



## VALVE STEM SEALS

A new valve stem seal list sorted by valve stem diameter has been added to the back of the catalog. This listing will enable the installer to find a seal by size and type of seal required. The practice of selecting seals in this manner should be considered a "last resort" exercise when no other listing can be found. The materials used in today's emission controlled gas and diesel engines are specifically selected to provide the best performance under all operating conditions. Often the materials differ from intake to exhaust even though the size specifications are the same. It is for these reasons we recommend that the application section be checked for these application specific situations before selecting seals by stem size only.

## AVAILABLE MATERIALS AND SPECIFICATIONS

### ALL TEFLON® SEALS



Can be used in high temperature applications. Cannot be used without guide O.D. Cannot be used with oversize valve stems.

### POSITIVE SEALS - ALL RUBBER

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No rings or bands. Very forgiving of guide O.D. variations. Low temperature applications. Can also be used with up to 0.015" oversize valve stems.

### POSITIVE SEALS - TOP HAT STYLE

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Latest OEM style resembles a top hat in appearance. Incorporates valve spring seat in the seal carrier body. Often attaches to the guide for positive location. Excellent oil control properties. Can also be used with up to 0.003" oversize valve stems.

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## POSITIVE SEALS - RING AND BAND



Less forgiving of guide O.D. variations. Can also be used with up to 0.015" oversize valve stems.

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## POSITIVE SEALS - 1 RING AND 2 RINGS



Very forgiving of guide O.D. variations. Can be used with oversize valve stems.

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## POSITIVE SEALS - RING AND SPRING



Very forgiving of guide O.D. variations. Uses garter spring for oil control. Excellent oil control properties. Can also be used with up to 0.015" oversize valve stems.

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## POSITIVE SEALS - METAL CLAD



Not forgiving of guide O.D. variations. Uses garter spring for oil control. Excellent oil control properties. Can also be used with up to 0.003" oversize valve stems.

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## O-RINGS



Breaks up oil flow down valve stem. Acts as "oil shredder". Works best when combined with umbrella seals. Can be used with oversize valve stems. Used in push rod engines only.