## Elliott Centrifugal Compressors Optimized performance in high-pressure applications

Gas storage, CO2 sequestration and enhanced oil recovery techniques, including gas injection and gas lift, usually come with high-pressure compression needs. Gases in these applications are typically corrosive, always dense and potentially laden with moisture. This presents unique challenges for the compression equipment. Since the 1970s when Elliott provided the first centrifugal compressors put into extreme high-pressure service in the North Sea, Elliott has been offering highpressure/high-density compression solutions.

Elliott high-pressure centrifugal compressors incorporate EDGE technology for performance, efficiency and reliability. They are characterized by their simple, singleshaft design and vertically-split barrel casings. Internals are packaged in a removable bundle, leaving the process piping and casing drain connections in place and untouched during maintenance cycles. The bundle includes the rotor, seals and bearings for ease of maintenance in locations where lay down space is available. The bundle can also be quickly and easily removed and replaced for exceptionally fast turnaround. High gas pressure and density generate proportionally higher static force on compressor internals than lower pressure applications. Dynamic forces, which can be much greater than the static force associated with gas pressure, add to the challenge. Elliott high-pressure centrifugal compressors are designed to optimize aerodynamics and minimize stage deflections, and feature enhanced damping characteristics for rotor stability in these difficult, high-pressure applications.

The risks and costs of high pressure compression applications demand a high return throughout the lifetime of the gas field. Elliott's broad compression expertise, combined with a large, global installed base of compressors in high-pressure service, ensures exceptional performance and value. Turn to Elliott for high-pressure compression solutions.

ELLIOT1

Inner casing is designed to minimize deflections while enabling historical stage spacing.

## Elliott High-Pressure Compressor Frame Summaries

Frame	Typical Flow Range (icfm) (m3/h)		Maximum Casing Rating Radial Split (psig) (Barg)		Nominal Impeller Diameter (in) (mm)		Nominal Speed (rpm)
10MB	1,700 - 5,400	2,900 - 9,200	10,000	690	10.38	263.55	19,800
15MB	2,200 - 7,100	3,700 - 12,100			11.93	303.07	17,300
20MB	2,900 - 9,400	4,900 - 16,000			13.72	348.54	15,000
25MB	3,900 - 12,500	6,600 - 21,200			15.78	400.81	13,100
29MB	5,100 - 16,500	8,700 - 28,000			18.15	460.93	11,400



The inner casing features a low deflection diaphragm design and hole pattern seal technology for exceptional rotordynamics.

## Features & Benefits

- EDGE technology for performance, reliability and maintainability
- Compact casing for minimized footprint and weight
- Bundled internals for ease of maintenance
- Unique inner casing for minimizing stage deflections while enabling normal stage spacing
- Vaned diffusers for maximum efficiency
- Hole pattern seal technology and anti-swirl features for enhanced rotor stability
- NACE compliant materials for sour gas environments



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