

Compressed Air System Control

KAESER FLOW CONTROLLER

Capacities from 250 to 12,600 cfm



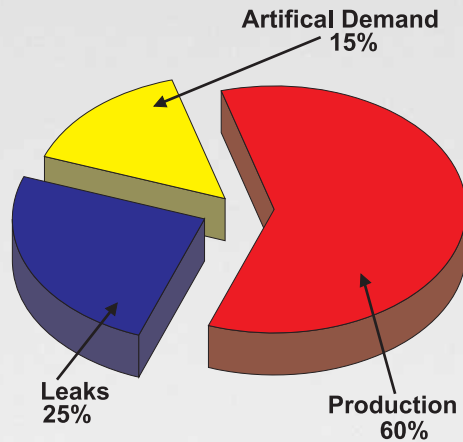
Do you need a Flow Controller?

Most systems have fluctuating demand. If not controlled, system pressure will also fluctuate at points of use. The results are often inconsistent air quality, inconsistent production, inefficient compressor operation and higher scrap rates.

To compensate, many users produce more volume than needed and at higher pressures than needed. This leads to increased air consumption due to artificial demand and increased amount of leakage. Further, raising the pressure increases the power consumption on the compressor.

In the end, more compressors are running longer at higher energy input rates without providing stable flow, and poor air quality and production problems continue.

Compressed air is a very expensive utility. At 8 cents per kWh, a 100 hp compressor can consume up to \$60,000 per year in energy costs alone. In most systems, only 60% of the air produced is needed for production. Leaks and artificial demand account for the remaining 40%.



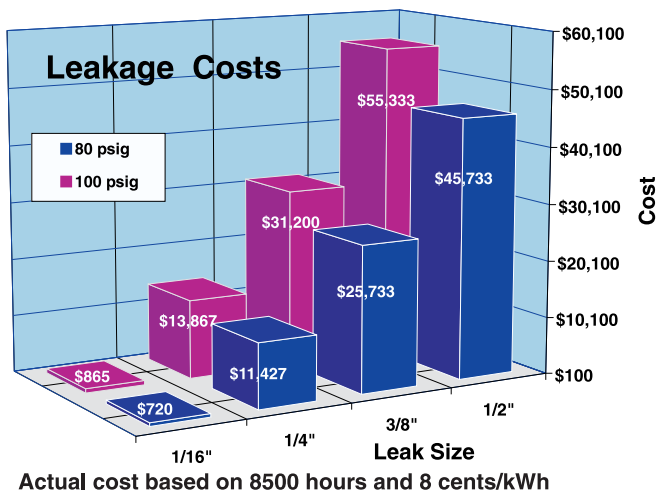
The Kaeser Flow Controller

The Kaeser Flow Controller (KFC) is an intermediate flow control installed between the air system supply and the distribution network. When combined with proper storage it rapidly responds to changes in demand and ensures consistent delivery of stable air pressure to all points of use throughout your facility.

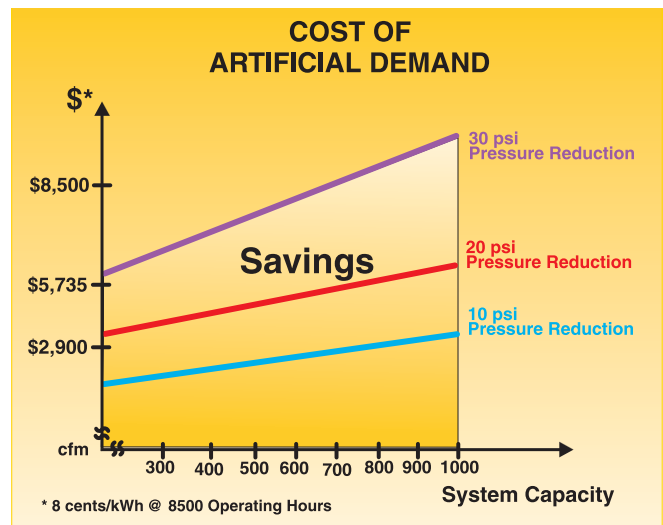
What does KFC do for your compressed air system?

The Kaeser Flow Controller (KFC) creates more effective storage by accumulating compressed air in your receivers and only delivering air that is needed for production. It responds very rapidly to fluctuating demand and actively maintains constant system pressure downstream.

This stable air pressure enables the user to lower operating pressure to what production equipment needs. This eliminates artificial demand and substantially reduces air losses through leaks. In this way, overall air consumption is greatly reduced.



Leakage decreases significantly at lower pressures. A 20 psi drop in pressure decreases leakage by over 20%.

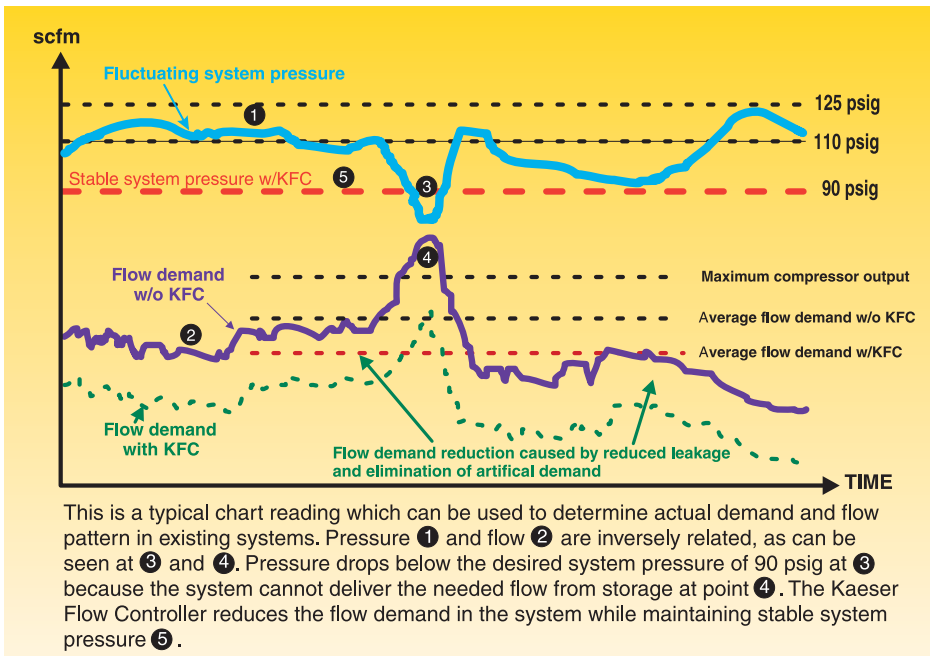


This chart shows how much savings may be made by operating at lower pressures and reducing artificial demand.

Further, stored compressed air can now be used to satisfy air demand spikes (see point 5, Figure 4) without pressure drop at the point of use. Additional energy is saved, since standby compressors do not have to come on-line. This greatly reduces compressor cycling and ensures more efficient use of compressors.

An added benefit is that by reducing wide fluctuations in volume flow (and velocity), the KFC ensures that your dryers and filters have adequate contact time to properly clean your compressed air. This protects production equipment which may be sensitive to moisture and other contaminants.

Typical System with and without Kaeser Flow Controller (KFC)



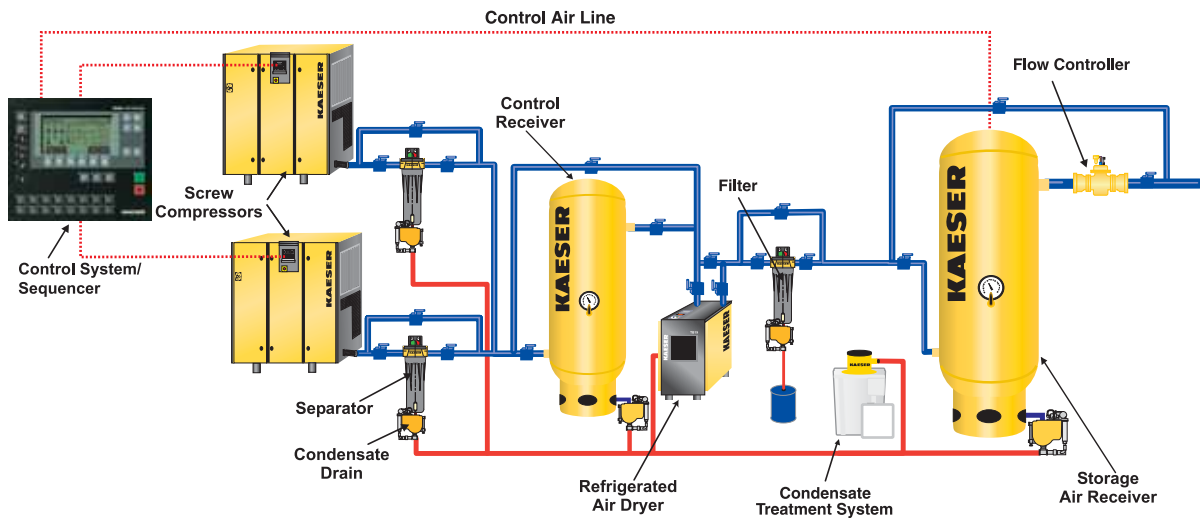
Benefits to Your Bottom Line

The Kaeser Flow Controller's many system benefits result in several measurable benefits for your operation:

- ✓ Significant energy savings
- ✓ Reduced maintenance requirements for compressed air equipment
- ✓ Reduced maintenance requirements for production equipment.

But perhaps the most important benefit will be that the extremely stable system pressure ensures reliable, uninterrupted operation of plant equipment, yielding higher production rates and lower scrap rates.

Kaeser Flow Controller Installation



The Kaeser Flow Controller is compact and easily installed in new or existing systems. There are no major piping changes required. If not already present, a properly sized air receiver is typically installed between the last clean air treatment component and the Kaeser Flow Controller.



Pneumatic control panel



Electronic control panel

Specifications

Model	Max Flow (scfm)	Connection Size (in.)	Dimensions L x W x H (in.)	Weight (lb.)
KFC 250	250	1 NPT (F)	7.3 x 2.7 x 15.2	3
KFC 500	500	1.5 NPT (F)	7 x 5.5 x 16.8	7
KFC 1000	1000	2 NPT (F)	16 x 6 x 16.2	18
KFC 1500	1500	3 FLG	18 x 7.5 x 17	29
KFC 2500	2500	4 FLG	21.2 x 9 x 19	124
KFC 3400	3400	4 FLG	24.7 x 9 x 24	189
KFC 6200	6200	6 FLG	30.6 x 11 x 25.8	214
KCF 8600	8600	6 FLG	22.5 x 16 x 22.5	400
KCF 12600	12,600	8 FLG	37.25 x 16 x 24	500

Maximum allowable working pressure: 200 psig

Maximum ambient air temperature: 130°F

Maximum inlet air temperature: 125°F

Minimum downstream pressure with pneumatic control is 10 psig

Minimum downstream pressure with electronic control is 5 psig

Minimum differential pressure, electronic control: 3 psi, pneumatic control: 5 psi

Demand side pressure control is maintained to within 10% of the KFC's rated capacity. For flow rates less than 10% of rated capacity, contact factory for a specific performance evaluation.

Specifications are subject to change without notice.

Features:

- Automatic internal bypass in case of low pressure or loss of power- can be configured to either open or close
- Rapid valve response
- NEMA 4 enclosure with Power On lamp
- Control panel can be isolated for service without interrupting air supply
- Low-pressure alarm with high visibility strobe beacon and dry contacts for remote alarm
- Pneumatic Control have analog gauges
- Electronic Control have digital gauges for inlet and discharge pressure
- Explosion proof electrics optional

KAESER COMPRESSORS

Built for a lifetime.™

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Certified Management Systems



The Air Systems Specialist

With over 85 years of experience, Kaeser is the air systems specialist. Our extensive 100,000 square foot facility allows us to provide unequalled product availability. With service centers nationwide and our 24-hour emergency parts guarantee, Kaeser customers can rely on the best after-sales support in the industry. Kaeser stands committed to providing the highest quality air system for your specific compressed air needs.