



CHAMPION

BIG ON QUALITY. CHAMPION ON PRICE!



June 2019

www.ChampionAirtech.com

S SERIES

100% OIL-FREE GUARANTEED

PREMIUM OIL-FREE ROTARY SCROLL COMPRESSORS

- 100% oil-free design
- High reliability
- Continuous operation, 100% duty cycle
- Energy efficient
- Low vibration and sound levels
- Compact design
- Low maintenance due to less moving parts



OIL FREE
ISO CLASS 0.001/0.01/0.05/0.1/0.5/1/5/10/20/50/100/200/500/1000

OIL FREE
ISO CLASS 0.001/0.01/0.05/0.1/0.5/1/5/10/20/50/100/200/500/1000

CHAMPION
504

SPECIALIST IN OIL-FREE TECHNOLOGIES

At a glance...

 **Nominal Pressure**
8 - 10 bar g

 **Motor Power**
4 - 15kW

 **Volume Flow**
21.2 - 106 m³/hr



Cutting edge technology development

Committed to developing environmentally friendly solutions, we ensure that our customers meet the demands of climate change legislation - reducing their carbon footprints by cutting energy bills and simply operating more efficiently.

Contaminant free. Risk free. 100% Oil-free

Compressed air purity is crucial for many industry sectors, such as medical, research and biotechnology. The new S-Series of oil-free scroll compressors from Champion does not use any oil anywhere in the compressor and has been certified ISO 8573-1 Class 0 and silicone free, which represents the highest air quality level possible.

In addition to the fulfilment of legal requirements, the oil-free scroll technology reduces the costs of ownership by avoiding oil filter replacements, oil condensate treatment and energy to combat the pressure loss caused by filtration.

CLASS	CONCENTRATION TOTAL OIL (AEROSOL, LIQUID, VAPOUR) MG/M³
0	As specified by the equipment user or supplier and more stringent than class 1
1	≤ 0.01
2	≤ 0.1
3	≤ 1
4	≤ 5

Compressor configuration

Depending on the application requirements, the versatile S-Series from Champion is available in various kW sizes. The scroll compressor range starts with Simplex units at 4, 6 and 8 kW and the Duplex units with 7, 11 and 15 kW. The compressor design features a very clean, simple and serviceable layout.





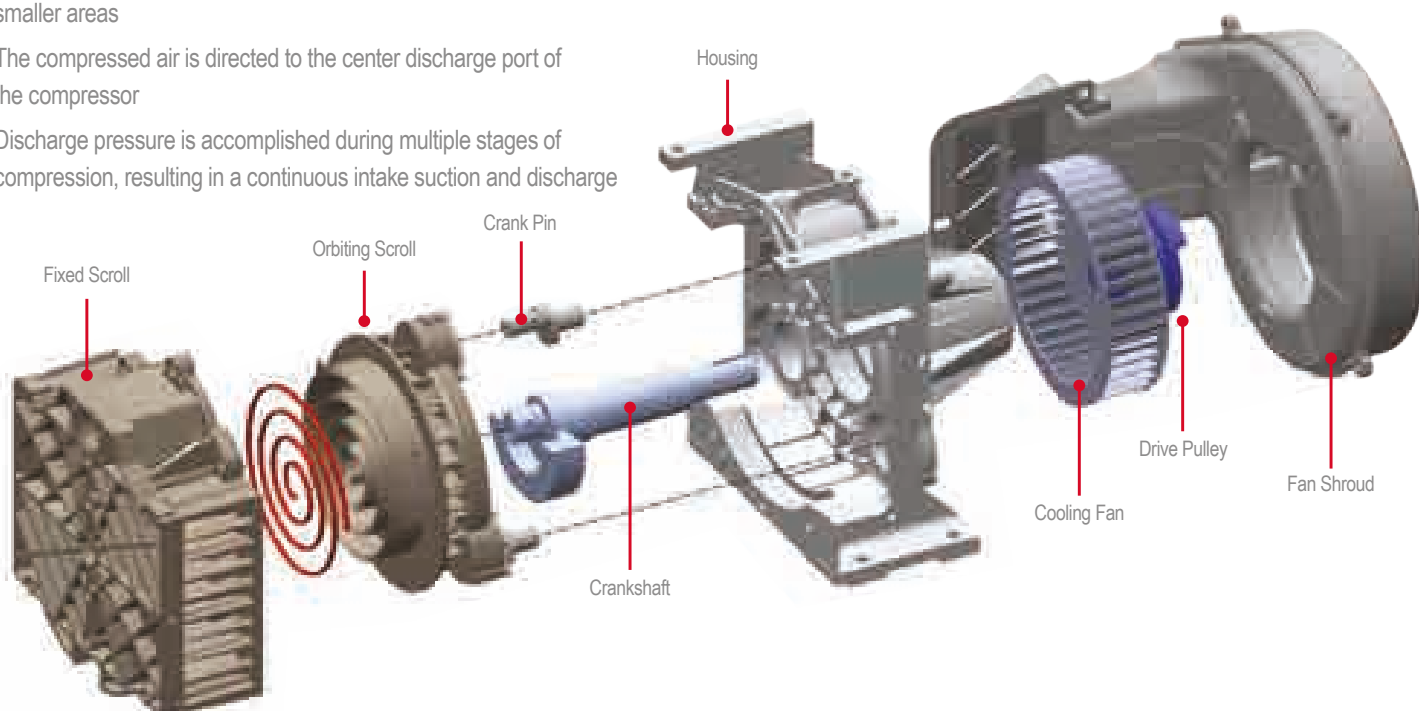
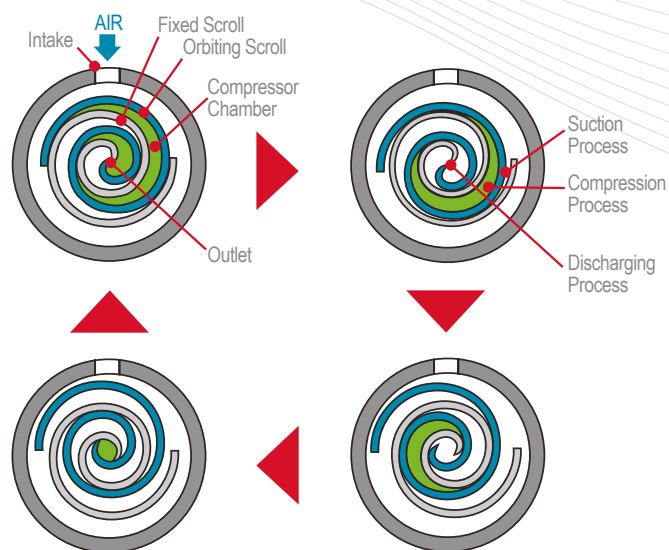
Industries with applications requiring oil-free air:

- **Transportation** - traditional and hybrid trucks, transit buses, school buses and trains
- **Automotive** - painting
- **Food & Beverage**
- **Electronics**
- **Medical/Healthcare** - instrument air and breathing air
- **Commercial Printing**
- **Biotechnology** - laboratory equipment
- **Drug Manufacture**

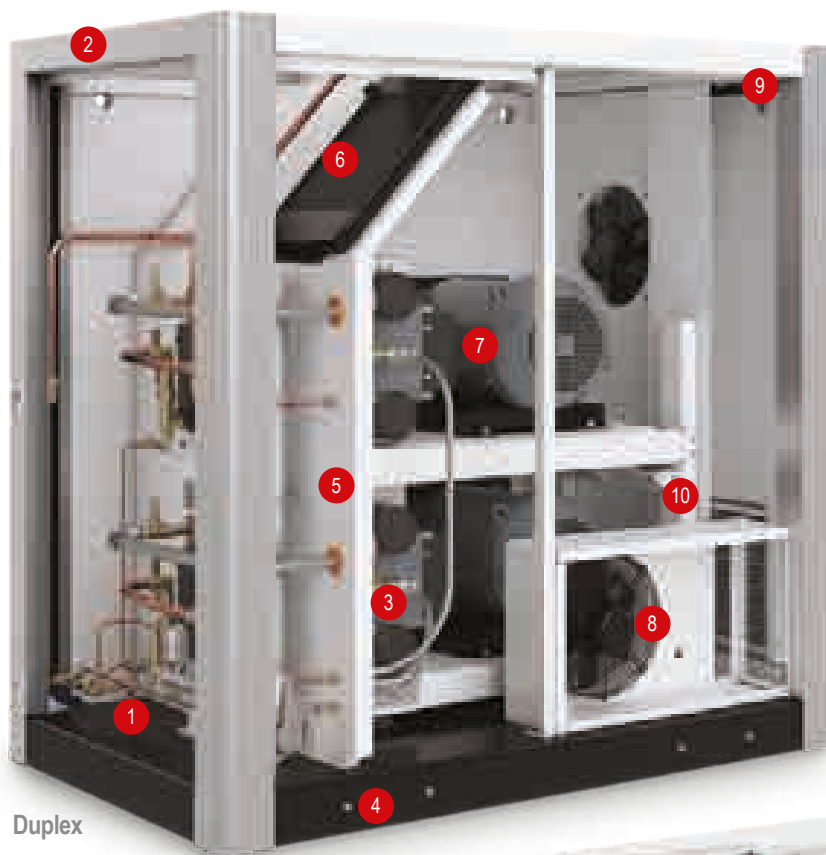
Innovative design

Scroll compression explained

- An orbiting (rotating) scroll and fixed scroll housing are mated to create the compression chambers
- The continual movement of the orbiting scroll moves atmospheric air from the intake toward the center, compressing the air into progressively smaller areas
- The compressed air is directed to the center discharge port of the compressor
- Discharge pressure is accomplished during multiple stages of compression, resulting in a continuous intake suction and discharge



S SERIES



Duplex

Champion S-Series

- 1 Automatic Condensate Drain
- 2 Rigid Framework
- 3 5 Micron Inlet Filter
- 4 Fork Slots for Easy Handling
- 5 Unique Chambered Design - Maximised Cooling and Serviceability
- 6 Large Industrial Aftercoolers
- 7 Premium Efficient TEFC Motor
- 8 High Volume Cooling Fan
- 9 Low Noise Sound Enclosure
- 10 Internal Vibration Isolators



Simplex



Controlling and monitoring

The S-Series from Champion is available with different controller options. The Simplex versions can be either equipped with the basic relay panel or optionally with the Deluxe HMI electronic controller.



- NEMA 1, UL508A Labeled Panel
- Magnetic Contactor with Overload Protection
- 115V Control Circuit Transformer with Fusing
- Door Mounted TOA Switch
- Green Power On Light
- Emergency Stop
- Reset Button
- Run Time Meter
- Pressure Gauge

The optional Deluxe HMI control from Champion has easy to use navigation and friendly graphics that deliver interactive and intuitive information at your fingertips.

With a built in integral webserver, via ModBus TCP Ethernet connection, these controllers provide visibility to the scroll compressor system from any computer or mobile device with internet connection.



Deluxe HMI

- 3.5" Full Color Touch Screen
- PLC Controlled
- Lead/Lag Control with Forced Alternation
- System Capacity and Operation Trending
- 26 Language Options
- 24V / DC Power Supply with Fusing
- System Run Time Meter
- Alarm/Fault Log
- System Discharge Pressure
- Pump Discharge Temperature
- System Maintenance Timers
- Integral Webserver
- Modbus TCP Interface over Ethernet

S4 – S8 Simplex Series: Oil free, Scroll compressors

Design: 100% oil free, scroll compressor, direct drive

Pressure Range: from 8 to 10 bar

Electric motor: from 4 to 7.5kW

S SERIES	TYPE	S4		S6		S8	
Maximum pressure	bar	8	10	8	10	8	10
Capacity ¹⁾	m³/h	23.6	21.2	34.5	26.0	53.0	41.3
Drive motor IP 55 / class F / IE3	kW	4		5.5		7.5	
Control voltage	24V	•		•		•	
Acoustic enclosure		•		•		•	
Air cooled		•		•		•	
RS485:1 Module for ModBus-RTU remote monitoring		•		•		•	

230V 50 / 60 Hz / Std. (DOL) / Basic Relay Control

MAT. NO.	SQ4-30A03C	SQ4-30A04C	SQ4-30A07C	SQ4-30A08C	SQ4-30A48C	SQ4-30A49C
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230 V 50 / 60 Hz / Std. (DOL) / Deluxe HMI electronic controller

MAT. NO.	SQ4-30A05C	SQ4-30A06C	SQ4-30A09C	SQ4-30A10C	SQ4-30A50C	SQ4-30A51C
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400 V 50 / 60 Hz / Std. (DOL) / Basic Relay Control

MAT. NO.	SQ4-30A11C	SQ4-30A12C	SQ4-30A58C	SQ4-30A59C	SQ4-30A62C	SQ4-30A47C
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400 V 50 / 60 Hz / Std. (DOL) / Deluxe HMI electronic controller

MAT. NO.	SQ4-30A13C	SQ4-30A14C	SQ4-30A60C	SQ4-30A61C	SQ4-30A63C	SQ4-30A64C
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400 V 50 / 60 Hz / Soft Start / Basic Relay Control

MAT. NO.	N/A	N/A	SQ4-30A15C	SQ4-30A16C	SQ4-30A19C	SQ4-30A20C
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400 V 50 / 60 Hz / Soft Start / Deluxe HMI electronic controller

MAT. NO.	N/A	N/A	SQ4-30A17C	SQ4-30A18C	SQ4-30A21C	SQ4-30A22C
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¹⁾ Data measured and stated in accordance with ISO 1.217 Edition 4, Annex C & E at the following conditions: Air Intake Pressure 1 bar a / 14,5 psi; Air Intake Temperature 20° C / 68° F; Humidity 0 % (dry)

S7D – S15D Duplex Series: Oil free, Scroll compressors

Design: 100% oil free, scroll compressor, direct drive

Pressure Range: from 8 to 10 bar

Electric motor: from 7 to 15kW

S SERIES	TYPE	S7D		S11D		S15D	
Maximum pressure	bar	8	10	8	10	8	10
Capacity ¹⁾	m³/h	47.2	42.5	69.0	52.0	106.0	82.6
Drive motor IP 55 / class F / IE3	kW	7		11		15	
Control voltage	24V	•		•		•	
Acoustic enclosure		•		•		•	
Air cooled		•		•		•	
RS485:1 Module for ModBus-RTU remote monitoring		•		•		•	

400 V 50 / 60 Hz / Std. (DOL) / Deluxe HMI electronic controller

MAT. NO.	SQ4-30A23C	SQ4-30A24C	SQ4-30A65C	SQ4-30A66C	SQ4-30A67C	SQ4-30A68C
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400 V 50 / 60 Hz / Soft Start / Deluxe HMI electronic controller

MAT. NO.	N/A	N/A	SQ4-30A25C	SQ4-30A26C	SQ4-30A27C	SQ4-30A28C
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¹⁾ Data measured and stated in accordance with ISO 1217 Edition 4, Annex C & E at the following conditions: Air Intake Pressure 1 bar a / 14,5 psi; Air Intake Temperature 20° C / 68° F; Humidity 0 % (dry)

SERVICE KITS	
MAT. ID	DESCRIPTION
300SMB1445	Air filter kit (4kW x1, 6 & 8kW x2)
300SIA6003	Service kit 6kW (includes tip seal, face seal & grease)
301SIA6003	Service kit 7kW (includes tip seal, face seal & grease)
300SMB6031	Grease gun

COMPRESSED AIR SOLUTIONS

CHAMPION

YOUR COMPRESSED AIR PARTNER



Champion's piston compressor range is designed to cover all the possible professional uses of compressed air. Our piston compressors come in various forms and sizes, providing a truly complete range of choices.



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



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



Champion also design and manufacture an enviable range of Rotary Scroll, Rotary Vane and Portable Rotary Screw compressors. All designed to provide efficiency and reliability in the most demanding applications and conditions, these compressors set new standards.

www.championairtech.com

For additional information please contact
your local representative.
Specifications subject to change without notice.