

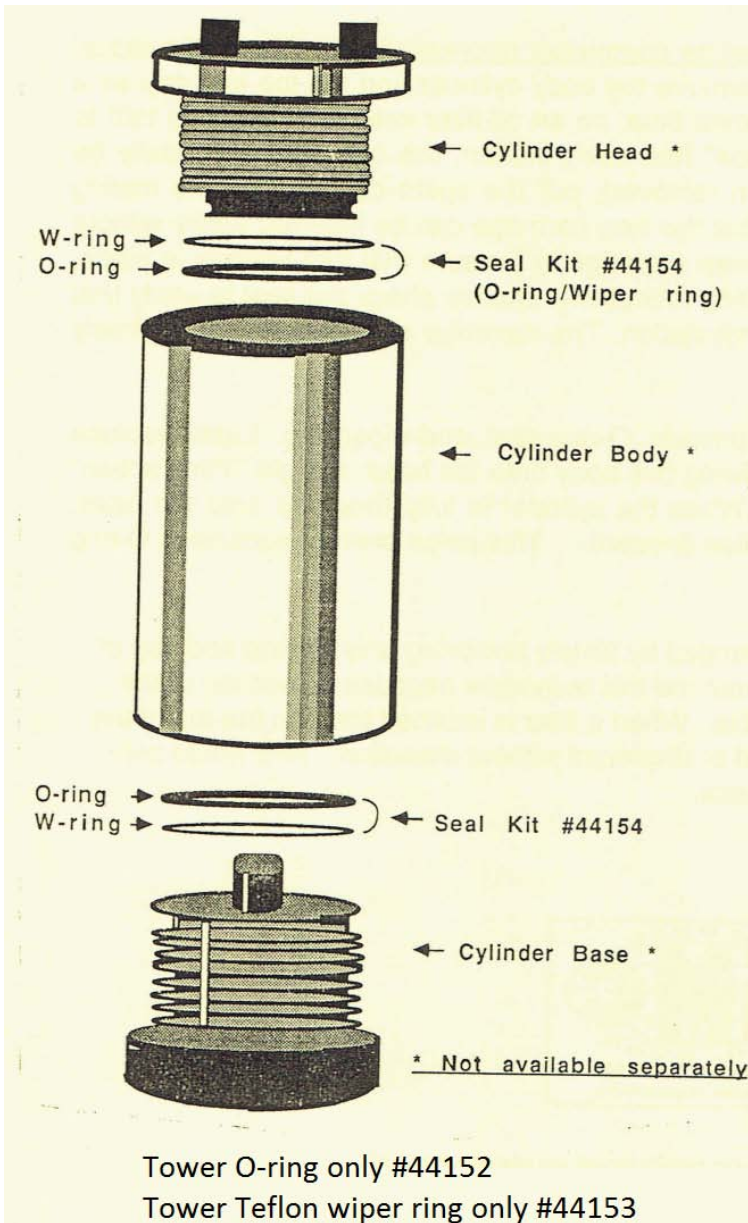


# FILTER TOWERS #44140 & 44150

**Description:** GSMoT tall (3.75" OD x 33") and short (3.75" OD x 16") filter towers are constructed of 7075 hi-strength aluminum with a hard anodized finish. Each tower consists of a top end cap, cylinder body, and basal foot; the three parts screw together and seal with large 90-durometer O-rings backed by teflon wiper rings. The towers are engineered for 5,000 psi service, are tested to 7,500 psi, and have a burst pressure of about 20,000 psi. The repressure cycle life is about 40,000 cycles. The operating temperature range is -40° to 120°F.

The towers utilize disposable filter cartridges which mate to the base by means of an internal O-ring seal within each cartridge. The cartridge simply slips onto a male receptacle tube which projects from each tower's base. This particular system is often called the Mako Mating System since it originated in that brand of popular compressors. In general, most filter towers have specific mating systems and therefore can utilize only cartridges compatible with that system.

**Porting:** GSMoT towers are ported AN-6, a common hydraulic, O-ring sealed thread system. This is preferred over a tapered pipe thread because it reduces thread wear whenever fittings are exchanged or replaced. GSMoT provides two stainless steel adapters which convert the AN -6 port to common 1/4 female NPT. The air enters and exits each tower through ports in the base of each unit; the direction of air flow is indicated by an arrowhead (>) stamped into the base of each tower.



**Flow Pathway:** In most modern filter towers, air enters through a port at the base of the tower and flows through the internal cartridge from the bottom up, exiting at the top. It then flows downward between the outside of the cartridge and the tower wall, exiting at the base through a port opposite the entry point. Correct air flow through the tower and filtrant is insured by an O-ring seal which mates the cartridge to the tower's base.

**Mounting:** The base of each tower has two 3/8 - 16 bolt holes tapped into its underside which can be used to mount the filter. Towers can be bolted to the compressor frame or wall-mounted using a piece of 4" metal angle bar. It is not advisable to mount the unit using hose clamps around the body because this will interfere with speedy changing of the internal cartridges. Be sure to allow enough vertical clearance to slide the tower body off the internal cartridge when changing filters (See below.)

**Changing Cartridges:** First, the tower must be completely depressurized. When all residual pressure has been drained, unscrew and remove the body cylinder and the top end cap as a single unit. The O-rings often take a set over time, so an oil-filter wrench is a handy tool to help rotate the cylinder. Once this "suction" has been broken, the cylinder can usually be turned by hand. After the tower has been removed, pull the spent cartridge off the mating receptacle. Lubricate the mating tube so that the new cartridge can be inserted easily without damaging its internal O-ring. Inspect the new cartridge to be sure that its O-ring is in place, and then press the filter down onto the mating receptacle. Double check the seal to verify that it was not damaged or displaced during installation. The cartridge should now "stand" freely upright, mated to the tower base.

Next, inspect and lubricate the main tower threads, O-ring seal, and wiper ring. Lastly, replace the cylinder body and end cap. When screwing this body onto the base, a slight "lifting action" on the cylinder will help it to turn freely. When the cylinder is fully threaded onto the base, rotate it back about 1/8 turn counterclockwise (loosen). This helps prevent excessive O-ring suction ("freezing") over time.

**NOTE:** Filter cartridges can also be exchanged by simply removing only the top end cap of the tower. However, GSMoT does NOT recommend this technique because inspection of the cartridge seal during installation is impossible. When a filter is inserted through the top of the tower, the cartridge O-ring can be damaged or displaced without detection. This would seriously impair or negate the air filtration process.



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