



Experience.  
Quality.  
Reliability.



# Electric Boilers: for industry, for home



## **Wide range of electric boilers**

Jäspi FIL electric boilers are designed to be used as the main heat source, as a backup, or in addition to other heating sources. With power ranges up to 1600 kW, our electric boilers can be used in your home or for your industrial requirements.





# Energy efficient solutions for your heating project

*Kaukora Oy is one of the leading manufacturers of heating equipment in Finland. For over 70 years the Jäspi and Jämä brands have produced more than two million items of heating equipment. We specialise in developing and supplying heating and hot water systems for residential housing, industrial facilities, farms, schools, sport and shopping centers.*

## **Your experienced partner for construction and renovation projects**

Our extensive knowledge of heating technology, in combination with state of the art production lines and experienced, qualified personnel, provides the basis for continual innovative and customised development in the manufacturing of our heating equipment.

The Jäspi range of electric boilers offer our clients the opportunity to select effective and suitable solutions for their particular requirements, such as individual properties, district heating, commercial developments, schools, warehouses and industrial processes.

*In 2019 the total capacity of supplied FIL electric boilers was 23 600 kW*

Our boilers are designed to be extremely reliable and user-friendly heating units. Their multifunctional, intelligent automatic control system, main safety switch, acid-resistant steel flange electric heating elements, excellent insulation as well as sophisticated design encapsulate the modern Jäspi heating technology.

Our efficient electric boilers are suitable for heating environments with specific and varied purposes, for example, shift operation, summer operation, full and partial operation, as well as for industrial processes.

## **Experience and professionalism at your service**

Extensive experience in the field of heating has widened our specialization. Our northern cold climate has taught us how to produce equipment with key features of efficiency, reliability and durability. Because we design and manufacture all our products, we can provide you with the best possible planning, installation and user support.





More than 100 FIL-B and FIL-SPL electric boilers with a range of capacities are installed at metro stations in Saint-Petersburg, Moscow and Kazan.



## KAUKORA in the world

**Russia:** Metro of S.-Petersburg, Moscow, Kazan: since 1994 more 100 pcs. electric boilers **FIL-B and FIL-SPL**

**Georgia:** New hospital in Tbilisi, **2 x FIL-SPL 1000 kW**, winter 2007-2008.

**Tadjikistan:** Executive Office of the President of the Republic of Tajikistan, **FIL-SPL 1200 kW + FIL-SPL 1000 kW + FIL-SPL 400 kW**, 2009.

**Russia:** Olympic facilities in Sochi, 18 pcs. electric boilers **FIL-SPL 52,5 – 300 kW**, 2012.

**Dominican Republic:** Gold mine, **FIL-SPL 800 kW**, 2010 and 2018.

**Ukraine:** Eristovsky mining and processing plant, **3 x FIL-SPL 600 kW + 3 x FIL-SPL 720 kW + 3 x FIL-SPL 900 kW**, 2013.

**Russia:** Koashva, Murmansk region, **5 x FIL-SPL 1600 kW**, 2014.

**Slovakia:** Glassworks, **2 x FIL-SPL 1000 kW**, 2019.

**Russia:** Moscow, Administrative center, **FIL-SPL 1000 kW (16 bar) + FIL-SPL 1600 kW**, 2019.

**UK:** Saltholme, National Grid Power station, **2 x FIL-SPL 300 kW**, 2020.

**Latvia:** Adazi, Orkla Factory, **2 x FIL-SPL 1600 kW**, 2021.

**Norway:** Thermo Control Ost, **FIL-SPL 1000 kW + FIL-SPL 800 kW**, 2020-2021.

## *Jäspi FIL electric boilers are trusted in shopping and leisure centres*

Jäspi FIL-SPL 1000 and 600 kW electric boilers are installed in the Zsar outlet shopping centre in Vaalimaa, Finland, and are used as a backup heat source for the heat pumps. In addition to heating they are an aid to anti-icing, reducing the winter months paving maintenance and cost.



# Serie FIL-SPL

## Power range 31,5 – 1600 kW

Jäspi FIL-SPL electric boilers feature advanced, commercially rated, acid-resistant flange electric heaters (specific surface rating < 10.4 W/cm<sup>2</sup>).

The robust and user-friendly automatic control system allows for a variety of remote control methods.

The automatic internal heat regulation ensures precision heating while efficiently adjusting the minimum required power steps, thus reducing the number of contactor activations. The regulating systems are available with 7 and 15 power stages. 30 stage systems are available by order.

The boilers can be easily adapted for partial heating backup.

FIL-SPL boilers with a capacity of over 400 kW are produced with either left or right service access.



## Inbuilt safety

FIL boilers are equipped with a main safety switch. This is used for shutting down the boiler in the event of over heating or overcurrent. The safety main switch also operates as an isolation switch, so a separate isolation switch is not needed.

The dry boiling preventer protects the boiler in the event of air in the hydraulic system.

## Other properties

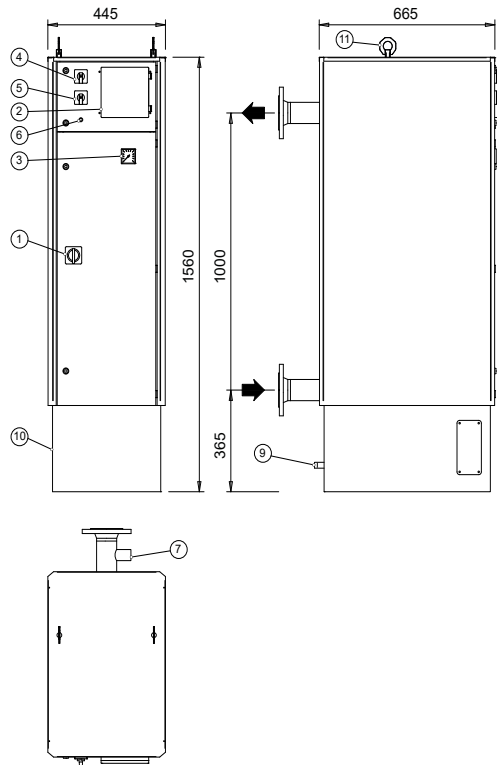
0-10 V voltage signal control (input)
Permit/prohibit working stroke
0-10 V voltage signal control (output)
Automatic control
Adjusting the desired flow temperature level
Adjusting according to outside temperature
Max. temperature 95-110° and pressure 10 bar (on request 16 bar)

## Safety properties

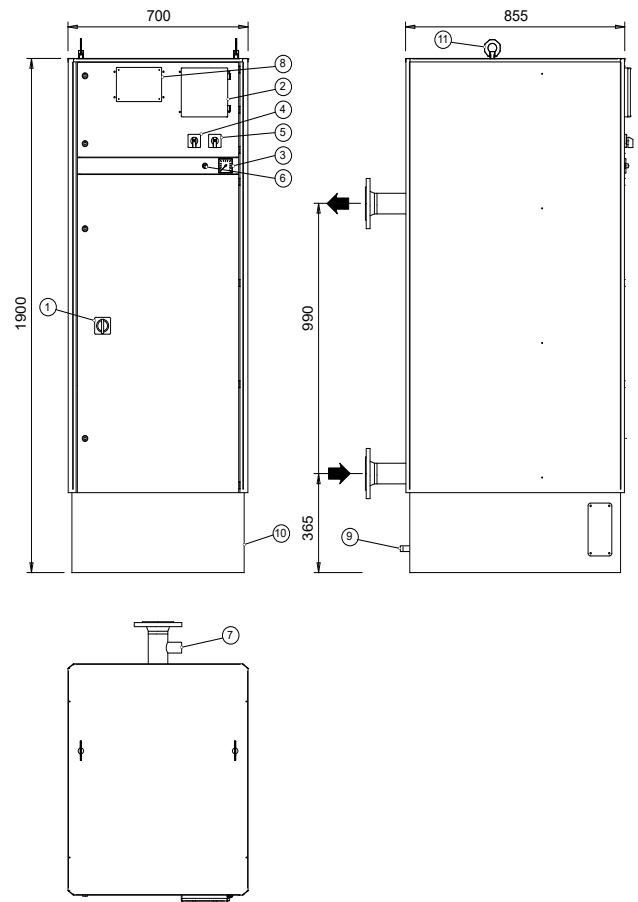
- Main safety switch
- Temperature limiter (duplicated in large boilers)
- Automatic anti-boiling protection unit in high-power boilers
- Backup operation with thermostat
- Signaling data about faults in all models
- In high-power boilers alarm for overheating of the electrical connection space
- Load control by current transformers
- Internal power monitoring by current transformer (optional)

# Serie FIL-SPL

## FIL-SPL 31,5 – 140 kW



## FIL-SPL 150 - 400 kW



### Scope:

- |                                                              |                                               |
|--------------------------------------------------------------|-----------------------------------------------|
| 1. Main safety switch (AB + disconnecter + shutdown command) | 7. Anti-boiling protection sensor sleeve DN25 |
| 2. Control unit / circuit board                              | 8. Anti-boiling protection unit               |
| 3. Temperature gauge                                         | 9. Drain sleeve DN15                          |
| 4. Control voltage switch                                    | 10. Electrical leads                          |
| 5. Heating / backup heating switch                           | 11. Lifting lug                               |
| 6. Limiting thermostat                                       |                                               |

Name	Dimensions (HxWxD) [mm]	Fuses [A]	Weight [kg]	Volume [l]	Power stage	Sleeve	Voltage	Temperature/pressure
FIL-SPL 31.5	1560x445x665	3x63	170	85	7	DN 65	400 V 3 N AC 50 Hz	30-100/10 bar
FIL-SPL 42	1560x445x665	3x80	170	85	7	DN 65	400 V 3 N AC 50 Hz	30-100/10 bar
FIL-SPL 52.5	1560x445x665	3x100	170	85	7	DN 65	400 V 3 N AC 50 Hz	30-100/10 bar
FIL-SPL 70	1560x445x665	3x125	170	85	7	DN 65	400 V 3 N AC 50 Hz	30-100/10 bar
FIL-SPL 84	1560x445x665	3x160	170	85	7	DN 65	400 V 3 N AC 50 Hz	30-100/10 bar
FIL-SPL 105	1560x445x665	3x200	170	85	7	DN 65	400 V 3 N AC 50 Hz	30-100/10 bar
FIL-SPL 120	1560x445x665	3x250	170	85	7	DN 65	400 V 3 N AC 50 Hz	30-100/10 bar
FIL-SPL 140	1560x445x665	3x250	170	85	7	DN 65	400 V 3 N AC 50 Hz	30-100/10 bar

Name	Dimensions (HxWxD) [mm]	Fuses [A]	Weight [kg]	Volume [l]	Power stage	Sleeve	Voltage	Temperature/pressure
FIL-SPL 150	1900x700x855	3x250	320	220	15	DN 100	400 V 3 N AC 50 Hz	30-100/10 bar
FIL-SPL 180	1900x700x855	3x315	320	220	15	DN 100	400 V 3 N AC 50 Hz	30-100/10 bar
FIL-SPL 225	1900x700x855	3x400	320	220	15	DN 100	400 V 3 N AC 50 Hz	30-100/10 bar
FIL-SPL 300	1900x700x855	3x500	320	220	15	DN 100	400 V 3 N AC 50 Hz	30-100/10 bar
FIL-SPL 400	1900x700x855	2 x (3x400)	320	220	15	DN 100	400 V 3 AC 50 Hz	30-100/10 bar

# Serie FIL-SPL

FIL-SPL 500 - 1600 kW



Control unit /  
circuit board



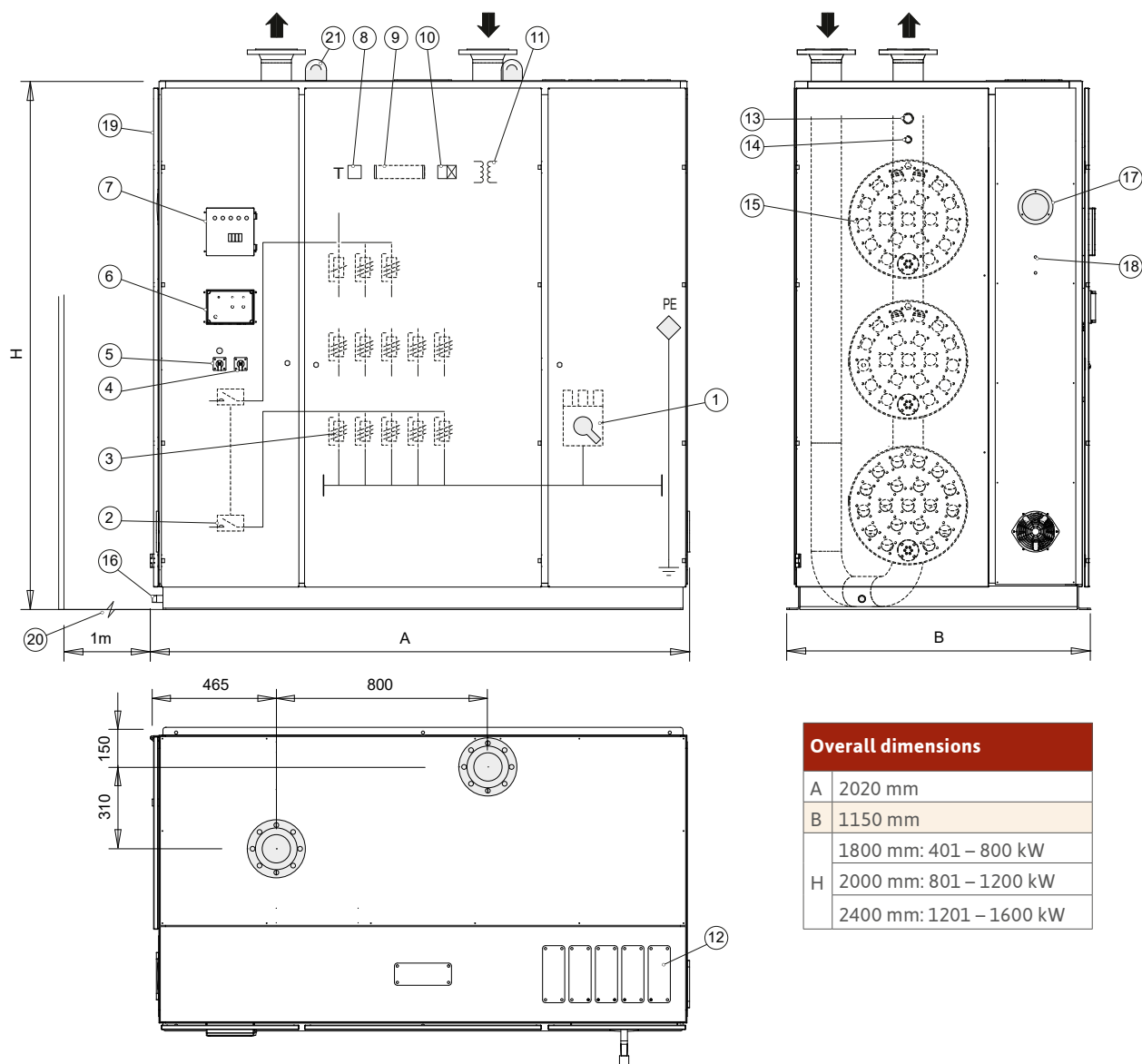
Anti-boiling  
protection unit

Name	Dimensions (HxWxD) [mm]	Fuses [A]	Weight [kg]	Volume [l]	Power stage	Sleeve	Voltage	Temperature/ pressure
FIL SPL 500	1800x2020x1150	2 x (3x500)	850	480	15	DN 125	400 V 3 AC 50 Hz	30-100/10 bar
FIL SPL 600	1800x2020x1150	2 x (3x630)	850	480	15	DN 125	400 V 3 AC 50 Hz	30-100/10 bar
FIL SPL 700	1800x2020x1150	2 x (3x630)	850	480	15	DN 125	400 V 3 AC 50 Hz	30-100/10 bar
FIL SPL 800	1800x2020x1150	3 x (3x500)	850	480	15	DN 125	400 V 3 AC 50 Hz	30-100/10 bar
FIL SPL 900	2000x2020x1150	3 x (3x630)	1100	750	15	DN 125	400 V 3 AC 50 Hz	30-100/10 bar
FIL SPL 1000	2000x2020x1150	3 x (3x630)	1100	750	15	DN 125	400 V 3 AC 50 Hz	30-100/10 bar
FIL SPL 1200	2000x2020x1150	4 x (3x630)	1100	750	15	DN 125	400 V 3 AC 50 Hz	30-100/10 bar
FIL-SPL 1500	2400x2020x1150	6 x (3x500)	1350	1000	15	DN 125	400 V 3 AC 50 Hz	30-100/10 bar
FIL SPL 1600	2400x2020x1150	6 x (3x500)	1350	1000	15	DN 125	400 V 3 AC 50 Hz	30-100/10 bar

# Serie FIL-SPL



## FIL-SPL 500 - 1600 kW



### Overall dimensions

A	2020 mm
B	1150 mm
	1800 mm: 401 – 800 kW
H	2000 mm: 801 – 1200 kW
	2400 mm: 1201 – 1600 kW

### Scope

- |                                                              |                                                  |                                               |
|--------------------------------------------------------------|--------------------------------------------------|-----------------------------------------------|
| 1. Main safety switch (AB + disconnector + shutdown command) | 9. Terminal blocks                               | 17. Temperature gauge                         |
| 2. Power stage contactors                                    | 10. Time relay                                   | 18. Thermostat / limiter                      |
| 3. Power stage fuses                                         | 11. Control voltage transformer                  | 19. Door for maintenance of heating elements  |
| 4. Heating / backup heating switch                           | 12. Electrical leads                             | 20. Space for maintenance of heating elements |
| 5. Control voltage switch                                    | 13. Anti-boiling protection sensor               | 21. Lifting lug                               |
| 6. Anti-boiling protection unit                              | 14. Temperature sensors (limiter and thermostat) |                                               |
| 7. Control unit / circuit board                              | 15. Electric heating elements                    |                                               |
| 8. Backup heating thermostat                                 | 16. Drain sleeve DN15                            |                                               |



# Serie FIL-LP



## Power range 31,5 – 400 kW

Jäspi FIL-LP electric boilers are intended primarily for connection with heat pumps as an additional or a backup heat source. They work seamlessly with Jämä / Jäspi range of air source heat pumps.

Jäspi FIL-LP electric boilers feature advanced, commercially rated, acid-resistant flange electric heaters (specific surface rating < 10.4 W/cm<sup>2</sup>).

Robust and user-friendly automatic control system allows for various remote control methods with the basic temperature control coming from the heat pump.

External power control 3 or 7 stages, depending on the boiler size.

The boilers can be easily adapted for partial heating backup.

These production line built boilers offer good value with a power of 31,5 – 140 kW.

By request Jäspi FIL-LP boilers can be produced with a power up to 400 kW (with the same physical dimensions of FIL-SPL series).

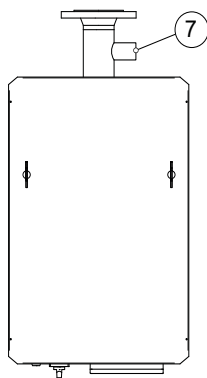
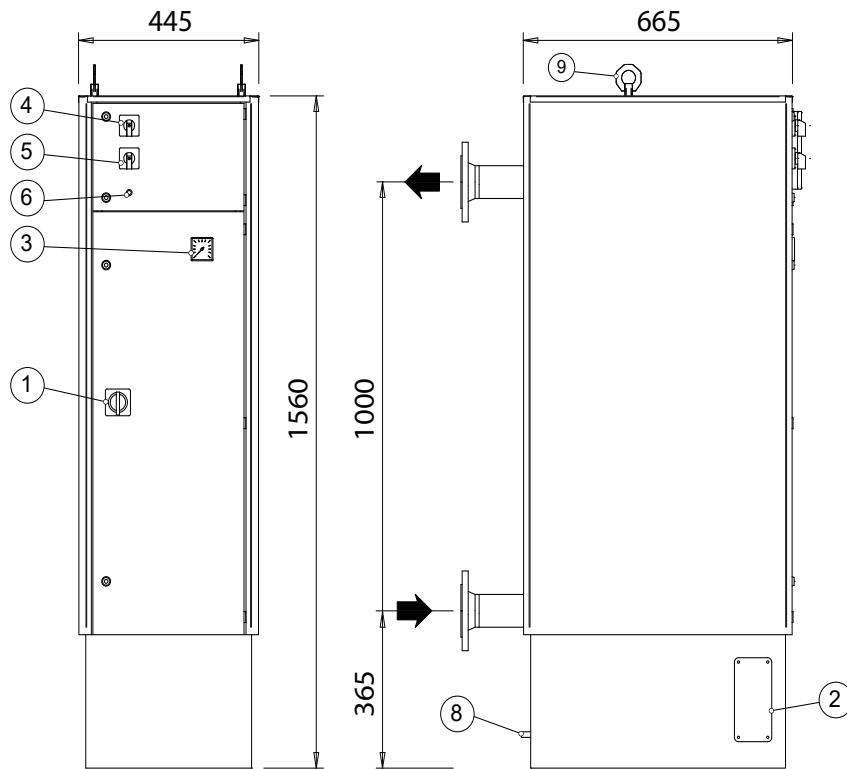
They can be integrated into industry facilities, multi-storey buildings, schools, apartment buildings etc.



Name	Dimensions (HxWxD) [mm]	Fuses [A]	Weight [kg]	Volume [l]	Power stage	Sleeve	Voltage	Temperature/pressure
FIL-LP 31.5	1560x445x665	3 x 63	170	85	7	DN 65	400 V 3 N AC 50 Hz	30-100/10 bar
FIL-LP 42	1560x445x665	3 x 80	170	85	7	DN 65	400 V 3 N AC 50 Hz	30-100/10 bar
FIL-LP 52.5	1560x445x665	3 x 100	170	85	7	DN 65	400 V 3 N AC 50 Hz	30-100/10 bar
FIL-LP 70	1560x445x665	3 x 125	170	85	7	DN 65	400 V 3 N AC 50 Hz	30-100/10 bar
FIL-LP 84	1560x445x665	3 x 160	170	85	7	DN 65	400 V 3 N AC 50 Hz	30-100/10 bar
FIL-LP 105	1560x445x665	3 x 200	170	85	7	DN 65	400 V 3 N AC 50 Hz	30-100/10 bar
FIL-LP 120	1560x445x665	3 x 250	170	85	7	DN 65	400 V 3 N AC 50 Hz	30-100/10 bar
FIL-LP 140	1560x445x665	3 x 250	170	85	7	DN 65	400 V 3 N AC 50 Hz	30-100/10 bar



# Serie FIL-LP



## Scope

1. Main safety switch (AB + disconnecter + shutdown command)
2. Electrical leads
3. Temperature gauge
4. Control voltage switch
5. Heating / backup heating switch
6. Thermostat / limiter
7. Anti-boiling protection sensor sleeve DN25
8. Drain sleeve DN15
9. Lifting lug



# Serie FIL-B

## Power range 31,5 – 200 kW

FIL-B models are used for primary heating as well as domestic hot water through an efficient and powerful finned copper coil.

Jäspi FIL-LP electric boilers feature advanced, commercially rated, acid-resistant flange electric heaters (specific surface rating < 7.5 W/cm<sup>2</sup>).

These models offer a convenient user-friendly automatic control system which allows various remote control methods and is power network friendly, due to automated soft start function.

The boiler heat control automatically adjusts for a correct temperature by intelligently regulating the lowest required power in the boiler.

The control units are delivered with 7 or 15 power stages so as to keep the number of power steps and contactor activations minimal.

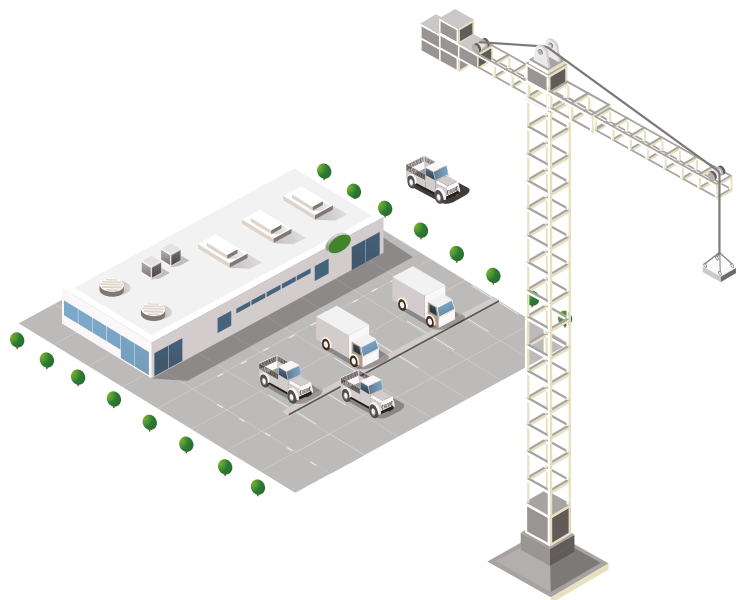
These boilers can also be used for partial heating backup.

Jaspi FIL-B boilers are delivered with current transformers to ensure efficient use of the available power while it takes into account the other electrical load in the house.

The 31,5 - 42 kW boilers have an internal water volume of 240 l.

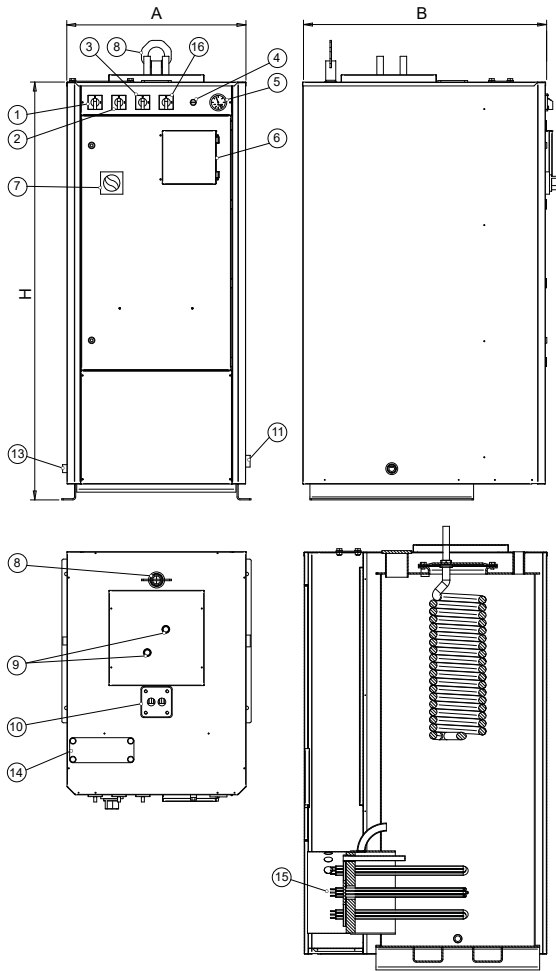
The 42 – 200 kW boilers come with a 750 l water capacity.

Jäspi FIL-B boilers are a smart and economical choice for various applications, e.g. industrial shops, schools, kindergartens and small houses, for both heat generation and hot water supply.

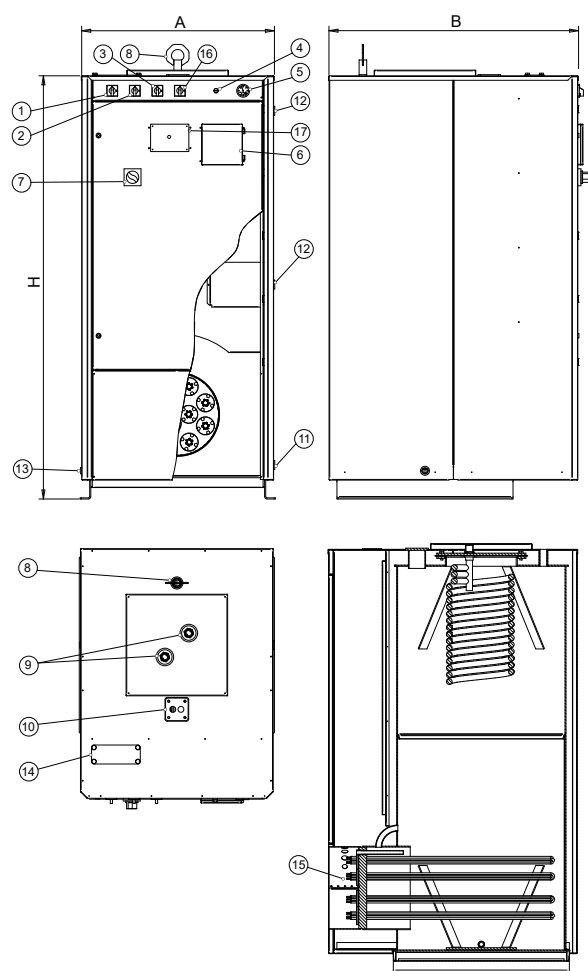


# Serie FIL-B

**FIL-B 31,5 - 42 kW (240 l)**



**FIL-B 42 - 200 kW (750 l)**



## Scope

- |                                            |                                                                    |                                      |
|--------------------------------------------|--------------------------------------------------------------------|--------------------------------------|
| 1. Control voltage switch                  | 7. Main safety switch (AB + disconnect + shutdown command)         | 13. Drain sleeve DN15                |
| 2. Heating / backup heating switch         | 8. Deaeration sleeve DN25                                          | 14. Electrical leads                 |
| 3. Pump switch                             | 9. Hot water coil sleeves                                          | 15. Electric heating elements        |
| 4. Temperature limiter                     | 10. Mixing valve sleeve DN25 (31,5-52,5 kW: DN25; 70-200 kW: DN32) | 16. External control selector switch |
| 5. Combined temperature and pressure gauge | 11. Expansion sleeve DN25                                          | 17. Anti-boiling protection unit     |
| 6. Control unit / circuit board            | 12. Additional circuit sleeves DN25 (for 750 l boilers only)       |                                      |

Name	Dimensions (HxWxD) [mm]	Fuses [A]	Weight [kg]	Volume [l]	Power stage	Hot water coil [l/min]	Voltage	Temperature/pressure
FIL-B 31.5	1400x600x815	3 x 63	150	240	7	35	400 V 3 N AC 50 Hz	30-100/1,5 bar
FIL-B 42	1400x600x815	3 x 80	150	240	7	35	400 V 3 N AC 50 Hz	30-100/1,5 bar
FIL-B 42	1900x900x1100	3 x 80	330	750	7	50	400 V 3 N AC 50 Hz	30-100/1,5 bar
FIL-B 52.5	1900x900x1100	3 x 100	330	750	7	50	400 V 3 N AC 50 Hz	30-100/1,5 bar
FIL-B 70	1900x900x1100	3 x 125	330	750	7	50	400 V 3 N AC 50 Hz	30-100/1,5 bar
FIL-B 84	1900x900x1100	3 x 160	330	750	7	50	400 V 3 N AC 50 Hz	30-100/1,5 bar
FIL-B 105	1900x900x1100	3 x 200	330	750	7	50	400 V 3 N AC 50 Hz	30-100/1,5 bar
FIL-B 120	1900x900x1100	3 x 250	330	750	7	50	400 V 3 N AC 50 Hz	30-100/1,5 bar
FIL-B 140	1900x900x1100	3 x 250	330	750	15	50	400 V 3 N AC 50 Hz	30-100/1,5 bar
FIL-B 150	1900x900x1100	3 x 250	330	750	15	50	400 V 3 N AC 50 Hz	30-100/1,5 bar
FIL-B 180	1900x900x1100	3 x 315	330	750	15	50	400 V 3 N AC 50 Hz	30-100/1,5 bar
FIL-B 200	1900x900x1100	3 x 400	330	750	15	50	400 V 3 N AC 50 Hz	30-100/1,5 bar





**We are proud to  
offer you warmth  
from Finland**



## **Kaukora Oy is one of the leading manufacturers of heating equipment in Finland**

*Kaukora Oy is a long established and well known Finnish heating equipment manufacturer, engineering our equipment for operating in the harsh northern conditions of Finland. We have been producing internationally renown heating equipment under the Jäspi brand since 1976 and under the Jämä brand since 1949. The technological advances we have developed in our heating products over the years means we now supply more than 50 000 high quality heating appliances annually and nearly half of our products are exported, which equates to hundreds of thousands of working systems around the world.*

### **The widest range of products in Finland**

Kaukora Oy products are a reliable and safe choice. We have always understood the importance of providing a premium service to our clients and for over 40 years we have produced innovative and reliable heating equipment which has proven to have an extensive life span. We are confident our wide range will offer the right solution for all your heating needs.



Jäspi products are manufactured by Kaukora Oy at the factories in Raisio and Turku and have been awarded the Key Flag Symbol, which is a guarantee that a product is made in Finland.

### **Kaukora Oy**

Tuotekatu 11, PL 11, 21200 Raisio FINLAND

[www.jaspi.fi/en](http://www.jaspi.fi/en)

Dealer:

## **Contact us!**

For various project requirements we also produce a wide range of:

- hot water supply tanks, heat accumulators and cold tanks volume 50-10 000 l
- air-to-water heat pumps and ground source heat pumps with a capacity of up to 540 kW in cascade



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**We cooperate with heating associations**



Lämmitysenergia  
Yhdistys

