



BRANO a.s. , development Department SBU CV,  
nám. Boženy Němcové 1, 466 90 Jablonec nad  
Nisou, Czech Republic

Information Document No.:

working version


Date: 27.3.2015

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## TECHNICAL SPECIFICATION

### TYPE BREEZE IV

#### 1. GENERAL

- 1.1. Make (trade name of manufacturer): BRANO a.s. 
- 1.2. Type and general commercial description(s): BREEZE IV
- 1.2.1 Variants: D3 (diesel 3 kW), D2 (diesel 2kW) \*\*
- 1.2.2 Versions: 12 and 24 V \*
- 1.3. Location of that marking: At the label (usually)
- 1.4. Category of heater: Independent combustion heater
- 1.5. Name and address of manufacturer: BRANO a.s.  
Opavska 1000  
747 41 Hradec nad Moravicí  
Czech Republic  
Regisetred in Companies Register  
at regional Court in Ostrava,  
Section B, Insert No.387  
Reg.No.: 45193363  
VAT Reg.No.: CZ45193363
- 1.6 Address (es) of assembly plant (s): BRANO a.s.  
SBU Commercial Vehicles  
Na Racanech 100  
514 01 JILEMNICE  
Czech Republic

\*\* D3 designation means: D ... fuel is diesel, 3 ... max heating capacity is 3kW

D2 designation means: D ... fuel is diesel, 2 ... max heating capacity is 2kW

the label is always denote D3

(Service network can change settings for maximum heating capacity. Diagnostic software enables identification of maximum heating capacity and enables change the setting of maximum heating capacity)

\* To operate on 24V it is necessary to change the parameter tables in the control unit by diagnostic software



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## 2. GENERAL CONSTRUCTION CHARACTERISTICS OF THE HEATER

2.1. PRODUCT DESCRIPTION

2.2 TECHNICAL SPECIFICATION

2.3 SERVIS BOOK

03-9940.186

(<http://breezeservice.webnode.cz/dokumenty/>)



## 2. GENERAL CONSTRUCTION CHARACTERISTICS OF THE HEATER

### 2.1 PRODUCT DESCRIPTION

The heater is designed to heat the interior compartments of motor vehicles, box-van trucks, cabs of heavy machinery, caravans, immobile dwelling cells, yachts etc., either in recirculating operation only or with a possibility to intake the air from the outside area. It is not intended for installation into vehicles used for transport of hazardous freight.

Heater WIND IV is a heating device using the heat generated by burning diesel oil for heating of air, while its heating capacity can be regulated continuously. Apart from the heater itself the set comprises the following components allowing its right function: an electric pump, a cable harness, an intake silencer, an exhaust and parts necessary for installation in the vehicle.

There are two variants of the heater, D3 and D2. D3 designation means: D ... fuel is diesel, 3 ... max heating capacity is 3kW and D2 designation means: D ... fuel is diesel, 2 ... max heating capacity is 2kW. The label is always denoted D3. Service network can change settings for maximum heating capacity. Diagnostic software enables identification of maximum heating capacity and enables change the setting of maximum heating capacity.

There are two versions of the heater for voltage 12V and 24V. Heaters supplied from the factory are designed for 12V. To operate on 24V it is necessary to change the parameter tables in the control unit by diagnostic software.

Main parts of the heater are: an aluminium heat exchanger, a combustion chamber, an electric motor with fans for heated air and combustion air, a housing, a rotation sensor, a flame indicator, an overheat thermostat, a glow plug and a control device with an output air sensor. Timer or manual control is possible to use for control of the heater.

### 2.2 TECHNICAL SPECIFICATION

Heating capacity	[W]	900 - 2700
Rated voltage	[V]	12/24*
Operating voltage range - 12V	[V]	10,5 – 15
Operating voltage range - 24V	[V]	21 -30
Power consumption – on startup	[W]	130 ±10%
Power consumption - in operation	[W]	75 ±10%
Fuel		Diesel EN 590, light fuel oil, BIO-oil ČSN 65 6509




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Fuel consumption	[l/h]	0,10 – 0,33
Capacity regulation		Continuously adjustable from min. to max
Adjustable temperature range	[°C]	1 – 30
El. motor speed – max	[RPM]	7500 ± 50
El. motor speed – min	[RPM]	2760 ± 50
Regulated speed	[RPM]	2000 ± 50
Temperature at purging	[°C]	80 ± 5
The temperature of heating air to open the fuse overheating	[°C]	120 – 150
Temperature of the flame sensor at maximum capacity	[°C]	250 – 500
Frequency of the pump at maximum capacity	[Hz]	4,5 ± 0,1
Hot air output (at backpressure 0Pa)	[m <sup>3</sup> /hod]	120
Pressure in the fuel tank max	[kPa]	± 10
Ambient operating temperature heating	[°C]	-40 to +65
Operating temperature range heating	[°C]	-40 to +40
Weight of the heater	[kg]	3,2
Weight of the complete set	[kg]	3,8
The electric installation conforms		ČSN 30 4002
Electromagnetic compatibility corresponds		EHK 010.04 a ISO 7637-2a
Environmental resistance conforms to		ČSN EN ISO 9227 NSS
- el. pump and exhaust		U24
- other parts		U23

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2.3 SERVIS BOOK (<http://breezeservice.webnode.cz/dokumenty/>)

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Service book is not part of this document, it can be found on the website:

<http://breezeservice.webnode.cz/dokumenty/>