

COMPRAG®

positive displacement



CATALOG
#1.1

STATIONARY
Screw Compressors
FV-series

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This Catalogue is valid from 01.02.2021.

All previous catalogues lose their validity with the publication of the new catalogue.

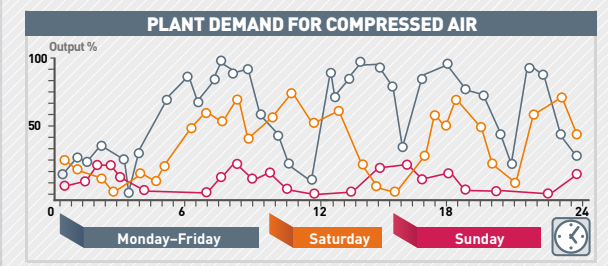
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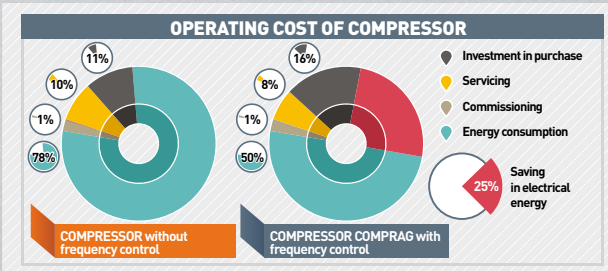
FV-series frequency control



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 Comprac FV compressor series with frequency control has been created for economical compressor operation where there is varying demand.

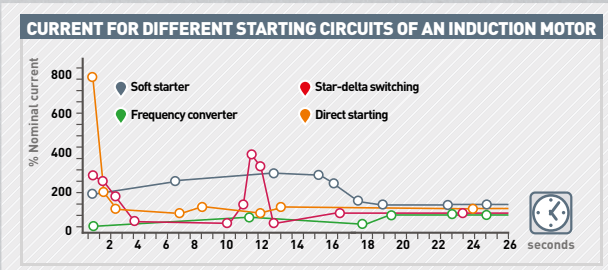


FV compressors are provided with a frequency converter for continuous control of compressor output according to the current demand for compressed air. They provide a plant with the necessary amount of compressed air at a given moment and at a constant set pressure, while consuming only as much electrical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

Comprac 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 electric.

Screw Compressors with drive power 30-37 kW, capacity up to 6,5 m³/min

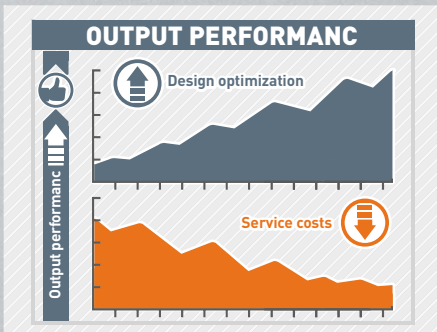
Comparg FV-Series oil filled screw compressors are designed for smooth and economical production of compressed air in industrial plants. They feature a compact, logically laid-out design and are simple to use.



version (FV)

Features:

FV-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. FV-Series compressors are most efficient in class.



- Low operating cost
- Only as much electrical energy is required as compressed air
- No electrical energy consumption during idling
- Constant system pressure
- No loading/unloading modes
- No pulsation and pressure drops
- Low maximum system pressure
- Less compressed-air leakage
- Conserved electrical energy owing to no excess pressure in system

Design and technical characteristics

FV-Series screw oil-filled compressors produce industrial compressed air, optionally with refrigerated dryer, up to class 4-4-4 to ISO 8573-1:2010.

Features screw compressors FV-Series: professional controller (A), effective and reliable electric motor (B), screw air-end (C), effective separation system (D).

Professional 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.

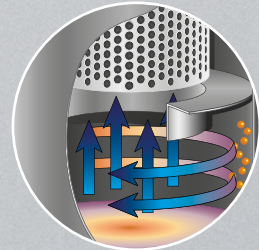
The professional controller allows a group mode control via several **v-Log** controllers and connection to a higher-level master controller or a control room via MODBUS.



Reliable electric motor (B)

Screw air-end (C)

Separation system (D)



FV-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.

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

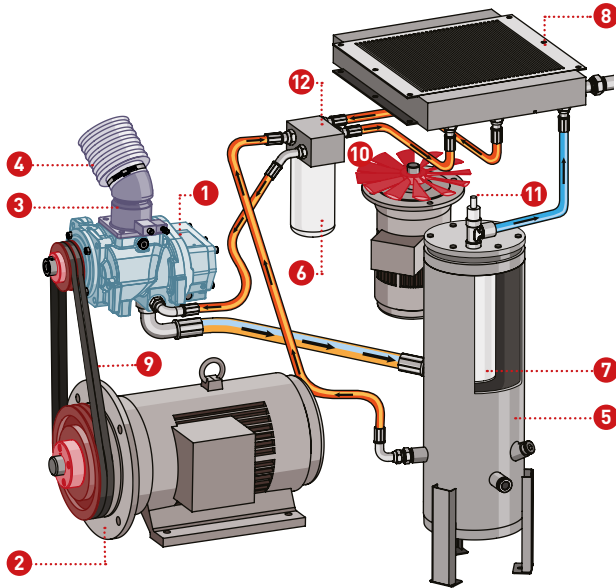
This increases compressor efficiency and reduces maintenance and replacement costs.

FV-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 | 5. Separation vessel | 9. Belt drive |
| 2. Electric motor | 6. Spin-On oil filter | 10. Cooling Fan |
| 3. Air intake valve | 7. Internal separator | 11. Minimum pressure valve |
| 4. Air filter | 8. Heat exchanger | 12. Thermostatic valve |

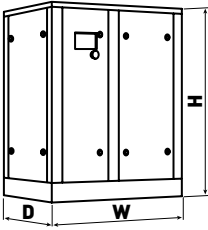
Table of models FV-Series

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
11410704	FV3008	30	5-8	5,1	3/380-420/50	72	1 1/4"
11410705	FV3010		5-10	4,6		72	
11410714	FV3708	37	5-8	6,5	3/380-420/50	72	1 1/4"
11410715	FV3710		5-10	5,5		72	

* Measured according to ISO 1217

** Measured according to ISO 3744

Dimensions FV-Series



Model	Height H (mm)	Width W (mm)	Depth D (mm)	Weight (kg)
FV30	1500	1400	1000	725
FV37				765

Screw Compressors with drive power 45-55 kW, capacity up to 9,0 m³/min

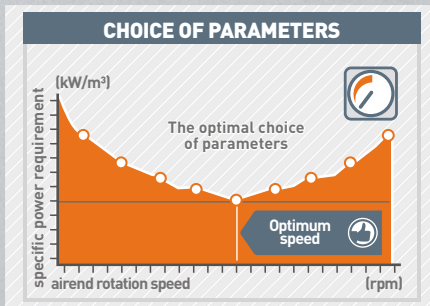
Comparg FV-Series oil filled screw compressors are designed for smooth and economical production of compressed air in industrial plants. They feature a compact, logically laid-out design and are simple to use.



version (FV)

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 FV-Series offer some of the lowest specific production costs of compressed air.



- Low operating cost
- Only as much electrical energy is required as compressed air
- No electrical energy consumption during idling
- Constant system pressure
- No loading/unloading modes
- No pulsation and pressure drops
- Low maximum system pressure
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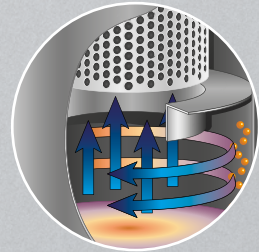
The professional controller allows a group mode control via several **v-Log** controllers and connection to a higher-level master controller or a control room via MODBUS.



Reliable electric motor (B)

Screw air-end (C)

Separation system (D)



FV-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.

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

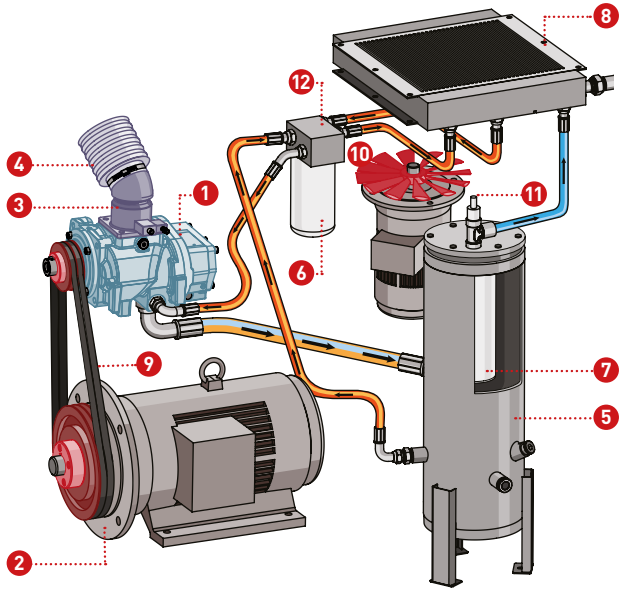
This increases compressor efficiency and reduces maintenance and replacement costs.

FV-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.

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Flow chart of compressor

- -OIL
- -OIL+AIR
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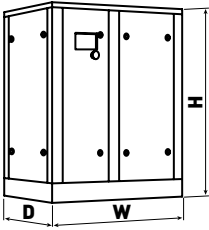
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11410804	FV4508	45	5-8	7,5	3/380-420/50	75	1 1/2"
11410805	FV4510		5-10	6,5		75	
11410814	FV5508	55	5-8	9,0	3/380-420/50	75	1 1/2"
11410815	FV5510		5-10	7,9		75	

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

Dimensions FV-Series



Model	Height H (mm)	Width W (mm)	Depth D (mm)	Weight (kg)
FV45	1720	1650	1250	1015
FV55				1190

Screw Compressors with drive power 75-90 kW, capacity up to 14,7 m³/min

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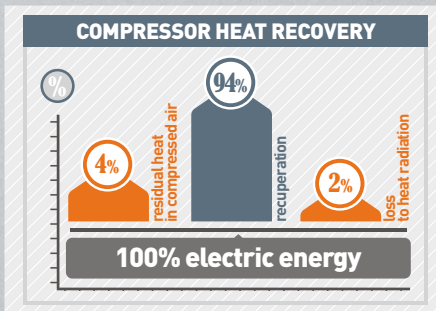


version (FV)



Features:

Up to **94%** of the electric energy expended in driving a compressor may be used again in the form of recuperated heat. FV-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

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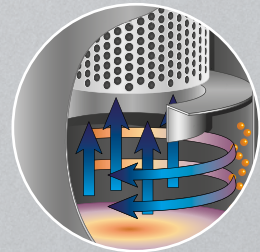
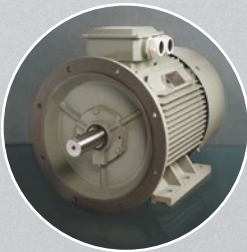
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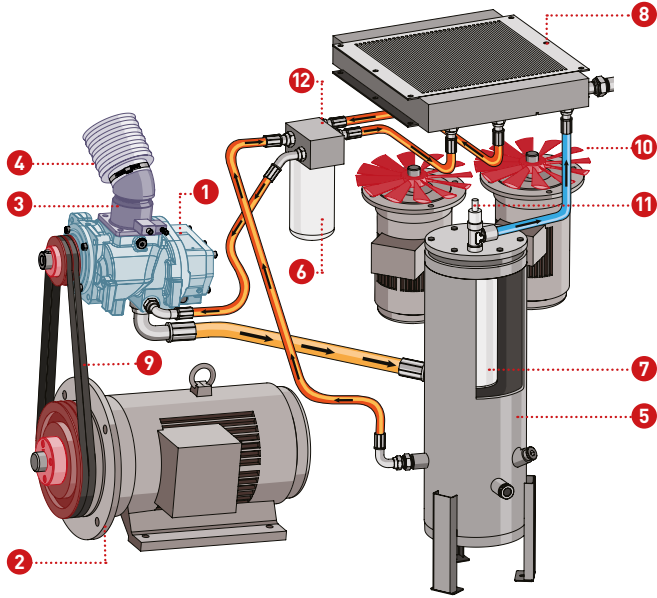
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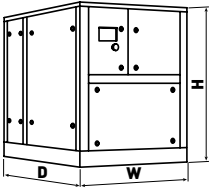
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11410904	FV7508	75	5-8	12,4	3/380-420/50	75	2"
11410905	FV7510		5-10	10,8		75	
11410914	FV9008	90	5-8	14,7	3/380-420/50	75	2"
11410915	FV9010		5-10	12,8		75	

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

Dimensions FV-Series



Model	Height H (mm)	Width W (mm)	Depth D (mm)	Weight (kg)
FV75	1790	1490	1960	1580
FV90				1690



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