

NOBEL 2S

75-315 kW





FNA Group

Over 75 years of compressed air.

FNA is a Multinational Group with over 75 years of experience in the compressed air sector, founded from the merger of three great Italian compressor traditions, which has developed an industrial synergy capable of competing on the world market without fear of comparison. Thanks to the consolidated experience and leadership of a family that has been operating exclusively in the compressed air sector for two generations, since 1948, FNA is one of the leading manufacturers of air compressors for industrial, professional and consumer use.

Today, Power System is part of the FNA family and is the Groups brand that represents the pinnacle of our technology, aimed specifically at the Industrial market. Power System is an undisputed leader in the design, development, production and distribution of high-tech solutions for compressing air with the greatest possible energy savings, serving every sector, from large industry to small business.

Power System's screw compressors, in the 2.2 to 315 kW power range, are manufactured entirely in Italy in the province of Bologna, an area renowned for its excellence in precision engineering, where the most modern design, construction, assembly and testing technologies are applied to ensure customers reliable compressors with first-class performance.



Production sites around the world



The Power System brand

Manufacturers of air-ends for over 30 years.

Power System is the leading Italian company, that has been able to combine craftsmanship with the most modern industrial technologies and highly specialised labour. The Made in Italy trademark is the expression of typical Italian quality and creativity, recognised and appreciated around the world, and which is now one of the distinguishing elements of our industrial production.

What makes Power System screw compressors unique is the guarantee of a product that is made entirely in Italy: from design to packaging, each stage of production is carefully overseen by our engineers and aimed at developing a machine that exceeds the most demanding requirements in terms of efficiency, quality, energy saving, performance, quiet and safe operation. Each component is thoroughly selected to integrate perfectly with our air-ends and intake regulators.

NOT JUST AIR.

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Power System air-ends feature rotors with an optimised profile and outstanding performance. The production process is completely integrated

thanks to avant-garde machine tools with robotic component positioning and sophisticated control instrumentation that guarantees the highest level of quality.

Each single rotor is cut in four very specific manufacturing stages to achieve high precision, execution and repeatability.

Before reaching the customer, every individual compressor is fully tested before completing final checks that ensure total compliance with over fifty stringent technical requirements.

Since 1996, the company's Quality System has been certified according to UNI EN ISO 9001:2015.

THE RANGE **NOBEL 2S**

With the introduction of the 2S models in the NOBEL series, Power System is once more redefining the standard in terms of efficiency, reliability, ease of maintenance and available energy savings.

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DBEL 2S

DV

The NOBEL range now includes the new 2S series: air-cooled, two-stage rotary screw compressors with power ratings from 75 kW to 315 kW, with variable speed and flow rate, supplied ready for use and complete with all the components required for safe and reliable operation, driven by a premium highefficiency electric motor.

The two-stage range represents the ultimate advancement in oil-injected screw compressor technology today, ensuring a very high level of reliability and unrivalled performance in a fully integrated and technically advanced solution.



Designed to last.



THE RANGE **NOBEL 2S**

A complete range from 75 kW to 315 kW, in air-cooled versions, all with variable speed in 24 model configurations.

The NOBEL 2S two-stage range, entirely manufactured in Italy at our plant in Bologna, has been designed by our engineering team with the support of our experienced after-sales service technicians to achieve a compressor that meets the requirements of the most demanding users, with complete emphasis on saving energy, silenced operation and with ease of maintenance in mind.











Born out of experience and know how.



WHY NOBEL 2S

Energy consumption 93%

Investment 4%:

: Maintenance 3%

The graph indicates the breakdown of the total costs during the life cycle of a Single-stage compressor appropriate to five years of use, considering 6000 working hours per year.

In Europe, compressed air production accounts for approximately **14% of total energy consumption in the industrial sector**. In order to achieve a sustainable future and to be more competitive in the market, there is a major challenge to face: increasing the efficiency of compressed air systems used in industry!

Annual energy consumption (kWh/year)



Energy consumption

Energy saving

The histogram shows the estimated annual energy savings of our two-stage compressor compared to a Single-stage compressor with the same power.

The two-stage NOBEL 2S range, with its new and exclusive two-stage air-end, meets this challenge.

Return on Investment

Comparing a Single-stage compressor with our two-stage compressor, with the same volume flow, considering 6,000 working hours per year and with a 70% duty cycle, it is possible to estimate that the acquisition investment in our two-stage compressor can be recouped in less than 24 months from installation.



Efficiency is also synonymous with sustainability.

Because they consume less

Our two-stage compressor allows energy savings of up to 20% compared to a similarly powered Single-stage compressors.

Because they are designed to last

The two-stage air-end technology ensures less wear and greater longevity for the compressor because the final pressure is divided between the two compression stages.

Because their efficiency is always under control

All NOBEL 2S functions are fully controlled by the integrated electronic "Login" controller, which constantly monitors the compressor.

Eco-friendly technology

The search for energy efficiency in the production processes of industry is one of the main challenges we face in order to maintain our competitive advantage in the market. We also seek to optimise the sustainability of our processes at the same time. Living sustainably means preserving our natural resources as much as possible.

Choosing a NOBEL 2S product, reducing energy consumption and CO_2 emissions, therefore, represents the most ecological choice.



Electricity

Recovered heat



Because they are designed for industrial applications

Compressed air is an essential energy source in the production processes of medium and large-scale industries, operating in a wide variety of sectors.

Thanks to our innovative two-stage technology, the NOBEL 2S models ensure a constant and reliable supply of compressed air.

Integrated heat recovery system

NOBEL 2S is designed to include an integrated water-oil plate exchanger (option) that allows the recovery of energy that may be converted into heat, suitable as an energy source to provide heated water for room heating, washrooms and for many industrial applications. *More info at page 18.*

WHY NOBEL 2S

Integrated design

NOBEL 2S compressors have been designed to ensure perfect accessibility to the internal components. This is achieved by paying care full attention to both the layout and design. All sides of the machine can be accessed easily thanks to flush-mounted hinged doors for ease of maintenance.

Oil separator vessel

The highly efficient design guarantees excellent compressed air quality with a very low residual oil content (less than 2 parts per million by weight). The separator element is easier to replace thanks to the sliding lid of the vessel (1-2), which facilitates convenient element replacement (3), reducing downtime and maintenance time.





Oil filter housing complete with thermostatic valve

The filter cartridges are of the screw-on type, making them simple to replace in a clean, safe way reducing the risk of oil spillage.

The thermostatic valve is located in a position that is immediately accessible and convenient to check/maintain.

The thermostatic valve controls the oil flow avoiding sudden temperature changes and reduces the formation of condensate inside the lubrication circuit.

It is not necessary to remove the oil from the radiator in order to replace it or for service.

Damping joint

- This allows for the suppression ullet
- of possible stresses and for the use
- of rigid pipes thus avoiding the risk of failure.
 - Maintenance operations are simplified because the pipe can be disconnected
 - without misalignment of the two flanges.



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Suction filter •

- The pocket type filtering element 🔎
- is designed to ensure minimum pressure drop and maximum filtration efficiency. •
- Maintenance is facilitated through
- the easily accessible and removable
- external panel, with no need to enter
 - the main machine.
 - ain machine.

Silencer •

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Flexible coupling

With elastic insert that is both easily accessible and simply removed

during longer term maintenance.

- The exclusive and unique
- soundproof chamber has been developed
 - to ensure maximum silencing
 - and to maintain high suction efficiency.



- Electric motor
- Electric motor with
- energy efficiency class
- IE4 'Super Premium Efficiency'.



WHY NOBEL 2S

Soundproof cabinet

Manufactured from heavy gauge steel and with applied multi-layer protective coating. The cabinet is completely lined internally with high-density sound-absorbing material, reducing the overall sound level to extremely low values.

The cabinet consists of panels that can be easily opened or removed for quick inspection and maintenance. The cabinet is solidly fixed to a steel support frame that is also designed to allow the safe and convenient lifting and positioning of the compressor.

Cooling system

The individually sized cooling system allows NOBEL 2S to operate at full load even under severe conditions in ambient temperatures of up to 45 °C.

The cooling fans have a variable flow rate and are regulated by the central electronic controller. This ensures that the operating temperature of the machine and of the lubricant is kept constant, preserving efficiency and allowing a longer life to the lubricant.

Heat exchanger and ventilation unit

The innovative design simplifies maintenance of the heat exchanger and fan unit, as it can be removed either vertically or horizontally, using a lifting device or by removing it outwards on the wheels at the base. These wheels slide on special tracks (optional) specially designed for this purpose and can be supplied on request.



• Efficient ventilation

- NOBEL 2S is equipped with a radial ventilation
- system, driven by an inverter and managed by the
- electronic controller. Quieter operation is also provided thanks to the use of soundproofing.







EFFICIENCY UNDER CONTROL

The new 'Login' controller introduces new software capabilities to strengthen diagnostic functions, thereby guaranteeing excellent performance in all conditions. Login provides additional facilities including remote control and multi-compressor management.









Intelligent control

All of NOBEL 2S' functions are entirely managed by the centralised Login electronic controller, which constantly monitors the compressors operation ensuring efficient and reliable operation of the machine in all conditions with customised functions to suit any application.

Always connected

During an irregular event within the machine, Login reports the presence of such and incident by creating an alert for the user, allowing for prompt operator intervention. The integrated connectivity with remote monitoring (optional), makes it possible to obtain complete information on the compressor status remotely.

Compressor rotation management

Thanks to the "ISC" system it is possible to simultaneously connect up to 8 different compressors (fixed and/or variable speed combinations), with "master-slave" logic.



Exclusive design

Italian design, functionality, simple to use and with the latest generation technology all come together with the innovative Login controller. The touch-screen display and the iconbased menu make it extremely intuitive and easy to use.



Memory card slot

Login features a memory card slot which can be used to store compressor data and configurations and to transfer them to another control unit.



Multilanguage management

It is possible to select the local language from any of the 20 pre-installed languages.



Remote control

Allows a complete remote monitoring of the compressor.



Multicolour display

All of the operational parameters are displayed on the large 4.3" colour screen which also displays graphs in real time (pressure, power, energy/time).



All the data that you need.





SMS 2.0 (Service Management System) is the innovative device (optional) to remotely access and perform preventive maintenance checks on any of the compressors fitted with a LOGIN controller.

Preventive and targeted maintenance

A LAN connection with Ethernet cable, SMS 2.0 allows e-mails to be sent automatically should an irregular event occur (up to 5 settable e-mail addresses). At the same time, it is possible to monitor the correct operation of the compressor and to check the scheduling for future maintenance interventions.

SMS 2.0 is installed directly on the LOGIN controller, at the rear. CODE #005560002SGL



Compressor remote control

- online compressor status control (view of temperature and pressure parameters);
- on/off control;
- view of events and alarms;
- view of remaining hours to maintenance;
- graphic view of analogue signals connected to the controller, in real time;
- no additional software is needed.



THE RANGE **NOBEL 2S**

5-year warranty.

The customer may choose to join the Trust extended warranty programme, protecting your investment for 5 years.







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IOBEL 2S

A complete range for all applications.

Power ratings from 75 kW to 315 kW with variable speed: 3 frame sizes, 24 possible configurations.

NOBEL 2S TE

NOBEL 2S 200 - 250 - 315 kW

Keywords: easy maintenance

The two-stage NOBEL 2S range has been designed with a focus on simplifying routine maintenance work.

SUSTAINABLE **NOBEL 2S**

The NOBEL 2S are also available with an integrated Heat Recovery System (HRS).

Most of the energy used to produce compressed air is converted into heat, much of it recoverable. About 75% of the energy used in the compression process is in the lubrication system and in the cooling circuit and can be reused as a source of heat.

NOBEL 2S is designed to host internally, as an option, an oil-water plate exchanger that allows the recovery of this energy. The heat stored in the hot lubricant generated by the compression process is transferred to water via the plate heat exchanger. This water can be used in any process where heat is required: room heating systems, production processes, etc.

NOBEL 2S is the best partner to generate compressed air in a very efficient way and is a master in sustainability with the HRS.

Top performance with two stage air-end and 75% energy recovery with HRS with immediate effect on the CO_2 footprint reduction.







NOBEL 2S 75-90 kW	Code	Power	Air outflow rate (min. / max.)		Max. pressure **		Sound level	Air outlet	Net weight	Net dimensions
		kW	m³/min.	c.f.m.	bar	p.s.i.	dB(A)	DN	kg	L x W x H (mm)
75 kW										
NOBEL 2S 75-07 DV	V60ZB97PWSA87	75	5.48 / 16.60	194 / 586	7	101	73	DN50	3260	3000 x 2000 x 2200
NOBEL 2S 75-08 DV		75	5.19 / 15.70	183 / 554	8	116	73	DN50	3260	3000 x 2000 x 2200
NOBEL 2S 75-10 DV		75	4.65 / 14.10	164 / 498	10	145	73	DN50	3260	3000 x 2000 x 2200
90 kW										
NOBEL 2S 90-07 DV	V60ZE97PWSA87	90	6.34 / 19.20	224 / 678	7	101	73	DN50	3500	3000 x 2000 x 2200
NOBEL 2S 90-08 DV		90	6.30 / 19.10	222 / 675	8	116	73	DN50	3500	3000 x 2000 x 2200
NOBEL 2S 90-10 DV		90	5.61 / 17.00	198 / 600	10	145	73	DN50	3500	3000 x 2000 x 2200

NOBEL 2S 110-160 kW	Code	Power	Air outflow rate (min. / max.)		Max. pressure **		Sound level	Air outlet	Net weight	Net dimensions
		kW	m³/min.	c.f.m.	bar	p.s.i.	dB(A)	DN	kg	L x W x H (mm)
110 kW										
NOBEL 2S 110-07 DV		110	8.22 / 24.90	290 / 879	7	101	76	DN80	5300	3600 x 2000 x 2250
NOBEL 2S 110-08 DV	V60ZH97PWSA87	110	7.43 / 22.52	262 / 795	8	116	76	DN80	5300	3600 x 2000 x 2250
NOBEL 2S 110-10 DV		110	6.99 / 21.19	247 / 748	10	145	76	DN80	5300	3600 x 2000 x 2250
132 kW										
NOBEL 2S 132-07 DV	V6071 07PWSA87	132	9.24 / 28.00	326 / 989	7	101	76	DN80	5500	3600 x 2000 x 2250
NOBEL 2S 132-08 DV	VOUZL9/PWSA6/	132	8.91 / 27.00	315 / 953	8	116	76	DN80	5500	3600 x 2000 x 2250
NOBEL 2S 132-10 DV	V60ZM97PWSA87	132	8.56 / 25.94	302 / 916	10	145	76	DN80	5730	3600 x 2000 x 2250
160 kW										
NOBEL 2S 160-07 DV	V60ZP97PWSA87	160	11.43 / 34.65	404 / 1224	7	101	76	DN80	5730	3600 x 2000 x 2250
NOBEL 2S 160-08 DV		160	10.89 / 33.00	385 / 1165	8	116	76	DN80	5730	3600 x 2000 x 2250
NOBEL 2S 160-10 DV	V60ZQ97PWSA87	160	9.90 / 30.00	350 / 1059	10	145	76	DN80	5890	3600 x 2000 x 2250

NOBEL 2S 200-315 kW	Code	Power	Air outflow rate (min. / max.)		Max. pressure **		Sound level	Air outlet	Net weight	Net dimensions
		kW	m³/min.	c.f.m.	bar	p.s.i.	dB(A)	DN	kg	L x W x H (mm)
200 kW										
NOBEL 2S 200-07 DV	V60ZS97PWSA87	200	14.35 / 43.50	507 / 1536	7	101	79	DN100	7310	4350 x 2250 x 2450
NOBEL 2S 200-08 DV		200	13.43 / 40.70	474 / 1437	8	116	79	DN100	7310	4350 x 2250 x 2450
NOBEL 2S 200-10 DV	V60ZT97PWSA87	200	12.21 / 37.00	431 / 1307	10	145	79	DN100	7400	4350 x 2250 x 2450
250 kW										
NOBEL 2S 250-07 DV		250	17.65 / 53.50	623 / 1889	7	101	79	DN100	8440	4350 x 2250 x 2450
NOBEL 2S 250-08 DV	V60ZV97PWSA87	250	16.85 / 51.05	595 / 1803	8	116	79	DN100	8440	4350 x 2250 x 2450
NOBEL 2S 250-10 DV		250	14.88 / 45.10	525 / 1593	10	145	79	DN100	8440	4350 x 2250 x 2450
315 kW										
NOBEL 2S 315-07 DV	V60ZY97PWSA87	315	20.79 / 63.00	734 / 2225	7	101	79	DN100	8500	4350 x 2250 x 2450
NOBEL 2S 315-08 DV		315	20.29 / 61.50	717 / 2172	8	116	79	DN100	8500	4350 x 2250 x 2450
NOBEL 2S 315-10 DV		315	18.48 / 56.00	653 / 1978	10	145	79	DN100	8500	4350 x 2250 x 2450

** Max. pressure up to 13 bar on request.
DV = variable speed.
Reference conditions: air intake temperature 20°C (68°F) – atmospheric pressure 1 bar (14.5 p.s.i.).
Air flow was measured in the following operative pressures: 6.5 bar for models at 7 bar - 7.5 bar for models at 8 bar - 9.5 bar for models at 10 bar.
The data and results were measured in accordance with standard ISO 1217.
The sound level was measured in accordance with ISO 2151, with a tolerance of ± 3 dB(A).

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