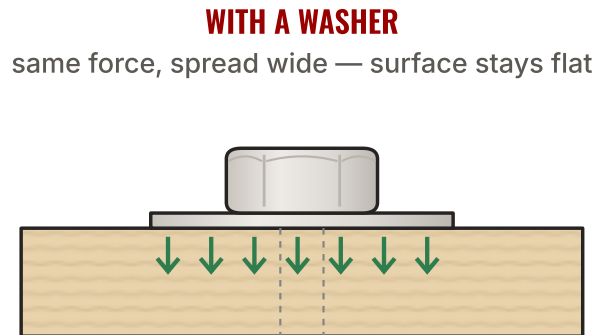
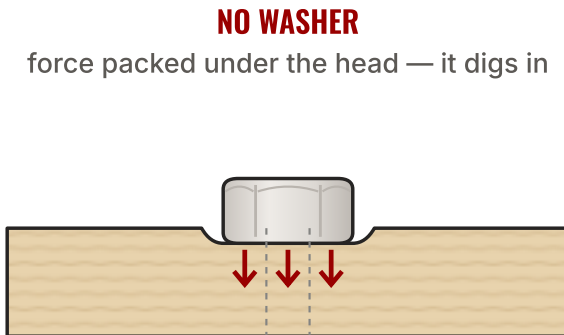


Washer Types & When to Use Them

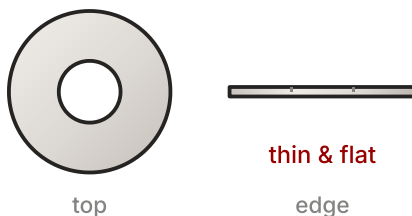
jandesupply.com/guide-washer-types.php

A washer isn't just a spacer. The right one spreads load, protects the surface, or fights loosening — here's what each kind is for.

Most of the time a washer does one simple job: **spread the clamping force** over a wider area so the bolt head or nut doesn't dig in.

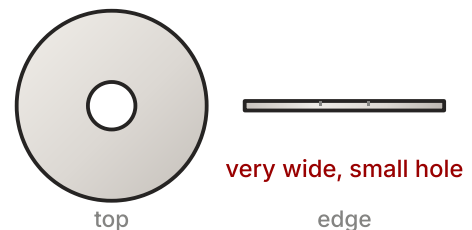


Some are shaped to do more — bridge an oversized hole, bite against loosening, or hold tension through vibration and temperature swings. Here are the ones you'll actually reach for, from the top and from the edge:



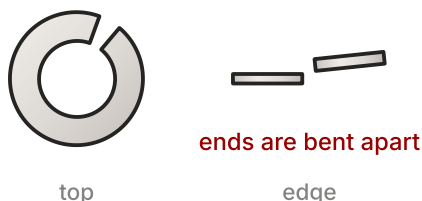
Flat washer

The everyday washer — **spreads the load** and protects the surface under a bolt head or nut. The default unless a job calls for something special.



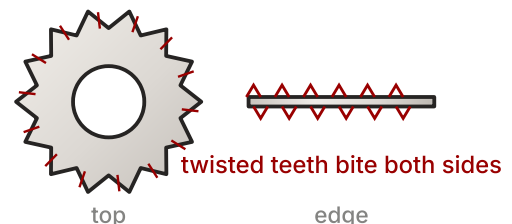
Fender washer

A flat washer with an **extra-large outside diameter**. For thin or soft material, oversized holes, or anywhere you want to spread the load very wide — sheet metal, wood, fender repairs.



Split lock washer

A spring ring with a gap that presses back against the nut. Helps **resist loosening** from light vibration. Honest note: under full torque its effect is modest — for serious vibration, a lock nut or threadlocker does more.



Tooth / star lock washer

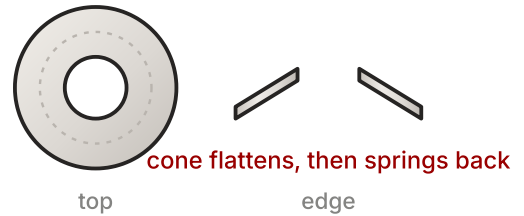
Teeth (inside or outside the ring) **bite** into the surface and the fastener to resist backing off. Also used to cut through paint for an **electrical bond** at a ground connection.



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thick & hardened



cone flattens, then springs back

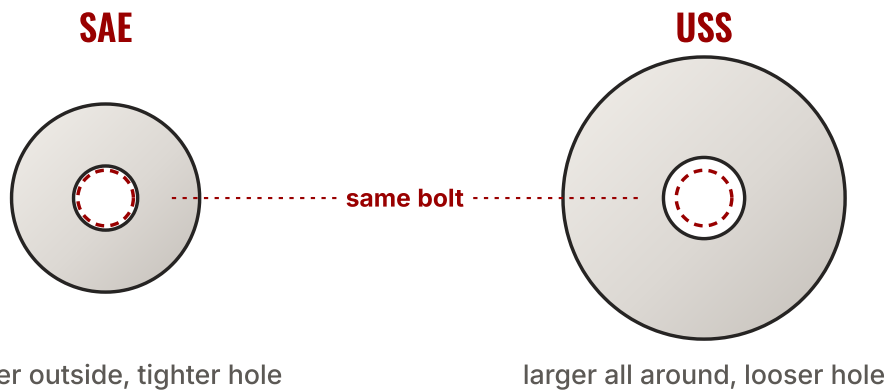
Structural (F436)

A **hardened, thick flat washer** made for structural bolting (A325 / A490). It stands up to the high clamp loads that would dish a standard washer. Use it where the spec calls for structural hardware.

Belleville (conical)

A cone-shaped spring washer that **holds tension** as parts expand, contract, or settle. For joints that see temperature swings or vibration and need to stay tight.

SAE vs. USS — the size that trips people up



For the same bolt size, an **SAE** flat washer has a smaller outside diameter and a tighter hole; a **USS** washer is larger all around. SAE suits finished work and smaller bearing surfaces; USS spreads load wider and fits looser holes.

(Washer seems too big or too small for the bolt? This is usually why — just tell us SAE or USS.

Quick guidance

And outdoors, match the washer's finish to the bolt so they don't corrode against each other.



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