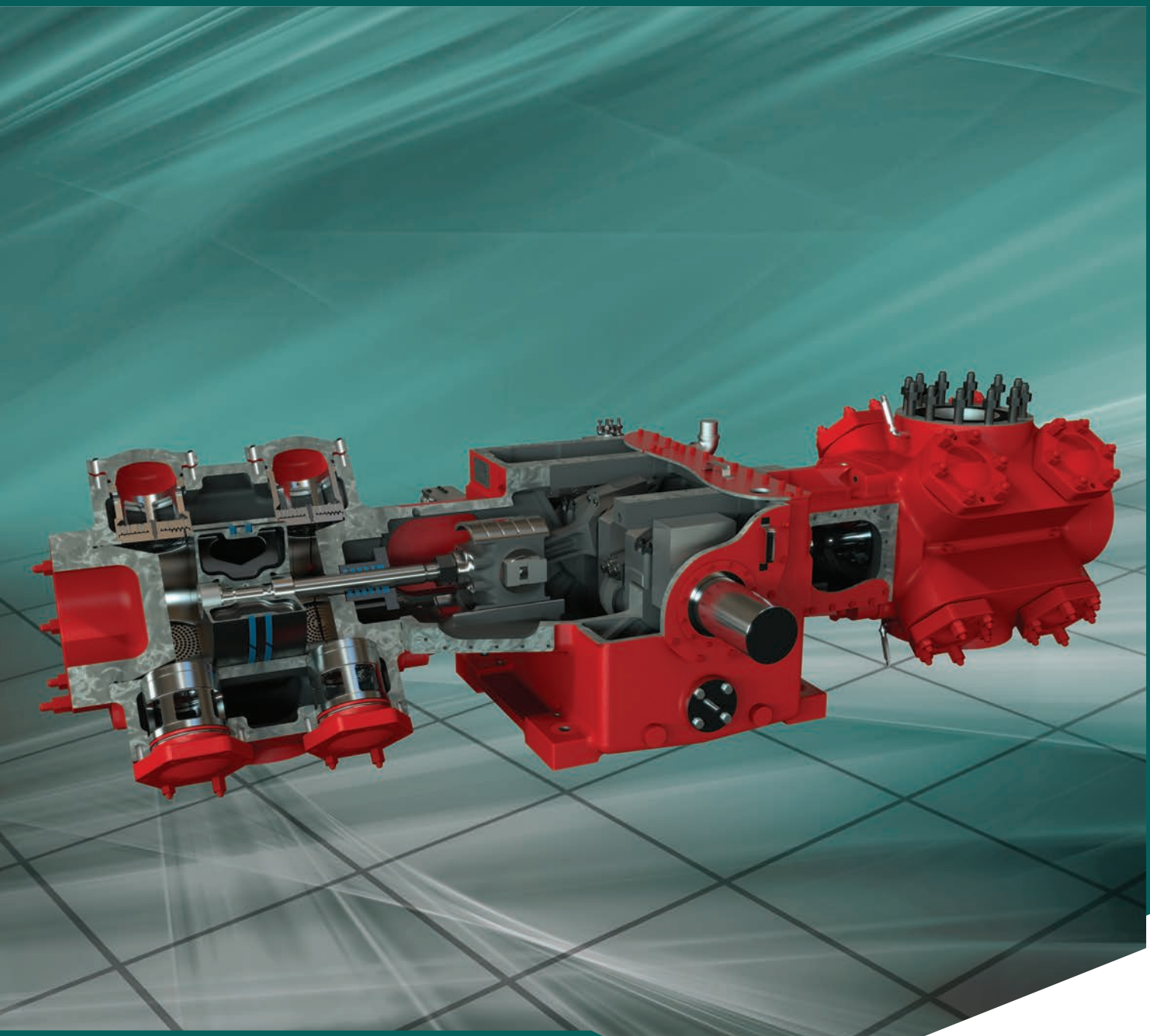


DRESSER-RAND®

Bringing energy and the environment into harmony.®

MOS™ COMPRESSORS

YOUR AUTHORIZED PACKAGER

COBEY®

ONE SHIP CANAL PARKWAY • BUFFALO, NY 14218
PH: +1.716.362.9550 • WWW.COBEY.COM

MOS™ compressors

The medium oilfield separable compressor for common jobs.

Dresser-Rand brings more than 60 years of separable compressor operating experience to the medium-duty MOS™ compressor line.

These rugged compressors are engineered for high speed and high horsepower gas field applications, including gas lift, gas gathering, pipeline boosting, gas transmission, underground gas storage (injection and withdrawal), fuel gas boosting, landfill gas recovery, enhanced oil recovery, and many other applications. They are suited not only for sweet natural gas services, but can be built to handle sour natural gas, propane, carbon dioxide, air, nitrogen, and most other gases.

As an alternative to more industry standard type units, the MOS compressor establishes itself by taking the best of previous Dresser-Rand designs, competing units and "voice of client" input.

The lower cost, compact design and rapid delivery of packaged MOS compressors make it an ideal choice for the most common of gas field applications such as gas gathering and gas processing.

With more than 30 years of experience in our closed-loop test facility using a variety of field gases, Dresser-Rand ensures the integrity of the MOS compressor design and performance.

Rated to 4,440 hp (3,310 kW) and 1,500 rpm with design pressures up to and exceeding 10,000 psig (690 bar), MOS compressors provide long life because of their heavy-duty construction. They are available in two-, four- or six-throw configurations and in cylinder sizes ranging from 3.75” (95.3 mm) to 20.50” (520.7 mm). The rigid, cast iron compressor frame is heavily ribbed and reinforced, with integrally cast crosshead extensions to handle almost any gas field requirement.

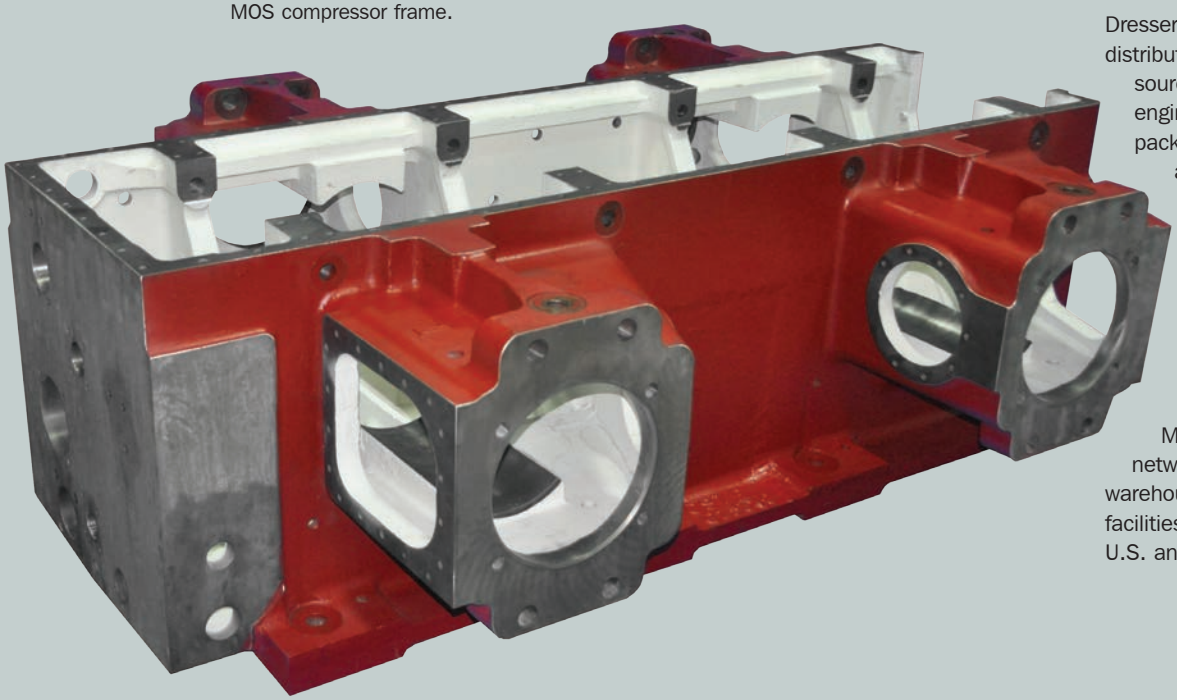
A SINGLE SOURCE FOR ALL YOUR COMPRESSION NEEDS

MOS compressors offer many benefits to gas compressor users, whether used in a standard or customized package, in rental service or purchased outright.

Dresser-Rand and its authorized distributors can provide single-source responsibility, including engineering, manufacturing, packaging, installation, parts, and service.

With MOS compressors on the job, you can expect less maintenance and less fuel consumption. Dresser-Rand and its distributors support the MOS compressor line with a network of computerized parts warehouses, and overhaul/revamp facilities located throughout the U.S. and Canada.

MOS compressor frame.



DRESSER-RAND®

Rugged design for smooth operation, l

Every MOS compressor includes components designed to enhance performance. The compressor frame and cylinders are matched to provide years of smooth, reliable, efficient compression service when operated within OEM recommendations.

Cylinder pe
of valves
PF valve
(r

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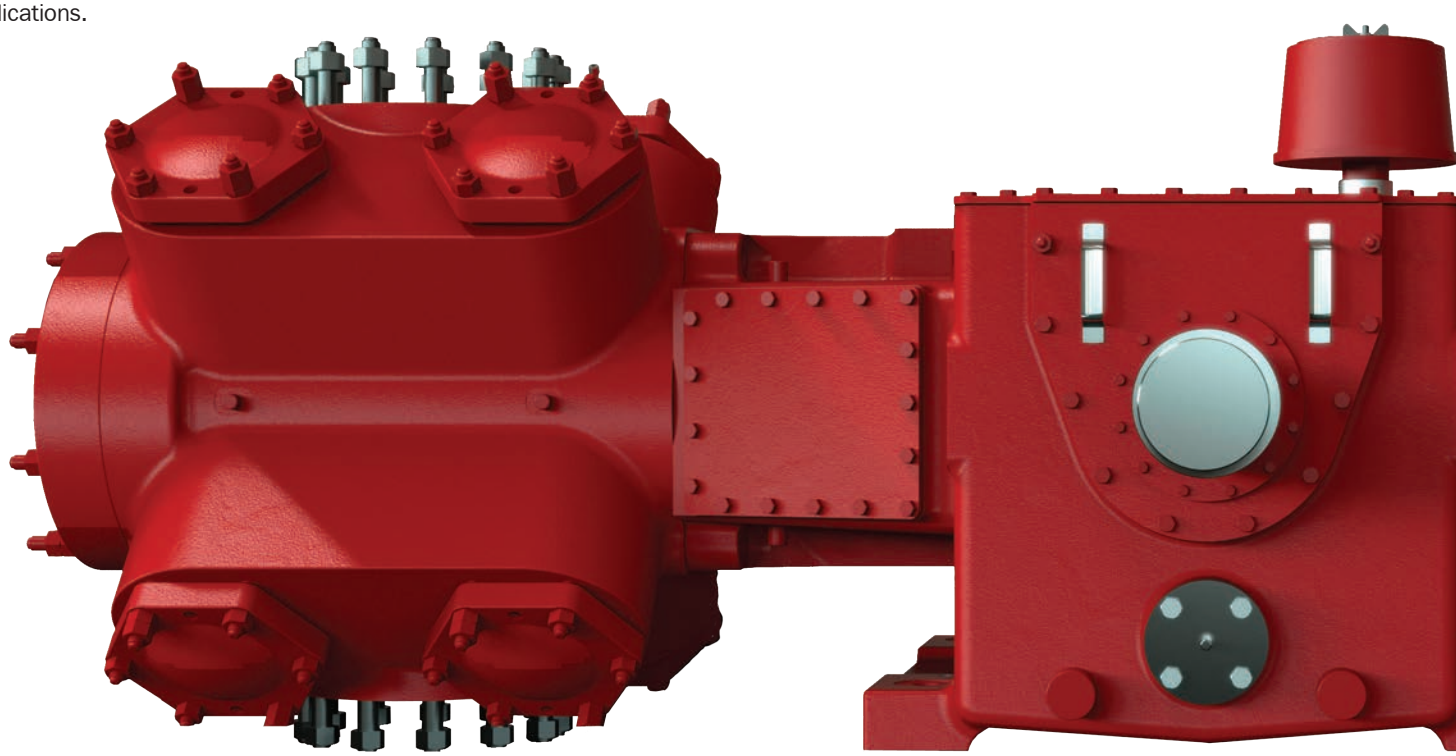
CYLINDER BASICS

MOS compressor cylinders are gas-cooled for most applications. For special applications, the MOS compressor is available with water-cooled cylinders that provide additional protection in higher temperature and higher pressure services. Each system is designed and engineered to match your operating needs.

Gas-cooled MOS cylinders use a solid bore cylinder barrel cast in nodular iron. Water-cooled MOS cylinders are HOS cylinders adapted to the MOS frame and are jacketed for circulating coolant.

A full line-up of higher pressure, forged steel cylinders are available in sizes 3.75” (95.3 mm) to 6.5” (165.1 mm). The line-up also includes a pipeline cylinder for gas transmission and a storage cylinder for gas injection and withdrawal applications.



FRAME BASICS

The open top frame construction ensures rigidity while providing easy access to major running gear components from the top. Multiple covers and large access areas are provided for easy maintenance and inspection. Two-piece precision tri-metal bronze main bearings ensure better heat dissipation, higher reliability and increased life. Thrust shoes are bronze.

As an option, a full-length distance piece with oversized access doors are available. The unique thru-bolt distance piece is designed for improved load carrying ability.

High-strength, nodular iron crossheads feature a Babbitt overlay for enhanced lubrication. Surface-hardened crosshead pins are full floating for optimum reliability, and there are no crosshead pin bushings to contend with.

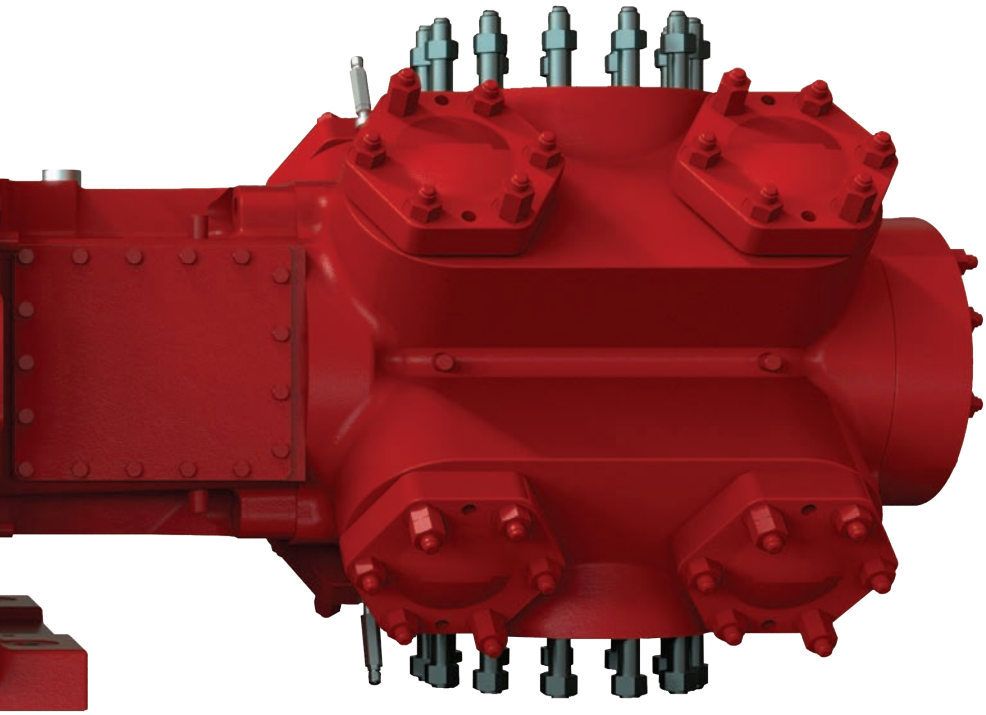
ong life and efficiency.

formance is optimized through the use of two types which are available on the MOS compressor, the (ported plate type) and the D-R Magnum™ valve ini-Poppet element). Both valves use exclusive Dresser-Rand Hi-Temp nonmetallic wear parts material. Each valve offers different advantages and is sized to optimize performance and reliability for a given application or client preference. Optional high-volume, manually operated variable volume clearance pockets ovide clearance for greater capacity control.

The MOS compressor uses either solid or two-piece cast iron or aluminum pistons depending upon service conditions, balance and inertia forces. Integral steel pistons and rods may be used in high-pressure applications.

Each piston rod is made from a high-strength alloy steel and is wet-magnetic-particle inspected. Every piston rod thread form is inspected using Johnson gauging. Piston rods for a given stroke are identical, regardless of cylinder size.

One packing case design is used, regardless of cylinder size or stroke. Packing cases use the emission control ring design to minimize leakage.



Crankpin and main bearings are two-piece precision tri-metal bronze and are identical, which reduces spare parts stocking. They are provided with a micro-babbitt overlay plate for added start-up protection and corrosion resistance.

Forged steel connecting rods are rifle-drilled for pressure lubrication of crossheads and feature high-strength bolts with rolled threads. Connecting rod pin bushings are centrifugally cast bronze with nickel plate barrier and topped with lead tin copper overlay on bore for reliable break-in.

The heavy-duty forged alloy crankshaft is rifle-drill balanced for connecting rod lubrication. The crankshaft is equipped with integral counterweights on the two- and four-throw units to reduce horizontal moments.

DRESSER-RAND®

RATINGS

Model	Stroke in. (mm)	Number of Cylinders	Nominal Rated Power hp (kW)	Max. Allowable Operating Rod Load lbs. (kN)	Rated rpm
5MOS2	5 (127)	2	1,950 (1,454)	45,000 (200)	1,500
5MOS4	5 (127)	4	3,900 (2,908)	45,000 (200)	1,500
5MOS6	5 (127)	6	4,200 (3,132)	45,000 (200)	1,500
6MOS2	6 (152.4)	2	1,800 (1,342)	45,000 (200)	1,200
6MOS4	6 (152.4)	4	3,600 (2,685)	45,000 (200)	1,200
6MOS6	6 (152.4)	6	4,320 (3,221)	45,000 (200)	1,200
7MOS2	7 (177.8)	2	1,700 (1,268)	45,000 (200)	1,000
7MOS4	7 (177.8)	4	3,400 (2,535)	45,000 (200)	1,000
7MOS6	7 (177.8)	6	4,440 (3,311)	45,000 (200)	1,000

Standard Features

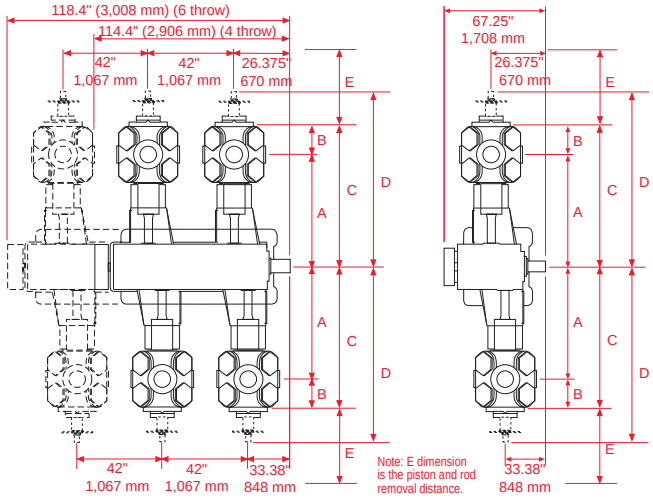
- A chain-drive, positive displacement gear-type frame lube oil pump, with ship loose cooler and frame-mounted full-flow oil filter
- Drilled, tapped and plugged indicator holes on all cylinders
- Vented, full-floating, filled Teflon® packing rings with cast iron back-up rings
- Filled Teflon, multi-piece combination rings perform double duty as both compression and rider rings
- Frame-fed block distribution system
- External frame oil relief valve

Optional Features

- VVCP (Variable Volume Clearance Pocket)
- Dresser-Rand TC_3 (HVOF) coated piston rods
- 17-4 PH stainless steel piston rods
- Purged packing and purged wiper case
- Single- or two-compartment distance piece
- Crankcase and lubricator oil heaters
- Crankcase explosion relief devices
- Main bearing RTDs
- Torsional studies
- Flywheel (if required)
- Dynamic valve analysis
- Pump-to-point cylinder lubrication
- Electric drive lubricator
- Dual oil filter
- Automatic unloading devices
- Manual frame pre-lube pump

Frame Specifications and Dimensions

Frame . . . . . One piece, cast iron, high-strength
Crosshead pins . . . . . Alloy-steel, hardened, super-finished
Main bearings . . . . . Tri-metal
Crosshead pin bushings . . . . . Bronze
Crankshaft . . . . . Forged steel
Piston rods . . . . . Alloy steel, rolled threads
Crankpin bearings . . . . . Tri-metal
Connecting rods . . . . . Forged steel
Oil pump . . . . . Gear-type, chain-drive
Connecting rod bolts . . . . . Alloy steel, rolled threads
Oil filter . . . . . Full-flow, 10 micron
Connecting rod bushings . . . . . Tri-metal
Oil cooler . . . . . Shell-and-tube
Crossheads . . . . . Nodular iron, babbit
Lubricator . . . . . Flange mounted, chain-drive



STANDARD CYLINDER OFFERING AND DIMENSIONS

Cylinder Size in. (mm)	MAWP psig (kg/cm^2) No Jacket	A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)	E in. (mm)
20.50 (520.7)	265 (18.6)	43.5 (1,105)	15.0 (381)	58.5 (1,486)	102.0 (2,591)	26.0 (660)
19.00 (482.6)	265 (18.6)	43.5 (1,105)	15.0 (381)	58.5 (1,486)	102.0 (2,591)	26.0 (660)
17.50 (444.5)	385 (27.1)	43.5 (1,105)	15.0 (381)	58.5 (1,486)	102.0 (2,591)	26.0 (660)
16.25 (412.7)	385 (27.1)	43.5 (1,105)	15.0 (381)	58.5 (1,486)	102.0 (2,591)	26.0 (660)
15.00 (381.0)	385 (27.1)	43.5 (1,105)	15.0 (381)	58.5 (1,486)	102.0 (2,591)	26.0 (660)
14.00 (355.6)	385 (27.1)	43.5 (1,105)	15.0 (381)	58.5 (1,486)	102.0 (2,591)	26.0 (660)
13.00 (330.2)	550 (38.7)	43.5 (1,105)	15.0 (381)	58.5 (1,486)	102.0 (2,591)	26.0 (660)
12.25 (311.1)	550 (38.7)	43.5 (1,105)	15.0 (381)	58.5 (1,486)	102.0 (2,591)	26.0 (660)
11.50 (292.1)	660 (46.6)	43.5 (1,105)	15.0 (381)	58.5 (1,486)	102.0 (2,591)	26.0 (660)
10.50 (266.7)	660 (46.6)	43.5 (1,105)	15.0 (381)	58.5 (1,486)	102.0 (2,591)	26.0 (660)
9.50 (241.3)	750 (52.7)	43.5 (1,105)	15.0 (381)	58.5 (1,486)	102.0 (2,591)	26.0 (660)
9.00 (228.6)	750 (52.7)	43.5 (1,105)	15.0 (381)	58.5 (1,486)	102.0 (2,591)	26.0 (660)
8.50 (215.9)	1,150 (80.8)	43.5 (1,105)	15.0 (381)	58.5 (1,486)	102.0 (2,591)	26.0 (660)
8.00 (203.2)	1,150 (80.8)	43.5 (1,105)	15.0 (381)	58.5 (1,486)	102.0 (2,591)	26.0 (660)
7.50 (190.5)	1,650 (116.0)	43.5 (1,105)	15.0 (381)	58.5 (1,486)	102.0 (2,591)	26.0 (660)
7.00 (177.8)	1,650 (116.0)	43.5 (1,105)	15.0 (381)	58.5 (1,486)	102.0 (2,591)	26.0 (660)
6.50 (165.1)	1,925 (135.3)	43.5 (1,105)	15.0 (381)	58.5 (1,486)	102.0 (2,591)	26.0 (660)
6.00 (152.4)	1,925 (135.3)	43.5 (1,105)	15.0 (381)	58.5 (1,486)	102.0 (2,591)	27.0 (686)
5.75 (146.0)	1,925 (135.3)	43.5 (1,105)	15.0 (381)	58.5 (1,486)	102.0 (2,591)	27.0 (686)
4.75 (120.7)	1,925 (135.3)	43.5 (1,105)	15.0 (381)	58.5 (1,486)	102.0 (2,591)	27.0 (686)
3.75 to 7.00 (95.3 to 177.8)	6,000 (421.8)	VARY DEPENDING ON PIPING NEEDS				

HOS (higher pressure and/or water cooled) cylinders are available for the MOS compressor as well as cylinder liners. Additionally, specialty cylinders for storage or pipeline applications can be applied to the MOS compressor.

For more information on the **MOS Compressor,** visit **www.dresser-rand.com/gfc** or contact us at:

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