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Question:

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Answer:

A rotary-screw compressor is a type of gas compressor that uses a rotary-type positive displacement mechanism. They are commonly used to replace piston compressors where large volumes of high-pressure air are needed, either for large industrial applications or to operate high power air tools. Rotary-screw compressors use two meshing helical screws, known as rotors, to compress the gas. In a dry-running rotary-screw compressor, timing gears ensure that the male and female rotors maintain precise alignment. In an oil-flooded rotary-screw compressor, lubricating oil bridges the space between the rotors, both providing a hydraulic seal and transferring mechanical energy between the driving and driven rotor. Gas enters at the suction side and moves through the threads as the screws rotate. The meshing rotors force the gas through the compressor, and the gas exits at the end of the screws.

