COMPRAG®

positive displacement



CATALOG
#1

STATIONARY
Screw Compressors
DV-series

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Design features of screw compressors



version (DV)
standard version
on base frame

Space-saving design.

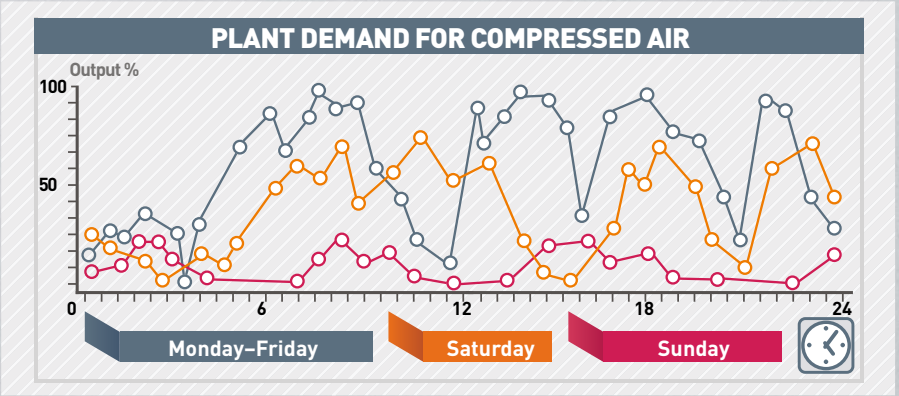
All other components of the compressed air system can be selected as required.

This Catalogue is valid from 01.10.2021.
All previous catalogues lose their validity with the publication of the new catalogue. Technical characteristics, specifications and details published in this catalogue are subject to change without notice. The latest catalogue version is available for download on our web page www.comprag.com

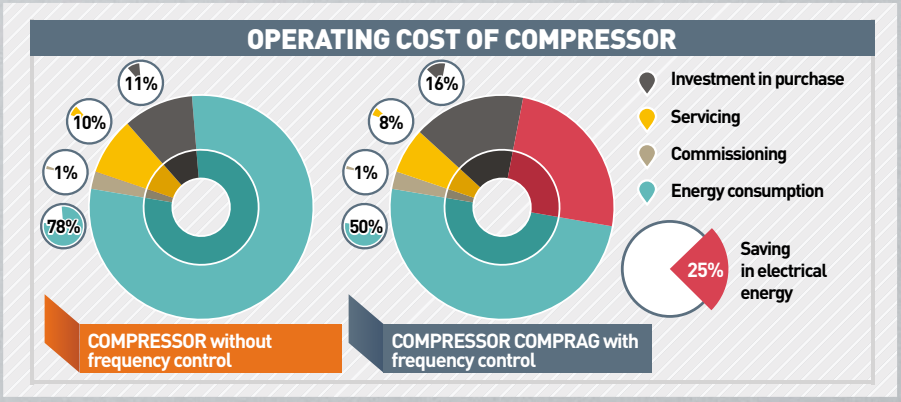
Comprag GmbH.

DV-series frequency control

A plant's demand for compressed air varies throughout the day - from zero demand to peak demand.



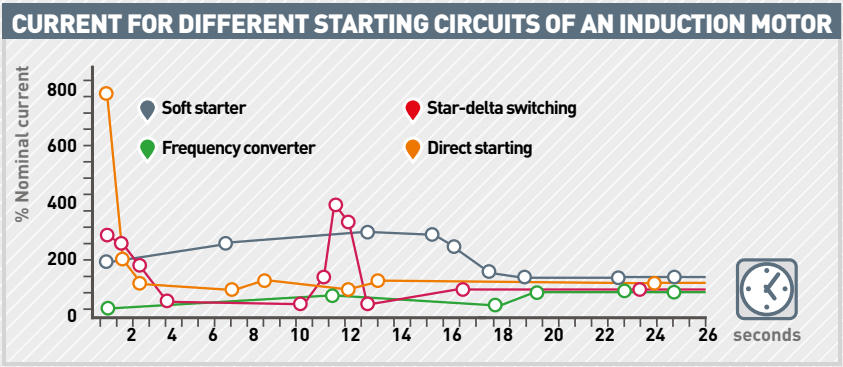
Conventional screw compressors are not able to switch between operating modes according to a plant's current demand for compressed air. Owing to constant switching between loading/unloading modes or the idle running of compressors, conventional screw compressors consume consistently large amounts of electrical energy when operating. The Comprag AV compressor series with frequency control has been created for economical compressor operation where there is varying demand.



AV compressors are provided with a frequency converter for continuous control of compressor output according to the current demand for compressed air. They provide a plant with the necessary amount of compressed air at a given moment and at a constant set pressure, while consuming only as much electrical energy as there is demand for compressed air. This mode of operation conserves as much energy as possible.

Comprag compressors with frequency control allow a 25% saving in electrical energy consumption.

Mechanism of compressor with frequency control:



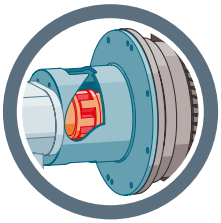
Varying compressed-air demand involves a change in pressure in a plant's compressed-air system. A pressure sensor installed in the compressor brings about a change in system pressure by means of a corresponding signal sent to the compressor's controller. Via the frequency converter, the controller sets a speed for the electric motor to match the compressor's required output. In this way, the plant's compressed-air system pressure is kept at a constant value.

The frequency converter means that compressor start-up is associated with very low starting currents. This has a positive effect on the service life of the electrical motor and the electrics.

DV-SERIES COMPRESSORS WITH 1:1 DIRECT DRIVE

Comprag DV-Series direct drive air compressors are designed for applications where durability, efficiency and reliability are essential.

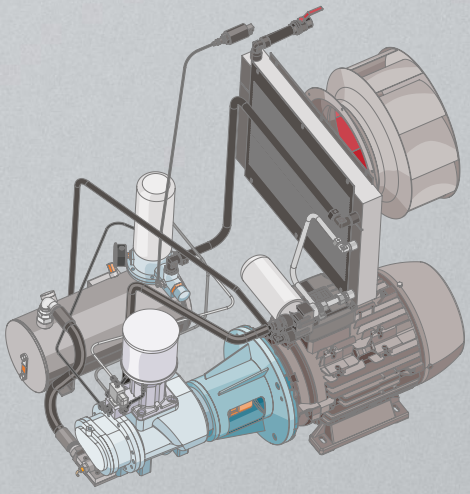
DV-Series compressors are fitted with a large screw unit with direct one-to-one drive in order to avoid loss through belt- or gear drives.



DIRECT DRIVE ADVANTAGES

Direct driven air compressors are typically compared with belt driven compressors when choosing the right equipment for an application.

In a direct drive compressor, the motor is connected with the air-end by a flexible coupling and transferring power directly and effectively. In contrast to a belt driven compressor, where a belt is adapted for the power transmission, a direct driven compressor operates more efficiently, with no power loss from a belt drive system. In addition, a direct drive compressor has fewer moving parts, is less subject to failure and possesses long operational life due to reduced wear and tear.

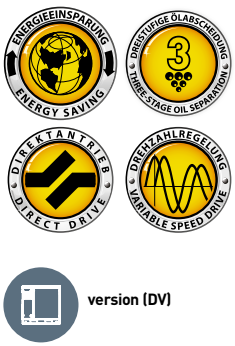


- FEWER MOVING PARTS
- LESS WEAR & TEAR
- MORE EFFICIENT
- REDUCES ENERGY COSTS

SCREW COMPRESSORS DV-SERIES WIDTH DIRECT DRIVE 1:1 & FREQUENCY CONTROL

with drive power 11-15 kW, capacity up to 2,3 m³/min

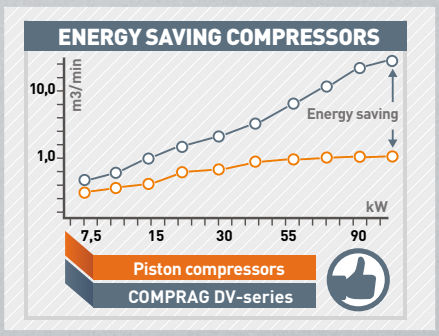
Comparg DV-Series oil filled screw compressors are designed for smooth and economical production of compressed air in industrial plants. They feature a compact, logically laid-out design and are simple to use.



version (DV)



Features:



- Modern, energy-efficient air-end.
- Microprocessor controlled for optimal cost-effective compressor operation.
- Through intelligent design of all key components, internal pressure losses are kept to a minimum, resulting in noticeable savings in total energy consumption.
- Through the use of an effective oil separation system, a residual oil content in compressed air of maximum 3 mg/m³ is attained.
- v-Log controller for more setting and control options a group mode control via several v-Log controllers and connection to a higher-level master controller or a control room via MODBUS.
- All filters and separators are easy to reach for economical service.

The advantages over conventional screw compressors are particularly clear in motor power segment greater than 7.5kW. Under the same operating conditions, the energy consumption of the DV compressor is significantly lower.

Design and technical characteristics

DV-Series screw oil-filled compressors produce industrial compressed air, up to class 4-4-4 to ISO 8573-1:2010.

New compressor design: Professional controller (A), Reliable electric motor (B), Screw air-end (C), Oil separator tank (D) and Comprag made control valves (E).

Controller v-Log (A)

The professional controller **v-Log** controls operation of the compressor in automatic mode, and also provides the user with necessary information on the working pressure, temperature of the air oil mixture, compressor's operation time, need for servicing, etc.

The professional controller allows a group mode control via several **v-Log** controllers and connection to a higher-level master controller or a control room via MODBUS.



Reliable electric motor (B)



DV-Series compressors are fitted with quality electric motors with a high efficiency coefficient and world-class bearings from leading manufacturers.

The motors are not overloaded, but have a power reserve and overheat protection for windings.

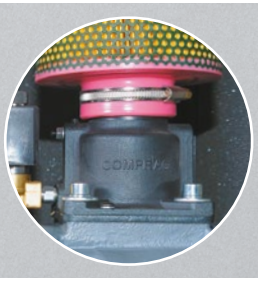
Screw air-end (C)



The air-end has a contemporary energy-efficient screw shape.

This increases compressor efficiency and reduces maintenance and replacement costs.

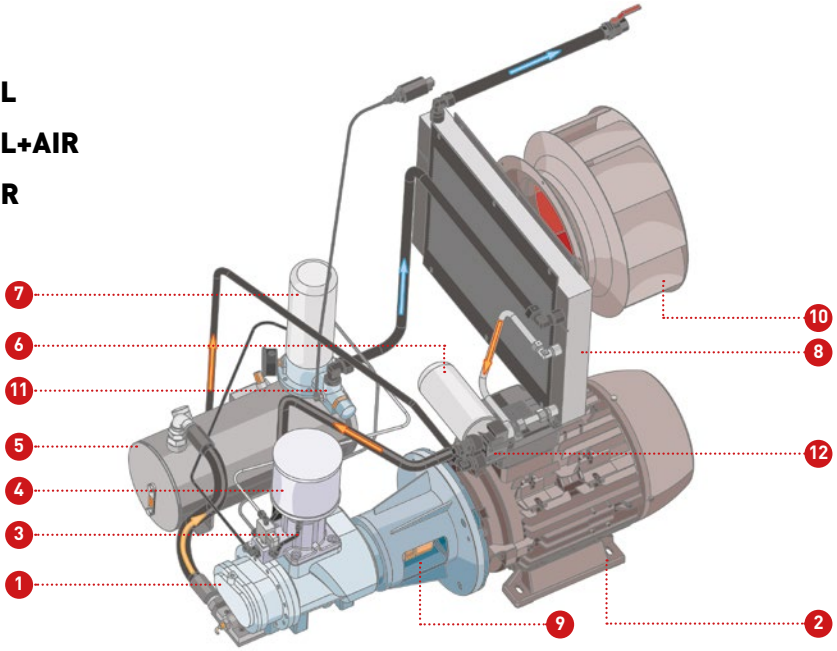
Control valve (E)



Comprag made control valves. Minimum pressure loss, improved unloading time adjustment.

Flow chart of compressor

-OIL
-OIL+AIR
-AIR



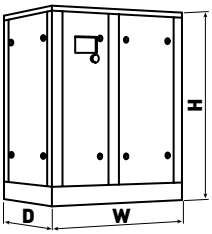
1. Screw air-end
2. Electric motor
3. Air intake valve
4. Air filter
5. Separation vessel
6. Spin-On oil filter
7. Internal separator
8. Heat exchanger
9. Coupling
10. Cooling Fan
11. Minimum pressure valve
12. Thermostatic valve

Table of models DV-Series

Article	Model	Drive power (kW)	Max. working pressure (bar)	Capacity* (m^3/min)	Rated voltage (phase/V/Hz)	Sound pressure level** dB(A)	Screw connection
11300025	DV-1108	11	5-8	1,5	3/380-420/50	72	1/2"
11300026	DV-1110		5-10	1,3		72	
11300035	DV-1508	15	5-8	2,3	3/380-420/50	72	1/2"
11300036	DV-1510		5-10	2,1		72	

* Measured according to ISO 1217; ** Measured according to ISO 3744

Dimensions DV-Series



Model	Height H (mm)	Width W (mm)	Depth D (mm)	Weight (kg)
DV-11	1280	1190	810	425
DV-15	1280	1190	810	445

SCREW COMPRESSORS DV-SERIES WIDTH DIRECT DRIVE 1:1 & FREQUENCY CONTROL

with drive power 18-22 kW, capacity up to 3,6 m³/min

Comparg DV-Series oil filled screw compressors are designed for smooth and economical production of compressed air in industrial plants. They feature a compact, logically laid-out design and are simple to use.

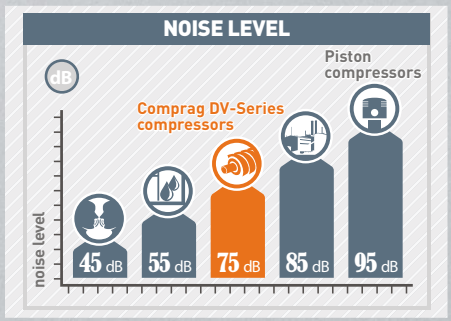




version (DV)



Features:



- Modern, energy-efficient air-end.
- Microprocessor controlled for optimal cost-effective compressor operation.
- Through intelligent design of all key components, internal pressure losses are kept to a minimum, resulting in noticeable savings in total energy consumption.
- Through the use of an effective oil separation system, a residual oil content in compressed air of maximum 3 mg/m³ is attained.
- v-Log controller for more setting and control options a group mode control via several v-Log controllers and connection to a higher-level master controller or a control room via MODBUS.
- All filters and separators are easy to reach for economical service.

Comprag DV-Series compressors are noise-and vibration-insulated and can be installed in any industrial premises in close proximity to the consumer. This eliminates the need to install costly noise insulation and to run long compressed air lines, thereby reducing pressure losses and increasing system efficiency.

Design and technical characteristics

DV-Series screw oil-filled compressors produce industrial compressed air, up to class 4-4-4 to ISO 8573-1:2010.

New compressor design: Professional controller (A), Reliable electric motor (B), Screw air-end (C), Oil separator tank (D) and Comprag made control valves (E).

Controller v-Log (A)

The professional controller **v-Log** controls operation of the compressor in automatic mode, and also provides the user with necessary information on the working pressure, temperature of the air oil mixture, compressor's operation time, need for servicing, etc.

The professional controller allows a group mode control via several **v-Log** controllers and connection to a higher-level master controller or a control room via MODBUS.



Reliable electric motor (B)



DV-Series compressors are fitted with quality electric motors with a high efficiency coefficient and world-class bearings from leading manufacturers.

The motors are not overloaded, but have a power reserve and overheat protection for windings.

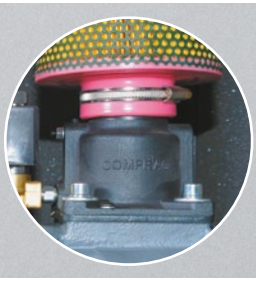
Screw air-end (C)



The air-end has a contemporary energy-efficient screw shape.

This increases compressor efficiency and reduces maintenance and replacement costs.

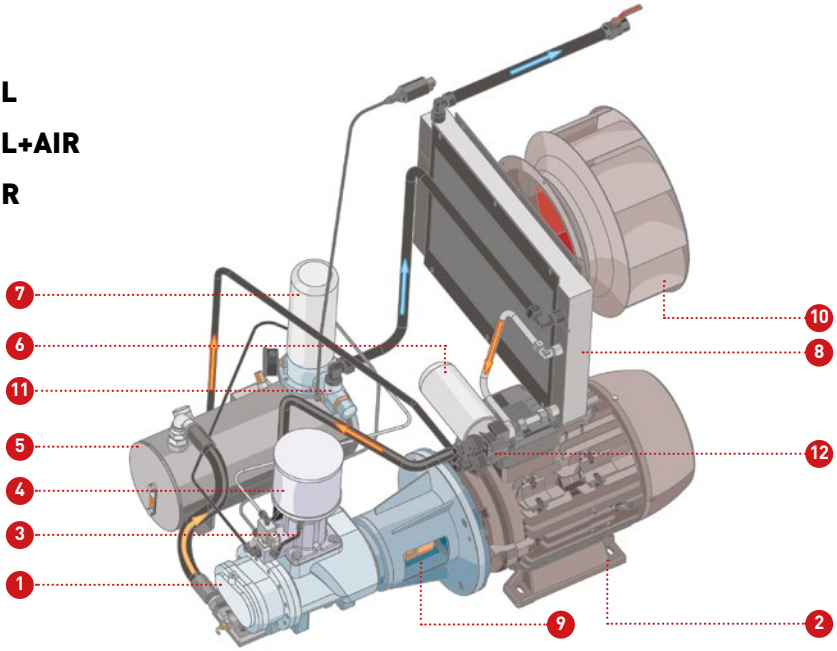
Control valve (E)



Comprag made control valves. Minimum pressure loss, improved unloading time adjustment.

Flow chart of compressor

-OIL
-OIL+AIR
-AIR



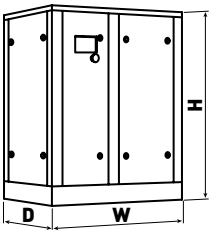
1. Screw air-end
2. Electric motor
3. Air intake valve
4. Air filter
5. Separation vessel
6. Spin-On oil filter
7. Internal separator
8. Heat exchanger
9. Coupling
10. Cooling Fan
11. Minimum pressure valve
12. Thermostatic valve

Table of models DV-Series

Article	Model	Drive power (kW)	Max. working pressure (bar)	Capacity* (m^3/min)	Rated voltage (phase/V/Hz)	Sound pressure level** dB(A)	Screw connection
11300045	DV-1808	18	5-8	2,9	3/380-420/50	72	3/4"
11300046	DV-1810		5-10	2,6		72	
11300055	DV-2208	22	5-8	3,6	3/380-420/50	72	3/4"
11300056	DV-2210		5-10	3,2		72	

* Measured according to ISO 1217; ** Measured according to ISO 3744

Dimensions DV-Series



Model	Height H (mm)	Width W (mm)	Depth D (mm)	Weight (kg)
DV-18	1280	1300	940	480
DV-22	1280	1300	940	515

SCREW COMPRESSORS DV-SERIES WIDTH DIRECT DRIVE 1:1 & FREQUENCY CONTROL

with drive power 30-37 kW, capacity up to 6,2 m³/min

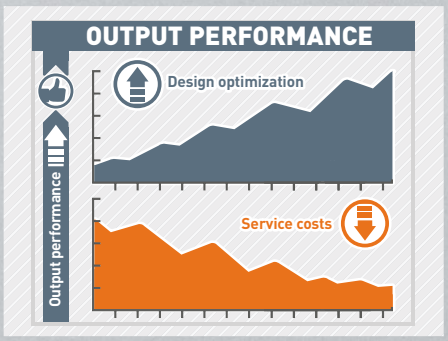
Comparg DV-Series oil filled screw compressors are designed for smooth and economical production of compressed air in industrial plants. They feature a compact, logically laid-out design and are simple to use.



version (DV)

Features:

DV-Series compressors have been developed to offer an optimal balance between performance, energy saving solutions, and offer increased servicing intervals to reduce your running costs. DV-Series compressors are most efficient in class.



- Modern, energy-efficient air-end.
- Microprocessor controlled for optimal cost-effective compressor operation.
- Through intelligent design of all key components, internal pressure losses are kept to a minimum, resulting in noticeable savings in total energy consumption.
- Through the use of an effective oil separation system, a residual oil content in compressed air of maximum 3 mg/m³ is attained.
- v-Log controller for more setting and control options a group mode control via several v-Log controllers and connection to a higher-level master controller or a control room via MODBUS.
- All filters and separators are easy to reach for economical service.

Design and technical characteristics

DV-Series screw oil-filled compressors produce industrial compressed air, up to class 4-4-4 to ISO 8573-1:2010.

New compressor design: Professional controller (A), Effective and reliable electric motor (B), Screw air-end (C), Effective separation system (D).

Controller v-Log (A)

The professional controller **v-Log** controls operation of the compressor in automatic mode, and also provides the user with necessary information on the working pressure, temperature of the air oil mixture, compressor's operation time, need for servicing, etc.

The professional controller allows a group mode control via several **v-Log** controllers and connection to a higher-level master controller or a control room via MODBUS.



Reliable electric motor (B)



DV-Series compressors are fitted with quality electric motors with a high efficiency coefficient and world-class bearings from leading manufacturers.

The motors are not overloaded, but have a power reserve and overheat protection for windings.

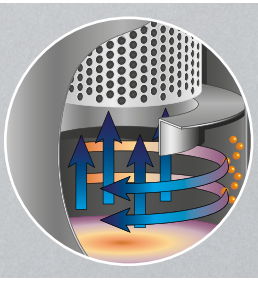
Screw air-end (C)



The air-end has a contemporary energy-efficient screw shape.

This increases compressor efficiency and reduces maintenance and replacement costs.

Separation system (D)

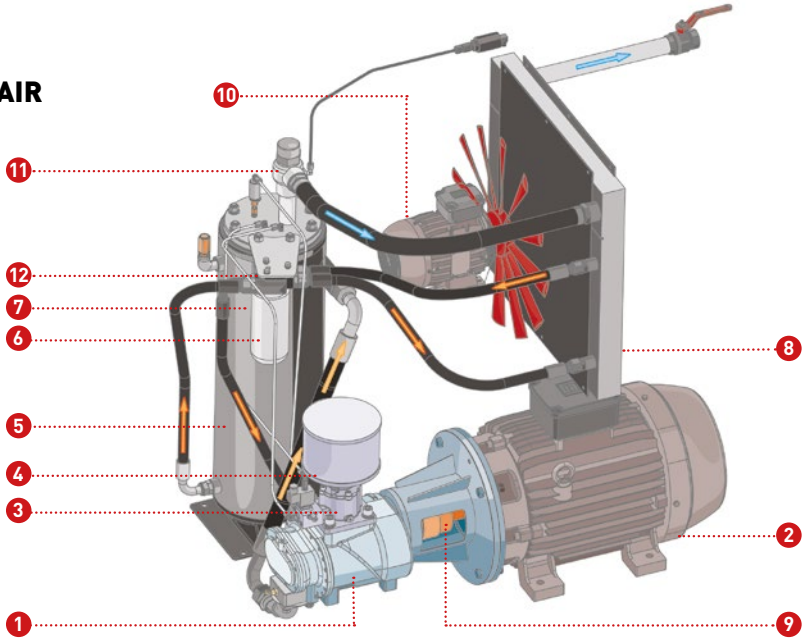


DV-Series compressors are fitted with an effective three-phase separation system. Most of the oil is separated under centrifugal force in the separator tank. Some of the oil is separated by gravitational force during movement of oil inside the separator.

The remaining amount of oil is separated by a quality separation element. The total amount of oil in compressed air at the outlet of the compressor does not exceed 3 mg/m³.

Flow chart of compressor

-OIL
-OIL+AIR
-AIR



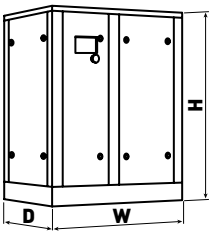
1. Screw air-end
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5. Separation vessel
6. Spin-On oil filter
7. Internal separator
8. Heat exchanger
9. Coupling
10. Cooling Fan
11. Minimum pressure valve
12. Thermostatic valve

Table of models DV-Series

Article	Model	Drive power (kW)	Max. working pressure (bar)	Capacity* (m^3/min)	Rated voltage (phase/V/Hz)	Sound pressure level** dB(A)	Screw connection
11300065	DV-3008	30	5-8	5,0	3/380-420/50	72	1.1/4"
11300066	DV-3010		5-10	4,5		72	
11300075	DV-3708	37	5-8	6,2	3/380-420/50	72	1.1/4"
11300076	DV-3710		5-10	5,6		72	

* Measured according to ISO 1217; ** Measured according to ISO 3744

Dimensions DV-Series



Model	Height H (mm)	Width W (mm)	Depth D (mm)	Weight (kg)
DV-30	1500	1400	1000	765
DV-37	1500	1400	1000	790

SCREW COMPRESSORS DV-SERIES WIDTH DIRECT DRIVE 1:1 & FREQUENCY CONTROL

with drive power 45-55 kW, capacity up to 9,1 m³/min

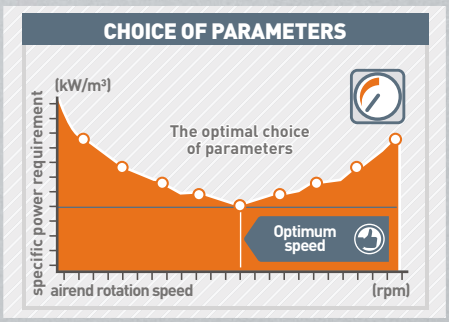
Comparg DV-Series oil filled screw compressors are designed for smooth and economical production of compressed air in industrial plants. They feature a compact, logically laid-out design and are simple to use.



version (DV)

Features:

The rotation speed of the helical screw rotor unit is selected on the basis of the specific optimal performance. All compressor components have been designed according to parameters chosen for optimal performance and low operating costs. Comparg DV-Series offer some of the lowest specific production costs of compressed air.



- Modern, energy-efficient air-end.
- Microprocessor controlled for optimal cost-effective compressor operation.
- Through intelligent design of all key components, internal pressure losses are kept to a minimum, resulting in noticeable savings in total energy consumption.
- Through the use of an effective oil separation system, a residual oil content in compressed air of maximum 3 mg/m³ is attained.
- v-Log controller for more setting and control options a group mode control via several v-Log controllers and connection to a higher-level master controller or a control room via MODBUS.
- All filters and separators are easy to reach for economical service.

Design and technical characteristics

DV-Series screw oil-filled compressors produce industrial compressed air, up to class 4-4-4 to ISO 8573-1:2010.

New compressor design: Professional controller (A), Effective and reliable electric motor (B), Screw air-end (C), Effective separation system (D).

Controller v-Log (A)

The professional controller **v-Log** controls operation of the compressor in automatic mode, and also provides the user with necessary information on the working pressure, temperature of the air oil mixture, compressor's operation time, need for servicing, etc.

The professional controller allows a group mode control via several **v-Log** controllers and connection to a higher-level master controller or a control room via MODBUS.



Reliable electric motor (B)



DV-Series compressors are fitted with quality electric motors with a high efficiency coefficient and world-class bearings from leading manufacturers.

The motors are not overloaded, but have a power reserve and overheat protection for windings.

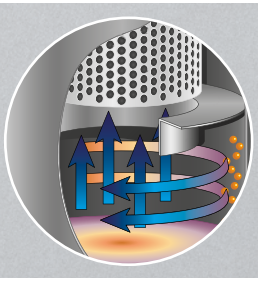
Screw air-end (C)



The air-end has a contemporary energy-efficient screw shape.

This increases compressor efficiency and reduces maintenance and replacement costs.

Separation system (D)

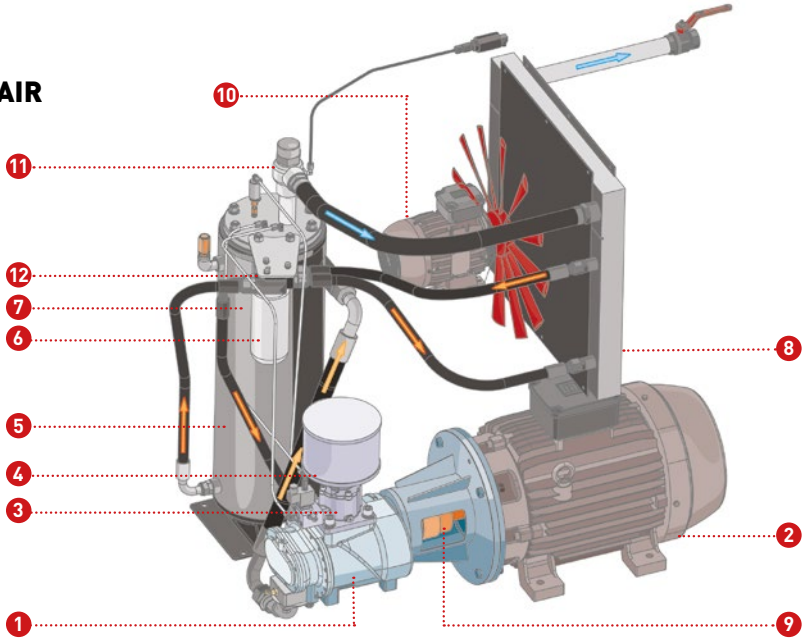


DV-Series compressors are fitted with an effective three-phase separation system. Most of the oil is separated under centrifugal force in the separator tank. Some of the oil is separated by gravitational force during movement of oil inside the separator.

The remaining amount of oil is separated by a quality separation element. The total amount of oil in compressed air at the outlet of the compressor does not exceed 3 mg/m³.

Flow chart of compressor

-OIL
-OIL+AIR
-AIR



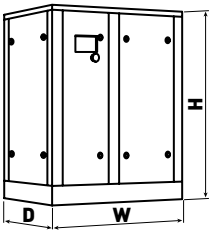
1. Screw air-end
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3. Air intake valve
4. Air filter
5. Separation vessel
6. Spin-On oil filter
7. Internal separator
8. Heat exchanger
9. Coupling
10. Cooling Fan
11. Minimum pressure valve
12. Thermostatic valve

Table of models DV-Series

Article	Model	Drive power (kW)	Max. working pressure (bar)	Capacity* (m^3/min)	Rated voltage (phase/V/Hz)	Sound pressure level** dB(A)	Screw connection
11300085	DV-4508	45	5-8	7,0	3/380-420/50	75	1.1/2"
11300086	DV-4510		5-10	6,2		75	
11300095	DV-5508	55	5-8	9,1	3/380-420/50	75	1.1/2"
11300096	DV-5510		5-10	8,5		75	

* Measured according to ISO 1217; ** Measured according to ISO 3744

Dimensions DV-Series



Model	Height H (mm)	Width W (mm)	Depth D (mm)	Weight (kg)
DV-45	1500	1650	1250	1055
DV-55	1500	1650	1250	1215

SCREW COMPRESSORS DV-SERIES WIDTH DIRECT DRIVE 1:1 & FREQUENCY CONTROL

with drive power 75-90 kW, capacity up to 15,4 m³/min

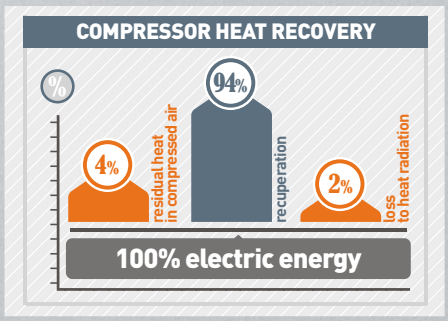
Comparg DV-Series oil filled screw compressors are designed for smooth and economical production of compressed air in industrial plants. They feature a compact, logically laid-out design and are simple to use.



version (DV)

Features:

Up to **94%** of the electric energy expended in driving a compressor may be used again in the form of recuperated heat. D-Series compressors allow heated air to be used efficiently by recovering it for production or storage facilities.



100% - electric energy consumed by compressor
4% - residual heat in compressed air
2% - loss to heat radiation

- Modern, energy-efficient air-end.
- Microprocessor controlled for optimal cost-effective compressor operation.
- Through intelligent design of all key components, internal pressure losses are kept to a minimum, resulting in noticeable savings in total energy consumption.
- Through the use of an effective oil separation system, a residual oil content in compressed air of maximum 3 mg/m³ is attained.
- v-Log controller for more setting and control options a group mode control via several v-Log controllers and connection to a higher-level master controller or a control room via MODBUS.
- All filters and separators are easy to reach for economical service.

Design and technical characteristics

DV-Series screw oil-filled compressors produce industrial compressed air, up to class 4-4-4 to ISO 8573-1:2010.

New compressor design: Professional controller (A), Effective and reliable electric motor (B), Screw air-end (C), Effective separation system (D).

Controller v-Log (A)

The professional controller **v-Log** controls operation of the compressor in automatic mode, and also provides the user with necessary information on the working pressure, temperature of the air oil mixture, compressor's operation time, need for servicing, etc.

The professional controller allows a group mode control via several **v-Log** controllers and connection to a higher-level master controller or a control room via MODBUS.



Reliable electric motor (B)



DV-Series compressors are fitted with quality electric motors with a high efficiency coefficient and world-class bearings from leading manufacturers.

The motors are not overloaded, but have a power reserve and overheat protection for windings.

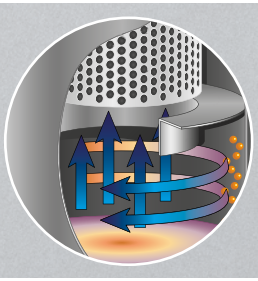
Screw air-end (C)



The air-end has a contemporary energy-efficient screw shape.

This increases compressor efficiency and reduces maintenance and replacement costs.

Separation system (D)

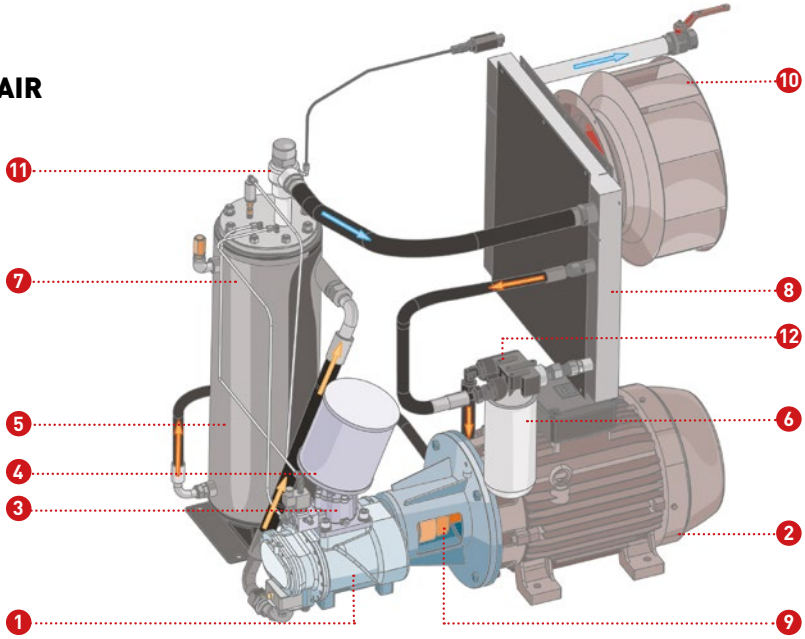


DV-Series compressors are fitted with an effective three-phase separation system. Most of the oil is separated under centrifugal force in the separator tank. Some of the oil is separated by gravitational force during movement of oil inside the separator.

The remaining amount of oil is separated by a quality separation element. The total amount of oil in compressed air at the outlet of the compressor does not exceed 3 mg/m³.

Flow chart of compressor

-OIL
-OIL+AIR
-AIR



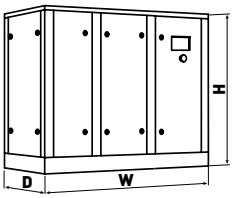
1. Screw air-end
2. Electric motor
3. Air intake valve
4. Air filter
5. Separation vessel
6. Spin-On oil filter
7. Internal separator
8. Heat exchanger
9. Coupling
10. Cooling Fan
11. Minimum pressure valve
12. Thermostatic valve

Table of models DV-Series

Article	Model	Drive power (kW)	Max. working pressure (bar)	Capacity* (m^3/min)	Rated voltage (phase/V/Hz)	Sound pressure level** dB(A)	Connection
11300105	DV-7508	75	5-8	12,8	3/380-420/50	75	DN 50
11300106	DV-7510		5-10	11,3		75	
11300115	DV-9008	90	5-8	15,4	3/380-420/50	75	DN 50
11300116	DV-9010		5-10	13,4		75	

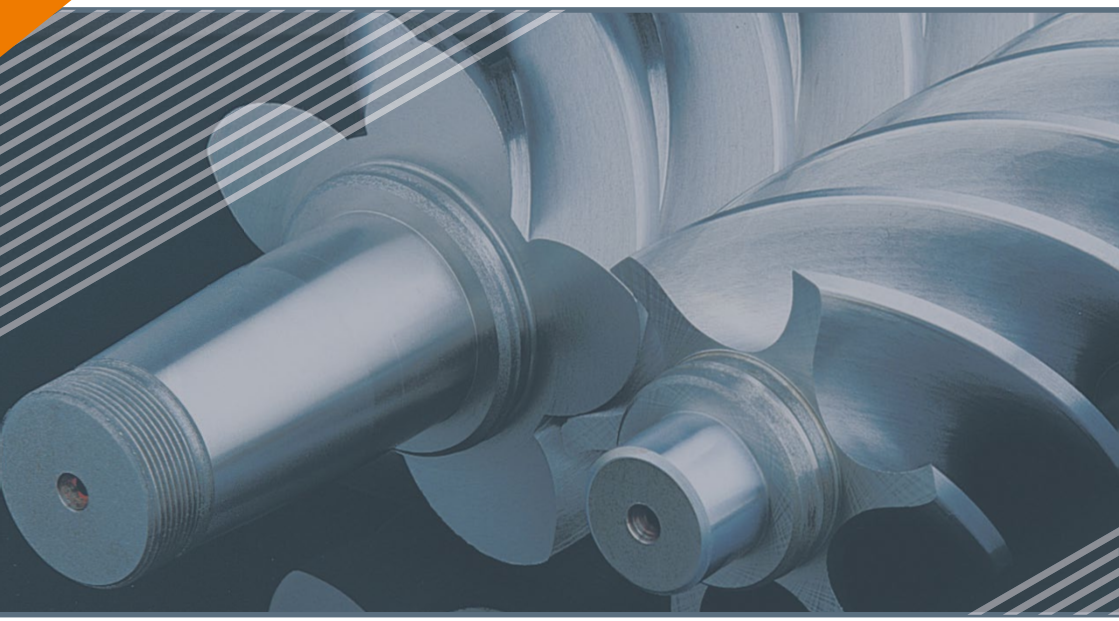
* Measured according to ISO 1217; ** Measured according to ISO 3744

Dimensions DV-Series



Model	Height H (mm)	Width W (mm)	Depth D (mm)	Weight (kg)
DV-75	1800	2700	1260	2200
DV-90	1800	2700	1260	2370

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