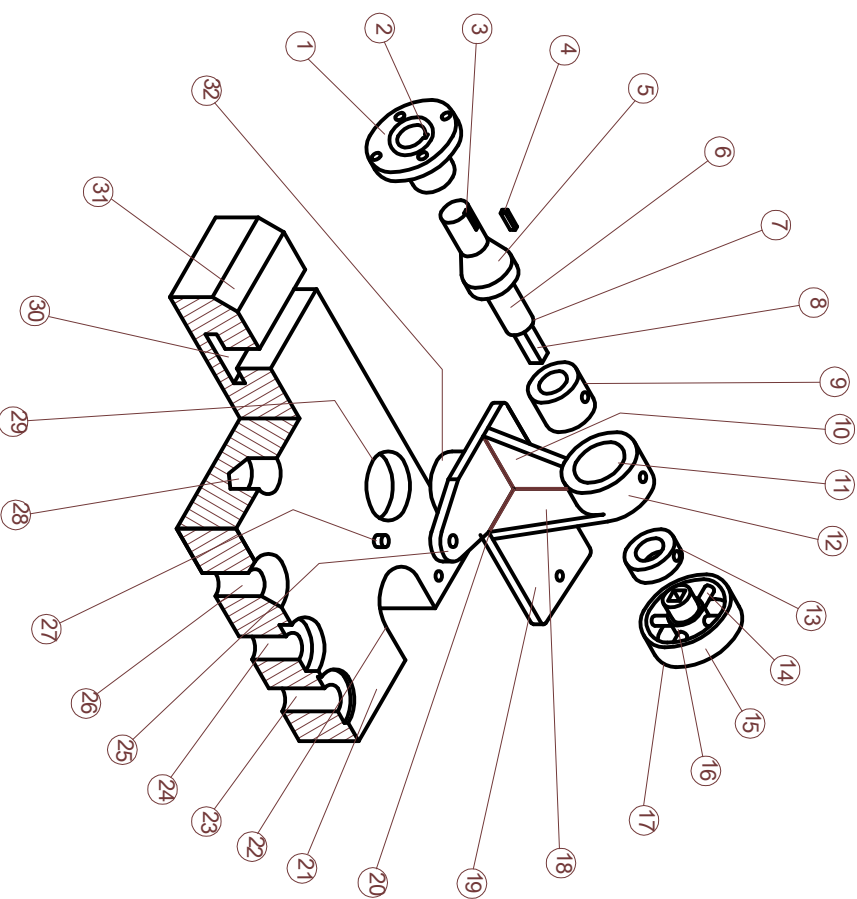


## MECHANICAL COMPONENTS AND TECHNICAL TERMINOLOGY

It is important for technologists and engineers to know and understand the technical terms describing mechanical components and their features.

- 1 A **flange** is a projecting thin disc on pipes or couplings joining two shaft ends or pipe ends together.
- 2 A **keyway** is a groove in a shaft or a hub machined to accommodate a corresponding key.
- 3 A **keyway** is a groove in a shaft or a hub machined to accommodate a corresponding key. Technically speaking the recess on a shaft is referred to as a **seating**.



- 4 A **key** is a shaped piece of metal which is inserted in a shaft and a hub to prevent relative movement between the two parts.
- 5 A **taper** is a gradual change in diameter of a component along its length.
- 6 A **shaft** is a cylindrical rotating rod on which parts are fixed, used for transmission of motion.
- 7 A **shoulder** is a sudden change in diameter on a shaft.
- 8 A **square on a shaft** is a length of the shaft with a square cross-section.

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- 9 A **bush** is a plain bearing supporting a rotating shaft and can easily be replaced when worn out.
- 10 A **web** is a thin flat part connecting heavy parts of a component; it is usually parallel to the bosses, bores, shafts, etc.
- 11 A **bore** is a cylindrical hole along a tube or a boss.
- 12 A **boss** is an enlarged protruding round part of a casting, used to accommodate a hole or bore.
- 13 A **collar** is a separate ring of circular section or an integral part of a shaft used for axial location.
- 14 **Spokes** are rods radiating from the hub to the rim of a wheel or pulley.
- 15 A **rim** is the outer part of a wheel or pulley.
- 16 A **hub** is the inner part (centre) of a wheel or pulley.
- 17 A **pulley** is a small wheel with a flat or grooved rim to carry a belt, rope, etc.
- 18 A **rib** is a thin part used to support or strengthen heavier parts of the component, it is usually perpendicular to the bosses.
- 19 A **bracket base** is the bottom part of a projecting support, usually fixed to a flat surface.
- 20 A **fillet** is an internal corner of a casting etc. which is curved to assist the flow of molten metal during casting and also to make the corner stronger by reducing stress concentrations.
- 21 A **table** is a flat top on which working components can be fixed.
- 22 A **slot** is an elongated hole or groove.
- 23 A **spot-faced** surface is a flat circular surface concentric with a hole, used for seating screw heads etc.
- 24 A **counterbored hole** is a hole, part of which is of a larger diameter and flat-bottomed to conceal screw heads etc.
- 25 A **lug** is a projection from a casting etc. used for fastening and adjusting purposes.
- 26 A **countersunk hole** is a hole, part of which is conical (usually at 45°) to receive countersunk screw heads so that the head sits flush to the surface.
- 27 A **dowel** is a cylindrical pin used for precise-location purposes.
- 28 A **blind-dilled hole** is a hole which does not pass completely through the component.
- 29 A **tee groove or tee slot** is a large aperture used to accommodate fixing bolts, preventing them from turning.
- 30 A **chamfer** is a surface produced by beveling square edges - where the art's edge is removed.
- 31 A **recess** is a shallow hole to suit the shape of a spigot or a similar matching part.
- 32 A **spigot** is a projection which fits into a corresponding recess and is used for precise location purposes.