

What Are Socket Set Screws Used For?

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Socket Set Screws are used for threaded assemblies where the head drive and seating style matter. They are manufactured to ISO 4026 / ISO 4029 / DIN 913-916, and the choice of size, property class and finish is driven by the load in the joint and the environment it sits in.

Primary duty

Threaded assemblies where the head drive and seating style matter

Governing standard

ISO 4026 / ISO 4029 / DIN 913-916

Thread size range

M1.6 to M48

Category

Screws

Application notes are general engineering guidance. Verify the property class and any approval requirement against your own design calculation.



Socket Set Screws are used primarily for threaded assemblies where the head drive and seating style matter. This page lists the industries and assemblies where they are specified, the selection criteria that matter for each application, installation practice, and the cases where a different fastener type is the correct choice. Parts are supplied to ISO 4026 / ISO 4029 / DIN 913-916. Stocked across roughly M1.6 to M48, they cover general to heavy-duty work.

Typical Applications for Socket Set Screws

The most common settings where these are specified:

Electronics & enclosures: mounting PCBs, panels and lids where the drive style and head height matter.

Appliances & consumer goods: high-volume assembly with power tools and consistent seating.

Machine guarding & panels: removable access covers that are opened for service.

General machine building: fastening covers, brackets, motors and sub-assemblies on production equipment.

Maintenance & repair (MRO): a stocked size for servicing existing plant where the original fastener spec must be matched.

How to Specify Socket Set Screws for Your Application

Size: Match the nominal size to the mating thread or hole. This product spans M1.6–M48; check the full table below for the exact dimensions of each size.

Drive & head: Pick the drive (socket, cross, slot) and head style for the tool access and seating surface; a recessed drive resists cam-out under power tools.

Environment: For damp, coastal or chemical exposure prefer A4/316 stainless or a suitable coating; indoors, plated steel or A2 is usually sufficient.

Standard: This product is supplied to ISO 4026 / ISO 4029 / DIN 913-916. Quoting the standard on your order guarantees interchangeable dimensions between suppliers.

Installation & Assembly Practice

Set screws are rated to ISO 898-5 by hardness, because they work in compression against a shaft rather than in tension. ISO 898-1 excludes them, and a set screw has no head to preload against, so neither a property class nor a preload torque applies. Seating torque depends on the point form and the shaft material.

Match the driver exactly to the recess (PH $\neq$ PZ; hex key sizes per ISO 2936) and keep the tool axial — side load is the main cause of stripped drives.

In tapped holes, engage a thread length of at least 1× the nominal diameter in steel, 2× in aluminum.

Set power tools to a torque that seats the head without embedding it into the mating surface.

Common Selection Mistakes with Socket Set Screws

Under-sizing the drive for the installation torque — a small recess at high torque strips before the screw is seated.

Using a countersunk head in thin sheet where the countersink removes most of the load-bearing material.

Specifying stainless in high-strength duty: A2-70 is roughly class 7 steel, not a 10.9 substitute.

Where Socket Set Screws Are Not the Right Choice

Not for high-preload structural joints (use a property-class bolt and nut), and not in thin sheet where a self-drilling or self-tapping type suits better.

Custom manufacturing • Made to drawing

Need a socket set screws outside the standard range?

Material and finish are usually what drives a special — a grade the standard part is not stocked in, or a coating chosen against a salt-spray figure instead of a default. Made by cold heading or warm forging.

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

Custom screw manufacturing

(<https://engineeringhardware.com/custom/screws/>)

Send a drawing (<https://engineeringhardware.com/custom/screws/#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 M1.6 Socket Set Screws to ISO 4026 / ISO 4029 / DIN 913-916. 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 (ISO 4026 / ISO 4029 / DIN 913-916)

Size	Pitch (mm)	Hex socket s (mm)	Engagement depth t min (mm)	Point diameter d
M1.6	0.35	0.7	0.7	0.8
M1.6	0.35	0.7	0.7	0.8
M1.6	0.35	0.7	0.7	0.8
M1.6	0.35	0.7	0.7	0.8
M2	0.4	0.9	0.9	1.0
M2	0.4	0.9	0.9	1.0
M2	0.4	0.9	0.9	1.0
M2	0.4	0.9	0.9	1.0
M2.5	0.45	1.3	1.1	1.5
M2.5	0.45	1.3	1.1	1.5
M2.5	0.45	1.3	1.1	1.5
M2.5	0.45	1.3	1.1	1.5
M3	0.5	1.5	1.4	2.0

Size	Pitch (mm)	Hex socket s (mm)	Engagement depth t min (mm)	Point diameter d
M3	0.5	1.5	1.4	2.0
M3	0.5	1.5	1.4	2.0
M3	0.5	1.5	1.4	2.0
M4	0.7	2.0	2.0	2.5
M4	0.7	2.0	2.0	2.5
M4	0.7	2.0	2.0	2.5
M4	0.7	2.0	2.0	2.5
M5	0.8	2.5	2.5	3.5
M5	0.8	2.5	2.5	3.5
M5	0.8	2.5	2.5	3.5
M5	0.8	2.5	2.5	3.5
M6	1.0	3.0	3.0	4.0
M6	1.0	3.0	3.0	4.0
M6	1.0	3.0	3.0	4.0
M6	1.0	3.0	3.0	4.0

Size	Pitch (mm)	Hex socket s (mm)	Engagement depth t min (mm)	Point diameter d
M8	1.25	4.0	4.0	5.5
M8	1.25	4.0	4.0	5.5
M8	1.25	4.0	4.0	5.5
M8	1.25	4.0	4.0	5.5
M10	1.5	5.0	5.0	7.0
M10	1.5	5.0	5.0	7.0
M10	1.5	5.0	5.0	7.0
M10	1.5	5.0	5.0	7.0
M12	1.75	6.0	6.0	8.5
M12	1.75	6.0	6.0	8.5
M12	1.75	6.0	6.0	8.5
M12	1.75	6.0	6.0	8.5
M16	2.0	8.0	8.0	12.0
M16	2.0	8.0	8.0	12.0
M16	2.0	8.0	8.0	12.0

Size	Pitch (mm)	Hex socket s (mm)	Engagement depth t min (mm)	Point diameter d
M16	2.0	8.0	8.0	12.0
M20	2.5	10.0	10.0	15.0
M20	2.5	10.0	10.0	15.0
M20	2.5	10.0	10.0	15.0
M20	2.5	10.0	10.0	15.0
M24	3.0	12.0	12.0	18.0
M24	3.0	12.0	12.0	18.0
M24	3.0	12.0	12.0	18.0
M24	3.0	12.0	12.0	18.0
M30	3.5	14.0	15.0	22.0
M30	3.5	14.0	15.0	22.0
M30	3.5	14.0	15.0	22.0
M30	3.5	14.0	15.0	22.0
M36	4.0	17.0	19.0	27.0
M36	4.0	17.0	19.0	27.0

Size	Pitch (mm)	Hex socket s (mm)	Engagement depth t min (mm)	Point diameter d
M36	4.0	17.0	19.0	27.0
M36	4.0	17.0	19.0	27.0
M45	4.5	19.0	24.0	34.0
M45	4.5	19.0	24.0	34.0
M45	4.5	19.0	24.0	34.0
M45	4.5	19.0	24.0	34.0
M48	5.0	22.0	28.0	36.0
M48	5.0	22.0	28.0	36.0
M48	5.0	22.0	28.0	36.0
M48	5.0	22.0	28.0	36.0

Video: What Are Socket Set Screws Used For? in use



<https://www.youtube.com/watch?v=-IVAflBQdS4>

[-IVAflBQdS4](https://www.youtube.com/watch?v=-IVAflBQdS4)

► Watch video: <https://www.youtube.com/watch?v=-IVAflBQdS4> (<https://www.youtube.com/watch?v=-IVAflBQdS4>)

How Do I Use a Set Screw? (<https://www.youtube.com/watch?v=-IVAflBQdS4>)

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 drive type do Socket Set Screws use?

Drive depends on the head style — socket (hex key), cross (Phillips/Pozi) or slot. A recessed drive resists cam-out when driven with power tools; check the product head style on this page.

What material should Socket Set Screws be for outdoor use?

For damp, coastal or chemical environments specify A4 (316) stainless or a suitably coated steel. For indoor or dry use, A2 (304) stainless or zinc-plated steel is normally adequate.

Are Socket Set Screws made to a recognized standard?

Yes — they are manufactured to ISO 4026 / ISO 4029 / DIN 913-916, so dimensions are interchangeable between suppliers when you quote the standard on your order.

What are Socket Set Screws used for?

Threaded assemblies where the head drive and seating style matter. They are supplied to ISO 4026 / ISO 4029 / DIN 913-916.

Can I get a quote for Socket Set Screws in the size and material I need?

Yes. Use the technical drawing and quote form on this page to set the size and options, then send the exact configuration to our team for pricing and lead time.

Related Pages

Product page: [Socket Set Screws — specifications & sizes \(https://engineeringhardware.com/fastener/socket-set-screws/\)](https://engineeringhardware.com/fastener/socket-set-screws/)

Socket Set Screws Specification Guides

- **M1.6 Socket Set Screws size guide** (<https://engineeringhardware.com/guide/size/m1-6-socket-set-screws/>)
- **A4 stainless Socket Set Screws** (<https://engineeringhardware.com/guide/material/a4-stainless-steel-socket-set-screws/>)

Related Fastener Applications

- **4IP Internal Service Screws for Mobile Devices applications** (<https://engineeringhardware.com/applications/4ip-internal-service-screws-for-mobile-devices/>)
- **Ball-Ended Thrust Screws applications** (<https://engineeringhardware.com/applications/ball-ended-thrust-screws/>)
- **Bicycle General Threaded Fasteners applications** (<https://engineeringhardware.com/applications/bicycle-general-threaded-fasteners/>)
- **Bicycle Spoke Nipples applications** (<https://engineeringhardware.com/applications/bicycle-spoke-nipples/>)
- **Button Head Socket Cap Screws, UNC applications** (<https://engineeringhardware.com/applications/asme-b18-3-3a-unc-button-head-socket-cap-screw/>)
- **Button Head Socket Screws applications** (<https://engineeringhardware.com/applications/button-head-socket-screws/>)