Compressed Air Technology
O_2 and N_2 Generators

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BERG
KOMPBERG®
BSDF 37

Oil-injected Screw Compressor (with Frequency Inverter)

KOMPBERG® BSDF

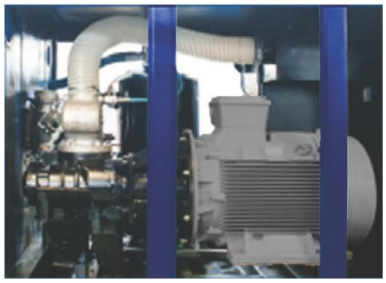
Our screw compressors with Frequency Control are the most modern and economical way of compressed air generation in the medium range these days.
Highly economical, long lifespan, easy and cost-effective maintenance are the most important criteria in the development of our new screw compressor products.

All Our Compressors are equipped as Direct Drive

Drive 1:1 means that the Airend and motor are directly connected. This means that there are no transmission losses. BERG® direct drive screw compressors deliver outstanding performance and make possible great savings in energy.
The drive motor and the air end in one-to-one drive series compressors designed to operate at the same low speed.
This enables the drive and compression units to be linked via a maintenance-free coupling which avoids the transmission losses with gear-driven units.
Our direct drive compressor reduces the number of components needed in comparison with gear drive, significantly increasing reliability and service life. Sound levels are also considerably lower.
The Airend in each KOMPBERG® BSDF model is designed to specifically match air demand and ensures outstanding efficiency through the low-speed operation.

Direct drive 1:1

The most efficient drive option, where t he screw unit is coupled directly to an electric motor, using the flexible coupling. Owing to such a solution, there are no energy losses when torque is transferred from the motor to the block. Power consumption is considerably reduced.



1. **Direct drive** soft start, almost zero loss power transmission
2. **Airend** efficient and effective to the highest standards
3. **Electric motor** economical and robust Siemens motor
4. **Cooler unit** large surface area, highest performance , and effectiveness for quieter running
5. **Controller** intelligent, fast response with full digital monitoring from Siemens
6. **Control cabinet** optionally with integrated, energy-saving Siemens frequency converter
7. **Separation system** guarantee's 100% compressed air quality
8. **Oil circuit** works efficiently with long maintenance intervals

Oil-injected Screw Compressor (with Frequency Inverter)

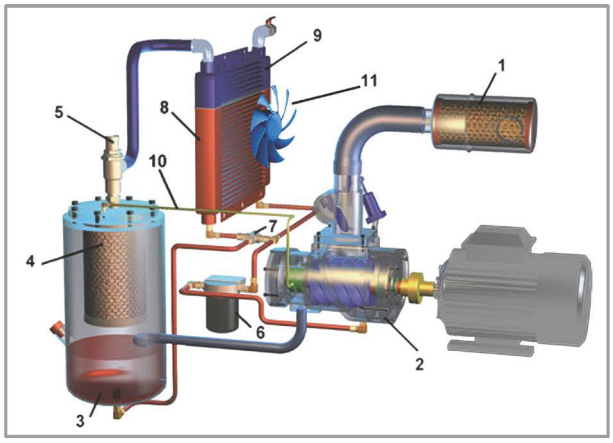
KOMPBERG® BSDF

Frequency Control series compressors from BERG® are exceptionally efficient variable speed screw compressors with Siemens inverter as well as energy-saving Siemens Controller provide outstanding performance throughout the entire control range. All BSDF Compressors model is capable of 100 % duty cycles without any additional maintenance required. These screw-type compressors have High economic efficiency, long service life, simple and cost-effective maintenance.

KOMPBERG® BSDF Advantages

- Compact Airends eliminating pipework and links with known sources of problems.
- Efficient noise-insulated canopy and multiple anti-vibration mountings.
- Door panels are easily removed allowing ease of access to the individual components for servicing.
- Use of high-quality standard components and maintaining and offering flexibility in the event of faults.

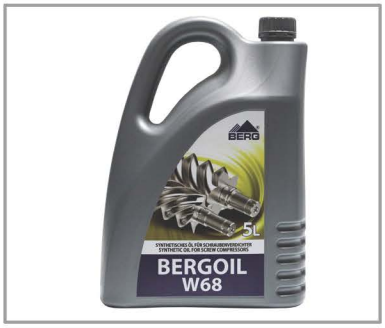
Principle Operation



Ambient air is sucked through the filter (1) then it flows through the suction regulator equipped with the variable control valve adapting to prompt demand for compressed air. The suction regulator operation is controlled by the electrical unit connected to the pressure sensor. Oil previously tr ea ted in the filter (2) is injected into the air compressed in the screw air end (3).
The oil ensures lubrication, sealing and cooling of the screw air end. The oil and air mixture is compressed in spaces between the screw impellers and then flows into the oil separator tank (4), where most of the oil is precipitated from the mixture. From the separator tank, air flows through the fine filter (5), minimum pressure valve (6), to the after cooler (7), where it is cooled to a temperature 10°C higher than the ambient temperature.
The oil collected in the oil separator is carried away with the pipe (8) to the screw air end. The oil flow through the after cooler (9) is controlled by the thermostat (10) The suction and oil filters are equipped with the pollution sensors. The airflow through the fan (11) tries to cool the after cooler.

Synthetic oil - longer periods between inspections

1. The BERG® synthetic oil helps to maintain the constant
2. compressed air delivery necessary for efficient system
3. operation by, among other things, over five times faster
4. air removal and over two times faster water separation by oil.



Oil-injected Screw Compressor (with Frequency Inverter)

Why Frequency Control?

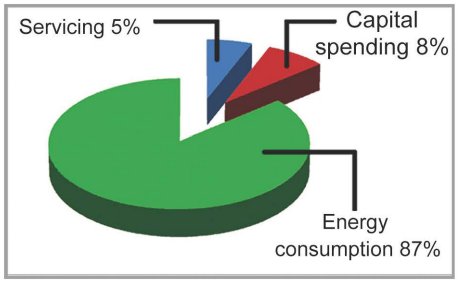
- Energy saving up to 35%
- Low fatigue
- Pressure optimization
- Reduction of discharge losses
- Lower power consumption leads to reduced CO_2

We use the reliable supplier for inverters:

SIEMENS Inverters have been amazingly reliable workhorses for over 25 years and no competitor drive can boast a track record like that. The Siemens inverters are microprocessor-controlled and use state-of-the-art Insulated Gate Bipolar Transistor (IGBT) technology.

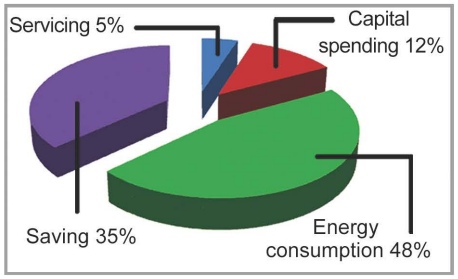
Standard Compressor:

The energy costs after ten years amount to 87% of the total costs incurred by a conventional compressor.



Compressor with VSD:

It is possible to save up to 35% on energy costs by using KOMPBERG® BSDF, Which is developed by BERG®.



Ultimate Efficiency with Our BSDF

Ultimate Efficiency with our BSDF significantly increases reliability and service life, Direct drive reduces the number of components needed and eliminates the associated transmission losses. Sound levels are also considerably lower.

Operation safety

The frequency inverter is located in the separate and effectively cooled switchgear, which ensures good ventilation and protection against an influence of heat emitted by the compression module operation.

Technical Data of screw compressor KOMPBERG® BSDF

Model	Capacity min-max [m^3/m]			Dimension (L×W×H)	Power transmission system	Noise level [dB]	motor power [kW]	Air connection
	7,5 ba r	10 bar	13 bar	[mm]				
BSDF 30	1.7 - 5.3	1.5 - 4.4	1.2 - 3.3	1740×950×1500	direct drive	75	30	G 1 ½"
BSDF 37	1.6 - 6.4	1.6 - 5.4	1.6 - 4.8	1740×950×1500	direct drive	75	37	G 1 ½"
BSDF 45	2.4 - 7.7	2.5 - 7.0	2.0 - 5.8	2000×1100×1580	direct drive	75	45	G 1 ½"
BSDF 55	2.6 - 9.9	2.5 - 8.5	2.3 - 6.6	2000×1100×1580	direct drive	75	55	G 1 ½"
BSDF 75	4.6 - 13.6	3.6 - 12.3	3.5 - 9.4	2200×1500×1675	direct drive	75	75	G 2"
BSDF 90	4.6 - 16.2	4.2 - 13.6	3.4 - 11.4	2550×1485×2130	direct drive	83	90	G 2"
BSDF 110	9.6 - 19.2	8.4 - 16.9	7.0 - 14.1	2550×1485×2130	direct drive	83	110	G 2"
BSDF 132	11.5 - 23.0	10.2 - 20.5	8.3 - 16.5	3300×1600×1800	direct drive	83	132	G 2 ½"
BSDF 160	15.0 - 30.0	12.3 - 24.5	11.3 - 22.6	3300×1600×1800	direct drive	83	160	G 2 ½"
BSDF 200	17.3 - 34.6	15.5 - 31.0	13.0 - 26.1	4000×2100×2200	direct drive	85	200	DN 100
BSDF 250	20.0 - 40.0	18.5 - 36.0	15.0 - 30.0	4000×2100×2200	direct drive	85	250	DN 100