



# **Heat-Regenerated Desiccant Dryers**

#### CALOSEC – CSP, CSA(-V) and CSL(-V) Series

Versatile, Efficient, Intelligent. Flow rate 9.7 to 155.8 m<sup>3</sup>/min, Pressure 5 to 11 bar

#### CALOSEC - CSP, CSA(-V) and CSL(-V) series

# The dryer

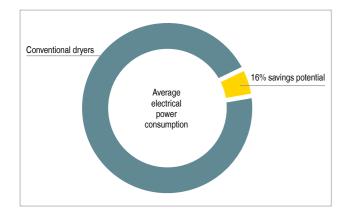
Versatile, efficient, and intelligent – KAESER's CALOSEC series of heat-regenerated desiccant dryers stands out with its versatile system design, providing the most efficient solution for every application. The intelligent CALOSEC CONTROL controller offers comprehensive system monitoring to assure reliable operation. This makes CALOSEC dryers the perfect system component for compressed air supplies requiring pressure dew points in the negative range. Exceptionally reliable and energy-efficient complete solutions can even be provided for highly demanding compressed air applications, such as those required by the optics, electronics and pharmaceuticals industries, for example.

#### Versatile.

With three drying methods – Blower Purge (CSP), Zero Purge (CSA) and Closed Loop (CSL) – CALOSEC dryers are always able to deliver the optimal solution for the widest range of requirements in terms of energy consumption, environmental conditions and pressure dew point. The CSP series achieves stable pressure dew points as low as -40 °C via cooling with compressed air, while the CSA Premium series achieves this in temperate climates without the need for compressed air. The water-cooled CSL series, even in tropical climates, requires no compressed air and can provide drying down to a pressure dew point of -70 °C if needed.

#### Efficient.

CALOSEC dryers impress with their high-quality standard equipment. This includes a separate electrical and pneumatic control cabinet, end-position-monitored valves at the compressed air inlet, and high-temperature galvanised compressed air piping. Individual valves ensure minimal pressure loss. They are also a prerequisite for running a parallel mode through which pressure dew point and temperature peaks are reduced to a minimum during chamber switchover. For added practicality, they are designed with a two-part housing, which reduces maintenance effort. Moreover, the CSA and CSL series use the highly energyefficient SILICAGEL ECO desiccant.



#### Intelligent.

Load-dependent pressure dew point control with a high-quality pressure dew point sensor is provided as standard. The CALOSEC CONTROL controller with 7" touch display ensures seamless operation and offers comprehensive system monitoring. For connection to a master controller or future integration into the KAESER SIGMA NETWORK, a Modbus TCP (Ethernet) interface is also fitted.

#### **Savings with Premium**

The CSA(-V) Premium series impresses with its exceptionally high-quality system design. This is reflected not only in the low maintenance requirement, but also in the performance of the models. Compared to conventional Zero Purge dryers, up to 16% of the electrical energy requirement can be saved when providing a pressure dew point of -40°C (comparison basis: ISO 7183 A1).





Image: CALOSEC CSA-V 483



#### AMBIENT CONTROL - CSA(-V) series

As is usual for Zero Purge dryers, models in the CSA-V and CSA series do not use compressed air for regeneration, but rely solely on ambient air. In cases where ambient humidity levels rise during an operating phase, such as on days with particularly high ambient dew points, the regeneration process in conventional dryers may not fully complete. Needless to say, this negatively impacts pressure dew point performance. Intelligent CALOSEC dryers monitor the temperature and relative humidity of the environment and can prevent pressure dew point deterioration as needed. They achieve this by using a partial flow of dried compressed air to ensure cooling for the duration of such operating phases.

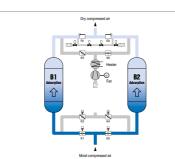
#### CALOSEC - CSP, CSA(-V) and CSL(-V) series

# **Economical for optimal drying results**

The provision of pressure dew points below 0°C is generally demanding. Therefore, we use only the highest-quality components and rely on generous process dimensioning to achieve the very best in compressed air performance.



#### Extra-long cycle times



Due to their operating principle, desiccant dryers inherently experience temperature and dew point peaks following chamber switchover. Thanks to generous dimensioning and the use of high-quality individual components, CALOSEC dryers go through a parallel phase before completing the switchover process. Compressed air is dried in both chambers until the still-warm chamber has cooled down. During this period, temperature and pressure dew point peaks are reduced to a minimum via the still-active cold chamber. The pressure dew point remains stable. With proper dimensioning, a predefined maximum pressure dew point can be reliably maintained.

#### SILICAGEL ECO

The premium SILICAGEL ECO desiccant achieves energy savings of approximately 15% during regeneration as compared to activated alumina. This is due to the 20% lower desorption temperature. The lower temperature level also contributes to minimising temperature and pressure dew point peaks. Furthermore, SILICAGEL ECO boasts a higher adsorption capacity, which has a positive impact on the dimensioning of desiccant guantities, cycle times and material load. SILICAGEL ECO is therefore the standard desiccant used in the CSA(-V) and CSL(-V) Premium series.

#### Pressure dew point control

CALOSEC dryers are equipped as standard with a high-quality pressure dew point sensor. The CALOSEC CONTROL controller is therefore able to monitor the pressure dew point of the dried compressed air. It concludes a drying cycle only when the desiccant capacity of a chamber is fully exhausted or the configurable switching threshold is reached. This demand-based control saves energy and ensures gentle operation. The sensor's measured values can be displayed graphically and are available via the Ethernet interface.

Thanks to the generous dimensioning of CALOSEC dryers, their fixed cycle lasts a full 12 hours. Thanks to standard pressure dew point control, the cycle time can be further extended according to demand. The long contact times between compressed air and desiccant ensure high system stability, especially under partial load and in demanding operating conditions.

#### Switchover process with parallel mode

CALOSEC - CSP, CSA(-V) and CSL(-V) series

# Low-maintenance design

KAESER truly understands its customers' needs, since the company itself operates numerous compressed air stations. From first-hand experience, we are well-versed in all aspects of compressed air station planning, implementation, operation and maintenance. We draw on this expertise to create user-friendly and low-maintenance products.



#### **Two-part individual valves**

In comparison to multi-port valves, the high-quality individual valves used in CALOSEC dryers are characterised by minimal pressure loss and a clear flow path. Bypass due to incomplete end position or sealing is excluded. In addition, the housings are designed in two parts. This enables cost-effective seat ring replacement during servicing, instead of complete valve replacement. Compared to multi-port valves, achieving reliable sealing during servicing is significantly easier.



#### **High-temperature galvanisation**

All CALOSEC dryer compressed air lines feature high-temperature galvanisation both inside and out. This offers excellent corrosion protection in the moist environment of the dryer. The coating process requires oil- and grease-free surfaces and allows for a reliably adjustable layer thickness. The coating also impresses with its high abrasion resistance and provides excellent protection against mechanical damage.



#### Separate pneumatic cabinet

CALOSEC dryers feature a separate pneumatic cabinet in addition to the electrical control cabinet. As a result, the valve island, control air unit, pressure transmitter and pressure dew point sensor are optimally protected.

Image: CALOSEC CSA-V 483



#### **Compressed air inlet temperature transmitter**

The compressed air inlet temperature is measured as standard in all CALOSEC dryers and is monitored via an adjustable threshold value. CALOSEC CONTROL can also specify the most efficient regeneration temperature based on individual process parameters, including the inlet temperature.



#### Insulation (option)

Upon request, the jackets and upper chamber floors of the desiccant chambers can be equipped with insulation made of rock wool and galvanised sheet steel. For added practicality, the insulation provides easy access for chamber testing using acoustic emission (AET). The acoustic sensors can be quickly installed without damaging the insulation. The heating housing on CALOSEC dryers is insulated as standard.



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CALOSEC - CSP, CSA(-V) and CSL(-V) series

# **Intelligent: Smart features**

Drying with heat-regenerated desiccant dryers presents a technical challenge. It's fortunate, therefore, that CALOSEC dryers provide comprehensive system monitoring and intuitive operation thanks to numerous smart features.



## CALOSEC CONTROL

(Ethernet) interface is also fitted.

#### **End-position-monitored inlet valves**

reported to CALOSEC CONTROL.





#### **ECO-DRAIN** prefilter connection

A matching range of standard and high-temperature KAESER FILTER products is available for CALOSEC dryers. For added practicality, the dryer's control cabinet provides a connection for the power supply of the electronically level-controlled ECO-DRAIN (24 VDC) condensate drain. Furthermore, the ECO-DRAIN's signal contact can be integrated into the CALOSEC CONTROL's system monitoring.



CALOSEC CONTROL offers the option to integrate the 4-20 mA signal from a flow rate sensor into the dryer's system monitoring. The advantage: among other features, a configurable threshold can be set for monitoring, and CALOSEC CONTROL is able to calculate specific performance data.

The CALOSEC CONTROL controller with 7" touch display ensures seamless operation and offers comprehensive system monitoring. For connection to a master controller or integration into the KAESER SIGMA NETWORK, a Modbus TCP

The K1 and K2 inlet valves come with end-position monitoring as standard. Convenient for maintenance: the LED display (green/red) indicates the valve position

#### **ENERGY CONTROL** (option)

CALOSEC CONTROL can estimate dryer utilisation as standard. Optionally, a high-quality power meter can be integrated into the control cabinet to measure and display power consumption, as well as average energy consumption (specific also available with the addition of flow rate measurement).

#### Flow rate measurement connection

#### CALOSEC – CSP, CSA(-V) and CSL(-V) series

# **CALOSEC CONTROL**

#### Network-capable

For connection to master controllers or integration into the KAESER SIGMA NETWORK, CALOSEC CONTROL features a Modbus TCP (Ethernet) interface.

#### **Animated P&I diagram**

CALOSEC CONTROL represents the drying process in an animated P&I diagram. It displays, among other information, the position of the main valves as well as the current process parameters (pressures, temperatures, dew points).

#### Languages

CALOSEC CONTROL currently supports 21 languages.

#### Maintenance

CALOSEC CONTROL provides a timer function to ensure timely maintenance. Monitoring of valve operating times provides valuable insights into their functionality. Information regarding the number of regeneration cycles and pressure changes per desiccant chamber is also easily accessible. Additionally, CALOSEC CONTROL records current and averaged dryer utilisation, providing valuable information about available reserves.

#### Various operating modes

CALOSEC CONTROL offers the following operating modes as standard: Load-dependent pressure dew point control via a pressure dew point sensor, AMBIENT CONTROL for the CSA(-V) series, and fixed cvcle.

#### **Test functions**

CALOSEC CONTROL offers comprehensive test functions that significantly simplify servicing. These include, among others, manual step operation for accelerated run-through of the drying program and manual valve switching for straightforward functional testing.



#### Colour touchscreen display

Featuring a 7" colour touchscreen display, the CALOSEC CONTROL controller ensures intuitive operation and a smooth process flow.

#### Data logging / visualisation

Key process parameters are stored in the internal memory for 28 days. The changing pattern of selected parameters can be shown graphically. CALOSEC CONTROL's message memory can archive the last 1000 notifications. They can be selected using convenient filter functions.

#### **Smart expansion**

The system monitoring of CALOSEC CONTROL can be expanded with smart features. These include: a user-configurable universal input, end-position monitoring of additional valves, and the ENERGY CONTROL power measurement. Additionally, CALOSEC CONTROL offers the option of connecting a condensate drain (voltage supply and signal contact) and a flow rate meter (4 - 20 mA signal).

#### **Floating contacts**

CALOSEC CONTROL features a configurable group alarm and operating message. Furthermore, there is a contact for remote control of the dryer, which enables intermittent operation (completion of the ongoing regeneration when remote-off is activated).

# **CSA** series: Premium for exceptional efficiency

CSA Premium series desiccant dryers offer highly efficient compressed air drying down to a pressure dew point of -40°C, completely without need of compressed air (Zero Purge). The generous dimensioning that enables a fixed cycle to last a full 12 hours – or even longer according to demand, thanks to pressure dew point control – ensures significant energy savings and high operational reliability. The SILICAGEL ECO premium desiccant requires an approximately 20% lower desorption temperature than activated alumina, resulting in approximately 15% electrical power savings compared to what is typically required. Furthermore, desorption in counterflow and cooling in co-current flow for adsorption ensure efficient moisture removal and optimal regeneration of the desiccant's quality layer, resulting in exceptional drying performance. In the CSA-V series, the required flow direction ("vacuum") reversal is achieved by changing the conveying direction of a side channel fan. The CSA series uses radial fans for airflows over 70 m<sup>3</sup>/min. In this case, the change in flow direction is achieved through ducting and valve control.

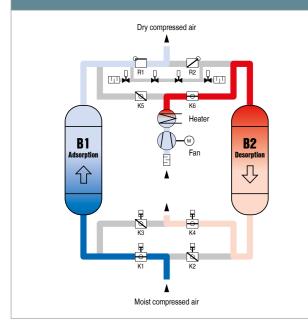
# **Central regeneration air outlet (option)**

Installation of additional check valves R3, R4, R5 and R6 and another intake filter in its own piping. For the CSA-V series, a central regeneration air outlet offers the following advantages:



No blowing out of warm, moist air into the installation room during desorption, thus eliminating the risk of the expelled desorption air being drawn back in from the room for desiccant cooling.

#### 1/4 – Adsorption / desorption



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#### Adsorption:

B1 is drying (adsorbs); desiccant is "loaded".

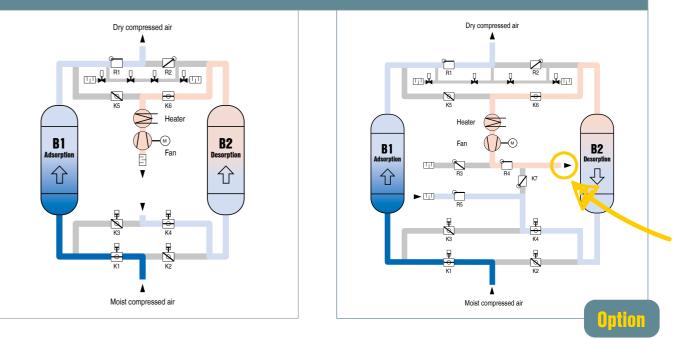
#### Desorption:

The fan draws in ambient air and relieves the heater by preheating the air (positive fan); the heater heats the ambient air to the required desorption temperature; hot air flows through B2 in counterflow, unloads the desiccant, and carries moisture away.

#### Advantage:

In the drying phase, moisture loading of the desiccant in B1 decreases in the direction of flow; in the desorption phase in B2, optimal moisture removal occurs due to the highest temperature from the quality layer at the chamber head; moisture is removed in the shortest path, i.e. with minimal effort, from zones with the highest loading towards the chamber bottom.

#### **2/4** – Adsorption / cooling and pressure build-up



#### Adsorption:

B1 is drying (adsorbs); desiccant is "loaded".

#### Cooling:

The fan operates in suction mode ("vacuum"), conveying ambient air in co-current flow via B2 and cooling the desiccant; maintaining a maximum ambient dew point of 18°C prevents preloading of the desiccant; co-current cooling prevents preloading of the desiccant's quality layer at the chamber head; warm ambient air is discharged by the fan.



Central outlet for connection of a regeneration air line, resulting in lower on-site installation costs.

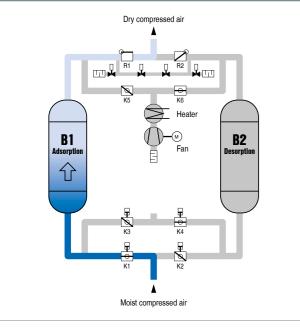
#### AMBIENT CONTROL:

If the ambient dew point is too high (determined by the integrated humidity and temperature sensor), cooling is performed using compressed air (as with the CSP series); the operating mode is selectable.



# **CSA** series: Premium for exceptional efficiency

# 3/4 - Adsorption / standby



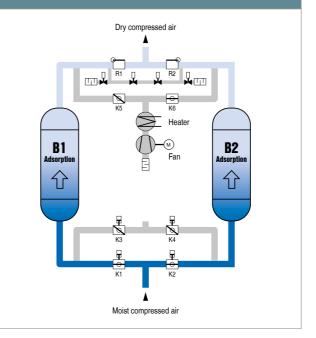
#### Adsorption

B1 is drying (adsorbs); desiccant is "loaded".

#### Standby:

B2 is ready for operation; residual heat is available.

### 4/4 - Parallel mode



# Versatile drying processes

An efficient solution for every application. Proven process technology paired with state-of-the-art control technology represent the three variable basic concepts of the CSP, CSA and CSL series, which are ideal for use in all climate zones worldwide.

The standard series are each available in 17 different performance levels. Higher flow rates are also available upon customer request.



With the CALOSEC CSA(-V) Premium series, desorption occurs in counterflow to the adsorption direction with heated ambient air, and cooling is achieved using ambient air in co-current flow. This results in zero compressed air loss for regeneration (Zero Purge). Use of the 'Zero Purge' process depends on the ambient dew point. It can only be used up to a maximum value. Unlike conventional Zero Purge dryers, the CALOSEC CSA(-V) series can be reliably used even in phases with higher ambient dew points when AMBIENT CONTROL is activated.

#### CSP series: Cooling with compressed air

With the smart CALOSEC CSP series, which can be used universally and worldwide, desorption takes place with heated ambient air in counterflow to the adsorption direction, and cooling is achieved using depressurised partial flow from the dried compressed air flow.



# **CSL(-V)** series: Loop cooling

#### Adsorption B1:

The flow rate is reduced by approximately 50%; B1 is drying (adsorbs); the desiccant is "loaded".

#### Adsorption B2:

In this phase (residual heat available), approximately 50% of the inlet flow rate is directed to B2, causing it to cool further and "load" the desiccant. Once cooling is complete, the next half-cycle begins again at step 1. In this step, B2 is supplied with 100% of the inlet flow rate, while B1 undergoes desorption.

#### CSA(-V) series: Cooling with ambient air

With the water-cooled CALOSEC CSL(-V) series, desorption occurs in counterflow to the adsorption direction with heated fan air, and cooling is achieved using fan air in co-current flow in the closed cooling circuit (Loop). The cooling phase is therefore independent of the ambient conditions. This also makes stable pressure dew points down to -70 °C possible. CALOSEC CSL(-V) systems can also be used worldwide in all climate zones. No compressed air is required for the cooling phase (Zero Purge).

# **Options**

- Central regeneration air outlet for CSA-V series
- Desiccant chamber insulation, including openings for acoustic emission testing
- Pressure dew point to -70 °C for CSL-(V) series
- End-position monitoring for additional valves (standard for inlet valves)
- Additional temperature transmitter at outlet
- Single-wire marking
- ENERGY CONTROL (power meter in control cabinet)
- Outdoor installation version

- Power supply 380 440 V / 3 / 60 Hz
- Surfaces in contact with compressed air free from non-ferrous metals
- Heat exchanger for on-site steam or hot water connection
- Silicone-free version
- Maximum ambient temperature > 40°C
- 16 bar working pressure
- EAC approval

Views

x = P, A, L



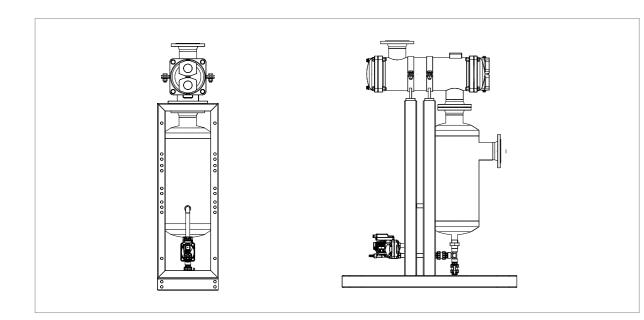


CSx(-V 97) – CSx(-V) 383

CSx(-V 433) - CSx(-V 567)

# **Precooling unit**

Low compressed air inlet temperatures in the dryer allow for a more economical design, can minimise compressed air discharge temperatures, and provide increased reliability and energy efficiency.



- Efficient cooling of the compressed air via a water-cooled shell and tube heat exchanger
- Low differential pressure (both on the air and water sides)
- Low cooling water consumption
- Condensate separator and ECO-DRAIN included
- Cooling water flow through piping
- Tube bundle retractable from both sides
- Compact design
- Design as per AD2000
- CE certification





CSx 700 - CSx 1558

# **Technical data**

Model (x = P, A, L)		CSx(-V) 97	CSx(-V) 120	CSx(-V) 147	CSx(-V) 183	CSx(-V) 233	CSx(-V) 283	CSx(-V) 333		
Flow rate (as per ISO 7183 Option A1)	m³/min	9.7	12	14.7	18.3	23.3	28.3	33.3		
Pressure dew point	°C	-40								
CSP: Ø Power requirement (cycle averaged)		4.7	5.7	7.1	8.6	10.6	13.4	15.2		
CSA(-V): Ø Power requirement (cycle averaged)	kW	4.7	5.3	7.1	7.8	10.3	13.1	15.1		
CSL(-V): Ø Power requirement (cycle averaged)	kW	4.2	5.1	6.7	7.6	10	12.2	13.9		
Ø Regeneration air requirement – Compressed air	%		1	CSP:	2% I CSA-(V): 0%	I CSL-(V): 0%	1			
Pressure loss (without filter)	bar				≤ 0.15					
CSL(-V): Cooling water requirement (cooling phase only)	m³/h	1	1	1	1	1	2	2		
CSL(-V): Cooling water temperature – Return	к		1	+8 K based o	on cooling water ter	nperature – Inlet flow		1		
Quality at compressed air inlet (ISO 8573-1)	-	[2, max. 100% RH, 2]								
Working pressure	bar	5-11								
Ambient temperature	°C	+5 - +40								
Compressed air inlet temperature	°C	+5-+40								
Power supply		400 V ± 10 % / 3 Ph / 50 Hz								
Desiccant drying layer		CSP: Activated alumina   CSA-(V): Silicagel Eco   CSL-(V): Silicagel Eco								
Fixed cycle					12 h					
Product conformity		CE, UKAS								
CSL(-V): Cooling water pressure	bar	4-6								
CSL(-V): Max. cooling water temperature - Inlet flow	°C	32								
Compressed air / regeneration air connections	DN	50	50	50	80	80	80	100		
KAESER model		CSP 97	CSP 120	CSP 147	CSP 183	CSP 233	CSP 283	CSP 333		
Width	mm	1510	1550	1600	1650	1700	1750	1800		
Height	mm	2315	2325	2390	2420	2450	2485	2550		
Depth	mm	1250	1275	1320	1370	1470	1600	1620		
Weight incl. insulated desiccant chamber	kg	1150	1250	1350	1650	1900	2250	2600		
KAESER model		CSA-V 97	CSA-V 120	CSA-V 147	CSA-V 183	CSA-V 233	CSA-V 283	CSA-V 333		
Width	mm	1510	1550	1600	1650	1700	1750	1800		
Height	mm	2320	2320	2400	2425	2660	2710	2755		
Depth	mm	1250	1270	1320	1370	1470	1600	1620		
Weight incl. insulated desiccant chamber	kg	1150	1250	1350	1650	1900	2250	2600		
KAESER model		CSL-V 97	CSL-V 120	CSL-V 47	CSL-V 183	CSL-V 233	CSL-V 283	CSL-V 333		
Width	mm	1580	1625	1600	1650	1700	1870	1830		
Height	mm	2340	2340	2400	2425	2460	2510	2550		
Depth	mm	1385	1385	1410	1480	1530	1690	1750		
Weight incl. insulated desiccant chamber	kg	1300	1400	1500	1800	2050	2300	2700		
Accessories										
KAESER model (x = P, A, L)		CSx(-V) 97	CSx(-V) 120	CSx(-V) 147	CSx(-V) 183	CSx(-V) 233	CSx(-V) 283	CSx(-V) 333		
KE prefilter with ECO-DRAIN 31 / 24 – 48 AC		F185KE	F185KE	F185KE	F185KE	F350KE	F350KE	F350KE		
KD high-temperature afterfilter, recommendation for Class 2 (ISO 8573-1)		FD185 HT	FD185 HT	FD185 HT	FD185 HT	FD354 HT	FD354 HT	FD354 HT		
, ,										
KE high-temperature afterfilter, additional recommendation Class 2 (ISO 8573-1)	for	FE185 HT	FE185 HT	FE185 HT	FE185 HT	FE354 HT	FE354 HT	FE354 HT		

CSx(-V) 383	CSx(-V) 433	CSx(-V) 483	CSx(-V) 567	CSx 700	CSx 833	CSx 1000	CSx 1167	CSx 1367	CSx 1558				
38.3	43.3	48.3	56.7	70	83.3	100	116.7	136.7	155.8				
-40													
17.7	19.9	22	25.8	30.3	36.4	43.6	50.9	59.4	67.7				
17.4	20.4	21.5	26.3	29.1	35.8	43	50	58.2	66.6				
16.2	19.1	20.5	24.1	26.7	33.1	39.7	46.3	54.3	62				
CSP: 2%   CSA-(V): 0%   CSL-(V): 0%													
≤ 0.15													
2	2	2	3	4	5	5	6	7	8				
+8 K based on cooling water temperature – Inlet flow													
[2, max. 100% RH, 2]													
5-11 5-10													
+5 - +40													
+5 - +40													
400 V ± 10 % / 3 Ph / 50 Hz													
CSP: Activated alumina   CSA-(V): Silicagel Eco   CSL-(V): Silicagel Eco													
12 h													
CE, UKAS													
				4	- 6								
				3	32			1					
100	100	100	100	150	150	150	150	150	200				
CSP 383	CSP 433	CSP 483	CSP 567	CSP 700	CSP 833	CSP 1000	CSP 1167	CSP 1367	CSP 1558				
1890	1940	1990	2200	3355	3500	3755	3915	4335	4295				
2595	2645	2665	2780	2860	2920	2985	3045	3130	3215				
1700	1820	1850	2050	1935	1935	2010	2135	2265	2565				
2800	3100	3350	3850	5200	5900	6500	7400	8700	9900				
CSA-V 383	CSA-V 433	CSA-V 483	CSA-V 567	CSA 700	CSA 833	CSA 1000	CSA 1167	CSA 1367	CSA 1558				
1890	1940	1990	2200	3470	3615	3765	3925	4225	4500				
2800	2820	2840	2990	3070	3130	3170	3230	3390	3450				
1695	1810	1840	2050	2040	2070	2150	2250	2530	2700				
2800 CSL-V 383	3100 CSL-V 433	3350 CSL-V 483	3850 CSL-V 567	5200	5900 CSL 833	6500 CSL 1000	7400 CSL 1167	8700 CSL 1367	9900 CSL 1558				
1890	1940	1990	2200	3375	3480	3755	3805	4185	4320				
2600	2620	2640	2785	2900	2955	2995	3055	3170	3250				
1840	1975	2030	2200	2250	2250	2485	2525	2640	2780				
2900	3150	3400	3950	5200	5900	6500	7400	8700	9900				
1000	0.00	0.00		5255				0.00					
CSx(-V) 383	CSx(-V) 433	CSx(-V) 483	CSx(-V) 567	CSx 700	CSx 833	CSx 1000	CSx 1167	CSx 1367	CSx 1558				
F530KE	F530KE	F530KE	F700KE	F700KE	F880KE	F1060KE	F1410KE	F1940KE	F1940KE				
·			50500 117	ED700 UT	FD885-1 HT	FD1060 HT	FD1420 HT	FD1950-1 HT	FD1950-1 HT				
FD526 HT	FD708 HT	FD708 HT	FD708 HT	FD708 HT	100031111	101000111		T D 1000 T T T	101930-1111				
FD526 HT FE526 HT	FD708 HT FE708 HT	FD708 HT FE708 HT	FD708 HT	FE708 HT	FE885-1 HT	FE1060 HT	FE1420 HT	FE1950-1 HT	FE1950-1 HT				

# More compressed air for less energy The world is our home

As one of the world's largest manufacturers of compressors, blowers and compressed air systems, KAESER KOMPRESSOREN is represented throughout the world by a comprehensive network of wholly owned subsidiaries and authorised distribution partners in over 140 countries.

By offering innovative, efficient and reliable products and services, KAESER KOMPRESSOREN's experienced consultants and engineers work in close partnership with customers to enhance their competitive edge and to develop progressive system concepts that continuously push the boundaries of performance and technology. Moreover, decades of knowledge and expertise from this industry-leading systems provider are made available to each and every customer via the KAESER group's advanced global IT network.

These advantages, coupled with KAESER's worldwide service organisation, ensure that every product operates at the peak of its performance at all times, providing optimal efficiency and maximum availability.







#### KAESER KOMPRESSOREN SE

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