



NEUMAN & ESSER
UPSTREAM & MIDSTREAM
RECIPROCATING COMPRESSORS



Field-Proven Solutions

Compressor Design Features

- API 618 and ISO 13631 (formerly API 11P) standards
- Slow- to high-speed compressor options to fit various size and weight constraints
- Lubricated or non-lubricated cylinders
- Advanced material selection and workmanship
- Cylinders:
 - Water-cooled or non-cooled
 - Large bore experience
 - Liners
- Customized valve selection from numerous valve OEMs
- Robust compressor frame designs built for durability
- Advanced capacity control system options
- Balanced compressor throws for low vibration
- Varying throw options per compressor model
- Horizontal, Vertical and V-type compressor model configuration options

Technical Analysis

- Advanced 3D modeling software used for compressor model selection and skid design
- Complex drive-train design and analysis with propriety torsional software
- Acoustics analysis to minimize vibrations
- Four-hour compressor mechanical test run

Compatible Drives

- Natural gas engine
- Electric motor drive
- Variable-speeds

NEA's Reciprocating Compressors for Upstream & Midstream Applications

Gas Processing	Offshore Compression
Gas Transmission	Fuel Gas Boosters
Gas Storage & Withdrawal	Gas Lift
CO₂ & Enhanced Oil Recovery	Gas Gathering



Customized Reciprocating Compressor Solutions for Demanding Applications

NEUMAN & ESSER (NEA) has a solid foundation of over 180 years of manufacturing history, including the design and build of reciprocating compressors for customers in the oil and gas industry. NEA's experienced and flexible in-house engineering team designs each reciprocating compressor according to API 618 or ISO 13631 (formerly API 11P) standards to ensure long-lasting performance and reliability.

As the OEM and packager, a key feature NEA offers is the capability to tailor-design each reciprocating compressor as a packaged unit in accordance to unique customer specifications. Dominate in the downstream markets, NEA also has a successful presence in the upstream and midstream markets utilizing customized solutions for every application, regardless of complexity.

Gas Processing

NEA compressor systems handle a wide range of compression needs found in natural gas processing facilities including:

- Inlet and residue
- Overhead stabilizer
- Refrigeration
- Ethane delivery
- Vapor recovery units

Gas Transmission

NEA compressor systems are designed to increase efficiency across transmission stations and are specially designed for industry requirements. Cylinders are engineered for pipelines using high grade materials. NEA also offers customized valve selections from numerous valve OEMs.

Gas Storage & Withdrawal

NEA gas storage compressor systems are designed to handle large pressure differentials and varying flow conditions associated with gas storage systems. NEA offers loading or unloading system options through a varying range of compression parameters.

CO₂ for Enhanced Oil Recovery

NEA provides years of experience compressing high pressure CO₂ through proper material selections, specialized designs and operating techniques to ensure longevity and highly reliable operations. Techniques include:

- Experience utilizing pressure/enthalpy diagrams
- Large-scale and heavy-duty frame designs
- Preventive acoustics analysis

Offshore Compression

NEA compressors fit a variety of offshore applications including:

- Platform-based gas lift
- Re-injection
- Vapor recovery

Offshore compressors demand high reliability in the harshest environments, with proven, worldwide packaging solutions.

Other Applications

NEA offers customized compressors for other applications including:

- Wellhead and gas lift compression
- Gas gathering and central facility boosting
- Gas boosting for turbine power generation



NEA compressor model: 3SVL320hs - three stage, lubricated, 4-throw, horizontal
Application: CO₂ Injection for EOR



NEA compressor model: 1SVL250hs - single stage, lubricated, 4-throw, horizontal
Application: Fuel Gas Booster



NEA compressor model: 3SVL250hs - three stage, lubricated, 4-throw, horizontal
Application: Offshore Vapor Recovery



NEA compressor model: 3SVL320hs - three stage, lubricated, 4-throw, horizontal
Application: CO₂ Injection for EOR



NEA compressor model: 2SVS320 - two stage, lubricated, 4-throw, vertical
Application: Gas Processing

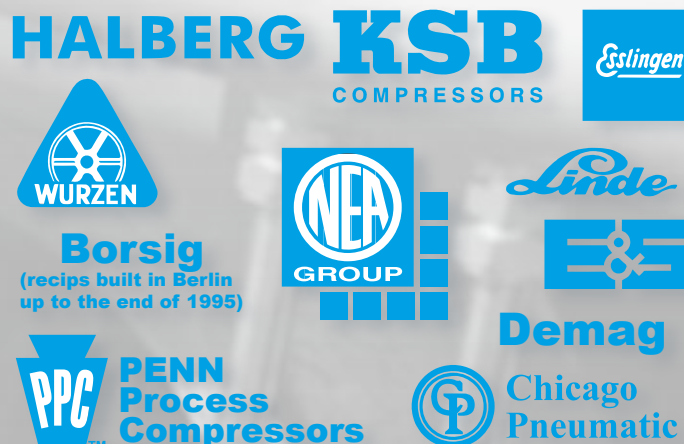


NEA compressor model: 2SVL700hs - two stage, lubricated, 4-throw, horizontal
Application: Gas Storage and Withdrawal

Entire Life-Cycle Maintenance

NEAC Compressor Service (NEAC) supports its customers by providing services in the installation, commissioning, maintenance, repair and supply of spare parts for reciprocating compressors and packages. NEAC also offers consulting services to keep customers updated on their equipment with regular service reports and recommendations. Condition monitoring and acoustic analysis programs are put in place as part of the preventive maintenance plan to ensure life long performance of the entire compression system.

NEAC services a portfolio of 11 brand lines with exclusive rights to original documentations (parts lists, specifications, drawings, history/modifications of the machine, etc.). This ensures that legacy equipment can be properly maintained and repaired with original spare parts.





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