

13.0 TOLERANCES

13.1 TOLERANCES FOR THREADED STUDS

The tolerances with which the threaded studs are made are:

- Metric thread diameter with normal pitch or fine pitch;
- Projection of the threaded stud from the plastic hub: ± 0.5 mm.

13.2 TOLERANCES FOR SMOOTH STUDS

The tolerances with which the smooth studs are made are:

- External diameter : h9 – h11 (standard tolerance for drawn bars UNI 5105);
- Projection of the smooth stud from the plastic hub: ± 0.5 mm.

13.3 TOLERANCES FOR PARTIALLY THREADED SMOOTH STUDS

The tolerances with which the partially threaded smooth studs are made are:

- External diameter : h9 – h11 (standard tolerance for drawn bars UNI 5105);
- Metric threading diameter with normal pitch or fine pitch: 6g ISO UNI 5545-65;
- Projection of the smooth stud from the plastic hub: ± 0.5 mm;
- Length of the threaded section: ± 0.2 mm.

13.4 TOLERANCES FOR FEMALE THREADED HOLES

Female threaded holes are made with the following tolerances:

- Metric threading diameter with normal pitch or fine pitch: 6H ISO UNI 5545-65;
- Depth of the thread: as this measurement is greatly influenced by the type of insert used for the measurement, the data given in the tables have been taken using a gauge with a 6g tolerance and entry bevel of 1 mm x 45°. In any case the tolerance is $-0 + 0.5$ mm.

13.5 TOLERANCES FOR THREADED THROUGH-HOLES

Threaded through-holes are made with the following tolerances:

- Metric threading diameter with normal pitch or fine pitch: 6H ISO UNI 5545-65;
- Depth of the thread : ± 0.5 mm.

13.6 TOLERANCES FOR SMOOTH THROUGH-HOLES

Smooth through-holes are made with the following tolerances:

- Smooth through-hole diameter: H7 ISO UNI 5545-65;
- For holes with a 5 mm diameter used for subsequent widening: H9 (specified in each table);
- Depth of the smooth hole: ± 0.5 mm.

13.7 TOLERANCES FOR THREADED HOLES OBTAINED BY MOULDING THE PLASTIC

It is not possible to specify a tolerance for threaded holes made by moulding the plastic. This is due to the nature of the material which is affected by a number of factors (shrinkage, density, pressure, etc). Normally the threaded hole is made slightly smaller. This makes the assembly process more difficult, but the thread seal is stronger. Generally, there is no need for threadlockers or other types of sealants.

13.8 TOLERANCES FOR SMOOTH HOLES OBTAINED BY MOULDING THE PLASTIC WITH PRESS-FIT ASSEMBLY

In order to ensure correct mounting on different types of shafts, Jencan machines a series of coaxial compensator lines having a smaller diameter than the hole, on the inside of the smooth hole. During assembly these compensator lines are deformed to compensate for the different diameters of the shafts in order to ensure a perfect seal.

- Therefore the permissible shaft tolerance is: ± 0.3 mm.
- Depth of the hole: ± 1 mm.

13.9 GENERAL TOLERANCES OF THE PLASTIC PRODUCTS

Generally the plastic articles included in the catalogue do not have a set defined tolerance. In most cases a difference of ± 0.5 mm in the diameter or length of the part is irrelevant. For the B family -Handles and the O family - Hinges, which must be assembled in pre-made holes, a tolerance in the distance between the centres of the fixing holes of ± 0.5 mm is provided. Note that in any case this difference can be recovered by using the larger diameter of the holes for the fastening screws.