KAESER COMPRESSORS®

Electronic Condensate Drains ECO-DRAIN Series

For compressor flow rates up to 1700 m³/min



ECO-DRAIN series

Electronic condensate drain

Condensate is an unavoidable result of air compression. If not reliably drained off at all collection points, it can cause costly downtime and damage to the compressed air system through corrosion. Electronic ECO-DRAIN level-sensing condensate drains from KAESER KOMPRESSOREN are therefore the perfect choice to perform this important task.

Loss-free condensate drainage

ECO-DRAIN condensate drains ensure safe, dependable condensate drainage without air loss, even under conditions with widely fluctuating accumulation and high particle / oil content.

The industry standard

Quality, dependability and safe operation are essential features of any industrial machinery or equipment. The ECO-DRAIN meets all of these requirements. Versions are available to suit even the most hostile operating conditions, for example: highly aggressive condensate, freezing temperatures, high pressure or vacuum. No matter what the application, KAESER KOMPRESSOREN has the right ECO-DRAIN to suit any need.

Essential system component

High quality, reliable condensate drains are an essential component of any compressed air system that uses premium quality compressors and treatment equipment. They should also be simple to integrate throughout the entire system so that compressor controllers (SIGMA CONTROL 2) and master control systems (SIGMA AIR MANAGER 4.0) can react instantaneously to their signals, thereby enhancing system reliability and performance.



All collection points must be fitted with a reliable means of draining condensate.
Best results are achieved with an electronically controlled condensate drain.

Dependable condensate drainage without pressure loss



Image: ECO-DRAIN 31



ECO-DRAIN series

Dependable condensate drainage without pressure loss



“Click” and go

Maintenance on the ECO-DRAIN 30, 31 and 32 is quick and easy. A simple “click” is all that’s needed to detach the service unit from the electronics module. Complicated disassembly is therefore no longer necessary. Every service unit is carefully checked for leak tightness and performance.



Intelligent electronic controls

The control electronics operate the discharge valve with such precision that all collected condensate is discharged without any loss of compressed air. This not only maximises compressed air use but also leads to considerable energy savings. All electrical components are splash-proof.



Self-monitoring

Should an issue with condensate drainage occur, the ECO-DRAIN valve is briefly cycled to open for one minute. If the situation remains, a message is triggered and the valve opens every 4 minutes for 7.5 seconds. Once the blockage is cleared, the ECO-DRAIN reverts back to normal operation.



Durable level sensor

The durable and non-wearing capacitive level sensor forms the basis for safe, reliable condensate drainage. The drain also works perfectly under conditions with high levels of contamination, even when filled with pure oil.

Technical specifications

Model	Pressure min. / max. $bar_{(g)}$	Climate zone [1]	Max. compressor power according to climate zone 1/2/3 m^3/min	Dryer power max. 1/2/3 m^3/min	Filter performance [2] max. 1/2/3 m^3/min	Field of use condensate [3] a/b	Floating contact	Dimensions W x D x H mm	Weight kg	Electrical supply
ECO-DRAIN 30	0.8/16	1/2/3	3/**2.5**/1.5	6/5/3	30/25/15	a/b	–	164 x 65 x 118	0.8	95…240 VAC ±10% (50…60 Hz) / 100…125 VDC ±10%
ECO-DRAIN 31	0.8/16	1/2/3	6/**5**/3.5	12/10/7	60/50/35	a/b	•	179 x 74 x 130	0.9	
ECO-DRAIN 32	0.8/16	1/2/3	12/**10**/7	24/20/14	120/100/70	a	•	211 x 74 x 157	1.6	
ECO DRAIN 32 CO	0.8/16	1/2/3	12/**10**/7	24/20/14	120/100/70	a/b	•	211 x 74 x 157	1.6	
ECO-DRAIN 12	0.8/16	1/2/3	8/**6.5**/4	16/13/8	80/65/40	a	•	158 x 65 x 141	0.8	230 V / 1 Ph / 50-60 Hz
ECO DRAIN 12 CO	0.8/16	1/2/3	8/**6.5**/4	16/13/8	80/65/40	a/b	•	158 x 65 x 141	0.8	
ECO DRAIN 13	1.0/16	1/2/3	35/**30**/20	70/60/40	350/300/200	a	•	212 x 93 x 162	2.0	
ECO DRAIN 13 CO	0.8/16	1/2/3	35/**30**/20	70/60/40	350/300/200	a/b	•	212 x 93 x 162	2.0	
ECO-DRAIN 14	0.8/16	1/2/3	150/**130**/90	300/260/180	1500/1300/900	a	•	252 x 120 x 180	2.9	
ECO DRAIN 14 CO	0.8/16	1/2/3	150/**130**/90	300/260/180	1500/1300/900	a/b	•	252 x 120 x 180	2.9	
ECO DRAIN 16 CO	0.8/16	1/2/3	1700/**1400**/1000	3400/2800/2000	–	a/b	•	260 x 280 x 280	5.9	
ECO-DRAIN 12 CO PN 63 [4]	1.2/63	1/2/3	8/**6.5**/4	16/13/8	80/65/40	a/b	•	146 x 65 x 141	0.9	
ECO-DRAIN 13 CO PN 25 [4]	1.2/25	1/2/3	35/**30**/20	70/60/40	350/300/200	a/b	•	197 x 93 x 162	2.2	

[1] Climate zone: **1 = Dry/cool** (Northern Europe, Canada, Northern USA, Central Asia); **2 = Temperate** (Central and Southern Europe, some parts of South America, North Africa), **3 = Humid** (South-East Asian coastal regions, Central America, Oceania, Amazon and Congo regions)

[2] Installed downstream of dryer

[3] a = Condensate from fluid-cooled compressors, b = Aggressive condensate

[4] For high pressure applications

► All models can be used in a temperature range from +1 °C to +60 °C

Options

For models from ECO-DRAIN 12

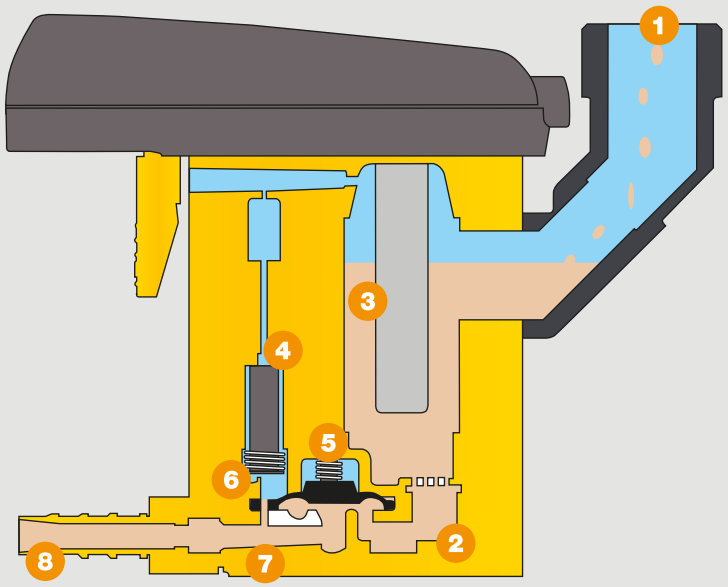
Heating

Thermostatically controlled to prevent freezing in ambient temperatures down to - 25 °C (not suitable for 63 bar high pressure version). Power supply 230 V / 1-ph / 50 - 60 Hz, max. 125 W. Scope of delivery: heating rod, adapter, gaskets.

Pipe heating

To be installed by the user to protect the inlet and discharge lines from freezing, temperature range - 25 °C to + 60 °C. Capacity 10 W/linear metre, on-site installation. Scope of delivery: terminal box, heating band.

General design

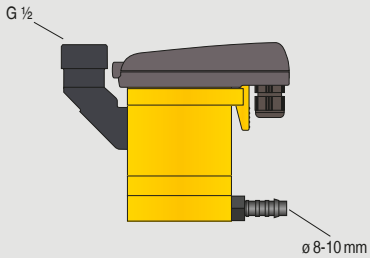
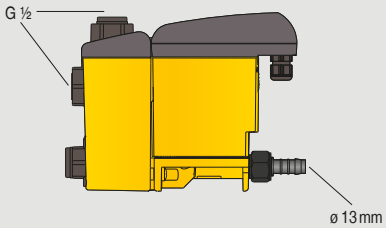
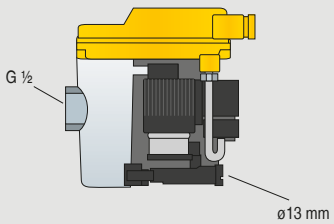
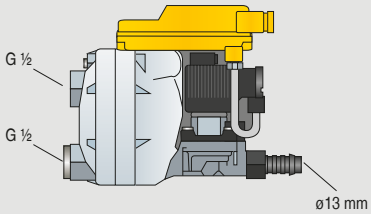
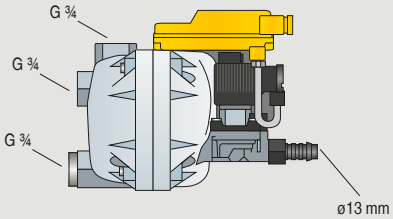
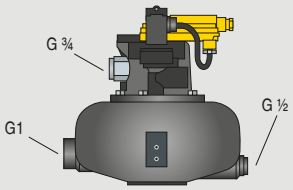


Example: ECO-DRAIN 31

1. Condensate inlet
2. Collection chamber
3. Level sensor
4. Solenoid valve
5. Valve diaphragm
6. Balance line
7. Valve seat
8. Discharge line

The condensate passes through **the condensate inlet (1)** into the **collection chamber (2)**. The **level sensor (3)** detects the presence of condensate and sends a signal to the drain's control system when a preset condensate level is reached. This opens the **solenoid valve (4)** and also therefore the **pressure balance line (6)**. The resulting pressure compensation causes the **valve diaphragm (5)** to open. The condensate flows from the collector through **discharge line (8)** from the drain. The drain's control system then closes the solenoid valve as soon as the minimum condensate level is reached in the collection tank. This causes a change in the pressure exerted on the diaphragm which in turn is re-closed and sealed via the spring.

Views

ECO-DRAIN 30 / 31	ECO-DRAIN 32	ECO-DRAIN 12
		
ECO-DRAIN 13	**ECO-DRAIN 14**	**ECO-DRAIN 16**
		

The world is our home

As one of the world's largest compressed air system 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 every product operates at the peak of its performance at all times and provides maximum availability.



LGA InterCert
Certified
QM/EM System
DIN EN ISO 9001:2015/
14001:2015

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P-741ED Specifications are subject to change without notice. .18/20