



Experienced
Finnish master
heat maker



Electric boilers: exceptionally high quality



Wide range of electric boilers

Jäspi FIL electric boilers are used in heating as the main heat sources, as well as backup or additional ones. Power range up to 1600 kW.



Energy efficient heating solutions for various objects

Kaukora Oy is one of the leading manufacturers of heating equipment in Finland. More than two million pieces of equipment have been produced under the Jäspi and Jämä brands for more than 70 years. We develop and supply heating and hot water systems for residential and industrial facilities, farms, schools, sport and shopping centers.

Experienced partner for new construction and renovation projects.

Excellent knowledge of heating technology in combination with modern production lines and qualified personnel provides even better opportunities for the development and manufacture of heating equipment.

From the Jäspi range of electric boilers you can choose an effective and suitable solutions for private residences, schools, warehouses, multistorey buildings and industrial facilities.

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

The boilers have been designed as extremely reliable and user-friendly heating units. Their multifunctional, intelligent automatic control system, main safety switch, acid-proof steel flange electric heating elements, excellent insulation, as well as sophisticated design represent the modern Jäspi heating technology.

Our efficient electric boilers are suitable for heating objects with various 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 expanded our specialization. The harsh northern operating conditions have taught us how to manufacture equipment whose key features are efficiency, reliability and durability. The manufacturer's knowledge of all details of the equipment allows to provide the best possible support.



More than 100 electric boilers FIL-B and FIL-SPL of different 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 Vaalimaa

Jäspi FIL-SPL 1000 and 600 kW electric boilers were supplied to the Tsar outlet shopping centre built in Vaalimaa as backup heat source for heat pumps. In addition to heating they solve the issue of anti-icing.



Serie FIL-SPL

Power range 31,5 – 1600 kW

Jäspi FIL-SPL electric boilers are factory-equipped and tested.

They feature advanced professionally recommended acid-resistant flange tubular electric heaters (specific surface rating < 10.4 W/cm²).

Robust and user-friendly automatic control system allows various remote control methods. Automatic boiler heat regulating system ensures proper heating while efficiently regulating the minimum required power in the boiler to minimize frequency and number of contactor activations. Regulating systems are available with 7 and 15 stages (30 by the order). Power stages are small enough.

The boilers have a partial heating backup function.

FIL-SPL boilers with a capacity of over 400 kW are produced both left and right-handed (space for servicing electric heaters on the left or right).



Safety main switch

FIL boilers are equipped with safety main switch. The safety main switch is used for shutting down boiler in case of over heating, over current or air in plumping system (dry-boiling preventer). The safety main switch operates also as isolation switch and thus separate isolation switch is not needed.

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)

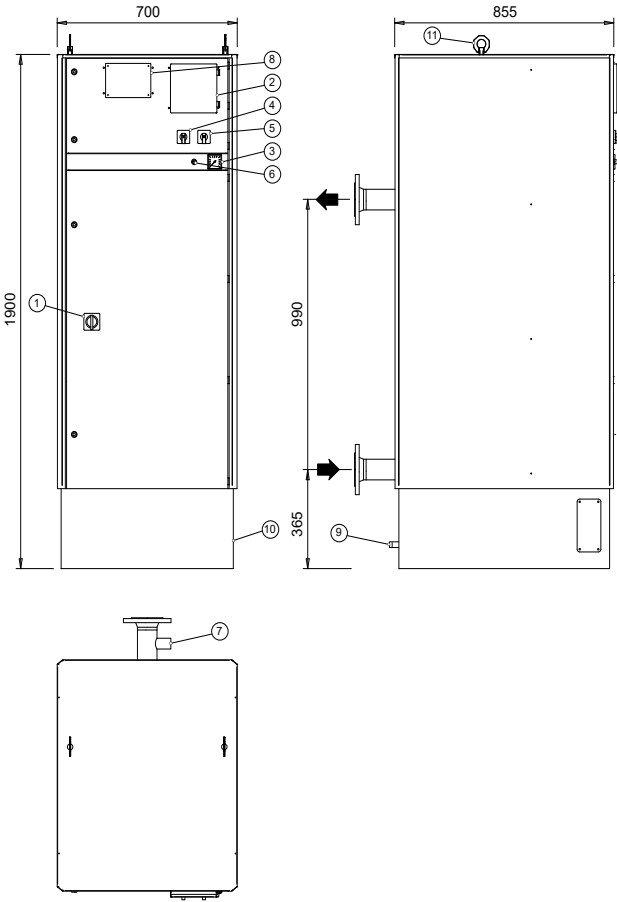
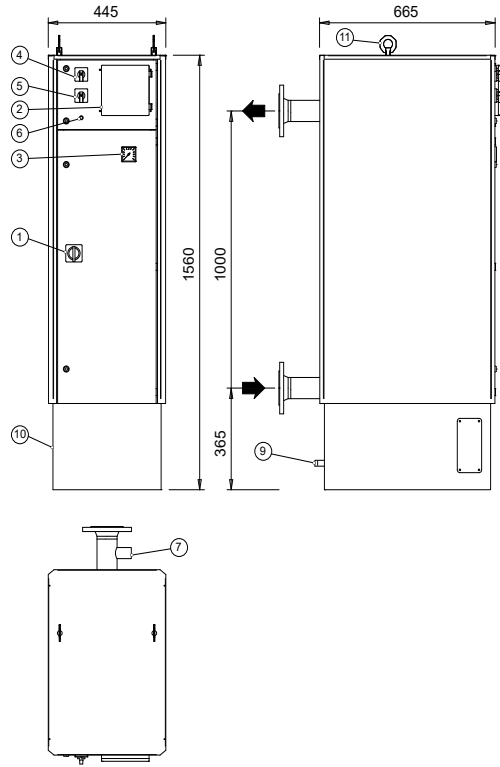
Safety properties

- 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 150 - 400 kW

FIL-SPL 31,5 – 140 kW



Scope:

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

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



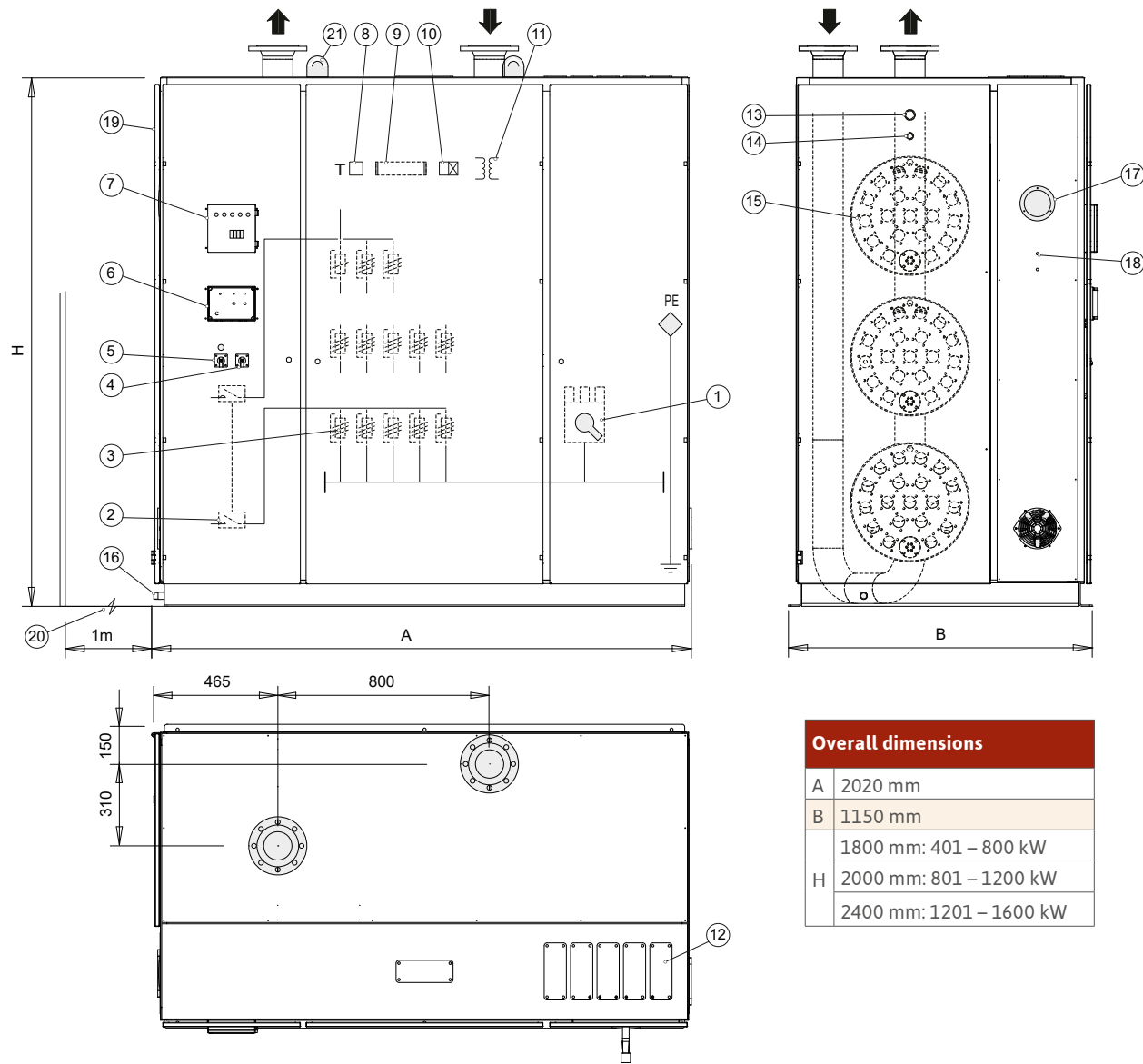
Control unit /
circuit board

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 + disconnect + 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 factory-equipped and tested and are intended primarily for connection with Jämä / Jäspi heat pumps as an additional or backup heat source.

They feature advanced professionally recommended acid-resistant flange tubular electric heaters (specific surface rating < 10.4 W/cm²).

Robust and user-friendly automatic control system allows various remote control methods.

The basic temperature control comes from the heat pump.

External power control 3/7 stages.

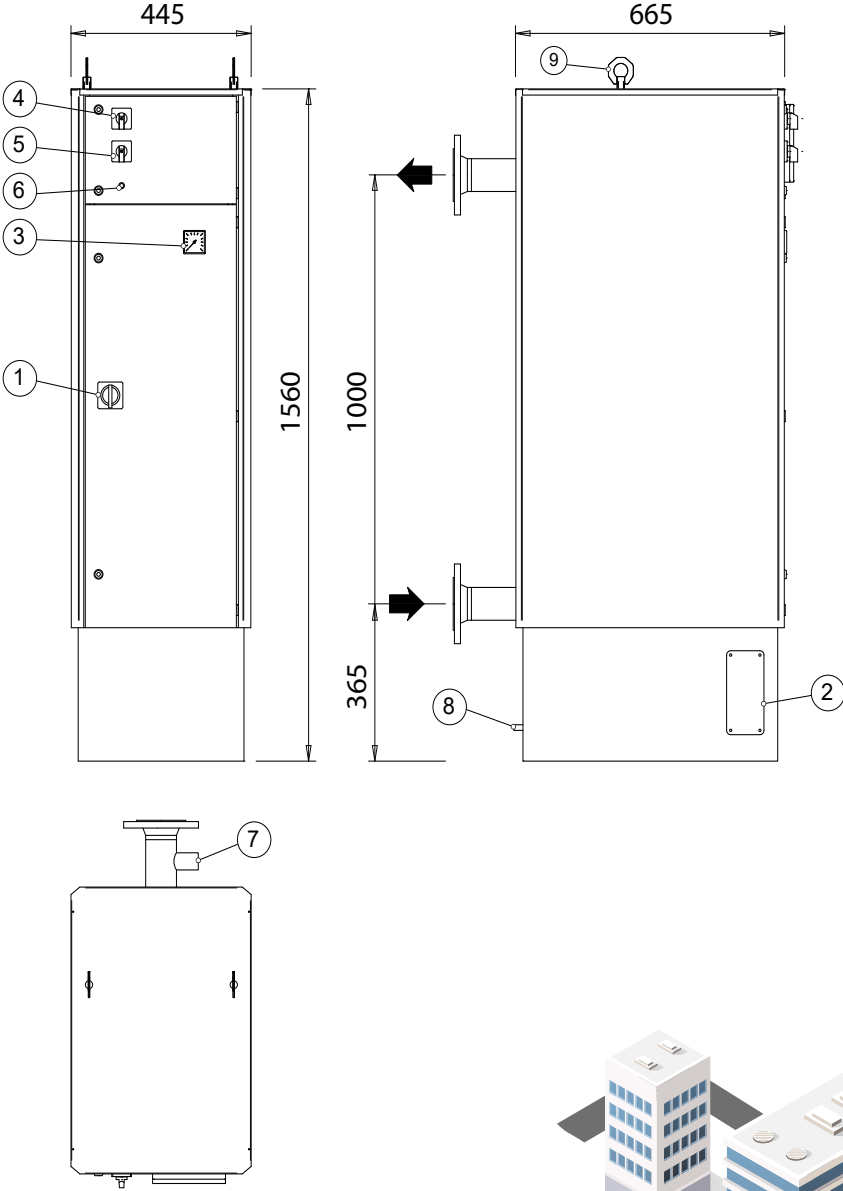
The boilers have a partial heating backup function.

Serially produced boilers with a power of 31,5 – 140 kW, on request with a power up to 400 kW (dimensions 150-400 kW: see FIL-SPL serie of similar power).

Typical objects of their operation are industry, multi-storey buildings, schools, apartment buildings etc.



Serie FIL-LP



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

Scope

1. Main safety switch (AB + disconnector + 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

Jäspi FIL-B electric boilers are factory-equipped and tested.

FIL-B models generate the heat required for heating as well as domestic hot water through an efficient, powerful finned copper coil.

They feature advanced professionally recommended acid-resistant flange tubular electric heaters (specific surface rating < 7.5 W/cm2).

Reliable in operation, convenient for the user and electrical supplier, the automation enables the use of various methods of remote control.

The boiler heat control automatics ensures correct heating by economically regulating the lowest required power in the boiler so that the density and number of contactors activation is minimal.

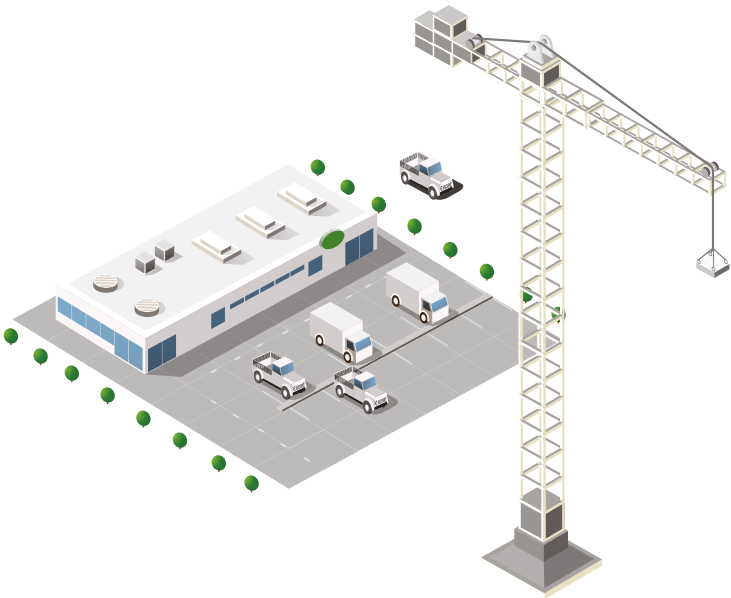
The control units are delivered with 7 or 15 stages, while obtaining rather small power steps.

The boilers have a partial heating backup function.

Current transformers supplied with these models ensure efficient operation of the main switch while checking other electric load of the house.

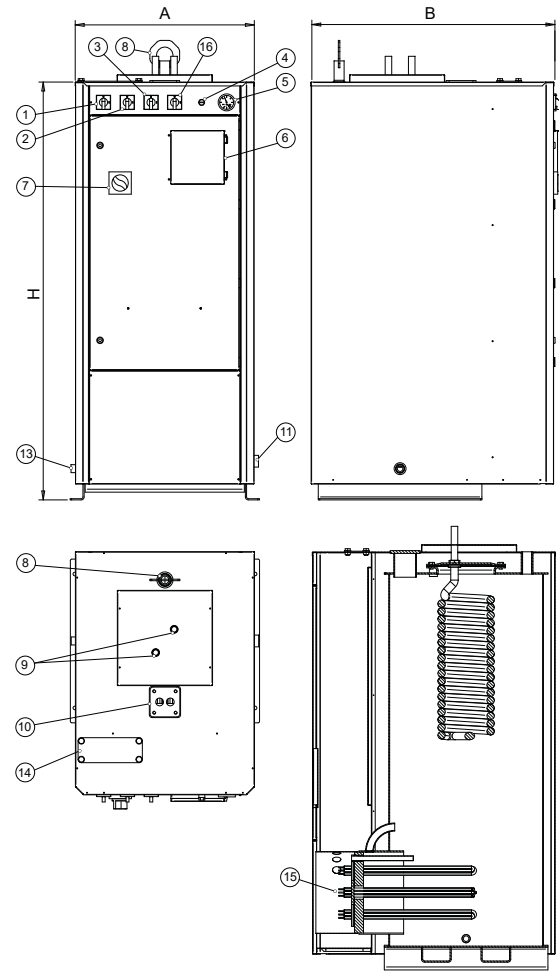
The 31,5 - 42 kW boilers with a 240 l water volume and the 42 – 200 kW boilers with a 750 l volume are produced commercially.

Jäspi FIL-B boilers will be suitable for various applications, e.g. industrial shops, schools, kindergartens, and small houses for both heat generation and hot water supply.

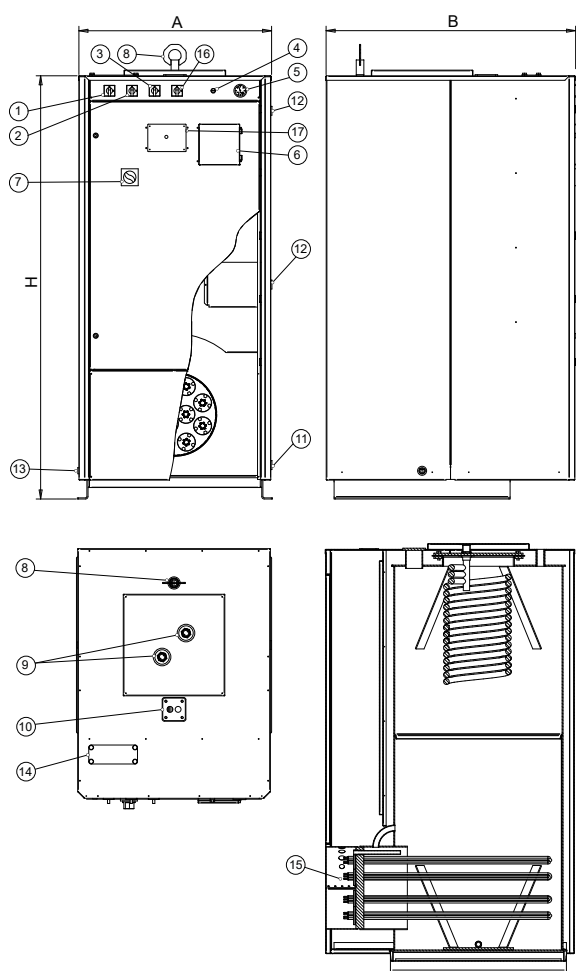


Serie FIL-B

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



FIL-B 42 - 200 kW (750 l)



Scope

1. Control voltage switch

2. Heating / backup heating switch

3. Pump switch

4. Temperature limiter

5. Combined temperature and pressure gauge

6. Control unit / circuit board
7. Main safety switch (AB + disconnector + shutdown command)

8. Deaeration sleeve DN25

9. Hot water coil sleeves

10. Mixing valve sleeve DN25 (31,5-52,5 kW: DN25; 70-200 kW: DN32)

11. Expansion sleeve DN25

12. Additional circuit sleeves DN25 (for 750 l boilers only)
13. Drain sleeve DN15

14. Electrical leads

15. Electric heating elements

16. Circulation pump control switch

17. Anti-boiling protection unit

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



**Experienced
Finnish master
heat maker**



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

Kaukora Oy knows the heating market and its peculiarities in Finland. We have been producing heating equipment under Jäspi brand since 1976 and under Jämä brand since 1949. It is common for us to meet the requirements for equipment operating in the harsh northern conditions and changes in the development of heating technology. We supply more than 50000 high quality heating appliances annually and are proud to be a Finnish home heat maker.

The widest range of products in Finland

The life span of high-quality heating equipments is quite long. Therefore, it is especially important that the manufacturer of such equipment is a company that can serve you for many years. Devices from Kaukora Oy are always a reliable and safe choice. The wide range offers 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

Dealer:

Contact us!

For objects of various purposes 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

sulpu