

## Piston Skirt Clearance

The limits of the cylinder bore diameter into which a Nüral piston fits are specified on the box label.

It is unnecessary to measure the diameter of a Nüral piston or the piston-to-bore clearance as they are designed and made to operate within the specified bore diameter limits.

In keeping with convention, all Nüral pistons for European applications specify the piston diameter and clearance on the piston crown; the sum of these two values is the minimum bore diameter. (see Fig. 1).

If it necessary to measure the piston diameter or the clearance, then the measurement position on the piston skirt is very important.

To understand the relevance of the measuring position it is necessary to be aware of basic piston geometry: (see Fig. 2 & 3).

1. A piston is oval and not a true circle. This ovality is necessary to accommodate thermal expansion of the piston and deflection of the piston skirt caused by side-loads.

2. The diameter of a piston is typically smaller at the crown and becomes progressively larger towards its base. The maximum diameter being between the base and the pin hole. This is because the piston expands more at the crown, as it is the closest point to the heat source.

The Nüral Piston Catalogue has clearance data for all pistons and also indicates the measuring points.

Fig 1.

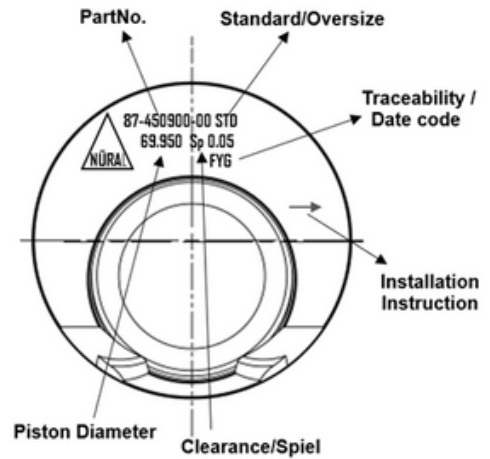


Fig 2.

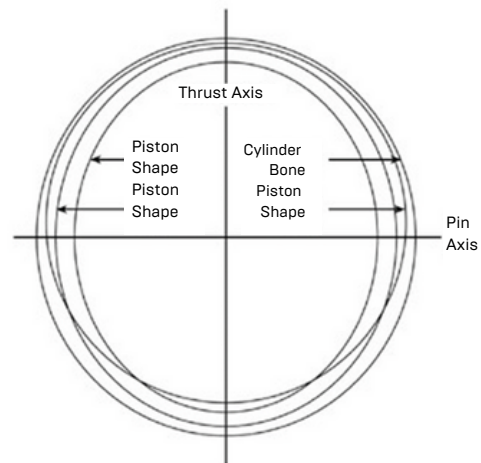


Fig 3.

