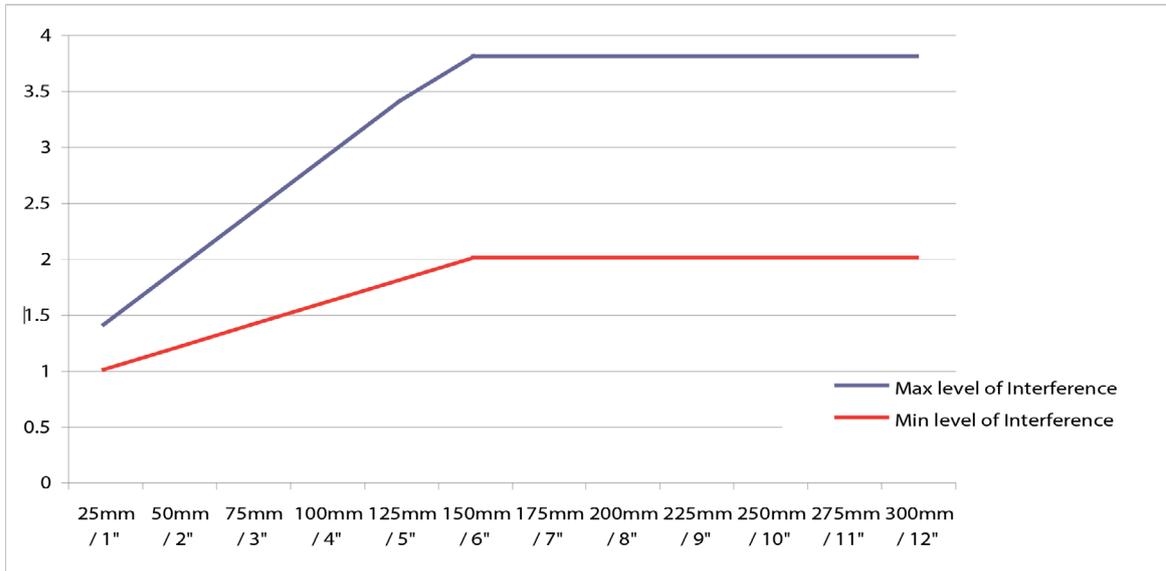


How to select an oil seal

To select the shaft size of an oil seal, the spring lip can be measured and by adding the expected interference with the shaft (using below graph), an estimation of the shaft size can be made.

An allowance must be made for seal lip wear. A heavily worn lip can end up the same as the shaft size. Each application must be considered on its own circumstances.

Interference Levels (mm)



Eg - The spring lip measures 48.5mm and does not appear to be heavily worn, the shaft diameter would be between 49.6mm and 50.3mm ($48.5 + 1.1 = 49.6$, $48.5 + 1.8 = 50.3$). Shaft size is most likely 50mm.

| Diametrical Tolerance | | | | |
|-----------------------------------|-------------|---------|----------------|--------|
| Outside Diameter | Metal Cased | | Rubber Covered | |
| | mm | Inches | mm | Inches |
| Under 50mm / 1.968" | +0.20 | +0.008 | +0.30 | +0.012 |
| | +0.08 | +0.003 | +0.15 | +0.006 |
| 50mm / 1.968" - 80mm / 3.150" | +0.23 | +0.009 | +0.35 | +0.014 |
| | +0.09 | +0.0035 | +0.20 | +0.008 |
| 80mm / 3.150" - 120mm / 4.724" | +0.25 | +0.010 | +0.35 | +0.014 |
| | +0.10 | +0.004 | +0.20 | +0.008 |
| 120mm / 4.724" - 180mm / 7.087" | +0.28 | +0.011 | +0.45 | +0.018 |
| | +0.12 | +0.005 | +0.25 | +0.010 |
| 180mm / 7.087" - 300mm / 11.811" | +0.35 | +0.014 | +0.45 | +0.018 |
| | +0.15 | +0.006 | +0.25 | +0.010 |
| 300mm / 11.811" - 440mm / 17.323" | +0.45 | +0.018 | +0.55 | +0.022 |
| | +0.20 | +0.008 | +0.30 | +0.012 |

An oil seal can also be selected by the expected interference of the outside diameter of the seal using this chart.

Eg - A seal with a rubber cover would be made to suit a recess between 49.87 and 50.01 ($50.1 - 0.23 = 49.87$, $50.1 - 0.09 = 50.01$).

Shaft size is most likely 50mm.

If the sample seal does not appear too badly damaged, it can be measured purely by dimensions (inside, outside, width).

Seal widths are not generally critical. A narrower seal will in most cases always replace a wider seal. Wider seals can also replace narrower seals if there is sufficient space in the application to allow it.