

WASHERS

Gestión de Compras has extensive experience in the design, development and manufacture any kind of washers.

PRODUCT:

Washers are thin plates of metal or non-metallic material with a hole, usually in the middle. These parts are normally used to relieve friction, prevent leakage, isolate, prevent loosening or distribute pressure of a nut, an axle bearing, or a joint.

Washer Classification and standards:

There is a huge quantity of sort of washers with different shapes and works. So, in order to define a washer with any degree of accuracy, we can make the following basic classification:

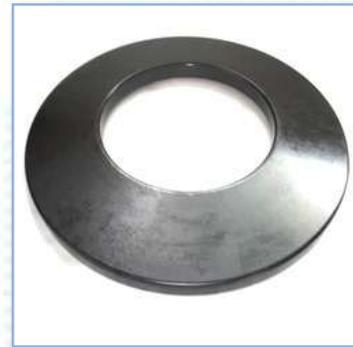
- **Flat washers:** Also called as "Plain washers", it is the most common washer group. Depending of the function they may be round, symmetrically square, hexagonal, rectangular...Some examples are fender washers (DIN 9021), washers for steel structures (DIN 7989), round washers for structural steel (DIN 6916), washers for clamping devices (DIN 6340), penny washers (DIN 9021, DIN 9054), washers for hexagon bolts (DIN 125), washers for cheese head screws (DIN 433), washers for bolts with heavy clamping sleeves (DIN 7349)...



- **Beveled:** Top bearing surface is cut at an oblique angle to compensate for non-parallel surfaces in industrial leveling and shimming applications. Can be round or squared. Most common beveled angles are 8% and 14% (DIN 434, DIN 435, respectively).



- **Conical:** also called as Belleville washer, it's a type of spring washers who has a frusto-conical shape which gives the washer a spring characteristic. It is specially used for absorbing shocks and maintaining tension under dynamic loads. Some standards are DIN 6796, DIN 2093.



- **Countersunk:** Allows flat or oval head countersunk screws to be flush for finished appearance.



- **Self-sealing:** Bonded rubber to a stainless-steel compressive washer. High-pressure sealing, internally and externally for water, other liquids, dust, air and vapors. Dampens noise and vibration.



- **Spherical:** It's an equalizing assembly of two pieces that permit eliminate unequal thread loads and stress from nonparallel surfaces (DIN 6319).



- **Shoulder:** Barrel protrudes from center hole of flat-bottomed washer to isolate or insulate a screw, shaft or rivet.



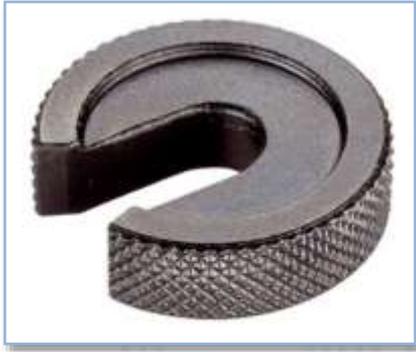
- **Waved:** Wavy shape provides compensating spring force, increases load-bearing capacity, absorbs shock and vibrations, and resist loosening and fatigue. (DIN 137B, DIN 6904).



- **Split lock:** Also known as helical lock washers, split with one end bent slightly outward to bite in and prevent loosening. Acts like a spring under compression to provide extra holding force and decrease frictional resistance during assembly and disassembly. Standards DIN 7980, DIN 127.



- **Slotted:** Also called C-washers. A slot with the same width as the hole diameter is cut from the center to the perimeter. Slips on and off shaft without removing fastener. DIN 6371



- **Toothed lock washers** or star washers. Directional teeth or serrated edges bite into fastener head/workpiece to prevent loosening. Most common standards are DIN 6797 and DIN 6798.



- **Tab washers:** It a washer that works by having a side tab that can be bent into place against a nut to lock it. Some standards are: DIN 432, DIN 463, DIN 93, and DIN 462.



PRODUCTION:

In **Gestion de Compras** we are experts in the design, develop and manufacture any kind of washers.

The primary method used to manufacture metallic washers is stamping and, in addition, processing may include many types of heat treating and surface coating.



The standard metallic washers made with steel, copper or aluminum as well as rubber washers for fittings has a much extended use. But when special materials, designs or dimensions is needed the options are drastically reduced. For this reason in **Gestión de Compras** we supply both standard and customized, to adapt the product to customer's needs.

MATERIALS:

Washers are available in a lot of materials including, but not limited to:

- **Steel.**
- **Stainless steel.**
- **Copper.**
- **Brass.**
- **Titanium.**
- **Aluminium.**
- **Rubber.**
- **Plastic.**
- **Nylon.**
- **Teflon.**
- **Zinc.**

STANDARD AND CERTIFICATES:

Our factories have the most demanding certifications for customers to ensure product quality as:

- ISO 9001
- ISO 14001.
- OHSAS 18001.



CONTACT:

In **Gestión de Compras** work with a wide range of customers from different sectors but have in common the search for products that suit your needs at the best Price and the guaranteed maximum quality. Check with us about any product. We have a qualified staff who will advise you.

C/ Nueva 35

02002 Albacete (Spain)

Phone: + (34) 967 221 602

Fax: + (34) 967 223 369

Email: info@gestiondecompras.com