Screw compressors
MONSUN ECO series
MONSUN series

Flow capacity 0.33-40.4 m³/min
Maximum pressure 7.5-15 bar
Drive power rating 4-250 kW

Involved from the beginning
The world of screw compressors – the world of BLITZ

1872 – A modest date with a momentous past. BLITZ was established in the year 1872 by Matthias Schneider as a mechanical engineering company engaged in precision mechanics. Experience in mechanical engineering which is the basis of today's compressor production.

However, tradition isn't everything to us. Consistently innovative compressor technology can only be achieved by constant research and development. This is implemented by the latest machining and production facilities, amongst which fully automatic machining centres, welding robots and computer-controlled laser cutters are included.

The construction of compressors has a long tradition at BLITZ. Piston compressors have been developed and manufactured in the most diverse designs for over 75 years. In the field of screw compressors, we can already look back on 34 years of history.

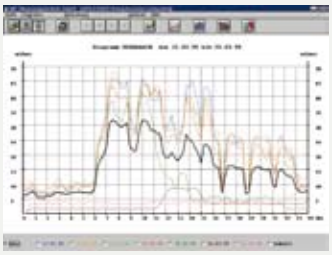
Open from the beginning

Wherever you look, easy maintenance is a primary aspect of the screw compressors of the MONSUN ECO and MONSUN series.

Base-load change-over switch

MONSUN ECO and MONSUN screw compressors help you to effectively reduce operating costs even in the standard version. If economy plays an important part in the operation of several compressors, a basic load configuration or, alternatively, frequency control are appropriate means of achieving this objective. Different compressors are controlled by an intelligent, supersidiary control system according to the demand. Fully automatically.

An optional PC program consolidates all important information at a click of the mouse. This includes important information such as compressed air consumption, compressor running times and energy consumption data.



1

2

3

4

Details

■ **1. Air transport:** In MONSUN ECO and MONSUN screw compressors, the flow of cooling air entering at the rear is pressed directly upwards without obstructing vanes. Exhaust channels which expel the heated cooling air can therefore be easily connected, e.g. to heat rooms in winter. ■ **2. Frequency control:** Using the standard frequency control (optional with MONSUN), en energy saving potential of up to 35% can be achieved with MONSUN screw compressors. This is basically achieved through infinitely variable adaption of the compressor output to the actual compressed air requirements. Continuous adaption helps prevent expensive compressor idle running times. The start of the compressor can also be controlled to be very smooth. In addition, flexible operating pressures provide for abundant network pressure and prevent unnecessary excessive compression. Important to know: A compression that exceeds the requirements by merely 1 bar already increases the energy cost by 6-10%. ■ **3. Heat exchanger:** Free energy from the waste product compressor heat, an important topic in the age of scarce and expensive energy. ■ **4. Rugged compressor stage:** The performance-optimized BLITZ compressor stage with asymmetrical screw profile combines a high degree of reliability with a long service life.

Maximized performance
Main features of MONSUN ECO and MONSUN screw compressors

Screw compressors of the MONSUN ECO and MONSUN series are equipped as a standard with an integrated microprocessor control system. PROCON ECO and PROCON unite the simplest operation with extraordinary performance features. All setting can be made conveniently by a control panel. Numerous operating modes allow an optimum adjustment to the existing operating conditions.

- An integrated diagnostic system monitors all safety-relevant operating parameters.
- System self-test before each start.
- Service messages indicate outstanding maintenance work (service interval function).
- Automatic start-up after power failures.
- The pressure sensor ensures precise operation in the adjusted pressure range.
- The motor only runs when necessary in automatic mode.
- Galvanically isolated contacts make connection to a master group control possible.
- Switchable remote and local operation.

In addition, the PROCON control of the MONSUN series features the following characteristics:

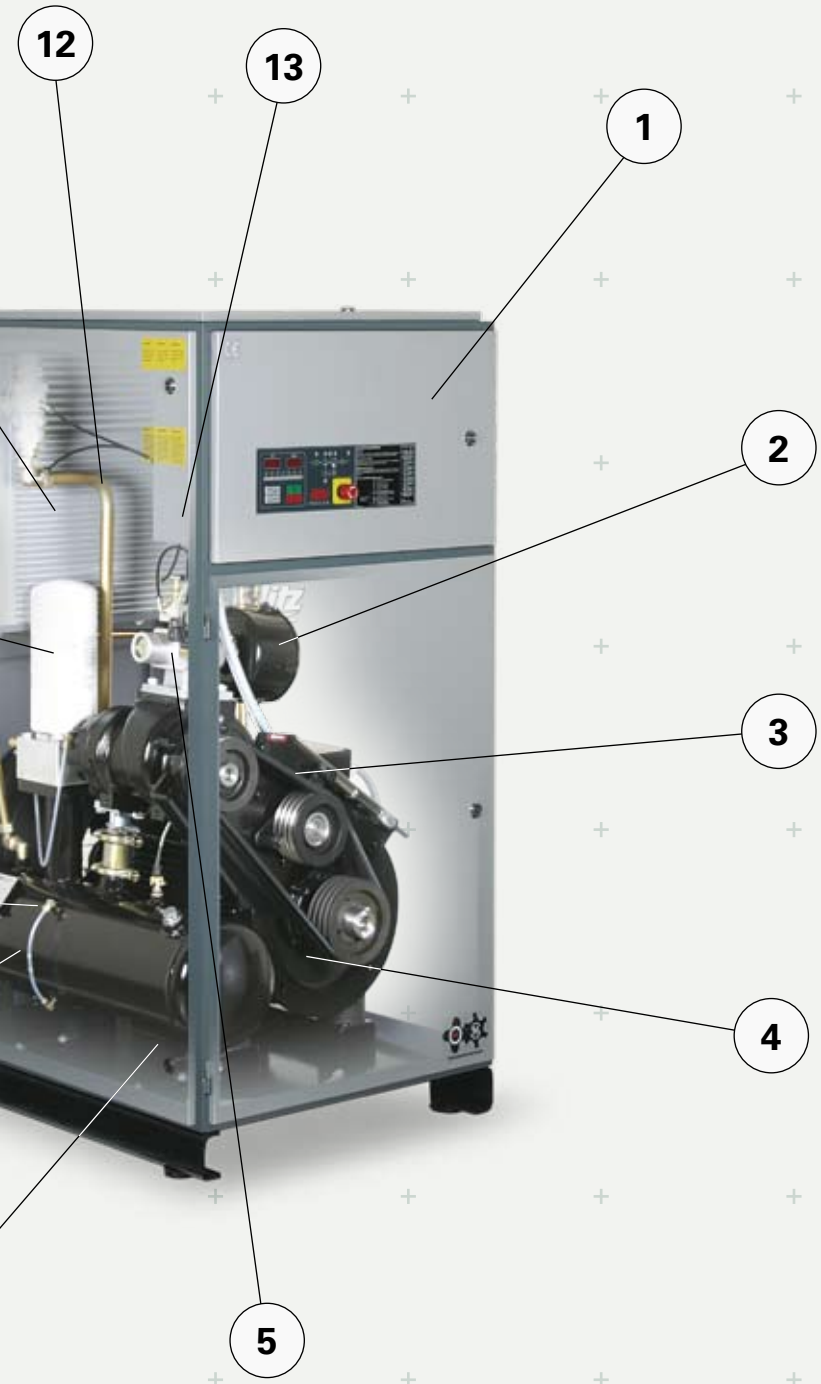
- When the final pressure has been reached PROCON calculates the actually required run-on time. This saves up to 60% of energy costs in idle operation.
- Electronic base load change-over function regulated via second pressure band (optional).

PROCON ECO

PROCON

Product features

● **1. Soundless:** Due to numerous detailed flow dynamic engineering solutions, the operating noise is reduced to a minimum – as a standard. ● **2. Two-stage suction filtering:** The entry of foreign bodies is prevented by a cyclone separator with a succeeding fine filter. ● **3. Equipped for the future:** Flexible pressures can be achieved due to the flexible drive. ● **4. Drive with reserves:** MONSUN ECO and MONSUN screw compressors are manufactured to high standards of quality. This includes the use of IP55 tested motors. The ISO F winding, designed to ISO B, provides power reserves for the worst case. ● **5. Infinite suction control:** The use of hard anodised surfaces guarantees the highest durability and control capability. No adjustments are required for BLITZ suction regulators. In conjunction with the optional, proportional controller, a smooth adjustment to the compressed air demand can also be achieved. (MONSUN only) ● **6. Integrated oil sump:** Reliably prevents the unintended escape of used oil to the environment. A supplied hose additionally shortens the time required for necessary oil changes. (MONSUN only) ● **7. Multistage air/oil separation:** A cyclone separator, a gravity separator and a filter produce an excellent air quality with a residual oil content of approx. 2 mg/m³. ● **8. Visual oil level indicator:** Regular oil checks are often neglected because they



are difficult to perform. MONSUN ECO and MONSUN screw compressors provide a clear view in this respect. ● **9. Fine separator:** Generously proportioned fine separator inserts reduce undesired, internal pressure losses. They can be changed in just seconds. ● **10. Open in all respects:** All side sections are removable in the screw compressors of the MONSUN series. This literally makes child's play out of maintenance work and reduces stoppage times to a minimum. ● **11. Compact aluminium cooler:** The composite design unifies oil and air cooling in a single assembly. Cleaning is made particularly easy by the maintenance-friendly arrangement. (MONSUN ECO additionally equipped with ventilation unit) ● **12. Permanently piped (MONSUN only):** You won't find risky hose connections in BLITZ screw compressors. The novel FLEX piping guarantees a firm attachment in all situations. ● **13. Operating pressures up to 15 bar:** The rugged, modular construction of the MONSUN ECO and MONSUN screw compressors makes designs possible from 7.5 to 15 bar.

Note: Optional equipment is partly model-specific.

1

2

■ **1. Big mouth:** The suction regulator as a central control element of the power consumption. ■ **2. Tailor-made:** MONSUN screw compressors are available in customer-specific designs.

MONSUN ECO high performance screw compressors
The power packs

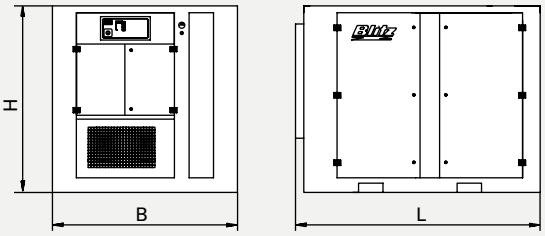
The new MONSUN ECO screw compressors are primarily characterized by one major feature – abounding power. The models are available with up to 250 kW and 13 bar in series. In order to meet the different industrial requirements accordingly, there are fan belt operated compressor models as well as D-FU type compressors available – featuring a direct drive and frequency control.

Illustration shows MONSUN ECO 90

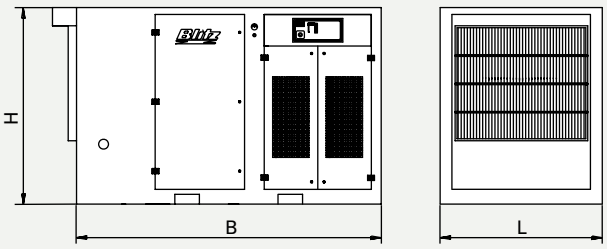
Model	Motor capacity	Max. pressure	Flow capacity*	With noise cover Measurements L	B	H	Sound	Weight	Air connection
	kW	bar	m³/min	mm	mm	mm	dB(A)	kg	G
High performance screw compressors, MONSUN ECO series									
Screw compressor with fan belt drive									
MONSUN ECO 90	90	7	15,8	1850	1360	1940	77	2100	2“
		10	13,6						
		13	12,0						
MONSUN ECO 110	110	7	18,2	2100	1500	1920	78	2440	2“
		10	15,8						
		13	14,2						
MONSUN ECO 132	132	7	23,3	1900	2410	1910	78	3480	DN 80
		10	19,5						
		13	16,2						
MONSUN ECO 160	160	7	27,8	1900	2510	1910	78	3520	DN 80
		10	23,6						
		13	19,7						
MONSUN ECO 200	200	7	34,9	3040	2350	2500	79	5140	DN 80
		10	28,6						
		13	23,6						
MONSUN ECO 250	250	7	43,8	3040	2350	2500	80	5840	DN 80
		10	36,7						
		13	30,4						
Screw compressor with direct drive and frequency control									
MONSUN ECO 90 D-FU	90	10	4,9-13,6	2390	1450	1750	77	2080	2“
		13	4,2-12,2						
MONSUN ECO 110 D-FU	110	10	6,0-17,1	2885	1500	2000	78	2800	2“
		13	5,1-14,2						
MONSUN ECO 132 D-FU	132	8	8,5-23,3	3185	1650	2000	78	3700	DN80
MONSUN ECO 160 D-FU	160	10	9,2-24,4	3185	1650	2000	78	3850	DN 80
MONSUN ECO 200 D-FU	200	10	10,6-31,0	4000	2100	2500	79	6140	DN 100
		13	7,8-25,6						
MONSUN ECO 250 D-FU	250	10	14,0-40,4	4000	2100	2500	80	6340	DN 100

* according to ISO 1217

Other sizes and pressures on request.



MONSUN ECO



MONSUN ECO D-FU

MONSUN compact screw-compressors
The basis of performance

The possible applications of MONSUM screw compressors are almost unlimited and as individual as the available designs.

Even the small MONSUN with 4 kW motor rating has the potential of a top performer. The design features and advantages are consistently apparent in all MONSUN models, e.g. the integrated oil sump, the maintenance-friendly openness to all sides and the PROCON control system.

MONSUN 4/5,5/7,5

MONSUN 11/15

MONSUN 18,5

MONSUN 22

MONSUN 30/37

MONSUN 45/55/75

Easy to handle

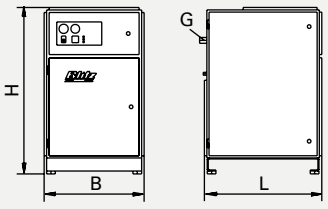
The large bottom clearance makes transport with a fork lift truck easy. With its compact dimensions, the MONSUN will clear normal fire doors.

MONSUN 11 with top silcencer

Model	Motor capacity	Max. pressure	Flow capacity*	With noise cover Measurements L	B	H	Sound level	Weight	With top noise cover Measurements L	B	H	Sound level	Weight	Air connection
	kW	bar	m³/min	mm	mm	mm	dB(A)	kg	mm	mm	mm	dB(A)	kg	G
Compact screw compressors, MONSUN series														
Screw compressor with fan belt drive														
MONSUN 4	4	7,5	0,53	650	695	1060	68	264	900	695	1260	62	304	1/2“
		10	0,42											
		13	0,33											
MONSUN 5,5	5,5	7,5	0,78	650	695	1060	68	269	900	695	1260	63	309	1/2“
		10	0,66											
		13	0,52											
		15	0,46											
MONSUN 7,5	7,5	7,5	1,07	650	695	1060	69	270	900	695	1260	64	310	1/2“
		10	0,89											
		13	0,75											
		15	0,70											
MONSUN 11	11	7,5	1,75	805	695	1170	71	334	1055	695	1370	66	374	1“
		10	1,48											
		13	1,15											
		15	1,12											
MONSUN 15	15	10	2,08	805	695	1170	73	346	1055	695	1370	68	386	1“
		13	1,66											
		15	1,52											
MONSUN 18,5	18,5	7,5	3,05	900	740	1350	70	433	1150	740	1550	66	478	1“
		10	2,59											
		13	2,15											
MONSUN 22	22	7,5	3,45	900	740	1350	72	466	1150	740	1550	67	511	1“
		10	3,03											
		13	2,66											
MONSUN 30	30	7,5	4,65	1100	815	1600	75	690	1410	815	1900	67	725	1 1/4“
		10	4,12											
		13	3,58											
MONSUN 37	37	7,5	5,60	1110	815	1600	77	710	1410	815	1900	69	745	1 1/4“
		10	5,20											
		13	4,55											
MONSUN 45	45	7,5	7,51	1400	890	1700	77	890	1800	890	2050	68	1060	1 1/2“
		10	6,52											
		13	5,62											
MONSUN 55	55	7,5	8,82	1400	890	1700	79	955	1800	890	2050	72	1120	1 1/2“
		10	7,76											
		13	6,72											
MONSUN 75	75	7,5	11,10	1750	1000	1870	85	1360	2150	1000	2270	74	1580	1 1/2“
		10	10,24											
		13	9,05											

* according to ISO 1217

Other sizes and pressures on request.



MONSUN

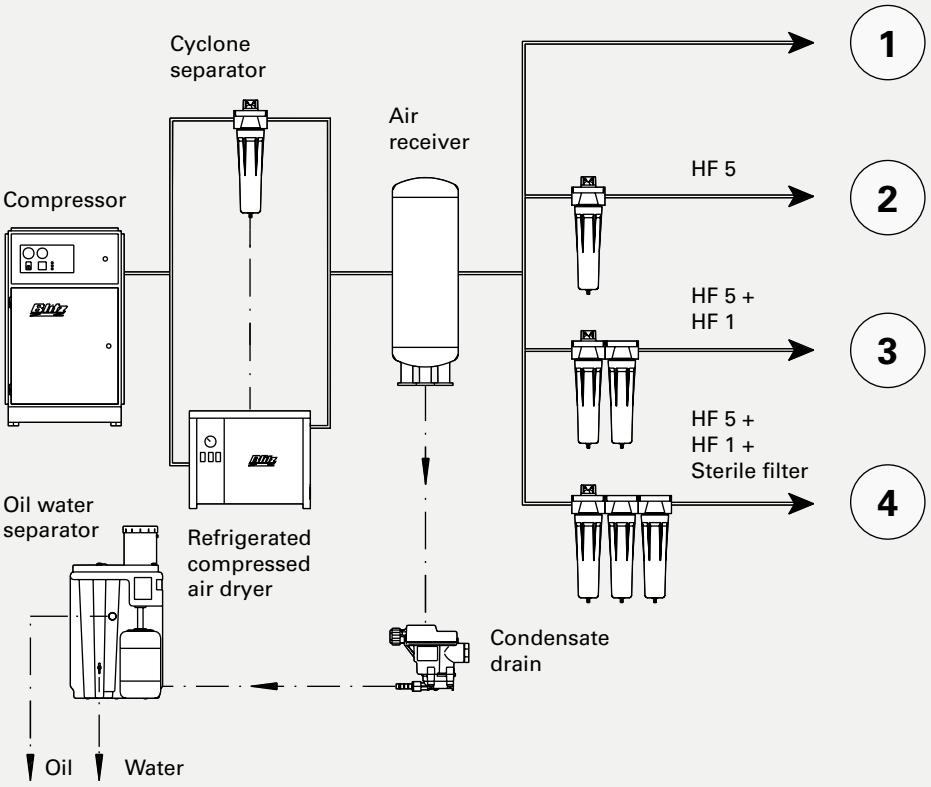
MONSUN compressed air stations
The economical overall solution

MONSUN compressed air stations are characterised by the complete scope of delivery. Apart from air receiver, refrigerated compressed air dryer, oil/water separator and automatic condensation drain etc., all components for the compressed air supply are supplied and piped ready for use. High installation costs are completely precluded. Also, a high quality of the compressed air is guaranteed at all times by the perfect factory adjustment of all components.

Compressed air stations of the MONSUN series are therefore excellently suited as decentralised system solutions for workshops and industry.

Compressed air treatment

Refrigerated compressed air dryers, oil/water separators and condensation separators provide the basis for "clean" compressed air. The quality can be further optimized with compressed air filters from BLITZ.



● **1. Variation**
Air quality: Pressure dew point 3°C, filtration of all solid particles, 3 micron absolute, Compressed air class*:3.4.4
Recommended use: General workshop air

● **2. Variation**
Air quality: Pressure dew point 3°C, separation degree 99,999%, for solid particles 0,01 micron, remaining oil contents 0,01 ppm, Compressed air class*: 1.4.2
Recommended use: Compressed air tools , pneumatics, control and instrumental technique, surface technique, powder coating, packing technique

● **3. Variation**
Air quality: Pressure dew point 3°C, free from aerosoles, oil smell and oil taste, solid particles 0,01 micron absolute, remaining oil contents 0,003 ppm, Compressed air class*: 1.4.1
Recommended use: Foods and semi-luxury foods, chemical and pharmaceutical industry, breathing air, production air, photographic laboratories

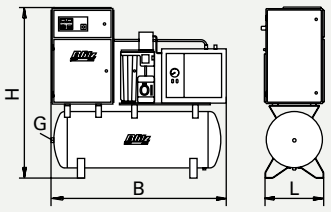
● **4. Variation**
Air quality: + 100% sterile filter Compressed air class*: 1.4.1
Recommended use: vide above + sterile air requirement

* according to DIN ISO 8573-1: 1995

Model	Motor capacity	Max. pressure	Flow capacity*	Contents of air receiver	With noise cover Measurements L	B	H	Sound level	Weight	With top noise cover Measurements L	B	H	Sound level	Weight	Air connection
	kW	bar	m³/min	l	mm	mm	mm	dB(A)	kg	mm	mm	mm	dB(A)	kg	G
Compressed air stations, MONUNS S series															
Screw compressor on horizontal air receiver with cold dryers and oil/water separators															
MONSUN 4 S	4	7,5	0,53	500	750	1900	1790	68	550	1050	1900	1990	62	590	1“
		10	0,42	500											
		13	0,33	500											
MONSUN 5,5 S	5,5	7,5	0,78	500	750	1900	1790	68	555	1050	1900	1990	63	595	1“
		10	0,66	500											
		13	0,52	500											
		15	0,46	500											
MONSUN 7,5 S	7,5	7,5	1,07	500	750	1900	1790	69	555	1050	1900	1990	64	595	1“
		10	0,89	500											
		13	0,75	500											
		15	0,70	500											
MONSUN 11 S	11	7,5	1,75	500	850	1900	1790	71	675	1150	1900	1900	66	715	1“
		10	1,48	500											
		13	1,15	500											
		15	1,12	500											
MONSUN 15 S	15	10	2,08	500	850	1900	1790	73	690	1150	1900	1990	68	740	1“
		13	1,66	500											
		15	1,52	500											

* according to ISO 1217

Other sizes and pressures on request.



MONSUN S

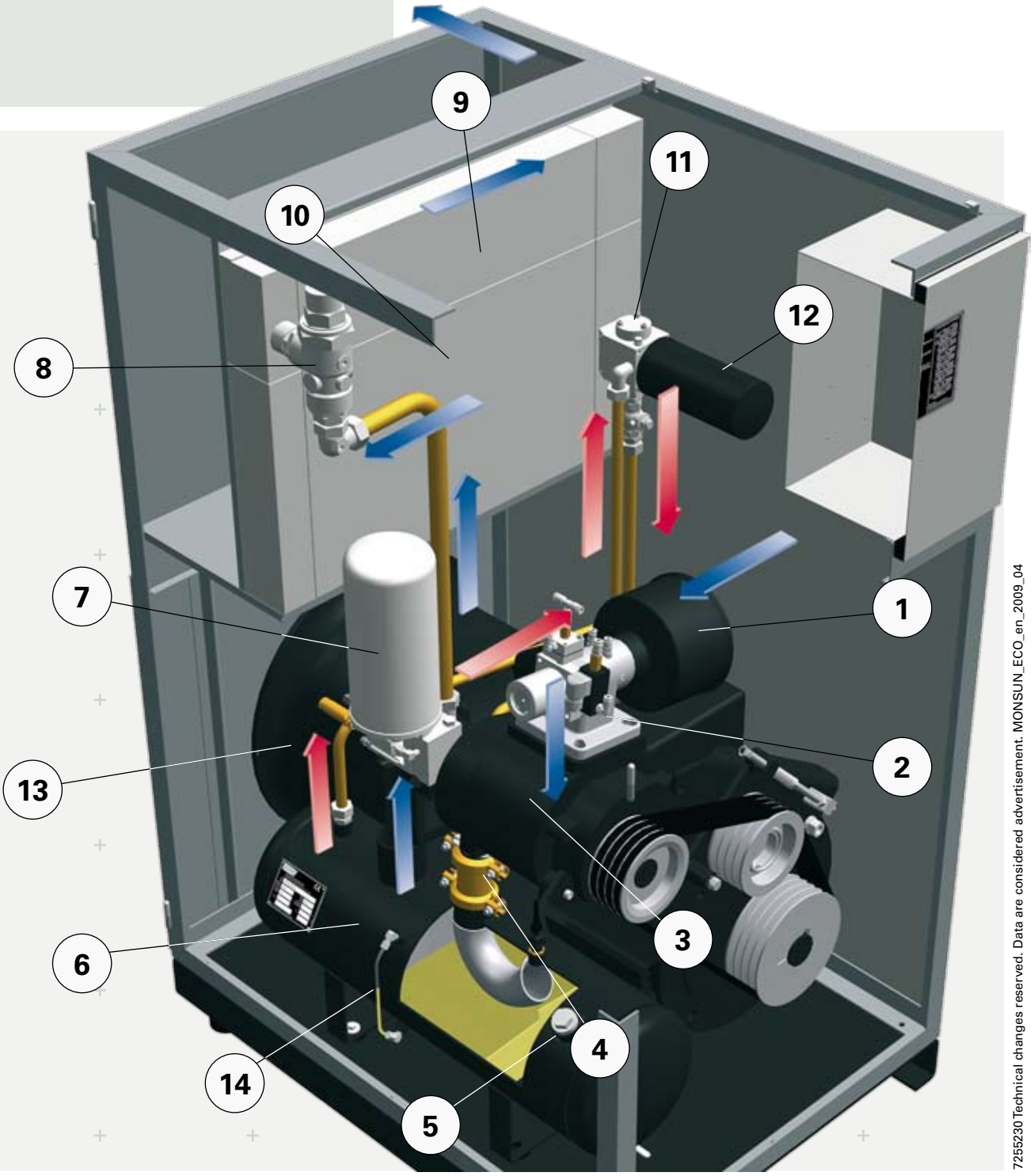
MONSUN S

Right the latest standards of technology from the start, with integrated cold dryer, oil/water separator and automatic condensation drain.

The technology in detail
Function diagram of the MONSUN screw compressors

Two circulation systems – one goal

Atmospheric air is impelled through the ● **1. air filter.** The purified air passes through the infinitely adjustable ● **2. suction valve** to the ● **3. compressor stage.** Oil injected continuously into the compression chamber cools, seals and lubricates. The oil/air mixture passes through the ● **4. pressure pipe** to the ● **6. compressed air/oil reservoir.** Oil components are separated from each other to 99 % by ● **5. cyclone-** and gravity separation. After passing through the ● **7. oil/fine separator cartridge** compressed air is available with a residual oil content of approx. 2 mg/cm³. The compressed air passes through the ● **8. minimum pressure valve** to the ● **9. compressed air cooler.** The oil precipitated in the ● **6. compressed air/oil separator** is cooled in the ● **10. oil cooler** and injected into the compressor stage. The oil is purified in the ● **12. oil filter** and returned to the oil circulation system. The built-in ● **11. oil temperature regulator** ensures that the temperature in the oil circulation system is constantly within the optimum range. ● **13. Cooler fan,** ● **14. Oil level indicator**



BlitzRotary GmbH
Hüfinger Straße 55
D-78199 Bräunlingen
A DOVER COMPANY

Fon +49.771.9233.0
Fax +49.771.9233.99
info@blitzrotary.com
www.blitzrotary.com

Blitz®