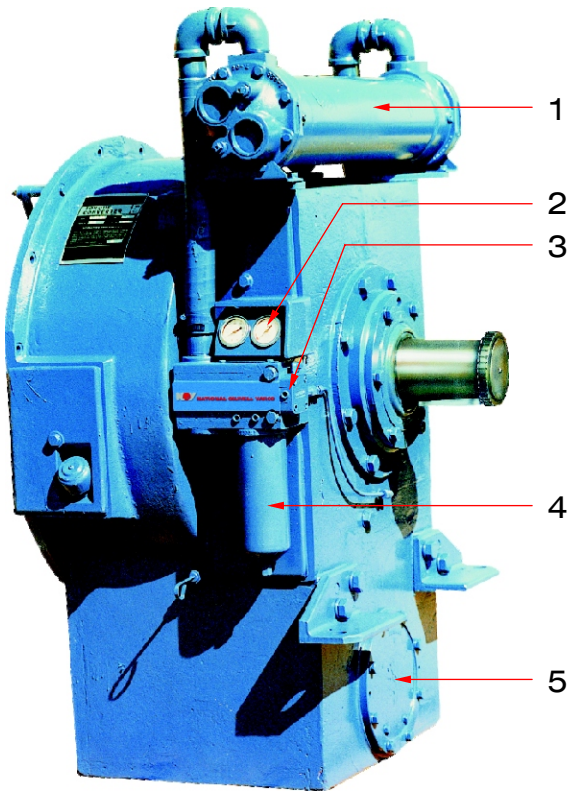
Hydraulic Torque Converters — Model C

National Oilwell Varco's line of Torque Converters is available in four basic models, designed for maximum load performance, smooth operation and extended service life.

A National Oilwell Varco Torque Converter is single-stage designed for higher peak efficiency and simplicity, with a minimum number a moving parts. The converter absorbs nearly constant power from the prime mover, and automatically and continually adjusts output torque and speed to meet load demands. The result is optimum overall performance, engine protection from the shock of sudden load changes, absorption of high frequency engine pulsations, and a cushioning effect for the entire drive train. These benefits extend the service life of the engines and driven components.

Since a Torque Converter is integral to the power delivery system, our Torque Converters are designed for ease of maintenance and repair with minimum downtime.

Typical applications include hoisting, power shovels, pump drives, gantry cranes, power cranes, metal shredders, and aggregate crushers. National Oilwell Varco has four basic Torque Converter models for prime movers up to 2000 horsepower, and several options available to match your specific operating needs.



Model C Hydraulic Torque Converter components

1 Typical Heat Exchanger mounting (optional)
2 Gages
3 Pressure control valve
4 Oil filter
5 Charging and circulating pump

OPERATIONAL FEATURES:

- Maximum torque available during peak power requirements
- Reduced engine maintenance and overhaul costs
- Fewer line sizes required when pumps are driven by Torque Converter
- Maximum flexibility and complete control through the entire load range
- Reduces or eliminates shock to equipment
- Does not overheat while operating at light loads

CONFIGURATIONS:

- Converter for direct mounting on engine flywheel housing; may be equipped with heat exchanger or radiator oil cooling
- Converter for direct mounting on engine flywheel; equipped with radiator for converter oil cooling with oil piping installed
- Converter with front end enclosure and input shaft for independent or midship mounting with heat exchanger oil cooling; arrangement also available with radiator oil cooling
- Converter with input clutch for direct mounting on engine flywheel housing; arrangement also available with radiator or heat exchanger mounted

DESIGN FEATURES:

- Charging and circulating pump
  - One pump performs both functions
  - Chain-driven; easily adjustable
  - Removable as a unit
  - High-capacity flow rate permits more efficient oil cooling
  - Accessible from outside of sump
- Full-flow pressure control valve
  - Resists small foreign particles in oil
  - Unitized
- Oil filters
  - Externally mounted
  - Easily removed
  - Reusable element (washable)
- Pressure and temperature gauges
  - Danger areas marked in red for easy visibility
  - Shock-protected
  - Easily replaced; connections are located externally
- Long-life, heavy-duty bearings — self lubricating
- Interchangeable parts within basic sizes (excluding aluminum elements)
- Low friction piston ring-type oil seals
- Uses regular oil; no special hydraulic fluid required
- Designed with minimum number of parts; maximum horsepower transmittal
- Centrifugal pumps/stators/turbines are precision machined, dynamically balanced aluminum alloy castings

OPTIONAL FEATURES AVAILABLE:

- Integral heat exchanger with factory-installed oil piping lines
- Integrally mounted oil-to-air radiator
- Input disconnect clutch
- Optional gage locations
- Special requirements are subject to inquiry

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NATIONAL OILWELL VARCO

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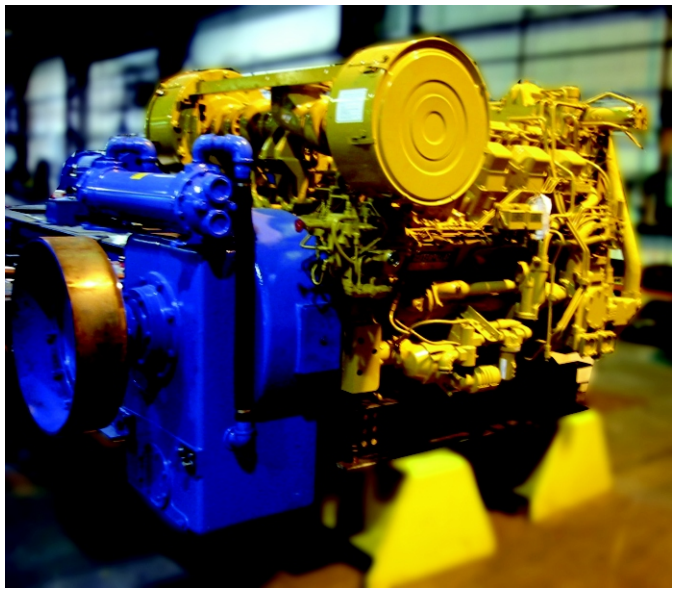
SIZES AND OPTIONS AVAILABLE:

C-346	F, FH, M, MH
C-300	F, FH, M, MH
C-245	F, FH, FR, M, MH, MR
C-195	F, FH, M, MH



NOMENCLATURE: **EXAMPLE: C-245-100 F H**

Design model: National Oilwell Varco has a number of oilfield Torque Converters of Model C design.

Converter size: Four sizes available are 195, 245, 300, and 346 (hydraulic circuit diameter in inches x 10).

Horsepower absorption: 64%, 80%, 100%, and 125% hp absorption capacities available.

Converter type:

Type F: Direct mounting on engine flywheel housing

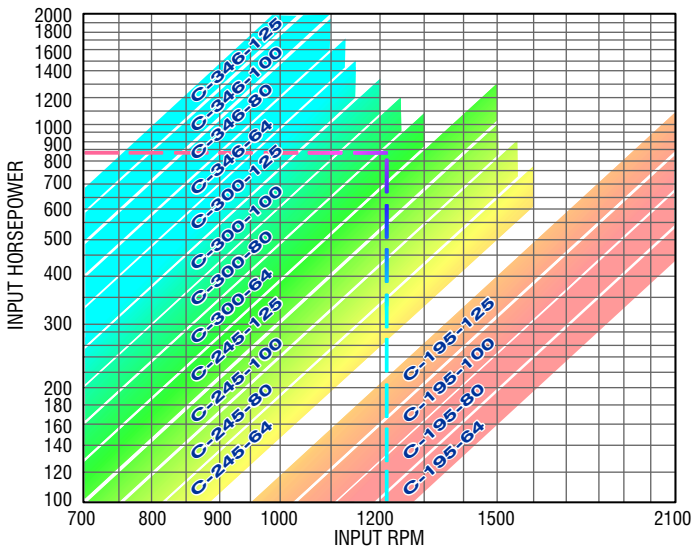
Type M: Independent or midship mounting with front end enclosure and input shaft

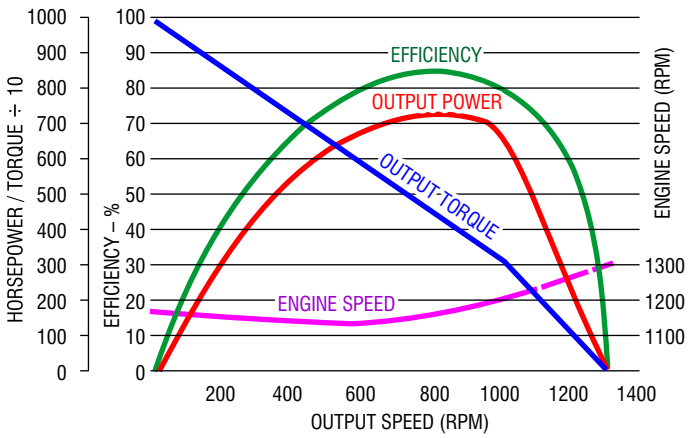
Optional Features:

H = heat exchanger J = overrunning clutch

K = input clutch R = radiator S = special feature*

* usually indicates a slight alteration in construction according to customer specifications. (J, K, and S features primarily offered for industrial applications.)





SELECTION CHART:

National Oilwell Varco's Torque Converter selection chart assists in determining which size converter most accurately matches your power requirements. In addition, assistance is offered in adapting the Torque Converters to new or existing applications.

Reading this chart: With an 865 hp engine operating at 1200 rpm, our Model C-300-80 Torque Converter will be the most accurate match. All applications, however, should be submitted to National Oilwell Varco for approval.

ENGINE-CONVERTER PERFORMANCE CHART:

Typical engine-converter performance curves for our Model C-300-80 Torque Converter mounted on engine rated at 865 hp at 1200 rpm.

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