INTERNATIONAL STANDARD

ISO 965-3

Third edition
1998-12-15

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

Reference number
ISO 965-3:1998(E)

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*

International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet iso@iso.ch

Printed in Switzerland

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.*

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 $\left[\text{deviation} = -\left(|es| + \frac{H}{6}\right)\right]$.

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	Internal thread					External thread					
			Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter
over	up to			*ES*	*EI*	*ES*	*EI*		*es*	*ei*	*es*	*ei*	Deviation $-\left(\lvert es\rvert + \frac{H}{6}\right)$ for stress calculation
mm	mm	mm		µm	µm	µm	µm		µm	µm	µm	µm	µm
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					
			Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter
over	up to			*ES*	*EI*	*ES*	*EI*		*es*	*ei*	*es*	*ei*	Deviation $-\left(\lvert es\rvert + \frac{H}{6}\right)$ for stress calculation
mm	mm	mm		µm	µm	µm	µm		µm	µm	µm	µm	µm
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				
			Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter
over	up to			*ES*	*EI*	*ES*	*EI*		*es*	*ei*	*es*	*ei*	Deviation $-\left(\lvert es\rvert + \frac{H}{6}\right)$ for stress calculation
mm	mm	mm		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
			—	—	—	—	—	7e6e	—	—	—	—	—
			7G	—	—	—	—	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					
			Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter
over	up to			*ES*	*EI*	*ES*	*EI*		*es*	*ei*	*es*	*ei*	Deviation $-\left(\lvert es\rvert + \frac{H}{6}\right)$ for stress calculation
mm	mm	mm		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	0	4h	0	– 53	0	– 80	– 87
			5G	+ 111	+ 21	+ 146	+ 21	5g6g	– 21	– 88	– 21	– 146	– 108
			5H	+ 90	0	+ 125	0	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	+ 21	6g	– 21	– 106	– 21	– 146	– 108
			6H	+ 112	0	+ 160	0	6h	0	– 85	0	– 125	– 87
			—	—	—	—	—	7e6e	– 53	– 159	– 53	– 178	– 140
			7G	+ 161	+ 21	+ 221	+ 21	7g6g	– 21	– 127	– 21	– 146	– 108
			7H	+ 140	0	+ 200	0	7h6h	0	– 106	0	– 125	– 87
			8G	—	—	—	—	8g	—	—	—	—	—
			8H	—	—	—	—	9g8g	—	—	—	—	—
		0,7	—	—	—	—	—	3h4h	0	– 45	0	– 90	– 101
			4H	+ 75	0	+ 112	0	4h	0	– 56	0	– 90	– 101
			5G	+ 117	+ 22	+ 162	+ 22	5g6g	– 22	– 93	– 22	– 162	– 123
			5H	+ 95	0	+ 140	0	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	+ 22	6g	– 22	– 112	– 22	– 162	– 123
			6H	+ 118	0	+ 180	0	6h	0	– 90	0	– 140	– 101
			—	—	—	—	—	7e6e	– 56	– 168	– 56	– 196	– 157
			7G	+ 172	+ 22	+ 246	+ 22	7g6g	– 22	– 134	– 22	– 162	– 123
			7H	+ 150	0	+ 224	0	7h6h	0	– 112	0	– 140	– 101
			8G	—	—	—	—	8g	—	—	—	—	—
			8H	—	—	—	—	9g8g	—	—	—	—	—
		0,75	—	—	—	—	—	3h4h	0	– 45	0	– 90	– 108
			4H	+ 75	0	+ 118	0	4h	0	– 56	0	– 90	– 108
			5G	+ 117	+ 22	+ 172	+ 22	5g6g	– 22	– 93	– 22	– 162	– 130
			5H	+ 95	0	+ 150	0	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	+ 22	6g	– 22	– 112	– 22	– 162	– 130
			6H	+ 118	0	+ 190	0	6h	0	– 90	0	– 140	– 108
			—	—	—	—	—	7e6e	– 56	– 168	– 56	– 196	– 164
			7G	+ 172	+ 22	+ 258	+ 22	7g6g	– 22	– 134	– 22	– 162	– 130
			7H	+ 150	0	+ 236	0	7h6h	0	– 112	0	– 140	– 108
			8G	—	—	—	—	8g	—	—	—	—	—
			8H	—	—	—	—	9g8g	—	—	—	—	—
		0,8	—	—	—	—	—	3h4h	0	– 48	0	– 95	– 115
			4H	+ 80	0	+ 125	0	4h	0	– 60	0	– 95	– 115
			5G	+ 124	+ 24	+ 184	+ 24	5g6g	– 24	– 99	– 24	– 174	– 140
			5H	+ 100	0	+ 160	0	5h4h	0	– 75	0	– 95	– 115
			—	—	—	—	—	5h6h	0	– 75	0	– 150	– 115

(*continued*)

Table 1 (*continued*)

Basic major diameter		Pitch	Internal thread					External thread					
			Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter
over	up to			*ES*	*EI*	*ES*	*EI*		*es*	*ei*	*es*	*ei*	Deviation $-\left(\lvert es\rvert + \frac{H}{6}\right)$ for stress calculation
mm	mm	mm		µm	µm	µm	µm		µm	µm	µm	µm	µm
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
			—	—	—	—	—	5h6h	0	– 80	0	– 140	– 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	—	—	—	—	—	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	—	—	—	—	—	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
			6G	+ 188	+ 28	+ 293	+ 28	6g	– 28	– 146	– 28	– 240	– 208
			6H	+ 160	0	+ 265	0	6h	0	– 118	0	– 212	– 180

(*continued*)

Table 1 (*continued*)

Basic major diameter		Pitch	Internal thread					External thread					
			Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter
over	up to			*ES*	*EI*	*ES*	*EI*		*es*	*ei*	*es*	*ei*	Deviation $-\left(\lvert es\rvert + \frac{H}{6}\right)$ for stress calculation
mm	mm	mm		µm	µm	µm	µm		µm	µm	µm	µm	µm
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				
			Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter
over	up to			*ES*	*EI*	*ES*	*EI*		*es*	*ei*	*es*	*ei*	Deviation $-\left(\lvert es\rvert + \frac{H}{6}\right)$ for stress calculation
mm	mm	mm		µm	µm	µm	µm		µm	µm	µm	µm	µm
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
			8G	+ 332	+ 32	+ 507	+ 32	8g	– 32	– 256	– 32	– 407	– 249
			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					
			Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter
over	up to			*ES*	*EI*	*ES*	*EI*		*es*	*ei*	*es*	*ei*	Deviation $-\left(\lvert es\rvert + \frac{H}{6}\right)$ for stress calculation
mm	mm	mm		µm	µm	µm	µm		µm	µm	µm	µm	µm
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	—	—	—	—	—	3h4h	0	– 75	0	– 150	– 217
			4H	+ 125	0	+ 190	0	4h	0	– 95	0	– 150	– 217
			5G	+ 192	+ 32	+ 268	+ 32	5g6g	– 32	– 150	– 32	– 268	– 249
			5H	+ 160	0	+ 236	0	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*)

Table 1 (*continued*)

Basic major diameter		Pitch	Internal thread					External thread					
			Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter
over	up to			*ES*	*EI*	*ES*	*EI*		*es*	*ei*	*es*	*ei*	Deviation $-\left(\lvert es\rvert + \frac{H}{6}\right)$ for stress calculation
mm	mm	mm		µm	µm	µm	µm		µm	µm	µm	µm	µm
22,4	**45**	**2**	5H	+ 180	0	+ 300	0	5h4h	0	– 132	0	– 180	– 289
			—	—	—	—	—	5h6h	0	– 132	0	– 280	– 289
			—	—	—	—	—	6e	– 71	– 241	– 71	– 351	– 360
			—	—	—	—	—	6f	– 52	– 222	– 52	– 332	– 341
			6G	+ 262	+ 38	+ 413	+ 38	6g	– 38	– 208	– 38	– 318	– 327
			6H	+ 224	0	+ 375	0	6h	0	– 170	0	– 280	– 289
			—	—	—	—	—	7e6e	– 71	– 283	– 71	– 351	– 360
			7G	+ 318	+ 38	+ 513	+ 38	7g6g	– 38	– 250	– 38	– 318	– 327
			7H	+ 280	0	+ 475	0	7h6h	0	– 212	0	– 280	– 289
			8G	+ 393	+ 38	+ 638	+ 38	8g	– 38	– 307	– 38	– 488	– 327
			8H	+ 355	0	+ 600	0	9g8g	– 38	– 373	– 38	– 488	– 327
		3	—	—	—	—	—	3h4h	0	– 100	0	– 236	– 433
			4H	+ 170	0	+ 315	0	4h	0	– 125	0	– 236	– 433
			5G	+ 260	+ 48	+ 448	+ 48	5g6g	– 48	– 208	– 48	– 423	– 481
			5H	+ 212	0	+ 400	0	5h4h	0	– 160	0	– 236	– 433
			—	—	—	—	—	5h6h	0	– 160	0	– 375	– 433
			—	—	—	—	—	6e	– 85	– 285	– 85	– 460	– 518
			—	—	—	—	—	6f	– 63	– 263	– 63	– 438	– 496
			6G	+ 313	+ 48	+ 548	+ 48	6g	– 48	– 248	– 48	– 423	– 481
			6H	+ 265	0	+ 500	0	6h	0	– 200	0	– 375	– 433
			—	—	—	—	—	7e6e	– 85	– 335	– 85	– 460	– 518
			7G	+ 383	+ 48	+ 678	+ 48	7g6g	– 48	– 298	– 48	– 423	– 481
			7H	+ 335	0	+ 630	0	7h6h	0	– 250	0	– 375	– 433
			8G	+ 473	+ 48	+ 848	+ 48	8g	– 48	– 363	– 48	– 648	– 481
			8H	+ 425	0	+ 800	0	9g8g	– 48	– 448	– 48	– 648	– 481
		3,5	—	—	—	—	—	3h4h	0	– 106	0	– 265	– 505
			4H	+ 180	0	+ 355	0	4h	0	– 132	0	– 265	– 505
			5G	+ 277	+ 53	+ 503	+ 53	5g6g	– 53	– 223	– 53	– 478	– 558
			5H	+ 224	0	+ 450	0	5h4h	0	– 170	0	– 265	– 505
			—	—	—	—	—	5h6h	0	– 170	0	– 425	– 505
			—	—	—	—	—	6e	– 90	– 302	– 90	– 515	– 595
			—	—	—	—	—	6f	– 70	– 282	– 70	– 495	– 575
			6G	+ 333	+ 53	+ 613	+ 53	6g	– 53	– 265	– 53	– 478	– 558
			6H	+ 280	0	+ 560	0	6h	0	– 212	0	– 425	– 505
			—	—	—	—	—	7e6e	– 90	– 355	– 90	– 515	– 595
			7G	+ 408	+ 53	+ 763	+ 53	7g6g	– 53	– 318	– 53	– 478	– 558
			7H	+ 355	0	+ 710	0	7h6h	0	– 265	0	– 425	– 505
			8G	+ 503	+ 53	+ 953	+ 53	8g	– 53	– 388	– 53	– 723	– 558
			8H	+ 450	0	+ 900	0	9g8g	– 53	– 478	– 53	– 723	– 558
		4	—	—	—	—	—	3h4h	0	– 112	0	– 300	– 577
			4H	+ 190	0	+ 375	0	4h	0	– 140	0	– 300	– 577
			5G	+ 296	+ 60	+ 535	+ 60	5g6g	– 60	– 240	– 60	– 535	– 637
			5H	+ 236	0	+ 475	0	5h4h	0	– 180	0	– 300	– 577
			—	—	—	—	—	5h6h	0	– 180	0	– 475	– 577
			—	—	—	—	—	6e	– 95	– 319	– 95	– 570	– 672
			—	—	—	—	—	6f	– 75	– 299	– 75	– 550	– 652

(*continued*)

Table 1 (*continued*)

Basic major diameter		Pitch	Internal thread					External thread					
			Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter
over	up to			*ES*	*EI*	*ES*	*EI*		*es*	*ei*	*es*	*ei*	Deviation $-\left(\lvert es\rvert + \frac{H}{6}\right)$ for stress calculation
mm	mm	mm		µm	µm	µm	µm		µm	µm	µm	µm	µm
22,4	**45**	**4**	6G	+ 360	+ 60	+ 660	+ 60	6g	– 60	– 284	– 60	– 535	– 637
			6H	+ 300	0	+ 600	0	6h	0	– 224	0	– 475	– 577
			—	—	—	—	—	7e6e	– 95	– 375	– 95	– 570	– 672
			7G	+ 435	+ 60	+ 810	+ 60	7g6g	– 60	– 340	– 60	– 535	– 637
			7H	+ 375	0	+ 750	0	7h6h	0	– 280	0	– 475	– 577
			8G	+ 535	+ 60	+ 1010	+ 60	8g	– 60	– 415	– 60	– 810	– 637
			8H	+ 475	0	+ 950	0	9g8g	– 60	– 510	– 60	– 810	– 637
		4,5	—	—	—	—	—	3h4h	0	– 118	0	– 315	– 650
			4H	+ 200	0	+ 425	0	4h	0	– 150	0	– 315	– 650
			5G	+ 313	+ 63	+ 593	+ 63	5g6g	– 63	– 253	– 63	– 563	– 713
			5H	+ 250	0	+ 530	0	5h4h	0	– 190	0	– 315	– 650
			—	—	—	—	—	5h6h	0	– 190	0	– 500	– 650
			—	—	—	—	—	6e	– 100	– 336	– 100	– 600	– 750
			—	—	—	—	—	6f	– 80	– 316	– 80	– 580	– 730
			6G	+ 378	+ 63	+ 733	+ 63	6g	– 63	– 299	– 63	– 563	– 713
			6H	+ 315	0	+ 670	0	6h	0	– 236	0	– 500	– 650
			—	—	—	—	—	7e6e	– 100	– 400	– 100	– 600	– 750
			7G	+ 463	+ 63	+ 913	+ 63	7g6g	– 63	– 363	– 63	– 563	– 713
			7H	+ 400	0	+ 850	0	7h6h	0	– 300	0	– 500	– 650
			8G	+ 563	+ 63	+ 1123	+ 63	8g	– 63	– 438	– 63	– 863	– 713
			8H	+ 500	0	+ 1060	0	9g8g	– 63	– 538	– 63	– 863	– 713
45	**90**	**1,5**	—	—	—	—	—	3h4h	0	– 80	0	– 150	– 217
			4H	+ 132	0	+ 190	0	4h	0	– 100	0	– 150	– 217
			5G	+ 202	+ 32	+ 268	+ 32	5g6g	– 32	– 157	– 32	– 268	– 249
			5H	+ 170	0	+ 236	0	5h4h	0	– 125	0	– 150	– 217
			—	—	—	—	—	5h6h	0	– 125	0	– 236	– 217
			—	—	—	—	—	6e	– 67	– 227	– 67	– 303	– 284
			—	—	—	—	—	6f	– 45	– 205	– 45	– 281	– 262
			6G	+ 244	+ 32	+ 332	+ 32	6g	– 32	– 192	– 32	– 268	– 249
			6H	+ 212	0	+ 300	0	6h	0	– 160	0	– 236	– 217
			—	—	—	—	—	7e6e	– 67	– 267	– 67	– 303	– 284
			7G	+ 297	+ 32	+ 407	+ 32	7g6g	– 32	– 232	– 32	– 268	– 249
			7H	+ 265	0	+ 375	0	7h6h	0	– 200	0	– 236	– 217
			8G	+ 367	+ 32	+ 507	+ 32	8g	– 32	– 282	– 32	– 407	– 249
			8H	+ 335	0	+ 475	0	9g8g	– 32	– 347	– 32	– 407	– 249
		2	—	—	—	—	—	3h4h	0	– 90	0	– 180	– 289
			4H	+ 150	0	+ 236	0	4h	0	– 112	0	– 180	– 289
			5G	+ 228	+ 38	+ 338	+ 38	5g6g	– 38	– 178	– 38	– 318	– 327
			5H	+ 190	0	+ 300	0	5h4h	0	– 140	0	– 180	– 289
			—	—	—	—	—	5h6h	0	– 140	0	– 280	– 289
			—	—	—	—	—	6e	– 71	– 251	– 71	– 351	– 360
			—	—	—	—	—	6f	– 52	– 232	– 52	– 332	– 341
			6G	+ 274	+ 38	+ 413	+ 38	6g	– 38	– 218	– 38	– 318	– 327
			6H	+ 236	0	+ 375	0	6h	0	– 180	0	– 280	– 289
			—	—	—	—	—	7e6e	– 71	– 295	– 71	– 351	– 360
			7G	+ 338	+ 38	+ 513	+ 38	7g6g	– 38	– 262	– 38	– 318	– 327

(*continued*)

Table 1 (*continued*)

Basic major diameter		Pitch	Internal thread					External thread				
			Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter
over	up to			*ES*	*EI*	*ES*	*EI*		*es*	*ei*	*es*	*ei*	Deviation $-\left(\lvert es\rvert + \frac{H}{6}\right)$ for stress calculation
mm	mm	mm		µm	µm	µm	µm		µm	µm	µm	µm	µm
45	**90**	**2**	7H	+ 300	0	+ 475	0	7h6h	0	– 224	0	– 280	– 289
			8G	+ 413	+ 38	+ 638	+ 38	8g	– 38	– 318	– 38	– 488	– 327
			8H	+ 375	0	+ 600	0	9g8g	– 38	– 393	– 38	– 488	– 327
		3	—	—	—	—	—	3h4h	0	– 106	0	– 236	– 433
			4H	+ 180	0	+ 315	0	4h	0	– 132	0	– 236	– 433
			5G	+ 272	+ 48	+ 448	+ 48	5g6g	– 48	– 218	– 48	– 423	– 481
			5H	+ 224	0	+ 400	0	5h4h	0	– 170	0	– 236	– 433
			—	—	—	—	—	5h6h	0	– 170	0	– 375	– 433
			—	—	—	—	—	6e	– 85	– 297	– 85	– 460	– 518
			—	—	—	—	—	6f	– 63	– 275	– 63	– 438	– 496
			6G	+ 328	+ 48	+ 548	+ 48	6g	– 48	– 260	– 48	– 423	– 481
			6H	+ 280	0	+ 500	0	6h	0	– 212	0	– 375	– 433
			—	—	—	—	—	7e6e	– 85	– 350	– 85	– 460	– 518
			7G	+ 403	+ 48	+ 678	+ 48	7g6g	– 48	– 313	– 48	– 423	– 481
			7H	+ 355	0	+ 630	0	7h6h	0	– 265	0	– 375	– 433
			8G	+ 498	+ 48	+ 848	+ 48	8g	– 48	– 383	– 48	– 648	– 481
			8H	+ 450	0	+ 800	0	9g8g	– 48	– 473	– 48	– 648	– 481
		4	—	—	—	—	—	3h4h	0	– 118	0	– 300	– 577
			4H	+ 200	0	+ 375	0	4h	0	– 150	0	– 300	– 577
			5G	+ 310	+ 60	+ 535	+ 60	5g6g	– 60	– 250	– 60	– 535	– 637
			5H	+ 250	0	+ 475	0	5h4h	0	– 190	0	– 300	– 577
			—	—	—	—	—	5h6h	0	– 190	0	– 475	– 577
			—	—	—	—	—	6e	– 95	– 331	– 95	– 570	– 672
			—	—	—	—	—	6f	– 75	– 311	– 75	– 550	– 652
			6G	+ 375	+ 60	+ 660	+ 60	6g	– 60	– 296	– 60	– 535	– 637
			6H	+ 315	0	+ 600	0	6h	0	– 236	0	– 475	– 577
			—	—	—	—	—	7e6e	– 95	– 395	– 95	– 570	– 672
			7G	+ 460	+ 60	+ 810	+ 60	7g6g	– 60	– 360	– 60	– 535	– 637
			7H	+ 400	0	+ 750	0	7h6h	0	– 300	0	– 475	– 577
			8G	+ 560	+ 60	+ 1 010	+ 60	8g	– 60	– 435	– 60	– 810	– 637
			8H	+ 500	0	+ 950	0	9g8g	– 60	– 535	– 60	– 810	– 637
		5	—	—	—	—	—	3h4h	0	– 125	0	– 335	– 722
			4H	+ 212	0	+ 450	0	4h	0	– 160	0	– 335	– 722
			5G	+ 336	+ 71	+ 631	+ 71	5g6g	– 71	– 271	– 71	– 601	– 793
			5H	+ 265	0	+ 560	0	5h4h	0	– 200	0	– 335	– 722
			—	—	—	—	—	5h6h	0	– 200	0	– 530	– 722
			—	—	—	—	—	6e	– 106	– 356	– 106	– 636	– 828
			—	—	—	—	—	6f	– 85	– 335	– 85	– 615	– 807
			6G	+ 406	+ 71	+ 781	+ 71	6g	– 71	– 321	– 71	– 601	– 793
			6H	+ 335	0	+ 710	0	6h	0	– 250	0	– 530	– 722
			—	—	—	—	—	7e6e	– 106	– 421	– 106	– 636	– 828
			7G	+ 496	+ 71	+ 971	+ 71	7g6g	– 71	– 386	– 71	– 601	– 793
			7H	+ 425	0	+ 900	0	7h6h	0	– 315	0	– 530	– 722
			8G	+ 601	+ 71	+ 1 191	+ 71	8g	– 71	– 471	– 71	– 921	– 793
			8H	+ 530	0	+ 1 120	0	9g8g	– 71	– 571	– 71	– 921	– 793
		5,5	—	—	—	—	—	3h4h	0	– 132	0	– 355	– 794

(*continued*)

Table 1 (*continued*)

Basic major diameter		Pitch	Internal thread					External thread					
			Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter
over	up to			*ES*	*EI*	*ES*	*EI*		*es*	*ei*	*es*	*ei*	Deviation $-\left(\lvert es\rvert + \frac{H}{6}\right)$ for stress calculation
mm	mm	mm		µm	µm	µm	µm		µm	µm	µm	µm	µm
45	**90**	**5,5**	4H	+ 224	0	+ 475	0	4h	0	– 170	0	– 355	– 794
			5G	+ 355	+ 75	+ 675	+ 75	5g6g	– 75	– 287	– 75	– 635	– 869
			5H	+ 280	0	+ 600	0	5h4h	0	– 212	0	– 355	– 794
			—	—	—	—	—	5h6h	0	– 212	0	– 560	– 794
			—	—	—	—	—	6e	– 112	– 377	– 112	– 672	– 906
			—	—	—	—	—	6f	– 90	– 355	– 90	– 650	– 884
			6G	+ 430	+ 75	+ 825	+ 75	6g	– 75	– 340	– 75	– 635	– 869
			6H	+ 355	0	+ 750	0	6h	0	– 265	0	– 560	– 794
			—	—	—	—	—	7e6e	– 112	– 447	– 112	– 672	– 906
			7G	+ 525	+ 75	+ 1 025	+ 75	7g6g	– 75	– 410	– 75	– 635	– 869
			7H	+ 450	0	+ 950	0	7h6h	0	– 335	0	– 560	– 794
			8G	+ 635	+ 75	+ 1 255	+ 75	8g	– 75	– 500	– 75	– 975	– 869
			8H	+ 560	0	+ 1 180	0	9g8g	– 75	– 605	– 75	– 975	– 869
		6	—	—	—	—	—	3h4h	0	– 140	0	– 375	– 866
			4H	+ 236	0	+ 500	0	4h	0	– 180	0	– 375	– 866
			5G	+ 380	+ 80	+ 710	+ 80	5g6g	– 80	– 304	– 80	– 680	– 946
			5H	+ 300	0	+ 630	0	5h4h	0	– 224	0	– 375	– 866
			—	—	—	—	—	5h6h	0	– 224	0	– 600	– 866
			—	—	—	—	—	6e	– 118	– 398	– 118	– 718	– 984
			—	—	—	—	—	6f	– 95	– 375	– 95	– 695	– 961
			6G	+ 455	+ 80	+ 880	+ 80	6g	– 80	– 360	– 80	– 680	– 946
			6H	+ 375	0	+ 800	0	6h	0	– 280	0	– 600	– 866
			—	—	—	—	—	7e6e	– 118	– 473	– 118	– 718	– 984
			7G	+ 555	+ 80	+ 1 080	+ 80	7g6g	– 80	– 435	– 80	– 680	– 946
			7H	+ 475	0	+ 1 000	0	7h6h	0	– 355	0	– 600	– 866
			8G	+ 680	+ 80	+ 1 330	+ 80	8g	– 80	– 530	– 80	– 1 030	– 946
			8H	+ 600	0	+ 1 250	0	9g8g	– 80	– 640	– 80	– 1 030	– 946
90	**180**	**2**	—	—	—	—	—	3h4h	0	– 95	0	– 180	– 289
			4H	+ 160	0	+ 236	0	4h	0	– 118	0	– 180	– 289
			5G	+ 238	+ 38	+ 338	+ 38	5g6g	– 38	– 188	– 38	– 318	– 327
			5H	+ 200	0	+ 300	0	5h4h	0	– 150	0	– 180	– 289
			—	—	—	—	—	5h6h	0	– 150	0	– 280	– 289
			—	—	—	—	—	6e	– 71	– 261	– 71	– 351	– 360
			—	—	—	—	—	6f	– 52	– 242	– 52	– 332	– 341
			6G	+ 288	+ 38	+ 413	+ 38	6g	– 38	– 228	– 38	– 318	– 327
			6H	+ 250	0	+ 375	0	6h	0	– 190	0	– 280	– 289
			—	—	—	—	—	7e6e	– 71	– 307	– 71	– 351	– 360
			7G	+ 353	+ 38	+ 513	+ 38	7g6g	– 38	– 274	– 38	– 318	– 327
			7H	+ 315	0	+ 475	0	7h6h	0	– 236	0	– 280	– 289
			8G	+ 438	+ 38	+ 638	+ 38	8g	– 38	– 338	– 38	– 488	– 327
			8H	+ 400	0	+ 600	0	9g8g	– 38	– 413	– 38	– 488	– 327
		3	—	—	—	—	—	3h4h	0	– 112	0	– 236	– 433
			4H	+ 190	0	+ 315	0	4h	0	– 140	0	– 236	– 433
			5G	+ 284	+ 48	+ 448	+ 48	5g6g	– 48	– 228	– 48	– 423	– 481
			5H	+ 236	0	+ 400	0	5h4h	0	– 180	0	– 236	– 433
			—	—	—	—	—	5h6h	0	– 180	0	– 375	– 433
			—	—	—	—	—	6e	– 85	– 309	– 85	– 460	– 518

(*continued*)

Table 1 (*continued*)

Basic major diameter		Pitch	Internal thread					External thread				
			Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter
over	up to			*ES*	*EI*	*ES*	*EI*		*es*	*ei*	*es*	*ei*	Deviation $-\left(\lvert es\rvert + \frac{H}{6}\right)$ for stress calculation
mm	mm	mm		µm	µm	µm	µm		µm	µm	µm	µm	µm
90	**180**	**3**	—	—	—	—	—	6f	– 63	– 287	– 63	– 438	– 496
			6G	+ 348	+ 48	+ 548	+ 48	6g	– 48	– 272	– 48	– 423	– 481
			6H	+ 300	0	+ 500	0	6h	0	– 224	0	– 375	– 433
			—	—	—	—	—	7e6e	– 85	– 365	– 85	– 460	– 518
			7G	+ 423	+ 48	+ 678	+ 48	7g6g	– 48	– 328	– 48	– 423	– 481
			7H	+ 375	0	+ 630	0	7h6h	0	– 280	0	– 375	– 433
			8G	+ 523	+ 48	+ 848	+ 48	8g	– 48	– 403	– 48	– 648	– 481
			8H	+ 475	0	+ 800	0	9g8g	– 48	– 498	– 48	– 648	– 481
		4	—	—	—	—	—	3h4h	0	– 125	0	– 300	– 577
			4H	+ 212	0	+ 375	0	4h	0	– 160	0	– 300	– 577
			5G	+ 325	+ 60	+ 535	+ 60	5g6g	– 60	– 260	– 60	– 535	– 637
			5H	+ 265	0	+ 475	0	5h4h	0	– 200	0	– 300	– 577
			—	—	—	—	—	5h6h	0	– 200	0	– 475	– 577
			—	—	—	—	—	6e	– 95	– 345	– 95	– 570	– 672
			—	—	—	—	—	6f	– 75	– 325	– 75	– 550	– 652
			6G	+ 395	+ 60	+ 660	+ 60	6g	– 60	– 310	– 60	– 535	– 637
			6H	+ 335	0	+ 600	0	6h	0	– 250	0	– 475	– 577
			—	—	—	—	—	7e6e	– 95	– 410	– 95	– 570	– 672
			7G	+ 485	+ 60	+ 810	+ 60	7g6g	– 60	– 375	– 60	– 535	– 637
			7H	+ 425	0	+ 750	0	7h6h	0	– 315	0	– 475	– 577
			8G	+ 590	+ 60	+ 1 010	+ 60	8g	– 60	– 460	– 60	– 810	– 637
			8H	+ 530	0	+ 950	0	9g8g	– 60	– 560	– 60	– 810	– 637
		6	—	—	—	—	—	3h4h	0	– 150	0	– 375	– 866
			4H	+ 250	0	+ 500	0	4h	0	– 190	0	– 375	– 866
			5G	+ 395	+ 80	+ 710	+ 80	5g6g	– 80	– 316	– 80	– 680	– 946
			5H	+ 315	0	+ 630	0	5h4h	0	– 236	0	– 375	– 866
			—	—	—	—	—	5h6h	0	– 236	0	– 600	– 866
			—	—	—	—	—	6e	– 118	– 418	– 118	– 718	– 984
			—	—	—	—	—	6f	– 95	– 395	– 95	– 695	– 961
			6G	+ 480	+ 80	+ 880	+ 80	6g	– 80	– 380	– 80	– 680	– 946
			6H	+ 400	0	+ 800	0	6h	0	– 300	0	– 600	– 866
			—	—	—	—	—	7e6e	– 118	– 493	– 118	– 718	– 984
			7G	+ 580	+ 80	+ 1 080	+ 80	7g6g	– 80	– 455	– 80	– 680	– 946
			7H	+ 500	0	+ 1 000	0	7h6h	0	– 375	0	– 600	– 866
			8G	+ 710	+ 80	+ 1 330	+ 80	8g	– 80	– 555	– 80	– 1 030	– 946
			8H	+ 630	0	+ 1 250	0	9g8g	– 80	– 680	– 80	– 1 030	– 946
		8[a]	—	—	—	—	—	3h4h	0	– 170	0	– 450	– 1 155
			4H	+ 280	0	+ 630	0	4h	0	– 212	0	– 450	– 1 155
			5G	+ 380	+ 100	+ 900	+ 100	5g6g	– 100	– 365	– 100	– 810	– 1 255
			5H	+ 355	0	+ 800	0	5h4h	0	– 265	0	– 450	– 1 155
			—	—	—	—	—	5h6h	0	– 265	0	– 710	– 1 155
			—	—	—	—	—	6e	– 140	– 475	– 140	– 850	– 1 295
			—	—	—	—	—	6f	– 118	– 453	– 118	– 828	– 1 273
			6G	+ 550	+ 100	+ 1 100	+ 100	6g	– 100	– 435	– 100	– 810	– 1 255
			6H	+ 450	0	+ 1 000	0	6h	0	– 335	0	– 710	– 1 155

(*continued*)

Table 1 (*continued*)

Basic major diameter		Pitch	Internal thread					External thread					
			Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter
over	up to			*ES*	*EI*	*ES*	*EI*		*es*	*ei*	*es*	*ei*	Deviation $-\left(\lvert es\rvert + \frac{H}{6}\right)$ for stress calculation
mm	mm	mm		µm	µm	µm	µm		µm	µm	µm	µm	µm
90	**180**	**8**[a]	—	—	—	—	—	7e6e	– 140	– 565	– 140	– 850	– 1 295
			7G	+ 660	+ 100	+ 1 350	+ 100	7g6g	– 100	– 525	– 100	– 810	– 1 255
			7H	+ 560	0	+ 1 250	0	7h6h	0	– 425	0	– 710	– 1 155
			8G	+ 810	+ 100	+ 1 700	+ 100	8g	– 100	– 630	– 100	– 1 280	– 1 255
			8H	+ 710	0	+ 1 600	0	9g8g	– 100	– 770	– 100	– 1 280	– 1 255
180	**355**	**3**	—	—	—	—	—	3h4h	0	– 125	0	– 236	– 433
			4H	+ 212	0	+ 315	0	4h	0	– 160	0	– 236	– 433
			5G	+ 313	+ 48	+ 448	+ 48	5g6g	– 48	– 248	– 48	– 423	– 481
			5H	+ 265	0	+ 400	0	5h4h	0	– 200	0	– 236	– 433
			—	—	—	—	—	5h6h	0	– 200	0	– 375	– 433
			—	—	—	—	—	6e	– 85	– 335	– 85	– 460	– 518
			—	—	—	—	—	6f	– 63	– 313	– 63	– 438	– 496
			6G	+ 383	+ 48	+ 548	+ 48	6g	– 48	– 298	– 48	– 423	– 481
			6H	+ 335	0	+ 500	0	6h	0	– 250	0	– 375	– 433
			—	—	—	—	—	7e6e	– 85	– 400	– 85	– 460	– 518
			7G	+ 473	+ 48	+ 678	+ 48	7g6g	– 48	– 363	– 48	– 423	– 481
			7H	+ 425	0	+ 630	0	7h6h	0	– 315	0	– 375	– 433
			8G	+ 578	+ 48	+ 848	+ 48	8g	– 48	– 448	– 48	– 648	– 481
			8H	+ 530	0	+ 800	0	9g8g	– 48	– 548	– 48	– 648	– 481
		4	—	—	—	—	—	3h4h	0	– 140	0	– 300	– 577
			4H	+ 236	0	+ 375	0	4h	0	– 180	0	– 300	– 577
			5G	+ 360	+ 60	+ 535	+ 60	5g6g	– 60	– 284	– 60	– 535	– 637
			5H	+ 300	0	+ 475	0	5h4h	0	– 224	0	– 300	– 577
			—	—	—	—	—	5h6h	0	– 224	0	– 475	– 577
			—	—	—	—	—	6e	– 95	– 375	– 95	– 570	– 672
			—	—	—	—	—	6f	– 75	– 355	– 75	– 550	– 652
			6G	+ 435	+ 60	+ 660	+ 60	6g	– 60	– 340	– 60	– 535	– 637
			6H	+ 375	0	+ 660	0	6h	0	– 280	0	– 475	– 577
			—	—	—	—	—	7e6e	– 95	– 450	– 95	– 570	– 672
			7G	+ 535	+ 60	+ 810	+ 60	7g6g	– 60	– 415	– 60	– 535	– 637
			7H	+ 475	0	+ 750	0	7h6h	0	– 355	0	– 475	– 577
			8G	+ 660	+ 60	+ 1 010	+ 60	8g	– 60	– 510	– 60	– 810	– 637
			8H	+ 600	0	+ 950	0	9g8g	– 60	– 620	– 60	– 810	– 637
		6	—	—	—	—	—	3h4h	0	– 160	0	– 375	– 866
			4H	+ 265	0	+ 500	0	4h	0	– 200	0	– 375	– 866
			5G	+ 415	+ 80	+ 710	+ 80	5g6g	– 80	– 330	– 80	– 680	– 946
			5H	+ 335	0	+ 630	0	5h4h	0	– 250	0	– 375	– 866
			—	—	—	—	—	5h6h	0	– 250	0	– 600	– 866
			—	—	—	—	—	6e	– 118	– 433	– 118	– 718	– 984
			—	—	—	—	—	6f	– 95	– 410	– 95	– 695	– 961
			6G	+ 505	+ 80	+ 880	+ 80	6g	– 80	– 395	– 80	– 680	– 946
			6H	+ 425	0	+ 800	0	6h	0	– 315	0	– 600	– 866
			—	—	—	—	—	7e6e	– 118	– 518	– 118	– 718	– 984
			7G	+ 610	+ 80	+ 1 080	+ 80	7g6g	– 80	– 480	– 80	– 680	– 946
			7H	+ 530	0	+ 1 000	0	7h6h	0	– 400	0	– 600	– 866
			8G	+ 750	+ 80	+ 1 330	+ 80	8g	– 80	– 580	– 80	– 1 030	– 946

(*continued*)

Table 1 (*concluded*)

Basic major diameter		Pitch	Internal thread					External thread					
			Tolerance class	Pitch diameter		Minor diameter		Tolerance class	Pitch diameter		Major diameter		Minor diameter
over	up to			*ES*	*EI*	*ES*	*EI*		*es*	*ei*	*es*	*ei*	Deviation $-\left(\lvert es\rvert + \frac{H}{6}\right)$ for stress calculation
mm	mm	mm		µm	µm	µm	µm		µm	µm	µm	µm	µm
180	**355**	**6**	8H	+ 670	0	+ 1250	0	9g8g	– 80	– 710	– 80	– 1030	– 946
		8	—	—	—	—	—	3h4h	0	– 180	0	– 450	– 1 155
			4H	+ 300	0	+ 630	0	4h	0	– 224	0	– 450	– 1 155
			5G	+ 475	+ 100	+ 900	+ 100	5g6g	– 100	– 380	– 100	– 810	– 1 255
			5H	+ 375	0	+ 800	0	5h4h	0	– 280	0	– 450	– 1 155
			—	—	—	—	—	5h6h	0	– 280	0	– 710	– 1 155
			—	—	—	—	—	6e	– 140	– 495	– 140	– 850	– 1 295
			—	—	—	—	—	6f	– 118	– 473	– 118	– 828	– 1 273
			6G	+ 575	+ 100	+ 1 100	+ 100	6g	– 100	– 455	– 100	– 810	– 1 255
			6H	+ 475	0	+ 1 000	0	6h	0	– 355	0	– 710	– 1 155
			—	—	—	—	—	7e6e	– 140	– 590	– 140	– 850	– 1 295
			7G	+ 700	+ 100	+ 1 350	+ 100	7g6g	– 100	– 550	– 100	– 810	– 1 255
			7H	+ 600	0	+ 1 250	0	7h6h	0	– 450	0	– 710	– 1 155
			8G	+ 850	+ 100	+ 1 700	+ 100	8g	– 100	– 660	– 100	– 1 280	– 1 255
			8H	+ 750	0	+ 1 600	0	9g8g	– 100	– 810	– 100	– 1 280	– 1 255

[a] Pitch 8 mm applies only to basic major diameters M125 and larger.

ICS 21.040.10

Descriptors: screw threads, ISO metric threads, dimensions, dimensional tolerances, dimensional deviations.

Price based on 16 pages