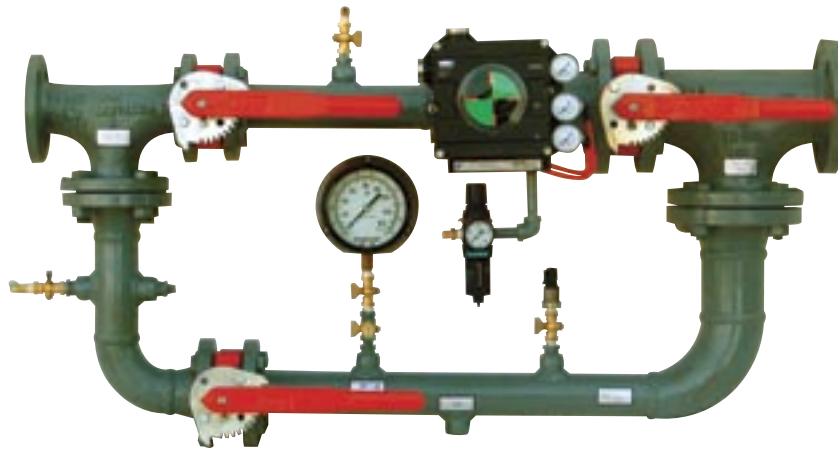


Demand Expander Control System

XMx Series



The Single Valve design provides superior system flow control. The process quality valve and positioner provides exact demand flow control maintaining pressure at +/- 1/2 PSI in most systems.

XMx Series

THE GARDNER DENVER XMx SERIES Demand Expander Control provides the benefits of managed compressed air storage and reduced system demand as a result of reduced system pressures. When used in conjunction with an ESP 20/20 Air Compressor Control System, the Demand Expander will provide for maximized air compressor efficiency by creating real storage in the receiver tanks. The system is then maintained at the lowest tolerable pressure level reducing the flow through leaks and unregulated applications.

The XMx Series Demand Expander Control will allow reduced plant air pressures, while maintaining air-flow thus enhancing the process through compressed air consistency.

Storage Management

In conventional system designs, the storage (if it exists at all) is merely an extension of the piping and distribution system. When the Supply and the Demand are separated, storage can be reserved to handle instantaneous system events or compressor failures. The compressor automation system control is enhanced with the advantage of real storage when a Demand Expander is added to the system.

Artificial Demand is reduced because lower system pressures equate to lower system flows. Leaks will waste less air volume when pressure

is reduced. Leaks will also be slower to expand under lower controlled pressure. Unregulated flows will also consume less air as a result of the Demand Expander.

System Security

The plant can now operate at pressure never before believed achievable due to the security provided by stored upstream volume in the air receivers. System events are not seen by the process.

System Stability

Most compressed air systems experience pressure fluctuations of 10% to 20%. As compressed air is an ingredient in the plant process, this inconsistency will have a negative impact on production. With Demand Expansion, the process sees only a constant pressure regardless of demand or coincidental system events.

Maximizes Compressor Efficiency

The use of storage provides the compressor control the ability to make a measured response to a fall or rise in the storage receivers. With an ESP 20/20 compressor controller, the Rate of Pressure Change in the storage receivers is calculated by the unique Bullseye algorithm and intelligent, energy efficient loading and operational decisions will be made.



Technical Data

XXM Series

Fail-Safe Operation

The XXM Series Demand Expander is provided with a fail open valve both electronically and pneumatically. Should the air signal or the control signal fail, the valve will open 100%. A manual three valve by-pass is included on the assembly to provide for continued air flow during valve maintenance periods.

Specifications

Model No.	Capacity (SCFM)	Inlet Connection	Outlet Connection	Dimensions L X W X H	Weight
XXM100	500	1" NPT	1.5" NPT	32" X 12" X 12"	250
XXM1.500	750	1.5" NPT	2" NPT	34" X 14" X 15"	275
XXM1200	1000	2" FLG.	3" FLG.	44" X 18" X 20"	295
XXM1300	2000	3" FLG.	4" FLG.	51" X 20" X 24"	375
XXM1400	3200	4" FLG.	6" FLG.	57" X 22" X 31"	625
XXM1600	6500	6" FLG.	8" FLG.	65" X 24" X 38"	1060
XXM1800	8200	8" FLG.	10" FLG.	74" X 32" X 60"	1550

Demand Expander Control

The Demand Expander can receive its control from the Gardner Denver ESP 20/20 Compressed Air Management System or from a stand-alone electronic controller. Both methods provide equal control accuracy. Combining both compressor and Demand Expander control through the ESP 20/20 provides for the coordination of all setpoints to assure maximum system efficiency.

Optional Features

- Optional Inlet Check Valve
- Optional Inlet "Y" Strainer
- Optional Control Air Filter and Dryer

Gardner Denver®

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