

**CHAMPION**

by Gardner Denver

# Screw Compressors 11 - 22kW

KSA Plus Fixed Speed, KSV Variable Speed



Smart and affordable

## KSA Plus Screw Compressors

### Up to 45°C ambient temperature

Proper sizing of the ventilation system and combined radiator ensure optimum cooling of the air/oil blend and output compressed air – at a temperature that is only 8 / 10 °C higher than ambient temperature.



### Enduro® plus screw airend

At Gardner Denver, we pay the utmost attention to the manufacturing of our screw airends, and we test and monitor every single item that we make. Representing the core of all our ENDURO® PLUS airends, rotors are accurately and thoroughly checked and measured by a computerised control system.

### Tank Dryer, Compressor - Air Provider

CT, CTD configurations represent different applications of the KSA/ KSV compressors, to provide an integrated station for the generation and treatment of compressed air. Configurations have been specially designed to ensure that they are all fully modular. You can start off with an individual KSA/KSV compressor, and then expand your station by simply adding the accessory you need.

Dryers achieve excellent performance even in instances of high ambient and high inlet temperatures.

The Highly efficient and ultra compact heat exchanger is able to operate effectively in ambient temperatures up to 45°C and inlet temperatures of 55°C, ensuring a reduced compressed air pressure drop.



### Air basic 2 control unit

This electronic control unit is easy to use and allows the compressor to be fully managed, controlled elements include the star-delta motor, the rotation direction, the ON OFF operation with automatic discharge of pressure when the machine is stopped, all remote controls, all protection and warning alarms, in addition to a complete series of messages connected with ordinary maintenance.



Valid for KSV range only

## Options

A number of optional applications complementing the CT and CTD versions are available for this range of compressor to ensure your integrated plant is fully functional.

More specifically:

**KIT Filters.** KSA / KSV compressors (CTD configuration) can be complemented with a kit of filters, ensuring that the air is treated upstream from its input into the system, thus reducing the chance of condensate to build up inside the network. These filters are supplied complete with automatic condensate drain traps.

**Automatic Drains.** Another optional extra is the automatic condensate drain trap for tanks. Once installed and programmed, this drain trap will periodically remove any condensate that may have built up inside the tank.

**Anti Dust Panel.** To protect compressors operating in dusty environments or poor environmental conditions, KSA/KSV compressors can be equipped with a dust panel that ensures good filtration of the intake cooling air.

## Housing

The housing consists of a solid palletised base for easy handling and a structure made of fully removable panels for easy access. The panels are completely lined internally with closed-cell acoustic material that is covered with a fully washable, oil-proof and damp-proof film. Although "high-tech", this material is easy to dispose of, with no impact whatsoever on the environment.



## Noise Levels

Appropriate canalisation of the air flow provides minimum sound (noise levels at 64 db) for the benefit of the environment and machine operators. It also ensures optimised cooling.



## Suction valve

Improved fluid-mechanical efficiency is ensured by a new vertical design suction valve. Intake-air flows through a straight-line path, which guarantees lower load loss. ON/OFF operation and unloading is controlled via a solenoid valve. This valve concept has been specially designed to keep the number of components down to a minimum, so as to ensure long-lasting durability and low maintenance requirements.

## Reduced maintenance costs

The panel structure provides easy access from all sides. All the components which need periodical maintenance – air cartridge, oil cartridge, air/oil separator, belts, oil fill and drain – can be reached from a single side

## Air/Oil separation

Increased reliability combined with reduced piping & connections is made possible by an integrated block acting as air/oil separator and filter. It is so efficient that it keeps residual oil down to extremely low levels (MAX 3ppm). Housed in this block are an oil filter, an air/oil separator filter, a minimum pressure valve and a safety valve.



## KSV

The result is an extremely quiet and environment friendly compressor with reduced electrical input and easily recyclable materials.



= Energy savings and lower CO<sub>2</sub> emissions into the environment.

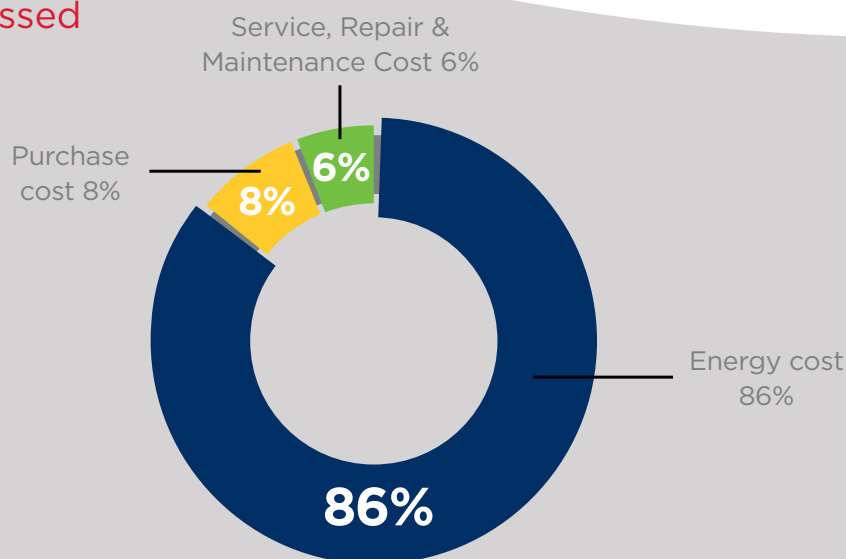
### The right solution saves you money.

Compressed air is not free and has a big impact on plant productivity. The wrong air system is costly - in the form of excessive energy, repair and maintenance costs, downtime, poor compressed air quality, unacceptable noise levels and more. System design and compressor choice are important decisions with long lasting implications.

### The variable speed compressor: One smart solution.

Variable speed compressors can efficiently and reliably handle the varying air demand found in most plant air systems. These compressors speed up and slow down to match air supply to air demand as it fluctuates. The right variable speed compressor in the right application delivers significant energy savings and a stable, consistent air supply.

### Cost of compressed air over 5 years



### Compressor energy cost example

Nominal kW	Operating Cost per Year (5000 hours) at Cost per KWh (€)					
	0.06	0.08	0.10	0.12	0.14	0.16
11	€3.295	€4.395	€5.490	€6.590	€7.690	€8.785
15	€4.495	€5.990	€7.490	€8.985	€10.483	€11.980
18	€5.540	€7.390	€9.235	€11.080	€12.930	€14.775
22	€6.590	€8.785	€10.980	€13.180	€15.375	€17.570

Note: Hours of operation based on two 8hrs-shifts, 6 days per week. Calculations based on nominal kW.



Allows substantial energy savings of at least 25% of the energy cost





# FlexiAir the correct response to changing air demand

## Electrical components

Completing the equipment of the KSV range is a set of market leading electrical components including IP 55 electric motors (class F).

## AirSmart™ controller

Complete, simple and intuitive. Combined with our inverter, provides excellent energy savings.

## Inverter

Generously sized and reliable the result of our extensive experience.

## The AirSmart™ controller orchestrating your compressed air system

### Simplicity

The AirSmart™ Controller was designed to make the operators' interface with the variable speed drive transparent. You don't need to be an expert on variable speed drives to operate our compressor. The controller takes care of the details and automatically adjusts the compressor performance to meet your changing air system demands - saving you energy. Changing the discharge pressure is as easy as pressing a button.

### Communication & Sequencing

The optional communication module allows the KSV Series units to talk to each other and other compressors to optimise system efficiency. This isn't just an hour balancing, on/off sequencing scheme, our controller allows the system to truly optimise efficiency because it knows the capabilities of other machines and orchestrates their operation.

### Advanced Display

The controller has a four line display with menus and tactile buttons for easy navigation. Two lines display operating information such as pressure, temperature, operating hours, etc. while the other two lines display advisory messages, shutdown messages and service contact information



## Maintenance is as easy as ever

### Fast and easy service

These compressors are designed to ensure easy access to maintenance points. All panels on the structure can be easily removed to allow full access to all service points. Also, the limited number of moving parts reduces service costs.

### Service network

Our large network of approved Champion dealers is always at your service to ensure the smooth running of your compressor and ensure the swift supply of replacement parts to respond for different system needs.

### Aftersales service

Champion offers a full range of aftersales services to fulfil all customer requirements, using original and genuine parts will ensure customers save time and money over the life of the compressor.



## Technical data

### KSA Plus - Stand alone compressor



Model	Ref	FAD <sup>1)</sup> Max	Nominal pressure	Drive motor	Noise level at 100% load <sup>2)</sup> , 1m	Tank	Weight	Dimensions	Out BSP
		m <sup>3</sup> /min	bar g	kW	dB(A)	Litres	kg	L x W x H mm	D
KSA 11 PLUS-8	CMP1091158N	1.65	8	11	66	-	242	960 x 740 x 1090	3/4"
KSA 11 PLUS-10	CMP1091159N	1.5	10						
KSA 11 PLUS-13	CMP1091160N	1.15	13						
KSA 14 PLUS-8	CMP1116459N	1.98	8	15	70	-	290	960 x 740 x 1090	3/4"
KSA 14 PLUS-10	CMP1116461N	1.8	10						
KSA 14 PLUS-13	CMP1116462N	1.57	13						
KSA 15 PLUS-8	CMP1091161N	2.21	8	15	69	-	301	960 x 740 x 1090	3/4"
KSA 15 PLUS-10	CMP1091162N	2	10						
KSA 15 PLUS-13	CMP1091163N	1.6	13						
KSA 18 PLUS-8	CMP1091164N	2.8	8	18.5	73	-	333	960 x 740 x 1090	1"
KSA 18 PLUS-10	CMP1091166N	2.5	10						
KSA 18 PLUS-13	CMP1091168N	1.93	13						
KSA 22 PLUS-8	CMP1091171N	3.35	8	22	73	-	333	960 x 740 x 1090	1"
KSA 22 PLUS-10	CMP1091172N	2.95	10						
KSA 22 PLUS-13	CMP1091174N	2.4	13						

### KSA Plus CT - Tank mounted compressor

Model	Ref	FAD <sup>1)</sup> Max	Nominal pressure	Drive motor	Noise level at 100% load <sup>2)</sup> , 1m	Tank	Weight	Dimensions	Out BSP
		m <sup>3</sup> /min	bar g	kW	dB(A)	Litres	kg	L x W x H mm	D
KSA 11 PLUS-8 / 500	CMP1091220N	1.65	8	11	66	500	392	1960 x 740 x 1725	3/4"
KSA 11 PLUS-10 / 500	CMP1091221N	1.5	10						
KSA 11 PLUS-13 / 500	CMP1091222N	1.15	13						
KSA 14 PLUS-8 / 500	CMP1116468N	1.98	8	15	70	500	440	1960 x 740 x 1725	3/4"
KSA 14 PLUS-10 / 500	CMP1116470N	1.8	10						
KSA 14 PLUS-13 / 500	CMP1116471N	1.57	13						
KSA 15 PLUS-8 / 500	CMP1091223N	2.21	8	15	69	500	451	1960 x 740 x 1725	3/4"
KSA 15 PLUS-10 / 500	CMP1091224N	2	10						
KSA 15 PLUS-13 / 500	CMP1091225N	1.6	13						
KSA 18 PLUS-8 / 500	CMP1091226N	2.8	8	18.5	73	500	483	1960 x 740 x 1725	3/4"
KSA 18 PLUS-10 / 500	CMP1091227N	2.5	10						
KSA 18 PLUS-13 / 500	CMP1091228N	1.93	13						
KSA 22 PLUS-8 / 500	CMP1091230N	3.35	8	22	73	500	483	1960 x 740 x 1725	3/4"
KSA 22 PLUS-10 / 500	CMP1091232N	2.95	10						
KSA 22 PLUS-13 / 500	CMP1091233N	2.4	13						

### KSA Plus CTD - Tank mounted compressor with add-on dryer

Model	Ref	FAD <sup>1)</sup> Max	Nominal pressure	Drive motor	Noise level at 100% load <sup>2)</sup> , 1m	Tank	Weight	Dimensions	Out BSP
		m <sup>3</sup> /min	bar g	kW	dB(A)	Litres	kg	L x W x H mm	D
KSA 11 PLUS-8 / D18 / 500	CMP1091265N	1.65	8	11	66	500	426	1960 x 740 x 1725	3/4"
KSA 11 PLUS-10 / D18 / 500	CMP1091266N	1.5	10						
KSA 11 PLUS-13 / D18 / 500	CMP1091267N	1.15	13						
KSA 14 PLUS-8 / D25 / 500	CMP1116474N	1.98	8	15	70	500	474	1960 x 740 x 1725	3/4"
KSA 14 PLUS-10 / D25 / 500	CMP1116475N	1.8	10						
KSA 14 PLUS-13 / D25 / 500	CMP1116476N	1.57	13						
KSA 15 PLUS-8 / D25 / 500	CMP1091268N	2.21	8	15	69	500	485	1960 x 740 x 1725	3/4"
KSA 15 PLUS-10 / D25 / 500	CMP1091269N	2	10						
KSA 15 PLUS-13 / D25 / 500	CMP1091270N	1.6	13						
KSA 18 PLUS-8 / D25 / 500	CMP1091271N	2.8	8	18.5	73	500	519	1960 x 740 x 1725	3/4"
KSA 18 PLUS-10 / D25 / 500	CMP1091272N	2.5	10						
KSA 18 PLUS-13 / D25 / 500	CMP1091273N	1.93	13						
KSA 22 PLUS-8 / D32 / 500	CMP1091275N	3.35	8	22	73	500	524	1960 x 740 x 1725	3/4"
KSA 22 PLUS-10 / D32 / 500	CMP1091276N	2.95	10						
KSA 22 PLUS-13 / D32 / 500	CMP1091277N	2.4	13						

\* Air flow rate measured according to standards ISO 1217, ed.4, ANNEX E – 2009 and test code / Pneurop / Cagi PN 2 CPTC2 at the following working pressure: 7 bar versions at 7.5/8/8.5 bar; 9 bar versions at 10 bar; 12 bar versions at 13 bar.

\*\* Sound pressure level measured according to standards ISO 2151 and ISO 3744 at 1 m distance in a free field.

WARNING: in particular indoor installation environments, the noise may increase by as much as 6\_10 dB(A) due to sound reflections against the walls. The manufacturer may change the above-mentioned technical specifications without prior notice.



## KSV - Stand alone compressor

Model	Ref	FAD <sup>*)</sup> m³/min		Nominal pressure	Drive motor	Noise level at 100% load <sup>**)</sup> , 1m	Tank	Weight	Dimensions	Out BSP
		Max.	Min.	bar g	kW	dB(A)	Litres	kg	L x W x H mm	D
KSV 11- 7.5	CMP1091158V	1.65	0.49	7.5	11	63	-	303	1250 x 740 x 1090	3/4"
KSV 11- 10	CMP1091159V	1.50	0.55	10						
KSV 11- 13	CMP1091160V	1.15	0.46	13						
KSV 15- 7.5	CMP1091161V	2.21	0.47	7.5	15	64	-	363	1250 x 740 x 1090	3/4"
KSV 15- 10	CMP1091162V	2.00	0.60	10						
KSV 15- 13	CMP1091163V	1.60	0.59	13						
KSV 18- 7.5	CMP1091164V	2.80	0.64	7.5	18.5	65	-	402	1250 x 740 x 1090	1"
KSV 18- 10	CMP1091166V	2.50	0.66	10						
KSV 18- 13	CMP1091168V	1.93	0.66	13						
KSV 22- 7.5	CMP1091171V	3.35	0.76	7.5	22	67	-	422	1250 x 740 x 1090	1"
KSV 22- 10	CMP1091172V	2.95	0.64	10						
KSV 22- 13	CMP1091174V	2.40	0.74	13						

## KSV CT - Tank mounted compressor

Model	Ref	FAD <sup>*)</sup> m³/min		Nominal pressure	Drive motor	Noise level at 100% load <sup>**)</sup> , 1m	Tank	Weight	Dimensions	Out BSP
		Max.	Min.	bar g	kW	dB(A)	Litres	kg	L x W x H mm	D
KSV 11- 7.5 / 500	CMP1091220V	1.65	0.49	7.5	11	63	500	453	1960 x 740 x 1725	3/4"
KSV 11- 10 / 500	CMP1091221V	1.50	0.55	10						
KSV 11- 13 / 500	CMP1091222V	1.15	0.46	13						
KSV 15- 7.5 / 500	CMP1091223V	2.21	0.47	7.5	15	64	500	513	1960 x 740 x 1725	3/4"
KSV 15- 10 / 500	CMP1091224V	2.00	0.60	10						
KSV 15- 13 / 500	CMP1091225V	1.60	0.59	13						
KSV 18- 7.5 / 500	CMP1091226V	2.80	0.64	7.5	18.5	65	500	552	1960 x 740 x 1725	1"
KSV 18- 10 / 500	CMP1091227V	2.50	0.66	10						
KSV 18- 13 / 500	CMP1091228V	1.93	0.66	13						
KSV 22- 7.5 / 500	CMP1091230V	3.35	0.76	7.5	22	67	500	572	1960 x 740 x 1725	1"
KSV 22- 10 / 500	CMP1091232V	2.95	0.64	10						
KSV 22- 13 / 500	CMP1091233V	2.40	0.74	13						

## KSV CTD - Tank mounted compressor with add-on dryer

Model	Ref	FAD <sup>*)</sup> m³/min		Nominal pressure	Drive motor	Noise level at 100% load <sup>**)</sup> , 1m	Tank	Weight	Dimensions	Out BSP
		Max.	Min.	bar g	kW	dB(A)	Litres	kg	L x W x H mm	D
KSV 11- 7.5 / D23 / 500	CMP1091265V	1.65	0.49	7.5	11	63	500	486	1960 x 740 x 1725	3/4"
KSV 11- 10 / D23 / 500	CMP1091266V	1.50	0.55	10						
KSV 11- 13 / D23 / 500	CMP1091267V	1.15	0.46	13						
KSV 15- 7.5 / D23 / 500	CMP1091268V	2.21	0.47	7.5	15	64	500	558	1960 x 740 x 1725	3/4"
KSV 15- 10 / D23 / 500	CMP1091269V	2.00	0.60	10						
KSV 15- 13 / D23 / 500	CMP1091270V	1.60	0.59	13						
KSV 18- 7.5 / D30 / 500	CMP1091271V	2.80	0.64	7.5	18.5	65	500	592	1960 x 740 x 1725	1"
KSV 18- 10 / D30 / 500	CMP1091272V	2.50	0.66	10						
KSV 18- 13 / D30 / 500	CMP1091273V	1.93	0.66	13						
KSV 22- 7.5 / D35 / 500	CMP1091275V	3.35	0.76	7.5	22	67	500	614	1960 x 740 x 1725	1"
KSV 22- 10 / D35 / 500	CMP1091276V	2.95	0.64	10						
KSV 22- 13 / D35 / 500	CMP1091277V	2.40	0.74	13						

\* Air flow rate measured according to standards ISO 1217, ed.4, ANNEX E – 2009 and test code / Pneurop / Cagi PN 2 CPTC2 at the following working pressure: 7 bar versions at 7.5/8.5 bar; 9 bar versions at 10 bar; 12 bar versions at 13 bar.

\*\* Sound pressure level (at 70% load) measured according to standards ISO 2151 and ISO 3744 at 1 m distance in a free field.

WARNING: in particular indoor installation environments, the noise may increase by as much as 6\_10 dB(A) due to sound reflections against the walls.

**CHAMPION**

by Gardner Denver

## Smart and affordable

**Champions piston compressor range** is designed to cover all the possible professional uses of compressed air. Our piston compressors in various forms and sizes, provide a truly complete range of choice.



**Champion stationary rotary screw compressors**, both fixed and variable speed drive, are the answer to the needs of industry and of small/medium-sized companies.

The complete range is designed for continuous operation under the most severe conditions of use, with particular attention to modularity, energy consumption, low operating and maintenance costs, and ease of installation and use.



A modern production system and process demands increased levels of air quality. Our complete **Air Treatment Range** ensures product quality and efficient operation.



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[www.championcompressors.eu](http://www.championcompressors.eu)

For additional information please contact  
 your local representative.

Specifications subject to change without notice.