ISO 773 Parallel Keys Specification

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ISO 773 specifies the dimensions and tolerances for parallel keys. The full dimensional table is reproduced below, followed by the DIN, ISO and ASME parts that match or supersede it.

Standard

ISO 773

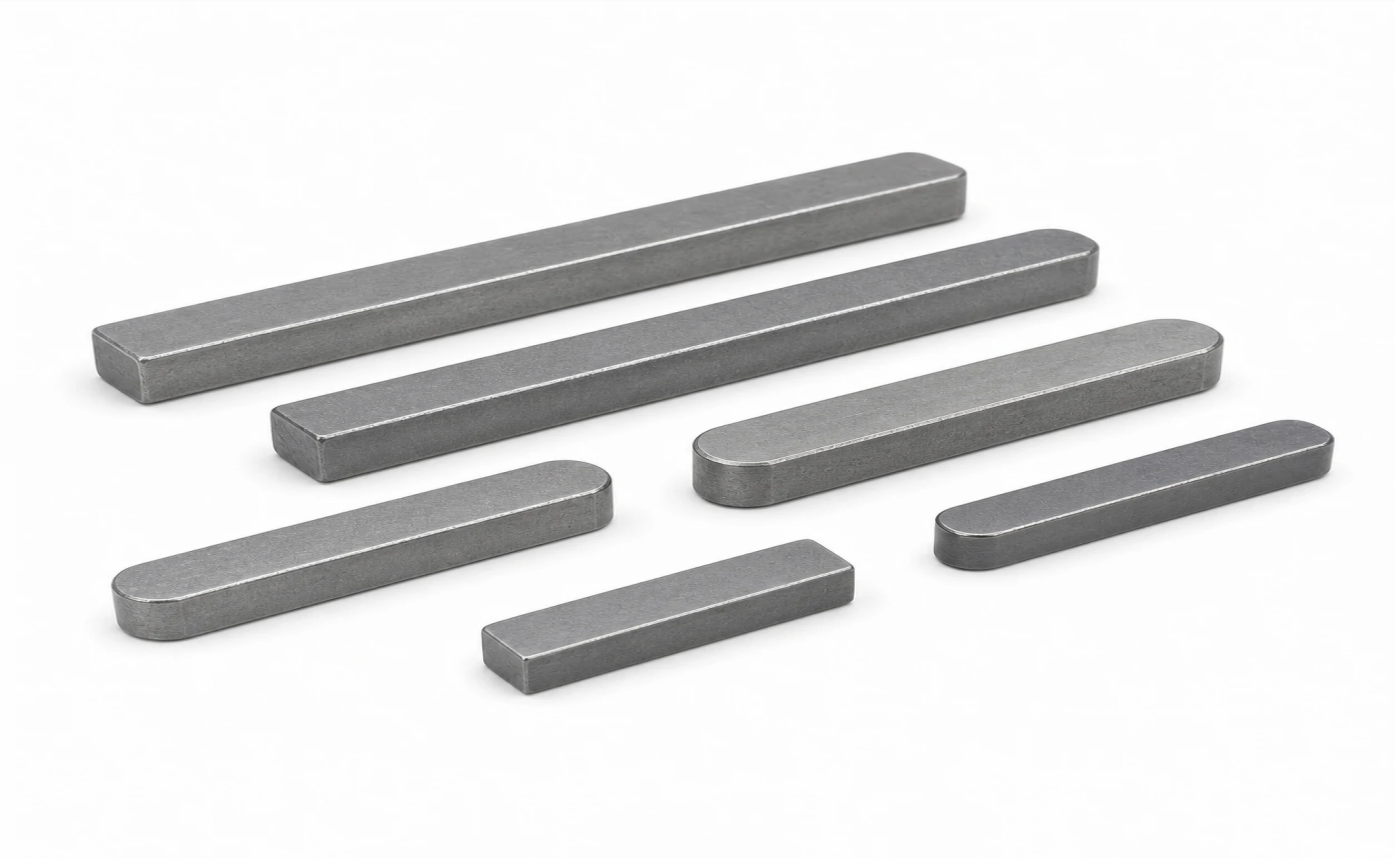
Product

Parallel Keys

Governing standards

DIN 6885 / ISO 773

Equivalence between national standards is dimensional, not always metallurgical. Check the property class separately when substituting.



ISO 773 is the standard cited for parallel keys. This page sets out what the standard controls for this part, reproduces the dimensional table supplied against it, and notes the related designations referenced on drawings.

ISO 773 — Scope

ISO 773 is "Rectangular or square parallel keys and their corresponding keyways".

Tolerance & Product Grades

ISO 773 does not divide parallel keys into product grades. Tolerances are given as limits on the individual dimensions in the table.

Where a general-tolerance class is cited on the drawing instead, it applies to the dimensions not otherwise toleranced.

Dimensions Specified by ISO 773

Shaft diameter range (mm)	Key width b (mm)	Key height h (mm)	Key length range (m
6~8	2	2	6~20
8~10	3	3	6~36
10~12	4	4	8~45
12~17	5	5	10~56
17~22	6	6	14~70
22~30	8	7	18~90
30~38	10	8	22~110
38~44	12	8	28~140
44~50	14	9	36~160
50~58	16	10	45~180
58~65	18	11	50~200
65~75	20	12	56~220
75~85	22	14	63~250
85~95	25	14	70~280

Shaft diameter range (mm)	Key width b (mm)	Key height h (mm)	Key length range (m
95~110	28	16	80~320
110~130	32	18	90~360
130~150	36	20	100~400
150~170	40	22	100~400
170~200	45	25	110~450
200~230	50	28	125~500
230~260	56	32	140~500
260~290	63	32	160~500
290~330	70	36	180~500
330~380	80	40	200~500
380~440	90	45	220~500
440~500	100	50	250~500

Companion Standards

ISO 773 controls the geometry of parallel keys. Surface finish is governed by separate finish standards such as ISO 4042 for electroplating, and corrosion testing by ISO 9227

(neutral salt spray). Mechanical performance is set by the documents specific to this part family — ISO 898-1 and ISO 898-2 apply to bolts, screws, studs and nuts, and not here.

When to Specify ISO 773

Choose ISO 773 for international engineering work and OEM supply where ISO standards are the contractual reference. It is the default modern specification for parallel keys.

Custom manufacturing · Made to drawing

Need a machine key to this standard in a non-standard size?

Parts built to ISO 773 are already in the catalog, so a special is usually a variation on existing tooling rather than a new design — which is what keeps the cost down. Made by milling or broaching & serration.

Minimum order from 2,000 pieces; samples within 7 days of drawing approval.

Custom machine key manufacturing (https://engineeringhardware.com/custom/keys/)

Send a drawing (https://engineeringhardware.com/custom/keys/#rfq)

Technical Drawing

Customize the parameters below — every spec field is editable, and the drawing redraws to match the values you choose. Changing the size will snap the other fields to that size's standard values; you can then override any individual value.

Dimensioned line drawing of 6~8 Parallel Keys to DIN 6885 / ISO 773. Side view and top view, drawn to the dimensions in the table below and redrawn for any size selected.

Opens a short step to confirm the exact specification before you enter contact details.

Request a Quote

Click “Request this configuration” under the drawing to confirm the exact specification, then add your contact details. You can also send the request without a specification — but only an accurate selection gets an accurate quote.

Dimensions & Specifications (DIN 6885 / ISO 773)

Shaft diameter range (mm)	Key width b (mm)	Key height h (mm)	Key length range (m
6~8	2	2	6~20
8~10	3	3	6~36
10~12	4	4	8~45
12~17	5	5	10~56
17~22	6	6	14~70
22~30	8	7	18~90
30~38	10	8	22~110
38~44	12	8	28~140
44~50	14	9	36~160
50~58	16	10	45~180
58~65	18	11	50~200
65~75	20	12	56~220
75~85	22	14	63~250
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130~150	36	20	100~400
150~170	40	22	100~400
170~200	45	25	110~450
200~230	50	28	125~500
230~260	56	32	140~500
260~290	63	32	160~500
290~330	70	36	180~500
330~380	80	40	200~500
380~440	90	45	220~500
440~500	100	50	250~500

Materials & Grades

Select a material class to see the grades we supply it in. Each designation is listed with its ISO/EN, AISI/SAE, JIS and GB equivalents.

Stainless Steel

Carbon Steel 66

Alloy Steel 41

Bearing Steel 5

Spring Steel 25

Aluminum and Aluminum Alloys 21

Brass 17

Bronze 11

Copper 8

Titanium and Titanium Alloys 18

Nickel and Nickel Alloys 22

Iron-Nickel and High-Temperature Alloys 10

Tool Steel and Specialty Hardened Steel 9

Structural and Construction Steel 9

Stainless Steel

Austenitic Stainless Steel

A1

AISI 303 · SAE 303 · SUS303 · EN 1.4305 · X8CrNiS18-9

A2
AISI 304 · SAE 304 · SUS304 · EN 1.4301 · X5CrNi18-10 · 06Cr19Ni10

304L
AISI 304L · SUS304L · EN 1.4307 · X2CrNi18-9 · 022Cr19Ni10

302
AISI 302 · SUS302 · EN 1.4310

305
AISI 305 · SUS305 · EN 1.4303

A4
AISI 316 · SAE 316 · SUS316 · EN 1.4401 · X5CrNiMo17-12-2 · 06Cr17Ni12Mo2

316L
AISI 316L · SUS316L · EN 1.4404 · X2CrNiMo17-12-2 · 022Cr17Ni12Mo2

321
AISI 321 · SUS321 · EN 1.4541 · X6CrNiTi18-10

310 / 310S
AISI 310 · AISI 310S · SUS310S · EN 1.4845

302HQ
AISI 302HQ

A3

A5

347
AISI 347 · SUS347 · EN 1.4550 · X6CrNiNb18-10

309 / 309S
AISI 309 · AISI 309S · SUS309S

Martensitic Stainless Steel

AISI 410
SUS410 · EN 1.4006 · X12Cr13 · 12Cr13

AISI 420
SUS420J1 · SUS420J2 · EN 1.4021 · EN 1.4028 · 20Cr13 · 30Cr13

AISI 431
SUS431 · EN 1.4057 · X17CrNi16-2

C1

C3

C4

AISI 440A

AISI 440B

AISI 440C
SUS440C · EN 1.4125

Ferritic Stainless Steel

AISI 430
SUS430 · EN 1.4016 · X6Cr17 · 10Cr17

F1

AISI 434

AISI 444

Precipitation-Hardening Stainless Steel

17-4 PH
AISI 630 · UNS S17400 · SUS630 · EN 1.4542 · X5CrNiCuNb16-4

15-5 PH
UNS S15500

17-7 PH
UNS S17700

Duplex and Super Duplex Stainless Steel

Duplex 2205
UNS S31803 · UNS S32205 · EN 1.4462

Super Duplex 2507
UNS S32750 · EN 1.4410

D2

D4

D6

D8

Lean Duplex 2101
UNS S32101

Super Duplex S32760
UNS S32760 · EN 1.4501

Carbon Steel

Low-Carbon Steel

SAE 1006

SAE 1008

SAE 1010

SAE 1018

SAE 1020

Q195

Q235

SAE 1012

SAE 1015

Q215

ML08

ML08Al

ML10

ML15

ML20

SWRCH6A

SWRCH8A

SWRCH10A

SWRCH12A

SWRCH15A
SWRCH18A

Medium-Carbon Steel

SAE 1035
SAE 1045
S45C
C45
SAE 1030
SAE 1040
SAE 1050
30
35
40
45
50
S35C
S40C
S50C
C35
C40

High-Carbon Steel

SAE 1060
SAE 1070
65Mn
SAE 1065

SAE 1075
SAE 1080
SAE 1085
SAE 1090
SAE 1095
60
65
70
75
80
85

Cold-Heading Steel

SWRCH22A
10B21
SWRCH22K
SWRCH25K
SWRCH30K
SWRCH35K
SWRCH40K
ML20Mn
ML25
ML30
ML35
ML40
15B25

Alloy Steel

Chromium Steel

- 40Cr
- 45Cr
- AISI 5140
- SAE 5140
- AISI 5120
- SAE 5120
- SCr420
- SCr440

Chromium-Molybdenum Steel

- 35CrMo
- 42CrMo
- AISI 4140
- SCM435
- SCM440
- 42CrMo4
- 30CrMo
- AISI 4130
- SAE 4130
- SAE 4140
- AISI 4142
- AISI 4145
- SCM415
- SCM420
- SCM445

EN 1.7220
EN 1.7225
25CrMo4
34CrMo4

Nickel-Chromium-Molybdenum Steel

AISI 4340
SAE 4340
40CrNiMo
SNCM439
EN 1.6511
36CrNiMo4

Boron Alloy Steel

10B22
10B21
15B21
15B25
20MnTiB
20Mn2B
35VB
40MnB

Bearing Steel

Bearing Steel

GCr15
AISI 52100

SAE 52100 · UNS G52986

SUJ2

100Cr6
EN 1.3505

GCr15SiMn

Spring Steel

Carbon Spring Steel

SAE 1065

SAE 1070

SAE 1075

SAE 1080

SAE 1095

65

70

75

80

65Mn

Silicon-Manganese Spring Steel

60Si2Mn

60Si2MnA

SUP6

SUP7

Chromium-Vanadium Spring Steel

50CrVA

SAE 6150

AISI 6150
SUP10

Stainless Spring Steel

AISI 301
SUS301
EN 1.4310
AISI 302
AISI 304
AISI 316
17-7 PH

Aluminum and Aluminum Alloys

Commercially Pure Aluminum

1050
1060
1070
1100

2xxx Series Aluminum

2024
2011
2014
2017

5xxx Series Aluminum

5052

5083
5754

6xxx Series Aluminum

6061
6061-T6
6063
6082
6082-T6

7xxx Series Aluminum

7075
7075-T6
7005
7050
7075-T73

Brass

Free-Cutting Brass

C36000
H62
HPb59-1
C3601
C3602
C3604
CuZn36Pb3
CuZn39Pb3

EN CW614N
EN CW617N
H65

Lead-Free Brass

C69300
C27450
CW510L
CW511L

Naval Brass

C46400
CuZn39Sn1

Bronze

Silicon Bronze

C65500
C65100
C65600

Phosphor Bronze

C51000
C52100
CuSn6
CuSn8

Aluminum Bronze

- C95400
- C95500
- C63000
- CuAl10Ni5Fe4

Copper

Copper

- C11000
- T2
- C10100
- C10200
- C12200
- T1
- TU1
- TU2

Titanium and Titanium Alloys

Commercially Pure Titanium

- Grade 2
- Grade 1
- Grade 3
- Grade 4
- TA1
- TA2

TA3

Alpha-Beta Titanium Alloys

Grade 5
Ti-6Al-4V
TC4
UNS R56400

Low-Interstitial Grade

Grade 23
Ti-6Al-4V ELI
UNS R56407

Other Titanium Fastener Alloys

Ti-6Al-6V-2Sn
Ti-6Al-2Sn-4Zr-2Mo
Beta-C titanium
Ti-10V-2Fe-3Al

Nickel and Nickel Alloys

Commercially Pure Nickel

Nickel 200
UNS N02200
Nickel 201
UNS N02201

Inconel Alloys

Inconel 625
UNS N06625

Inconel 718
UNS N07718

Inconel 600
UNS N06600

Inconel 601
UNS N06601

Inconel 686
UNS N06686

Inconel X-750
UNS N07750

Monel Alloys

Monel 400
UNS N04400

Monel K-500
UNS N05500

Hastelloy Alloys

Hastelloy C-276
UNS N10276

Hastelloy C-22
UNS N06022

Hastelloy B-2
UNS N10665

Hastelloy B-3
UNS N10675

Hastelloy X
UNS N06002

Other Nickel Alloys

Alloy 20
UNS N08020

Alloy 625

Alloy 718

Alloy 825
UNS N08825

Alloy 925
UNS N09925

Iron-Nickel and High-Temperature Alloys

A286

A-286

UNS S66286

EN 1.4980

Invar

Invar 36

Alloy 36

UNS K93600

FeNi36

Alloy 42

Alloy 42

UNS K94100

FeNi42

Tool Steel and Specialty Hardened Steel

Tool Steel and Specialty Hardened Steel

- AISI D2
- AISI H13
- SKD11
- Cr12MoV
- AISI O1
- AISI A2
- AISI S7
- SKD61
- 9CrSi

Structural and Construction Steel

Structural and Construction Steel

- ASTM A36
- Q235B
- Q355B
- S355JR
- Q235C
- Q355C
- S235JR
- S275JR
- S355J2

Applications & Industries

Parallel Keys are bought for a small number of well-defined jobs. These are the ones we ship them for. Stocked from 6~8 to 440~500 (key section).

Industries that specify Parallel Keys

Motors & gearboxes **Transmitting torque from shaft to hub.**

Pumps & fans **Driving rotating assemblies without slip.**

Power transmission **Locking pulleys, sprockets and couplings to a shaft.**

Typical applications

- **replacing a sheared key on a drive in service**
- **transmitting torque between a shaft and a hub**

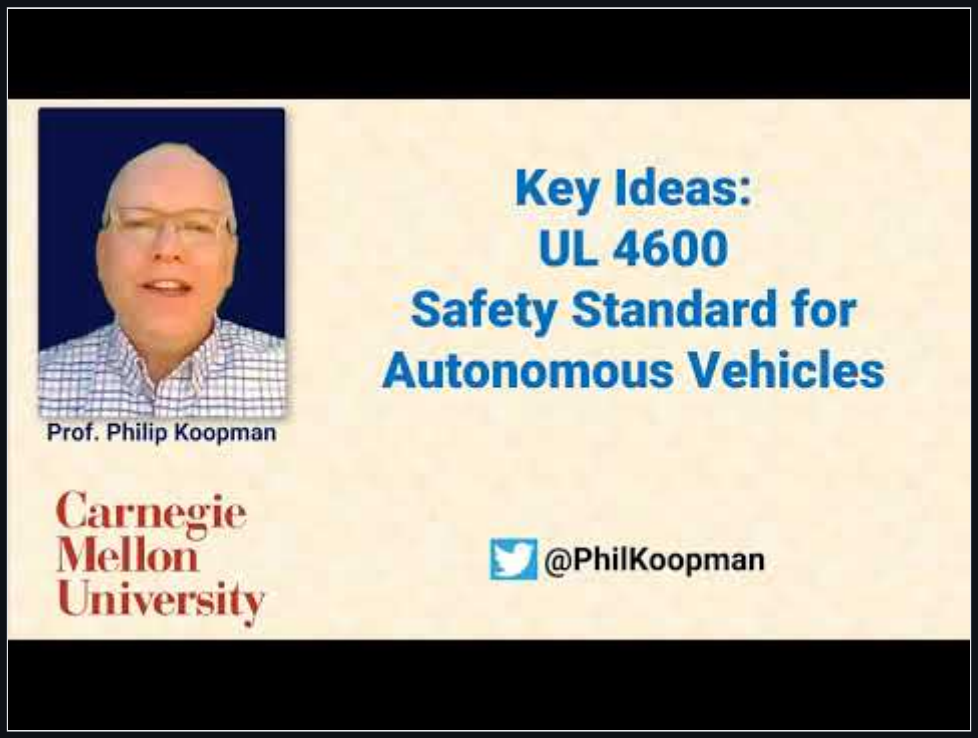
Service conditions to specify against

Marine and coastal

Available in A4 (316) stainless for chloride exposure — coastal structures, pool halls, water treatment and deck hardware, where A2 will eventually pit.

Full application guide: where Parallel Keys are used, how to specify them, and the cases they are wrong for (https://engineeringhardware.com/applications/parallel-keys/)

Video: ISO 773 Parallel Keys Specification



(https://www.youtube.com/watch?v=jTVqcyDCLsQ)https://www.youtube.com/watch?v=jTVqcyDCLsQ)

► Watch video: https://www.youtube.com/watch?v=jTVqcyDCLsQ(https://www.youtube.com/watch?v=jTVqcyDCLsQ)

Third-party video, selected automatically for this topic. It is not produced by Engineering Hardware and is not a specification source — use the tables on this page for dimensional data.

Inside the plant

Manufactured in our own plant

This part is cold-formed, threaded, heat-treated and finished in-house. The stages below are where its class and finish are actually decided.

01

Cold heading

Wire rod is drawn to size and cold-formed into blanks. Forming rather than cutting keeps the grain flow continuous around the head, which is where a bolt is most likely to fail.

Head dimensions and under-head radius checked at set-up and per shift.

02

Thread rolling

Threads are rolled between hardened dies rather than cut. Rolled threads are stronger in fatigue than cut threads and hold pitch and flank angle far more consistently across a batch.

Go / no-go ring gauges to ISO 965 tolerance class 6g.

03

Heat treatment

Quench-and-temper brings carbon and alloy steel to the property class ordered — 8.8, 10.9 or 12.9 — with the furnace charge tracked so a finished lot can be traced back to it.

Core hardness and tensile tested per lot to ISO 898-1.

04

Surface treatment

Zinc, zinc-nickel, hot-dip galvanizing, black oxide, phosphate and Dacromet, selected against the service environment rather than against the price list.

Coating thickness and neutral salt spray hours to ISO 9227.

Frequently Asked Questions

What is ISO 773?

ISO 773 is "Rectangular or square parallel keys and their corresponding keyways".

What does ISO 773 specify for Parallel Keys?

ISO 773 specifies the dimensions and tolerances of parallel keys. Material and property class are governed by separate documents.

Does ISO 773 specify the mechanical strength?

No. ISO 773 controls the dimensional requirements for parallel keys. Mechanical performance is set by the documents specific to this part family — ISO 898-1 and ISO 898-2 apply to bolts, screws, studs and nuts, and not to this product.

Can I substitute ISO 773 for the corresponding DIN standard on a drawing?

On modern drawings the ISO standard is the master reference; the older DIN equivalent is a cross-reference. For most dimensional purposes the parts are interchangeable, but check tolerance grades and the head height — these are the most common points of divergence.

How do I request a quotation?

Use the technical drawing on this page to pick the exact configuration, then submit it with the quote form. We respond within one business day.

Related Pages

View the full Parallel Keys page (https://engineeringhardware.com/fastener/parallel-keys/)

More Parallel Keys Guides

- **DIN 6885 Parallel Keys (https://engineeringhardware.com/guide/standard/din-6885-parallel-keys/)**