	
		—		—	—	—	—	6f	- 45	- 185	- 45	- 281	- 262	
		6G		+ 222	+ 32	+ 332	+ 32	6g	- 32	- 172	- 32	- 268	- 249	
		6H		+ 190	0	+ 300	0	6h	0	- 140	0	- 236	- 217	
		—		—	—	—	—	7e6e	- 67	- 247	- 67	- 303	- 284	
		7G	+ 268	+ 32	+ 407	+ 32	7g6g	- 32	- 212	- 32	- 268	- 249		
		7H	+ 236	0	+ 375	0	7h6h	0	- 180	0	- 236	- 217		
		—	—	—	—	—	—	—	—	—	—	—	—	
		8H	+ 300	0	+ 475	0	9g8g	- 32	- 312	- 32	- 407	- 249		
		1,75	—	—	—	—	—	—	3h4h	0	- 75	0	- 170	- 253
			4H	+ 125	0	+ 212	0	4h	0	- 95	0	- 170	- 253	
			5G	+ 194	+ 34	+ 299	+ 34	5g6g	- 34	- 152	- 34	- 299	- 287	
			5H	+ 160	0	+ 265	0	5h4h	0	- 118	0	- 170	- 253	
			—	—	—	—	—	5h6h	0	- 118	0	- 265	- 253	
			—	—	—	—	—	6e	- 71	- 221	- 71	- 336	- 324	
			—	—	—	—	—	6f	- 48	- 198	- 48	- 313	- 301	
			6G	+ 234	+ 34	+ 369	+ 34	6g	- 34	- 184	- 34	- 299	- 287	
			6H	+ 200	0	+ 335	0	6h	0	- 150	0	- 265	- 253	
			—	—	—	—	—	7e6e	- 71	- 261	- 71	- 336	- 324	
		7G	+ 284	+ 34	+ 459	+ 34	7g6g	- 34	- 224	- 34	- 299	- 287		
		7H	+ 250	0	+ 425	0	7h6h	0	- 190	0	- 265	- 253		
8G	+ 349	+ 34	+ 564	+ 34	8g	- 34	- 270	- 34	- 459	- 287				
8H	+ 315	0	+ 530	0	9g8g	- 34	- 334	- 34	- 459	- 287				
2	—	—	—	—	—	—	3h4h	0	- 80	0	- 180	- 289		
	4H	+ 132	0	+ 236	0	4h	0	- 100	0	- 180	- 289			
	5G	+ 208	+ 38	+ 338	+ 38	5g6g	- 38	- 163	- 38	- 318	- 327			
	5H	+ 170	0	+ 300	0	5h4h	0	- 125	0	- 180	- 289			
	—	—	—	—	—	5h6h	0	- 125	0	- 280	- 289			
	—	—	—	—	—	6e	- 71	- 231	- 71	- 351	- 360			
	—	—	—	—	—	6f	- 52	- 212	- 52	- 332	- 341			
	6G	+ 250	+ 38	+ 413	+ 38	6g	- 38	- 198	- 38	- 318	- 327			
	6H	+ 212	0	+ 375	0	6h	0	- 160	0	- 280	- 289			
	—	—	—	—	—	7e6e	- 71	- 271	- 71	- 351	- 360			
7G	+ 303	+ 38	+ 513	+ 38	7g6g	- 38	- 238	- 38	- 318	- 327				
7H	+ 265	0	+ 475	0	7h6h	0	- 200	0	- 280	- 289				
8G	+ 373	+ 38	+ 638	+ 38	8g	- 38	- 288	- 38	- 488	- 327				

(continued)

Table 1 (continued)

Basic major diameter		Pitch	Internal thread					External thread					
over	up to		Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter
				<i>ES</i>	<i>EI</i>	<i>ES</i>	<i>EI</i>		<i>es</i>	<i>ei</i>	<i>es</i>	<i>ei</i>	
mm	mm	mm	$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$		$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$	$\mu\text{m}$	
11,2	22,4	2	8H	+ 335	0	+ 600	0	9g8g	- 38	- 353	- 38	- 488	- 327
			2,5	—	—	—	—	3h4h	0	- 85	0	- 212	- 361
		4H	+ 140	0	+ 280	0	4h	0	- 106	0	- 212	- 361	
		5G	+ 222	+ 42	+ 397	+ 42	5g6g	- 42	- 174	- 42	- 377	- 403	
		5H	+ 180	0	+ 355	0	5h4h	0	- 132	0	- 212	- 361	
		—	—	—	—	—	5h6h	0	- 132	0	- 335	- 361	
		—	—	—	—	—	6e	- 80	- 250	- 80	- 415	- 441	
		—	—	—	—	—	6f	- 58	- 228	- 58	- 393	- 419	
		6G	+ 266	+ 42	+ 492	+ 42	6g	- 42	- 212	- 42	- 377	- 403	
		6H	+ 224	0	+ 450	0	6h	0	- 170	0	- 335	- 361	
—	—	—	—	—	7e6e	- 80	- 292	- 80	- 415	- 441			
7G	+ 322	+ 42	+ 602	+ 42	7g6g	- 42	- 254	- 42	- 377	- 403			
7H	+ 280	0	+ 560	0	7h6h	0	- 212	0	- 335	- 361			
8G	+ 397	+ 42	+ 752	+ 42	8g	- 42	- 307	- 42	- 572	- 403			
8H	+ 355	0	+ 710	0	9g8g	- 42	- 377	- 42	- 572	- 403			
22,4	45	1	—	—	—	—	—	3h4h	0	- 63	0	- 112	- 144
			4H	+ 106	0	+ 150	0	4h	0	- 80	0	- 112	- 144
			5G	+ 158	+ 26	+ 216	+ 26	5g6g	- 26	- 126	- 26	- 206	- 170
			5H	+ 132	0	+ 190	0	5h4h	0	- 100	0	- 112	- 144
			—	—	—	—	—	5h6h	0	- 100	0	- 180	- 144
			—	—	—	—	—	6e	- 60	- 185	- 60	- 240	- 204
			—	—	—	—	—	6f	- 40	- 165	- 40	- 220	- 184
			6G	+ 196	+ 26	+ 262	+ 26	6g	- 26	- 151	- 26	- 206	- 170
			6H	+ 170	0	+ 236	0	6h	0	- 125	0	- 180	- 144
			—	—	—	—	—	7e6e	- 60	- 220	- 60	- 240	- 204
		7G	+ 238	+ 26	+ 326	+ 26	7g6g	- 26	- 186	- 26	- 206	- 170	
		7H	+ 212	0	+ 300	0	7h6h	0	- 160	0	- 180	- 144	
		8G	—	—	—	—	8g	- 26	- 226	- 26	- 306	- 170	
		8H	—	—	—	—	9g8g	- 26	- 276	- 26	- 306	- 170	
		1,5	4H	+ 125	0	+ 190	0	3h4h	0	- 75	0	- 150	- 217
			5G	+ 192	+ 32	+ 268	+ 32	4h	0	- 95	0	- 150	- 217
			5H	+ 160	0	+ 236	0	5g6g	- 32	- 150	- 32	- 268	- 249
			—	—	—	—	—	5h4h	0	- 118	0	- 150	- 217
			—	—	—	—	—	5h6h	0	- 118	0	- 236	- 217
			—	—	—	—	—	6e	- 67	- 217	- 67	- 303	- 284
			—	—	—	—	—	6f	- 45	- 195	- 45	- 281	- 262
			6G	+ 232	+ 32	+ 332	+ 32	6g	- 32	- 182	- 32	- 268	- 249
6H	+ 200		0	+ 300	0	6h	0	- 150	0	- 236	- 217		
—	—		—	—	—	7e6e	- 67	- 257	- 67	- 303	- 284		
7G	+ 282		+ 32	+ 407	+ 32	7g6g	- 32	- 222	- 32	- 268	- 249		
7H	+ 250		0	+ 375	0	7h6h	0	- 190	0	- 236	- 217		
8G	+ 347	+ 32	+ 507	+ 32	8g	- 32	- 268	- 32	- 407	- 249			
8H	+ 315	0	+ 475	0	9g8g	- 32	- 332	- 32	- 407	- 249			
2	—	—	—	—	—	3h4h	0	- 85	0	- 180	- 289		
	4H	+ 140	0	+ 236	0	4h	0	- 106	0	- 180	- 289		
	5G	+ 218	+ 38	+ 338	+ 38	5g6g	- 38	- 170	- 38	- 318	- 327		

(continued)