

DDV

Dynamic Discharge Valve Pipeline Cylinder

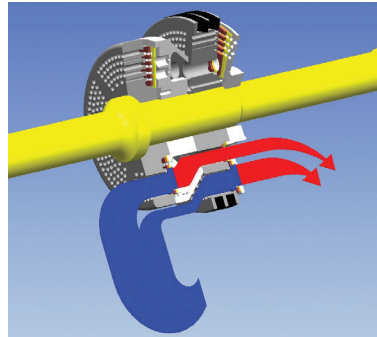
Using simple, field-proven components, Dresser-Rand continues to develop DDV pipeline compressor cylinders, available with capacity control options suitable for gas transmission applications that are similar to those found on integral engine compressors.

The new DDV pipeline cylinder offers as many as eight inlet valves per cylinder, as well as double-deck "valve-in-piston" discharge design for maximum valve flow area and high compression efficiencies.

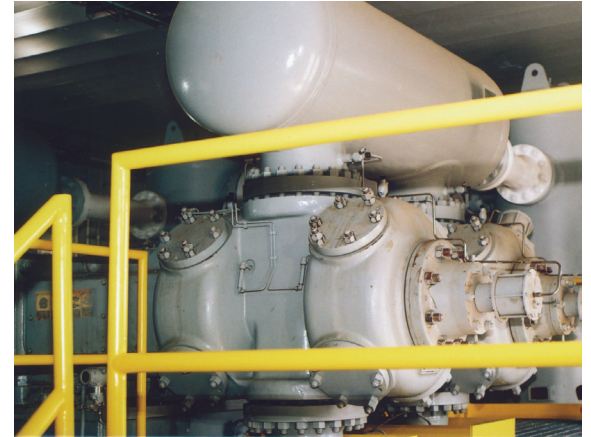
Specifically engineered for long periods of continuous operation through a wide range of operating conditions, the D-R DDV pipeline cylinder is complemented with the field-proven HOS compressor frame (2200-7200 HP), HOSS compressor frame (2800-8700 HP), and BOS compressor frame (3600-11,200 HP). The "double-deck" discharge/piston assembly utilizes the durable "PF" ported plate style valves. The inlet side comprises the patented D-R Magnum™ "mini-poppet" -style valves.

Compared with traditional low-speed integral compressors, new compressors using the D-R DDV pipeline cylinder offer significantly lower operating (lifecycle) costs and reduced maintenance. This is accomplished through its high efficiency and ease of access to internal components.

Key Features



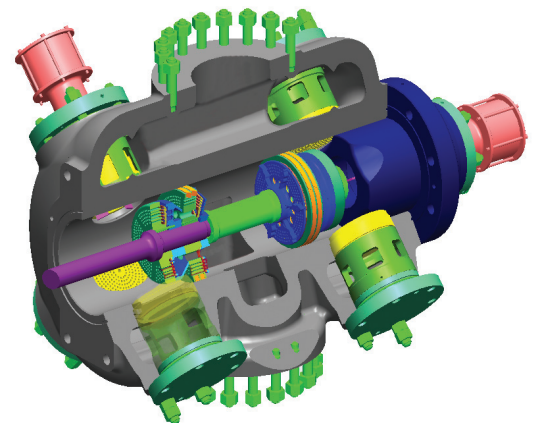
Valve masking is eliminated; straight flow discharge passage



Twice as many suction valves; double deck discharge valves



Generous unloading flow paths



Continuous flow inlet passage

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Specifications

Cylinder size in (mm)	MAWP psig (kg/cm ²)	Compressor Model	I and D Connections
8.50/9.00/9.50/10.00/10.50 (216/229/241/254/267)	1925 (135.3)	HOS HOSS	10 in—900# (254 mm—408kg)
11.00/11.50/12.00/12.50/13.00/13.50 (279/292/305/318/330/343)	1925 (135.3)	HOS HOSS	12 in —900# (305 mm—272kg)
14.00/14.50/15.00/15.50/16.00 (356/368/381/394/406)	1650 (116.0)	HOSS BOS	14 in—900# (356 mm—408kg)

Capacity Control

Each D-R DDV pipeline cylinder can be equipped with the following capacity control devices:

Port-type unloaders provide end unloading and a 50 percent capacity step for each DDV pipeline cylinder.

Fixed volume automatic clearance pockets are custom-designed to provide a capacity load step to meet specific design conditions. (These can be located on the outer end and frame end of the DDV pipeline cylinder.)

Manual variable volume clearance pockets also can be provided and are located on the outer end of the HOS pipeline cylinder. They can be adjusted to increase the outer-end clearance to "trim" the clearance for a required process condition.

All three are available as options to optimize capacity control for various operating conditions depending on your needs.

Standard Features


Piston rod: AISI 4142, induction hardened with rolled threads; all rods are wet magnetic particle inspected

Piston ring material: Carbon-filled Teflon®

Valves: D-R high-performance PF discharge valves with patented scalloped plate; Magnum "mini-poppet" inlet valves – elements are interchangeable regardless of valve size; both valves meet API 618 for non-interchange ability; sealing elements for both valve types are made from proprietary, Hi-Temp PEEK™ material.

Cylinder: Nodular iron – gas-cooled

Configuration: Four inlet valves per end, matched in effective flow area with "double-deck" PF discharge valves mounted to the piston rod

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