

CHAMPION

AIR TECH MADE EASY

Big on Quality. Champion on Price!



www.ChampionAirtech.com

BIG ON QUALITY. CHAMPION ON PRICE.



Champion offers a **wide range of compressed air solutions** using a **variety of technologies** including **rotary screw, piston, vane, scroll and portable**, plus a **complete air treatment range**.

Our fixed and variable speed compressed air solutions are perfect for the industrial needs of small and medium sized businesses.

The complete and comprehensive compressed air solutions product range is designed for continuous use under the most severe conditions, paying particular attention to modularity, performance, energy efficiency, low operating and maintenance costs, plus ease of installation and use.

More than just a financial investment, compressors are a key component in manufacturing and service processes and Champion delivers consistent, high quality, low cost air.



Why Champion?

We provide the smart and affordable choice for our customers.

As a Customer

We continuously invest in our product development to ensure that we are always able to deliver:

- Quality and functional products
- High level of customer care
- Competitive pricing
- Local presence
- Quick delivery
- Cost effective functionality aimed at small to medium sized businesses

As a Distributor

For decades, our philosophy has been to use local, independent distributors and resellers for our products as they are proven to be:

- Highly responsive and customer focused
- Involved in the local community
- Flexible to customer requirements
- Well trained and fully staffed
- Service oriented



ROTARY SCREW COMPRESSORS 2.2 - 132kW

Overview

- Oil flooded
- Single stage rotary screw compressor
- Star-Delta starting
- Pressure range 5 - 13 bar
- Electric motor 2.2kW to 132kW - IE3
- User-friendly C-PRO 1.0+, C-PRO 2.0 and C-MASTER controllers
- Energy efficient airend design
- From 2 - 5 year extended warranties available

Benefits

- Reliable
- Energy efficient
- Easy to install
- Easy to maintain
- Durable



FM Series (2.2 - 7.5kW)

The decision to buy a screw compressor has just become much easier thanks to the introduction of this range. With the FM Series from screw compressor specialist Champion, even customers who require less air pressure can now enjoy the benefits of a screw compressor.

- Stand alone unit
- With attached refrigeration dryer
- Horizontal air receiver
- Horizontal air receiver with attached refrigeration dryer
- Optional filter pack with by-pass available



FM & FM RS Series (7.5 - 22kW)

The generously sized ventilation system ensures optimum cooling, low outlet air temperatures best performance and reliability under harshest conditions. The FM series feature high quality airends manufactured in Finland using state of the art manufacturing techniques. The airends are designed with focus on reliability and efficiency.

- Compressor base mounted
- Tank mounted compressor
- Complete package including compressor, dryer and tank
- Optional filter pack with by-pass available



FM & FM RS Series (30 - 75kW)

New FM series 30-75 kW features premium quality airends designed and manufactured in house. The manufacturing process is using the latest CNC rotor grinding machinery, coupled with on-line laser technology, in order to maintain precise manufacturing tolerances.



FM & FM RS Series (90 - 132kW)

The highly efficient new range of screw compressors from 90 to 132 kW are manufactured in Germany and feature high efficiency airends, which are also produced inhouse. The resulting reliability and performance ensures that the operational costs remain low throughout the lifetime of the compressor.

FM RS 
 Variable Speed Technology
The correct response to changing air demand

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.

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
55	€16.500	€22.000	€27.500	€33.000	€38.500	€44.000
75	€22.500	€30.000	€37.500	€45.000	€52.500	€60.000

Reduced Maintenance Costs

The design of these compressors provides easy access to components requiring maintenance. The limited number of moving parts also reduces overall service costs.

Our approved service network ensures the smooth running of your compressor and the swift supply of original and genuine parts to save you time and money over the life of the compressor.

PISTON COMPRESSORS 2 - 30 HP



Overview

- Coaxial version, single phase
- Belt driven, with canopy version
- Belt driven, three phase
- Pressure range 8 - 15 bar
- Electric motor 1.5kW - 15kW
- Voltage 230v / 50Hz & 400v / 50Hz
- Alternative frequency of 60Hz available

Benefits

- Durable high quality pistons
- Wide range to suit all applications
 - Oil-free models available
 - Silenced models available

Piston compressors: **reliable, strong, suitable for professional use**

Our company has always been associated with long-lasting, high-quality products.

- Single-cylinder, single-stage with direct transmission for small power outputs suitable for semi-professional uses
- Two-cylinder, single-stage with belt transmission for use in workshops
- Two-cylinder, two-stage with belt transmission for industrial use



Base Series

This range of lubricated direct drive compressors are ideal for hobby and semi-professional applications. Choose from a power range of 1.5 to 3 HP with receiver capacities ranging from 3 to 100 litres and working pressures up to 9 Bar.

Line Series

This range of belt driven lubricated compressors for semi-professional, professional and light industrial use. The series is entirely manufactured in the EU and is available in power range 2 to 20 HP with tank capacity ranging from 25 to 900 litres and pressures up to 11 Bar.





Pro Series

This range is a comprehensive range of belt driven lubricated compressors for professional and industrial use. The series is manufactured in the EU and is defined by superior longevity and high construction quality. Available in power range of 2 to 30 HP with tank capacity ranging from 25 to 900 litres and pressures up to 11 Bar.



Advanced Series

This range offers the best in class option to satisfy the demand of professional and industrial applications. The series represents the best in range and stands out in terms of strong assembly, innovative technical solutions and excellence in detail and design. Power range from 2 to 30 HP with tank capacity ranging from 22 to 900 litres and pressures up to 15 Bar.



Engine Series

A comprehensive range of Honda petrol engine driven lubricated compressors incorporating the cast iron pump unit. Made in the EU with power ranges from 4 to 9 HP and tank capacities of 22 to 270 litres and pressures up to 10 Bar.



Silenced Series

This series of silenced belt driven lubricated compressors are designed to meet the needs of professional and industrial applications where low noise levels are critical. Available in a power range of 5.5 to 15 HP and working pressures up to 11 Bar with or without a refrigerated dryer



Choose the RIGHT solution

Direct Drive Aluminium Pump

- Simple utilisation
- Oil flutter lubrication
- Cast iron cylinders
- Aluminium piston with 3 rings
- Special inox steel valves
- High efficient ventilation



Belt Driven Cast Aluminium Pump

- Superior volumetric efficiency
- Aluminium finned cylinders with cast iron liners
- Fast dissipation of heat through the use after coolers
- High air flow flywheels
- Oil sight glass



Belt Driven Cast Iron Cylinder Pump

- Superior volumetric efficiency
- Cast iron cylinders for longer life
- Fast dissipation of heat through the use after coolers
- High air flow flywheels
- Oil sight glass



CAST IRON PISTON COMPRESSORS

1.1 - 7.5kW



Benefits

- Special loadless start system
- Specially designed fan type pulleys
- Specially designed high-speed stainless steel concentric valves
- Bearings with a long service life

Champion, the smart and affordable compressed air solution, make available a range of reciprocating cast iron compressors. Trouble free and with a long service life, these can be used safely in many applications with single and double stage options. Choose from base plate or receiver mounted with 230 volt options on selected models.

Main motor and drive system

- High efficiency 400V/3 phase/50Hz IP55 electric motor
- Special loadless start system
- Automatic discharge system for loadless start
- Belt Driven
- Specially designed fan type pulleys
- Easy tensioning of belt

Compressor block

- Cast iron cylinder with cooling fins and special aluminium alloy cylinder heads
- Specially designed high-speed stainless steel concentric valves
- Cast iron crankcases with high strength
- Dynamically-balanced cast steel crankshaft and counterweight
- Special alloy aluminium pistons and steel cast connecting rods
- Specially designed finger-type, high-capacity stainless steel suction-discharge valves
- Stainless steel suction-discharge valves, specially designed for high pressure strength

Safety systems

- Solenoid discharge valve for loadless start (on models over 4 kW)
- Pressure switch
- Check valve
- Belt pulley guard
- Relief valve
- Easy tensioning of belt

Other features

- CE Certified air tanks complying with SPVD (Simple Pressure Vessel Directive) and designed as per EN 286-1 standard
- Bearings with a long service life
- Air suction filter and silencer
- Impact lubrication system
- Starting panel (For 1.1 - 4 kW models)

Options

- Automatic Condensate Discharge
- Valve for the Air Tank
- Star delta motor starting panel (5.5-7.5 kW models)

ROTARY VANE AIR COMPRESSORS

1.1 - 4kW

Benefits

- Small and compact
- High quality clean dry air
- No gears or belt
- Low noise levels
- Pro electronic controller (4kW)
- Tripod or receiver mounted

Reliable air supply, day after day

The open, fixed speed CMPV01 - CMPV04 models are small and compact and with noise levels as low as 62 dB(A). They are ideally suited to light industrial and workshop applications where the compressed air outlet needs to be situated close to the point of use.

Designed and built with the highest levels of efficiency and energy savings in mind, our engineers have developed rotary vane compressors for the twenty first century, whilst retaining features that have helped build Champion's reputation for quality and reliability around the world.

Tripod or Receiver mounted:

- 50 / 60Hz
- 1.1 - 4kW
- 10 bar
- 0.1 - 0.6 m³/min
- 4 - 20 cfm

Designed for you... built to last

Providing up to 100,000+ operating hours due to their simple and integral direct drive design, these rotary vane compressors deliver clean, dry and pulse free, quality air straight from the outlet – requiring less downstream equipment. Operating at low speeds (1,450 - 1,760rpm) results in low noise, low stresses and long life.

The Rotary Vane Principle

- Air is drawn in through the intake valve
- Air is contained between the rotor and the stator wall
- Air is compressed by decreasing volume, oil is continually injected to cool, seal and lubricate
- High pressure air passes into the primary oil separator
- Remaining traces of oil are removed in a final separator element, providing high quality air
- System air passes through the aftercooler, removing most of the condensate
- Oil is circulated by differential internal air pressure – it passes through an air-blast
- Oil cooler and filter before being returned into the compressor
- Air flow is regulated by an inbuilt modulation system



OIL-FREE DENTAL COMPRESSORS

Reliability. Simplicity.
Performance.



Benefits

- 100% oil-free
- Many variants including open frame, silenced cabinet and membrane dryer
- High reliability
- Low noise levels
- High air quality



Dental Oil Free Compressors

When compressed air is used in the dental, health, cosmetics sectors or to operate machinery which cannot be contaminated by impurities, an oil-free Champion compressor is required.

Champion oil free compressors are available as open frame, silenced with or without on-board membrane dryer. Due to the high quality filtration and drying system Champion oil free compressors are complaint with HTM2022.

C-PRIME compressors benefit from heavy duty cycle use, silent running, superior design, high reliability, and articulated connecting

rod system and brass internal cylinder surface. The entire PRIME range is equipped with hour-counter, thermic protection and amperometric protection. Versions equipped with membrane dryer (M) have a filtration system offering filtration to 0.01 micron, achieving a dew point value of -20°C, producing oil free hygienic air. In addition, the silenced cabinet versions (CS) are among the lowest noise level for this technology.



The comprehensive and innovative range of oil free piston compressors feature:

- Power range from 0.8 to 10 kW
- Suitable for 1-20 dental chairs
- Silenced operation on cabinet versions
- Noise level of 53-78 dB(A)
- Receiver sizes from 24-270 litres
- Efficient and improved duty cycles
- Operating pressure up to 10 Bar
- Double filtration system to 0.01 microns
- Maintenance free membrane dryers to -20°C dew point

In addition, the special internal surface treatment prevents rust generation and air tank corrosion. The installation of a simple automatic drain system reduces the need of periodical ordinary maintenance.

The choice of dental compressor is critical for the correct operating standards of surgeries and laboratories. Actual and future compressed air demand are important questions when making the correct dental compressor choice. The Champion dental compressor range satisfies every need, both from the performance and the investment point of view.

BREATHING AIR COMPRESSORS

Versatile. Reliable.
Flexible.

Benefits

- Quick charging times
- Safe operation
- Various drive motors
- Easy to use
- High reliability
- Including range of accessories

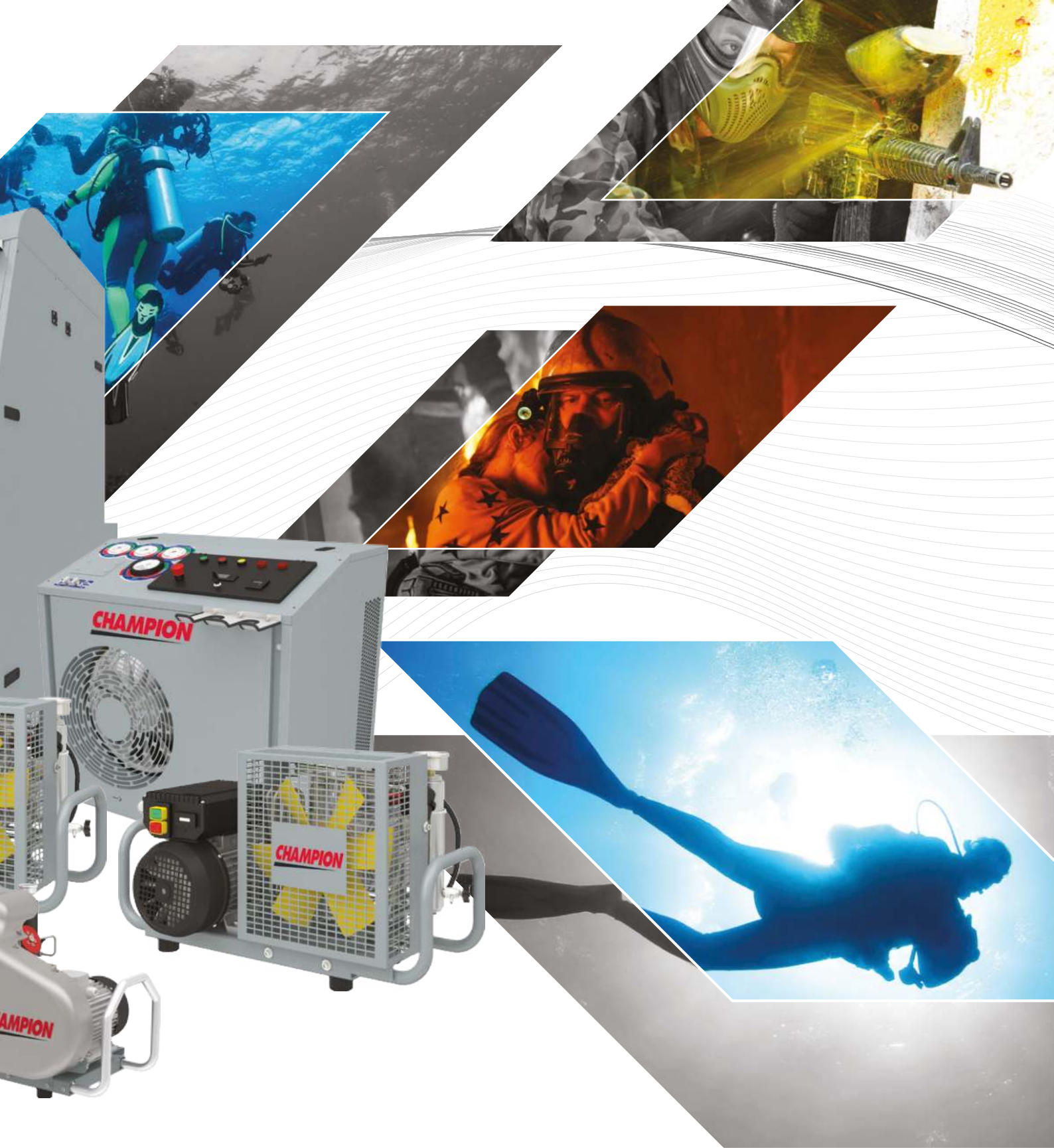


The Range of Breathing Air Compressors

Champion offer a range of breathing air and technical gas compressors from the small portable CBA6 series with a flow rate of 100 l/min and a pressure of 300 bars to the more powerful models for large refilling centres such as the CBA36 with a flow rate of 600 l/min and a maximum pressure of 330 bar.

Compressors such as the CBA36 meet the needs of large refilling centres as it charges a 10 litre single-cylinder at 200 atmospheres in 3.3 minutes with noise levels as low as 75 dB(A). The range is compliant to EN 12021 CGA E.

Champion compressors are available with single and 3-phase electric motors as well as petrol or diesel engines. Additionally, Champion offer a series of important accessories, such as filling panels, transfer hoses, oxygen carbon dioxide and helium analysers, pressure reducers with safety valves and other useful accessories.



- POWER RANGE:** 2.2 to 11 kW
- CAPACITY:** 80 to 600 l/min
- CHARGE TIME:** 3 to 25 mins (based on charging a 10 litre cylinder)
- PRESSURE:** 232 to 300 bar
- NOISE LEVEL:** 70 to 101 dB(A)
- VOLTAGE:** 230 / 1 / 50 / 60, 400 / 3 / 50, 440 / 3 / 60

PREMIUM OIL-FREE

ROTARY SCROLL AIR COMPRESSORS 4 - 15kW

Benefits

- 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



Cutting edge technology development

Setting new standards for air purity, these oil-free scroll compressors are ISO 8573-1 CLASS 0 compliant. Offering not only 100% oil-free air, but also improved energy efficiency, these compressors deliver extremely quiet operation and contain less moving parts which means lower maintenance and higher reliability.

Superior compressor package

Designed to meet the strict requirements for contaminant free, oil-free, clean air applications, the scroll compressor range is made up of Simplex units at 4, 6 and 8kW, and Duplex units at 7, 11 and 15kW – all featuring a very clean, simple and serviceable layout.

- Oil & contaminant free air
- Motor power from 4 to 15kW
- Volume flow from 21.2 to 106.0 m³/hr
- 8 or 10 bar options

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 centre, compressing the air into progressively smaller areas
- The compressed air is directed to the centre discharge port of the compressor
- Discharge pressure is accomplished during multiple stages of compression, resulting in a continuous intake suction and discharge



OIL 
FREE 
CLASS: ZERO

Everything **under control**

Different controller options are available for the scroll compressors. A basic relay panel is fitted as standard to Simplex models, or the optional deluxe HMI electronic controller can be installed, with easy-to-use navigation and friendly graphics, delivering interactive and intuitive information to your fingertips.

With integral web server built in, via ModBus TCP ethernet connection, the HMI controller provides visibility to the compressor system from any computer or mobile device with internet connection.

Deluxe HMI

- 3.5" Full Colour Touch Screen
- PLC Controlled
- Lead/Lag Control with Forced Alternation
- System Capacity and Operation Trending
- 26 Language Options
- 24VDC 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

PORTABLE ROTARY SCREW COMPRESSORS

Benefits

- Portable
- Tailored compressor solutions
- High energy efficiency
- Low emissions
- Compact & lightweight design
- Numerous options and accessories



Designed for the most demanding conditions

Champion Portable Compressors

High-precision construction projects demand that the efficiency and reliability of compressors is of the highest calibre. Champion offers a wide range of portable compressors, with a reputation within the industry for just that – compressors that meet the requirements of numerous mobile compressed air applications.

The C-Series from Champion is constantly evolving and guarantees high energy efficiency, low emissions and many other innovations, which make daily operations and maintenance tasks much easier.

Engineering Excellence

Changing emission legislation is a key driver for development, but Champion's passionate engineering team also strive to achieve the best possible performance at the lowest operational costs. The C-Series of portable compressors fulfills the emission standards in accordance with the directive 97/68/EC. Additionally, the compressors are very compact and lightweight which is a preference for many customers.

The screw compression element is the most important component of the compressor. Therefore Champion keeps the design and manufacture in-house, using the latest CNC rotor grinding machinery, coupled with online laser technology. The resulting reliability and performance ensures that operating costs will remain low throughout the life of the compressor.

AirPlus

Tailored compressor solutions to fit your application.

Champion offers numerous options and accessories allowing customers to configure the compressor according to the specific requirements of the application. Besides various components for air treatment, integrated generators, bunded bottom boxes, toolboxes, hose reels and integrated oilers, etc. can all be factory fitted.

Champion Genuine Parts

Enjoy complete peace of mind.

Genuine Champion parts and lubricants ensure best performance and reliability is maintained.

- Minimum losses contributing to energy savings
- Long service life, even under harsh conditions
- High reliability



ONE STEP AHEAD

PORTABLE SCREW COMPRESSORS

At a glance...



Nominal Pressure
7 - 24 bar g



Engine Power
15.5 kW - 224 kW



Volume Flow
1.0 - 27 m³/min



Performance Protection for Portable Compressors

When you buy a Champion C-Series portable compressor, peace of mind comes as standard now. The first of a kind Mobile 5 Warranty offers genuine performance protection for up to 5 years. The main compressor elements and controls¹ are covered at zero additional cost.

Having your compressor serviced by authorised personnel in accordance with Champion's maintenance schedules, ensures you enjoy comprehensive protection for up to 5 years (up to a maximum of 10,000 operating hours).

Mobile 5 from Champion – keeping your workforce working.



AIR TREATMENT PRODUCTS

Complete range of compressed air treatment products

- Filters
- Condensate separators
- Differential pressure indicators & accessories
- Refrigeration dryers
- Adsorption dryers
- Condensate drains
- Activated carbon towers
- Nitrogen Generators
- Aftercoolers
- Oil/water separators
- Membrane Dryers
- Heat Recovery System



Why is compressed air treated?

Compressed air is known as “the fourth utility” – just like electricity or water, it is an essential input across all fields of industrial manufacturing, necessary to keep production lines moving.

When air is initially pulled into a compressor, it often contains pollutants, dirt particles and water vapour, which condenses into liquid water when the air is compressed. These impurities can cause disruptions in your operations, leading to substantial but

avoidable costs. To avoid expensive production breakdowns, compressed air must be oil-free, clean and dry. An efficient and smart air solution is more than a line of high-quality compressors. It is a combination of air generation, filtering, drying, condensation and purification expertise and products. Champion’s complete compressed air systems provide not only compression packages, but a full range of air treatment systems.



Refrigeration Dryers

The use of clean, dry compressed air, ensures high levels of reliability, guarantees that quality standards are met and can reduce production costs. Champion compressors offer a range of drying solutions, utilising state of the art cooling technology.



Compressed Air Filters / Separators

Installed to reduce or remove contaminants from compressed air, water separators and filters are essential to the health and performance of a compressed air network. The primary function of any filter is to improve air quality, although modern demands mean this performance should not be at the expense of energy efficiency.



Adsorption Dryers

Champion has a broad range of adsorption dryer technologies, each of which are designed to match the specific needs of the user. At the heart of any smart air solution is the dryer, used to remove water vapour, stop condensation and prevent corrosion. Adsorption dryers additionally inhibit the growth of micro-organisms.



Condensate Drains

Removing liquid condensate from the system can be a highly energy inefficient process if not managed correctly. Most drains allow valuable compressed air to escape, forcing the compressor to produce more compressed air and waste more electrical energy. Champion condensate drains allow for substantial energy savings.



EPL: The efficient alternative to traditional piping

The easy-to-install leak-free Champion EPL (Easy Pipe Line) system is your alternative to costly, labor-intensive steel pipe distribution systems for air, inert gas and vacuum lines. It leverages more than a century of Champion compressed air experience for streamlined installation, uncompromised reliable performance, effortless maintenance, flexibility for future needs, and maximum energy efficiency at the lowest total cost.



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.

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