

GE Oil & Gas

Reciprocating compressors

High performance in low and medium speed applications

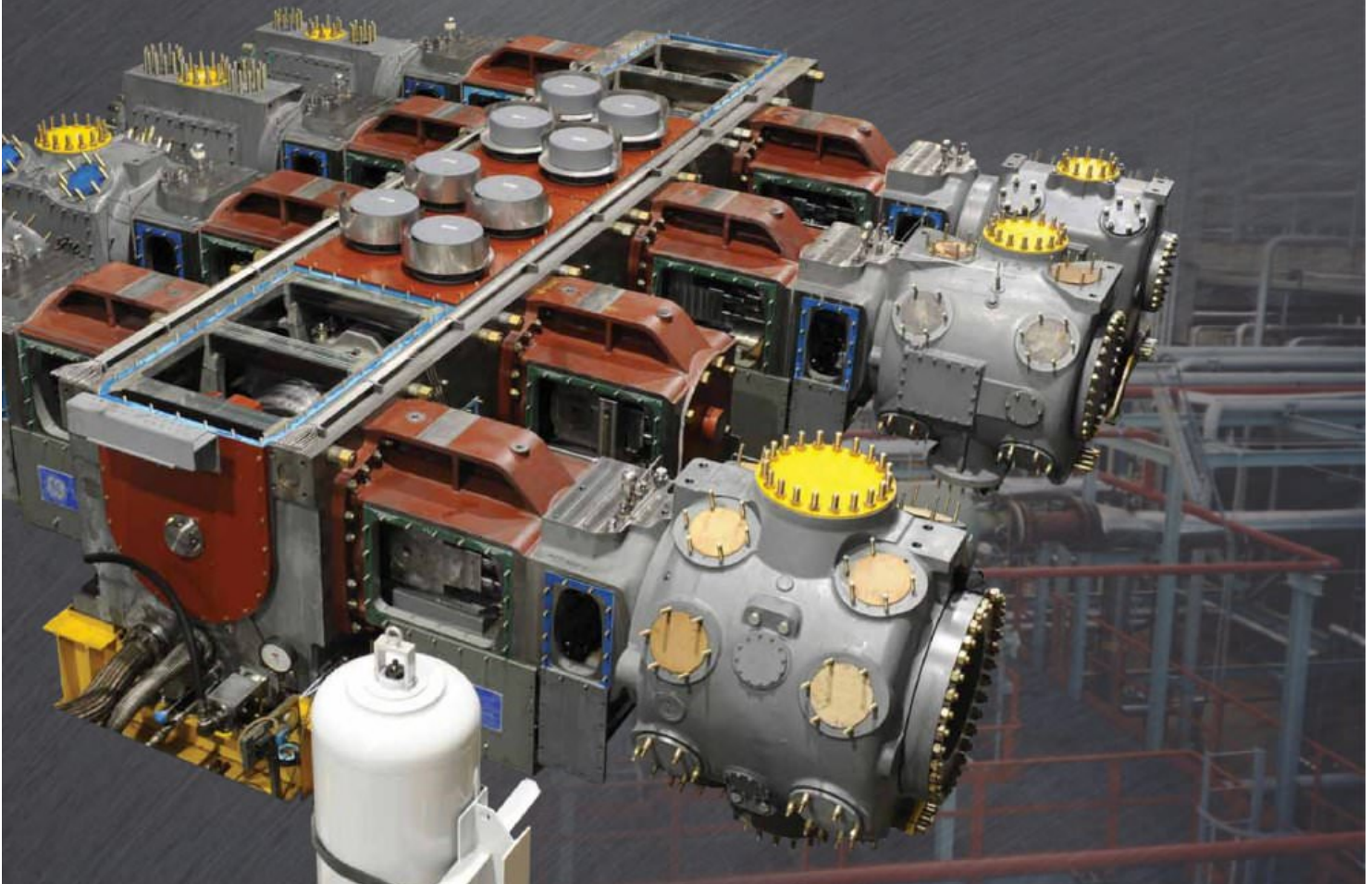


Reciprocating compressors

Reciprocating compressors move gasses by volumetrically compressing them to higher pressures. They convert rotational crankshaft motion into pumping piston motion, while valves outside the compression chamber allow flow in and out, based on pressure differentials.

GE Oil & Gas solutions

With an installed base of over 3,000 operating units worldwide, our portfolio covers machine sizes from 100 to 41,000 kW, with field-proven reliability and performance capabilities up to 3,500 bar. Our proven designs adhere to the requirements of API 618 latest edition and can be customized to project requirements.







Excellence for API 618 applications

With a full century of experience in reciprocating compressor design, GE Oil & Gas is a leading global supplier of technologically advanced and field-proven API 618 machines.

API 618

This standard covers the requirements for low-to-medium speed heavy-duty reciprocating compressors and their drivers in petroleum, chemical and gas industry services, with either lubricated or non-lubricated cylinders and related auxiliary systems, controls, instrumentation, intercoolers, after-coolers, pulsation suppression devices and other auxiliary equipment.

Our rigorous design, manufacturing and testing processes combine to deliver high reliability and flexibility for the toughest applications across the oil and gas industry. Process applications include refineries, petrochemicals, fertilizers, LDPE and boil-off. Natural gas applications include wellhead gas gathering, vapor recovery, gas re-injection, gas lift, pipeline gas transmission, gas storage and fuel-gas boosting.

Support for every customer

More than 3,000 of our reciprocating compressors are in service worldwide, wherever reliability and long life are essential to business success.

Consistently high quality and focused attention on every unique customer need are ensured through programs such as Lean, Six Sigma and Product Structuring. Our modular design and manufacturing approach combines standardized and customized components to increase cost effectiveness and quality assurance, while ensuring installation, specific performance and lifecycle maintenance ease, all with shorter delivery times.

All GE Oil & Gas machinery is backed by our Global Services teams, with fully equipped facilities and experienced personnel providing expert installation, start-up and maintenance services to our customers around the world.



World-class compression

Robust designs

Built for continuous operation in the most severe applications, our API 618 heavy-duty balanced-opposed compressors can operate at speeds up to 1,200 rpm, designed for direct drive with electric motors or reciprocating engines. The number of cylinders range from 1 to 10 with 41,000 kW maximum power. SHMB (fully balanced version), which is particularly well suited to offshore applications, is also available.

Our HE-S is the only reciprocating compressor capable of 750 rpm gas-engine direct drive at 9 MW and above. Not only is it powerful, it is also suitable for both high- and low-speed API 618 and API 11P applications, and provides an ideal solution for API 618 moderate speed service. It is available with 2, 4, or 6 throws, and 2,550 kW maximum power per throw. Maximum speed is 800 rpm with a stroke of 200-240, or 600 rpm with a stroke of 290-330.

Our Series P hypercompressors are specifically designed for ethylene compression in Low Density Polyethylene (LDPE) production plants. Delivery pressures range up to 3,500 bar, the highest pressure required in any industrial process. The most severe operating conditions require a unique architecture for both the crankcase and cylinders – in which special rods ('plungers') are used as single-acting pistons.

Reliable performance

Flexible

The modular design of our reciprocating compressors allows frames and cylinders to be easily reconfigured as pressures and flows change, offering maximum flexibility at minimal cost. A wide range of capacity-control devices are also available, including our standard variable-volume clearance pockets.

Reliable

Our API 618 compressors are balanced-opposed to minimize vibration by equalizing the opposing reciprocating forces on the crankshaft. Rugged frames evenly distribute reciprocating stresses for greater strength and longer life. Highly standardized components, extensive use of hydraulic tensioning, proprietary cylinder design, plastic valves and eccentric piston shoe grooves allow for the highest availability and long mean times between maintenance.





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