

## Variable Volume Clearance Pockets

A VVCP is used to change the clearance volume of the head end of a cylinder. The amount of clearance will vary depending upon the position of the clearance pocket piston. Clearance is added to the cylinder by turning the piston / stem assembly counter clockwise (CCW).



Most compressor cylinders can be equipped with variable volume clearance pockets. The VVCP is mounted in place of the head end cylinder head. The VVCP includes an adapter, piston, seal ring, stem, Teflon vee packing, turning handle and locking wheel.

The expected change in compressor flow and absorbed power will depend upon the application compression ratio and the properties of the gas being compressed. Always check to see that the head end suction <u>volumetric</u> <u>efficiency</u> or <u>discharge event</u> are within limit when setting the pocket.

To set the VVCP at the desired percentage open, fully close the VVCP, and then fully open it, counting the number of turns to the full open position. Fully close the VVCP. Multiply the number of turns by the desired percentage open, and turn the VVCP open the resulting number of turns.

The pocket position can be measured with a ruler on site. A pocket position nameplate is attached to newer pockets showing the measurements for open and closed. This data can also be found in the Ariel Performance Software.



Refer to the compressor cylinder DataBook for available VVCP for each cylinder.

The vent on the VVCP will be one of two configurations. K, T, C, D, F, U, Z cylinder classes with models 8-3/8 and larger, will have two seals on the stem with a vent between. All other cylinder classes will have a vee packing for the stem seal and a vent downstream. Refer to the Packager Standards for information on routing these vents.

