Gas Storage Service

Gas Storage service includes applications where gas is injected at relatively high pressures into formations, wells, caverns for future use or sale. Gas storage applications may also include the compression for withdrawal from these storage sites during periods of demand for the gas. Discharge gas pressures will swing widely during the injection process, while suction pressure will remain relatively stable. Suction gas pressures will swing widely during the withdrawal process, while the discharge pressure will remain relatively stable.

Due to the wide range of pressures, compressor valves are often required to be low lift for proper dynamics.

The elevated storage pressures often require two stages of compression as the storage sites fill. However, much of the injection process and most of the withdrawal process can be done with a single stage of compression. Many gas storage applications are designed to operate all cylinders in parallel for a single stage of compression during the early phase of injection and during withdrawal. The gas piping is then reconfigured through valving to operate with two stages of compression at the final phase of injection. This one stage / two stage operation allows for much greater use of the installed power and much more flow during the lower ratio phase of the processes.

Gas storage compressors are often installed in highly automated systems. Capacity control devices are often pneumatically operated rather than manually operated. This would include pneumatic actuated fixed volume clearance pockets and suction valve unloaders.