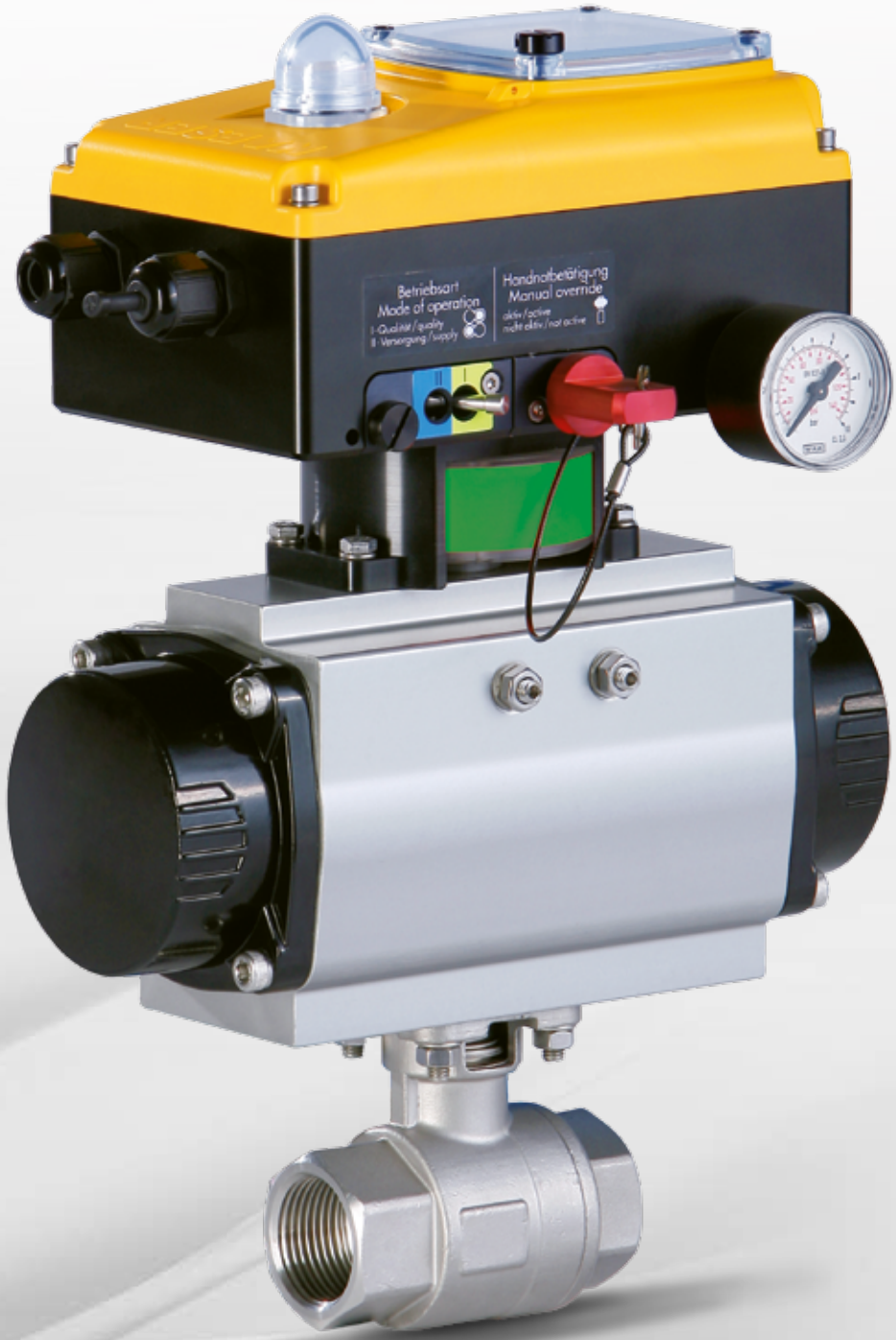
KAESER COMPRESSORS®

Air-Main Charging Systems DHS Series

Connection up to DN 400



DHS series

Electronic air-main charging systems

Compressed air treatment systems are designed for a certain rate of air flow which, when the system is operating at full load, pushes against the pressurised air in the air distribution network. However, should this resistance not be present, for example during periods of low load or downtime, it is possible that dryers and filters may be overwhelmed by the sudden surge in airflow that occurs when the system restarts. DHS series air-main charging systems prevent this from occurring and ensure maximum reliability at all times.

Air-main charging systems are important

Air-main charging systems are essential for any application that requires a reliable source of consistent quality compressed air. They eliminate the sudden surge of compressed air that occurs when compressors are restarted after a period of downtime and therefore safeguard optimum performance of air treatment equipment.

Two operating modes

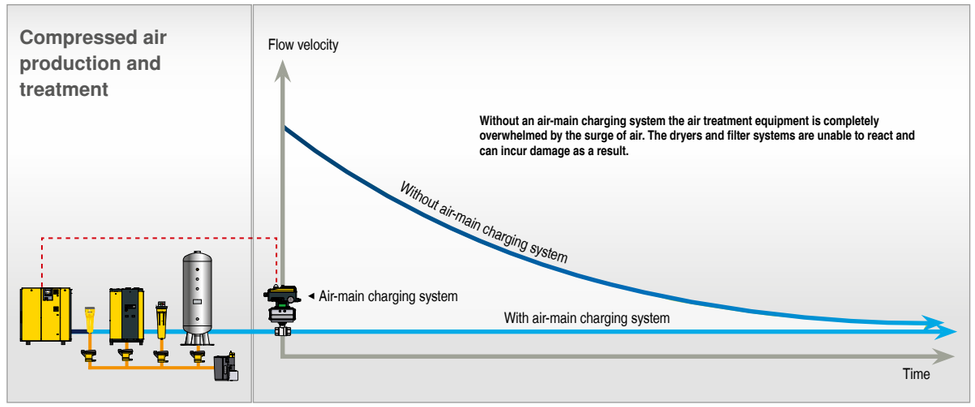
Depending on the priority and configuration of the compressed air station, operators of electronic DHS air-main charging systems can choose from two operating modes: Operating Mode I ensures reliable compressed air quality for stations with multiple treatment packages, whilst Operating Mode II ensures reliable compressed air supply following restart of systems equipped with a single treatment package.

Newly developed control unit

The heart of each DHS air-main charging system is the electronic control unit. It has been redesigned from the ground up and has been optimised both electronically and pneumatically to fulfil its demanding tasks. The pressure sensor, display and control algorithm (based on pulse width modulation) are designed to communicate with master control systems. The pressure measurement sensor integrated in the DHS system enables unprecedented compressed air system integration.

DHS speaks your language

KAESER DHS systems are designed with maximum user-friendliness and dependability in mind. Every DHS system can be intuitively adapted to all applications via the display – in 25 languages. The system also allows 'at-a-glance' operation status checks and makes saving of parameters simple.



Safeguards compressed air quality

Image: DHS 25 G incl. Tecalan pressure line

DHS series

Double dependability

Reliability at a glance

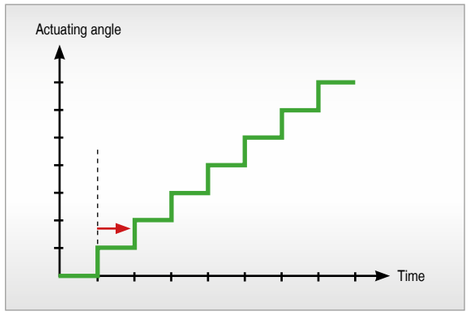
In addition to the intuitive operating panel with display (25 programmed languages), the high visibility LED can be seen from a distance and at any angle: green = “open”, red = “closed”, blinking = “action required”.

Clear and safe

The mechanical, two-colour operating display provides additional safety. The operating mode switch (see pg. 6) is clearly marked, locked in place by screws and can be additionally secured against unintentional switching using an anti-tamper seal.

Emergency manual operation

In the event of power failure or similar circumstances, the ball valve or butterfly valve can be immediately opened manually to allow free flow. This provides an additional safeguard to maintain compressed air supply reliability.



Pulse width modulation

The KAESER-developed regulation algorithm is based on pulse width modulation and prevents vibration in the compressed air distribution network by incrementally opening and closing valves.

Equipment

Air-main charging system

Electronically controlled air-main charging system with pulse width modulation. Incremental opening and closing of the compressed air network prevents excessive flow speeds of the air in dryers and filters. Installation-ready complete system.

Two operating modes

1 – “Reliable compressed air supply”: pulse width modulated opening/closing of ball/butterfly valves.
2 – “Reliable compressed air quality”, for redundant compressed air networks: additionally closes the affected line in the event of disruptions at the dryer or filter (factory configured).

Electronic control unit

Integrated electronic pressure sensor, pressure regulator 0-16 bar, high visibility LED, mechanical indicator, processor, display (25 languages), password protection, operating mode selection switch, pressure gauge for internal control pressure. Control unit can be rotated 90°. End position monitoring. Software update via microSD card. Anti-tamper seals available for keyboard and operating mode switch to protect against unauthorised access. Multi-voltage: 90-260 V AC, 47-63 Hz, 24 V DC.

Pivot drive

Spring-loaded pneumatic pivot drive. Activates the ball or butterfly valve with internal control pressure. Silicone-free grease for ball and butterfly valve.

Operation

Password and operating parameter input via keypad, e.g. opening pressure, hysteresis, opening/closing times in percent. Manual operation using key to open in the event of power failure or disruption.

Interfaces

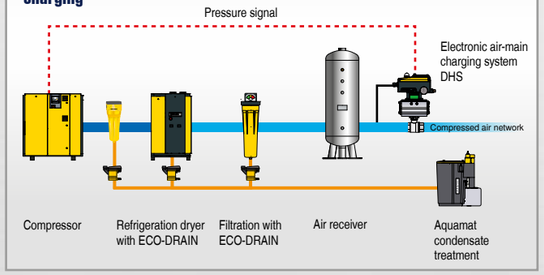
Relay inputs for “external shutdown” e.g. dryer alarm. Relay outputs for “group alarm”, “open”, “closed” and “pressure monitoring”. 4-20 mA air distribution network signal for compressor controllers or master control systems. Connection prepared for remote operation. Connection to compressed air network with Tecalan line (up to 16 bar included within scope of delivery).

Retrofit kits

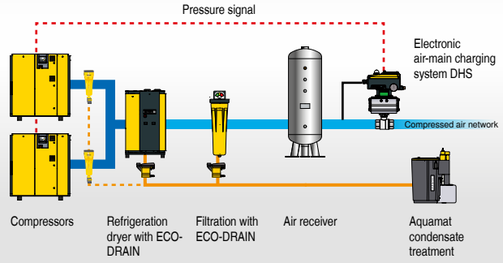
Provided to retrofit existing KAESER air-main charging systems. Kit comprises control unit and installation components.

Flexible application

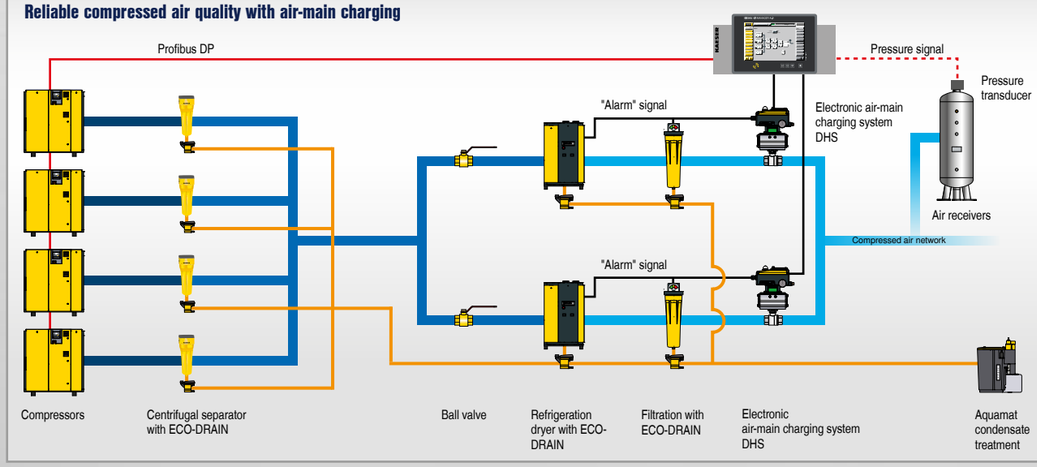
Reliable air-main charging (e.g. for individual systems that are regularly shutdown)



Reliable compressed air supply with air-main charging



Reliable compressed air quality with air-main charging



Technical specifications

Electronic air-main charging systems

Model	Connection diameter	Suitable for pressure range			Elec. pressure transducer	Dependable performance		Dimensions W x D x H	Weight
		0.5-10 bar	0.5-16 bar	up to 63 bar		Compressed air treatment	Compressed air supply	mm	kg
Version with ball valve									
DHS 15 G	G 1/2	–	□	□	✓	✓	●	226 x 173 x 284	4.5
DHS 20 G	G 3/4	–	□	□	✓	✓	●	316 x 173 x 293	5.6
DHS 25 G	G 1	–	□	□	✓	✓	●	226 x 173 x 327	5.9
DHS 32 G	G 1 1/4	–	□	□	✓	✓	●	226 x 173 x 338	7.7
DHS 40 G	G 1 1/2	–	□	□	✓	✓	●	226 x 173 x 371	8.8
DHS 50 G	G 2	–	□	□	✓	✓	●	258 x 173 x 386	10.9
DHS 65 G	G 2 1/2	–	□	□	✓	✓	●	299 x 173 x 437	17.3
DHS 80 G	G 3	–	□	□	✓	✓	●	349 x 173 x 507	23.7
Versions with butterfly valve									
DHS 40	DN 40	–	□	–	✓	✓	●	226 x 173 x 441	8.2
DHS 50	DN 50	–	□	–	✓	✓	●	226 x 173 x 427	9.1
DHS 65	DN 65	–	□	–	✓	✓	●	258 x 173 x 459	10.6
DHS 80	DN 80	–	□	–	✓	✓	●	258 x 173 x 489	12.1
DHS 100	DN 100	–	□	–	✓	✓	●	299 x 173 x 545	16.2
DHS 125	DN 125	–	□	–	✓	✓	●	349 x 173 x 627	23.2
DHS 150	DN 150	–	□	–	✓	✓	●	397 x 183 x 649	28.4
DHS 200	DN 200	–	□	–	✓	✓	●	473 x 193 x 737	38.6
DHS 250	DN 250	□	Upon request	–	✓	✓	●	560 x 203 x 852	63.4
DHS 300	DN 300	□	Upon request	–	✓	✓	●	601 x 218 x 1100	88.0
DHS 350	DN 350	□	Upon request	–	✓	✓	●	698 x 216 x 1175	158.5
DHS 400	DN 400	□	Upon request	–	✓	✓	●	738 x 265 x 1331	259.5

Electrical connection 90-260 V AC / 47-63 Hz or 24 V DC; IP 65 protection

□ Please provide maximum working pressure when ordering
● Adjustable on-site
✓ Standard
– Not applicable

Retro-fit kits for older KAESER air-main charging systems available upon request.

Spring-loaded bypass valves

Connection diameter	Pressure setting range	Max. working pressure	Max. working temperature	Dimensions W x D x H	Weight
	bar	bar	°C	mm	kg
G 1/2	4-10	16	80	65 x 90 x 185	1
G 3/4	4-10	16	80	75 x 90 x 185	1.1
G 1	4-10	16	80	90 x 90 x 185	1.5

KAESER – The world is our home

As one of the world's largest compressed air systems providers and compressor manufacturers, KAESER KOMPRESSOREN is represented throughout the world by a comprehensive network of branches, subsidiary companies and authorised partners in over 100 countries.

With innovative products and services, KAESER KOMPRESSOREN's experienced consultants and engineers help customers to enhance their competitive edge by working in close partnership to develop progressive system concepts that continuously push the boundaries of performance and compressed air efficiency. Moreover, the decades of knowledge and expertise from this industry-leading system provider are made available to each and every customer via the KAESER group's global computer network.

These advantages, coupled with KAESER's worldwide service organisation, ensure that all products operate at the peak of their performance at all times and provide maximum availability.

LGA InterCert
Certified QM/EM System
ISO 9001:2008 / ISO 14001:2004

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P-773ED Specifications are subject to change without notice. .9/17