

Torque Knob

Over compression is the biggest problem experienced in this industry. Most of the elastomers gaskets are already damaged even before they are being used. Think about the life expectancy of a gasket that is over compressed.

Each rubber has certain mechanical, thermal and chemical properties that we can rely on when we choose to use it. As long as we use the rubber within its boundaries the rubber will perform as expected. Once we exceed one of these properties the rubber will basically fail. High temperature as well as wrong chemical exposure will destroy a gasket. The same will happen when we over compress a gasket. The mechanical structure within the rubber represented by Tear Strength and Tensile Strength will fail. The internal structure of the rubber will breakdown, resulting in lower temperature resistance, weaker chemical resistance and eventually parts of the rubber will break out and end up in your system.

Why does man over compress?

- We don't know!
- People think the gasket will leak, therefore we turn the wing nut extra
- Users were told to turn the wing nut as far as they could
- The manufacturer has not provided sufficient information

All is true. We tested several rubbers and PTFE gaskets and learned that many of them can be sealed with a much lower torque than expected. Below a table of results.

Material	Rec. Torque Nm	Pressure 20°C	SIP @ 135°C	Pressure after SIP 20°C	Cycles
EPDM	1,5 Nm	30 Bar	2,2 Bar (2h)	30 Bar	1
SILICONE	1,5 Nm	30 Bar	2,2 Bar (2h)	30 Bar	1
FKM	1,5 Nm	30 Bar	2,2 Bar (2h)	30 Bar	1
TUF-FLEX	2 Nm	30 Bar	2,2 Bar (2h)	20 Bar	1
TRI-BOND	2 Nm	30 Bar	2,2 Bar (2h)	20 Bar	1
PTFE ENVELOPE	3 Nm	25 Bar	2,2 Bar (2h)	6 Bar	1
PTFE SOLID	3 Nm	30 Bar	2,2 Bar (2h)	10 Bar	1
STEAM-FLON	4 Nm	8 Bar	2,2 Bar (2h)	8 Bar	1
TUF-STEEL	4 Nm	15 Bar	2,2 Bar (2h)	15 Bar	1



The Torque-Knob prevents over compression by setting a Torque limit. The Torque-Knob is an easy tool to use. It fits almost all Wing-Nuts depending on the gasket material you can choose the specific Torque in Nm. Turn until it starts clicking.

Available in: for elastomers in 1,5 Nm – 2 Nm - 2,5 Nm for PTFE in 3 Nm - 4 Nm.