

KAESER
COMPRESSORS®

Built for a lifetime.



Air Main Charging Valves

DHS Series
High Temperature AMCV Series

kaeser.com

Air Main Charging Valve

Velocity control improves air quality

KAESER's air main charging valve prevents damage and increases the effectiveness of air treatment equipment by reducing exposure to excessive velocity. The air main charging valve automatically opens and closes to maintain a set minimum pressure in the supply side of the air system while charging the main distribution piping. It also pressurizes the entire system in the shortest possible time.

Why your system needs a DHS air main charging valve

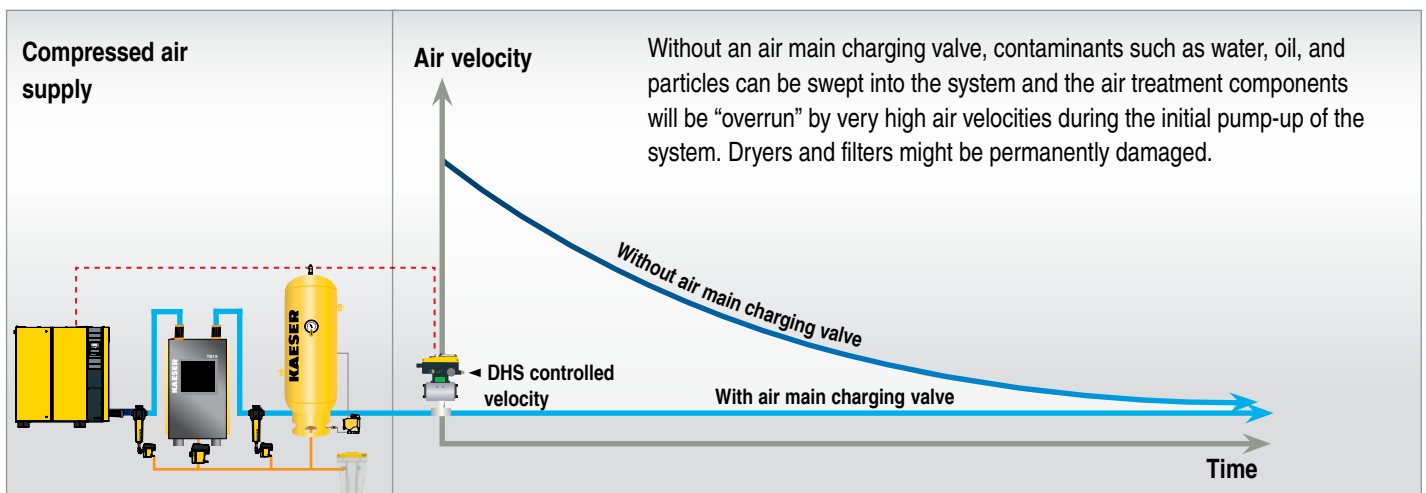
Compressed air dryers and filters are designed and rated to treat specified volumes of air at specific conditions. Refrigerated and desiccant dryers, for example, are rated to achieve a specified dew point at a particular volume (scfm), pressure (100 psig), compressed air temperature (100°F), and ambient temperature (100°F).

If system pressure is not constant, the air velocity through clean air treatment equipment will fluctuate, which may cause lower quality compressed air, and possible premature failure of the air treatment equipment. For those operating 24 hours a day, fluctuation may be minor. If, however, compressors are shut down for any length of time (overnight, weekends, holidays), system pressure will drop significantly as air escapes through leaks. Until full, or near full, operating pressure is reached, air velocity will be high. In this condition, dryers and filters may not work to specification and contaminants may be swept downstream.

Air quality protection

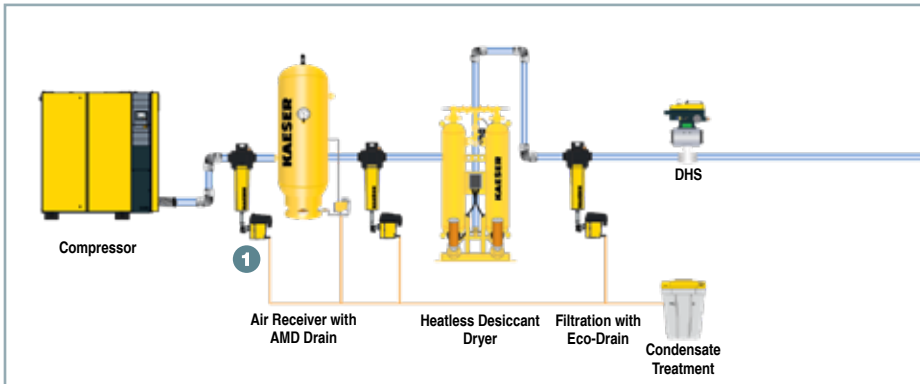
An air main charging valve controls high velocity air while an air system is being pressurized. After the air system has been pressurized, the air main charging valve also prevents exposure of air treatment components to possible overflow conditions. Leaks, artificial demand, and unregulated uses all affect the total demand for air. When this total demand reduces the system pressure, the increased air velocity may greatly reduce the effectiveness or damage the air treatment components. A DHS charging valve prevents this condition, ensuring that dryers and filters will be able to operate according to their rated specifications. The air main charging valve is also able to isolate the treatment line in the event that an air treatment component malfunctions and alarms (See Priority: Air Quality on the next page). This not only assures consistent air quality, but also safeguards the pipe distribution network and the air consumers in your production facility. The DHS will also keep the air supply side of the system pressurized, so when the system is started back up, the time to pressurize the air system is reduced.

Velocity Profile



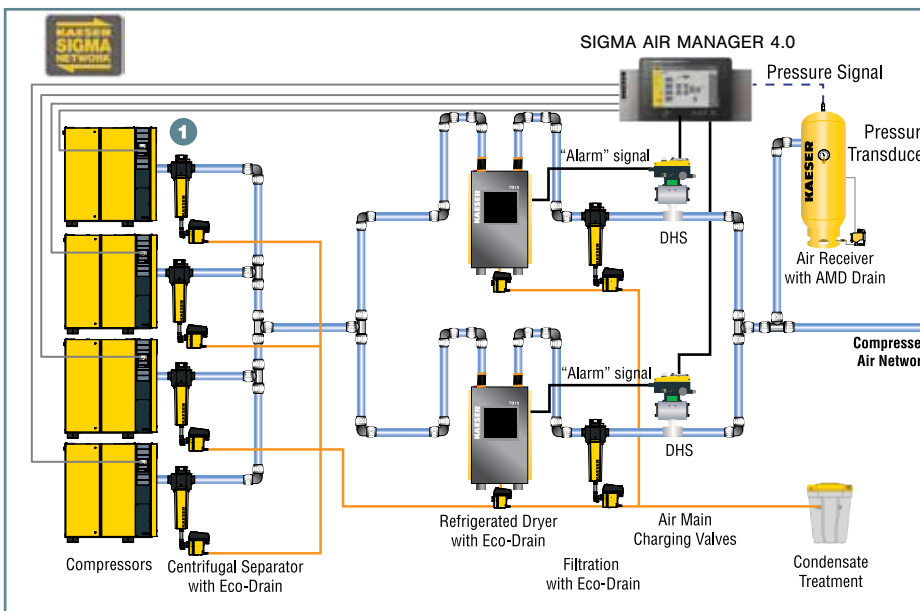
Installation Options

Priority: Air Quality



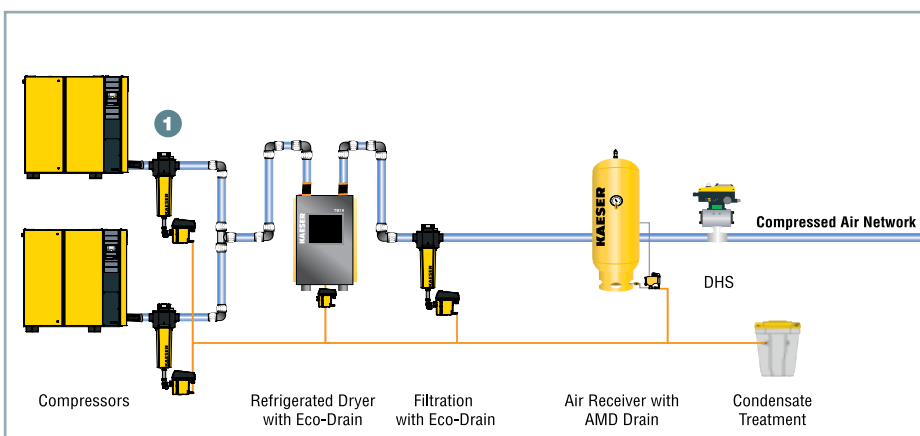
In its default configuration, the air main charging valve (DHS) is pre-set to close if the demand exceeds supply, pressure falls below the set point, or in case of power outage. It minimizes air velocity at start up and maintains air supply side pressure. For systems which are shut down frequently, this option further minimizes periods of high velocity air.

Priority: Air Quality



The second example shows a multiple compressor system with two parallel air treatment lines all controlled by a SIGMA AIR MANAGER® (SAM) 4.0. A standard feature of the DHS is its ability to connect to a SAM 4.0 by the KAESER SIGMA NETWORK. The SAM 4.0 can modify DHS 4.0 parameters and monitor for alarms. With optional inputs, the DHS can also close in case of a dryer failure or alarm.

Priority: Air Supply



When the supply of air is the priority, the air main charging valve is set so that the default is "normally open". In case of power failure, the valve remains open, ensuring air supply. For systems which are shut down infrequently and have no leaks in the supply side piping, this field adjustable setting allows for any storage receiver after the air main charging valve to supplement air during start up conditions, further minimizing system exposure to high velocity air and faster start up.

1 If not included with compressor

Technical Specifications

DHS Series

* Connection (in.)	Max. Working Temperature (°F)	Max. Working Pressure (psig)	Dimensions W x D x H (approx. in.)	Weight (lbs.)
DHS with Ball Valve				
1 NPT	140	232**	9.7 x 9.8 x 13	13
1-1/2 NPT			9.7 x 9.8 x 14.6	23
2 NPT			9.7 x 9.8 x 15.3	25.1
DHS with Butterfly Valve				
2 Flange	140	232	9.7 x 9.6 x 16.8	21.2
3 Flange			9.7 x 9.8 x 19.3	27.8
4 Flange			9.7 x 10.1 x 21.4	36.8
6 Flange			9.7 x 10.8 x 25.4	63.7
8 Flange			9.7 x 11.2 x 28.8	86.2

NOTE: All DHS models operate on 24 VDC or 115 V / 1 ph / 60 Hz power supply.

*For more sizes consult factory

**Option up to 914 psig

AMCV High Temperature Series

Connection (in.)	Max. Working Temperature (°F)	Max. Working Pressure (psig)	Dimensions W x D x H (approx. in.)	Weight (lbs.)
AMCV High Temperature with Butterfly Valve				
2-1/2 Flange	400	232	10 x 7 x 25	33
3 Flange			10 x 7.5 x 25	37
4 Flange			13 x 9 x 28	58
6 Flange			13 x 11 x 31	79
8 Flange			16 x 13.5 x 35	127

NOTE: For use with heated desiccant and heat of compression dryers without aftercoolers.

All AMCV Series models require 115V/1 ph/60 Hz power supply.

Specifications are subject to change without notice.



www.kaeser.com

Kaeser Compressors, Inc.
511 Sigma Drive
Fredericksburg, VA 22408 USA
Telephone: 540-898-5500
Toll Free: 800-777-7873
info.usa@kaeser.com

Kaeser Compressors Canada Inc.
3760 La Verendrye Street
Boisbriand, QC J7H 1R5 CANADA
Telephone: (450) 971-1414
Toll free: (800) 477-1416
info.canada@kaeser.com

Kaeser Compresores de México S de RL de CV
Calle 2 #123
Parque Industrial Jurídica
76100 Querétaro, Qro.
Telephone: 01 (442) 218 64 48
sales.mexico@kaeser.com

Kaeser Compresores de Guatemala y Cia. Ltda.
3a calle 6-51, zona 13
Colonia Pamplona
01013-Guatemala City
Telephone: +502 2412-6000
info.guatemala@kaeser.com

