# PRODUCT
# RANGE



Contromet

HEATING TECHNIQUE

# ABOUT US

## Dear Colleagues, dear present and future users of our products

A quality product, efficient use of energy, protection of the environment, and, above all, a satisfied customer, are basic guidelines of Centrometal company today. This philosophy is present from the development, production, use and maintenance of Centrometal's products, to the training of the company's employees and partners.

If we could go back in time, we would have before us a sixty-year tradition of building hot water boilers, with an almost equally long tradition of the rest of the production program.

At the very beginning of 1965, Mr. Karlo Zidarić opened a workshop for the installation and maintenance of central heating systems. With this experience, we stepped into the world of development and construction, which we implemented in 1990 in the company Centrometal d.o.o.

Traditionally hardworking people from Međimurje, in cooperation with leading scientific institutes in many different fields, especially with the Faculty of Mechanical Engineering of the University of Zagreb, brought in the past few years a huge expansion of the company which today, with it's own know-how, employs 270 workers. The company has it's own training center, test station, a modern technological center as well as range of service centers throughout the country.



The company Centrometal d.o.o. - view from air

Today, Centrometal d.o.o. persistently is underway to become a leading Croatian thermotechnical equipment constructor. Accent at development is pointed to the equipment which use renewable energy sources (wood, pellets, wood chips, sun...) which means that the company is actively involved in environmental protection and efficient energy use.

The quality of products and management of the company are guaranteed by the ISO 9001 certificate and placement in many European markets is ensured by certificates of conformity issued by authorized domestic and international institutions, which each product of the "Centrometal" company possesses.

Davor Zidarić




*Djelatnici Centrometala ispred upravne zgrade*

Centrometal d.o.o. manufactures using up to date machines and technology, which assure high quality and consistency. Production of equipment in stainless steel is separated from the rest of production, to satisfy the particularly demanding quality standards of such work. Continuous modernizing of production methods supports the call for growth in capacity, simplifies the work itself and maintains the quality of our products. Our goal is total customer satisfaction.



*Cutting of metal sheets using modern laser technology*



*Forming of metal sheet with hydraulic presses*



*Robotic welding of stainless steel water heaters*



*Robotic welding of the boilers*



*Bending and perforation of metal sheet with modern CNC machines*



*Automated welding of stainless steel water heaters*

## ISO Certificate / labels



# COMBINED BOILERS



*EKO-CK P* *EKO-CKB P*

**EKO-CK P** steel hot water boilers with a nominal heat output of **14** to **110 kW** are engineered for **solid fuel**, **wood pellet** or **heating oil** firing to meet heating demands from the smallest to the largest premises, either as a main or as an alternative heat source. This product can be easily recognized by it's modern design, synthesis of modern technologies, and quality of materials, as well as through it's simple and easy assembly, and straightforward operation and control. The application of well-developed and thoroughly tested technical solutions makes these boilers safe and reliable. A particular feature of these boilers is the ease of integration of any suitable burner and boiler controls. Boilers are manufactured to the EN 303-5 standard. The special feature of **EKO-CKB P** is a built-in stainless steel domestic hot water situated inside the boiler's water.

## EKO-CK P / EKO-CKB P

| EKO-CK P | | 14 | 20 | 25 | 30 | 35 | 40 | 50 | 60 | 70 | 90 | 110 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Heat output range | (kW) | 10-14 | 14-20 | 20-25 | 25-30 | 30-35 | 35-40 | 40-50 | 50-60 | 60-70 | 70-90 | 90-110 |
| DHW | (lit.) | - | - | - | - | - | - | - | - | - | - | - |
| Boiler mass | (kg) | 220 | 227 | 234 | 255 | 266 | 293 | 337 | 355 | 429 | 455 | 492 |
| Depth/Width | (mm) | 985/420 | 985/420 | 1020/420 | 1020/470 | 1020/520 | 1020/570 | 1142/570 | 1142/570 | 1250/570 | 1250/620 | 1350/620 |
| Height | (mm) | 1255 | 1255 | 1255 | 1255 | 1255 | 1255 | 1255 | 1355 | 1435 | 1435 | 1435 |
| Energy efficiency class | | A | A | A | A | A | A | A | A | A | A | A |

EKO-CKB P

| 20 | 25 | 30 | 35 | 40 | 50 |
|---|---|---|---|---|---|
| 15-20 | 20-25 | 25-30 | 30-35 | 35-40 | 40-50 |
| 65 | 72 | 80 | 80 | 80 | 100 |
| 271 | 281 | 303 | 322 | 343 | 375 |
| 985/515 | 1020/515 | 1020/565 | 1020/615 | 1020/665 | 1140/665 |
| 1610 | 1610 | 1610 | 1610 | 1610 | 1610 |
| A | A | A | A | A | A |

## COMBINED BOILERS WITH TWO COMBUSTION CHAMBERS



*CentroPlus-B*



*CentroPlus*

Steel hot water boilers **CentroPlus** and **CentroPlus-B** with a nominal heat output of **25, 35** and **49 kW** have two separate combustion chambers inside the boiler water. The left combustion chamber is used for **solid** or **liquid fuel firing**, while the right combustion chamber is used for **pellet** or **liquid fuel firing**. The possibility of combining solid fuel firing with the automatic start-up of the oil or pellet burner when the solid fuel does not meet the need anymore makes this boiler particularly interesting. The special feature of **CentroPlus-B** boilers is a built-in stainless steel hot water heater.

| CentroPlus | | 25 | 35 | 50 |
|---|---|---|---|---|
| Heat output range | (kW) | 25 | 35 | 49 |
| DHW | (lit.) | - | - | - |
| Boiler mass | (kg) | 464 | 522 | 630 |
| Depth/Width | (mm) | 1070/915 | 1070/1015 | 1140/1145 |
| Height | (mm) | 1260 | 1260 | 1260 |
| Energy efficiency class | | A | A | - |

CentroPlus-B

| 25 | 35 | 50 |
|---|---|---|
| 25 | 35 | 49 |
| 80 | 80 | 100 |
| 512 | 562 | 670 |
| 1070/915 | 1070/1015 | 1140/1145 |
| 1560 | 1560 | 1560 |
| A | A | - |



*CentroPlus-B*

Steel hot water boilers **CentroPlus** and **CentroPlus-B** can be fired with **pellets** and **solid fuel**. For this kind of burning, it is necessary to install the **Cm Pelet-set Touch** with a fan flap, a 4-way manual mixing valve or an accumulation tank. In addition to burning only with pellets or only with solid fuel, a combination of burning with solid fuel and the semi-automatic switching on of the pellet burner at the moment when the solid fuel does not meet the need for heat is also possible. The operation of this "mini" plant is controlled by a digital controller in combination with a draft regulator when using solid fuel. Pellet tank is part of the plant and is filled as needed from the top (pellet tank volume 0.37m³ or 0.8m³). When burning with wood pellets, fuel savings are up to 40% compared to a heating system using EL fuel oil.

Steel hot water boilers **CentroPlus** and **CentroPlus-B** can be fired with **solid** and **liquid fuel**. For this kind of burning, it is necessary to install an oil burner and boiler controller EKO-CK/CKB on the boiler. In addition to burning only with liquid fuel or only with solid fuel, a combination of burning with solid fuel and the semi-automatic switching on of the oil burner at the moment when the solid fuel does not meet the need for heat is also possible. Operation of this "mini" plant is managed by the boiler controller in combination with the draft regulator when using solid fuel.

## WOOD FIRING CENTRAL HEATING COOKERS



*BIO-CET B*



*BIO-PEK B*

**BIO-CET B** steel hot water boilers for **solid fuel** firing are engineered for central heating and cooking. Heat output transferred to heating water is **12, 19** and **25 kW** and **5** to **6 kW** is transferred to the surrounding space through the upper heating plate. They can be connected to closed and open central heating systems, with and without the accumulation tank. The boiler is easily adapted to requirements for space heating by changing the position of the firebox grate.

**BIO-PEK B** steel hot water boilers for **solid fuel** firing are engineered for heating smaller premises and for cooking and baking. Heat output transferred to heating water is **12, 19** and **25 kW** and **5** to **6 kW** is transferred to the surrounding space through the upper heating plate. There is the option of a boiler with right or left connection to the chimney. Boiler is easily adapted to requirements for space heating by changing the position of the firebox grate.

| | | BIO-CET B 17 | BIO-CET B 23 | BIO-CET B 29 | BIO-PEK B 17 | BIO-PEK B 23 | BIO-CET B 29 |
|---|---|---|---|---|---|---|---|
| Heat output range | (kW) | 18 | 24 | 30 | 18 | 24 | 30 |
| Heat output on the water side | (kW) | 12 | 19 | 25 | 12 | 19 | 25 |
| Boiler mass | (kg) | 121 | 176 | 201 | 205 | 234 | 258 |
| Depth/Width | (mm) | 635/460 | 635/600 | 635/715 | 635/1000 | 635/1100 | 635/1150 |
| Height | (mm) | 910 | 885 | 885 | 885 | 885 | 885 |
| Energy efficiency class | | A | A | A | A | A | A |

# WOOD GASIFICATION BOILERS

## BioTec II

**BioTec II** steel hot water boilers with a rated heat output of **25** to **45 kW** are designed for burning split logs. They are intended for heating small to medium-sized buildings. The principle of **pyrolysis** ensures thorough fuel combustion. The spacious combustion chamber accommodates logs up to 500 mm in length. A single fuel load lasts at least 4 hours at rated heat output and can be extended to a full day when heating demand is reduced. The boiler can maintain embers for up to 8 hours, allowing combustion to resume without relighting. The boiler is operated by a multifunctional digital controller with a 7" touchscreen, which uses a **lambda sensor** to ensure optimal combustion. The controller enables the control of heating circuits, domestic hot water preparation, a solar circuit and an alternative boiler. The integrated Wi-Fi module allows remote monitoring and control of the boiler via a smartphone or computer. The boiler is connected to the central heating system via a three-way thermostatic valve (60 °C) or a motorized three-way mixing valve and a CAS buffer tank (minimum 40 litres/kW).

| BioTec II | | 25 | 34 | 45 |
|---|---|---|---|---|
| Heat output range | (kW) | 25 | 34 | 45 |
| Boiler mass | (kg) | 519 | 606 | 677 |
| Depth/Width/Height | (mm) | 1400/590/1375 | 1445/700/1420 | 1385/700/1615 |
| Energy efficiency class | | A+ | A+ | A+ |



*BioTec II*

# BOILER WITH 2 COMBUSTION CHAMBERS AND LAMBDA PROBE

**BioTec Plus** steel hot water boiler with two combustion chambers is intended for firing **wood pellets** and **wood logs**. In the pellet combustion chamber, the burner for wood pellet firing is installed with automatic pellet firing and automatic grate cleaning functions. In the second combustion chamber, the wood gasification principle enables the burning of wood logs. Multifunctional digital boiler controller, using a lambda probe and a modulating under-pressure fan, optimizes combustion in both combustion chambers, which increases the efficiency of the boiler. Pellet tank is an integral part of the boiler, to which the automatic pellet vacuum suction system can be installed. Installation of the accumulation tank (CAS) is obligatory. It is possible to expand the boiler controller with the CM2K module (control up to 2 heating circuits according to outdoor temperature, max. 4x CM2K), alarm message, and boiler start/stop with the CM WiFi box.

## BioTec Plus

| BioTec Plus | | 25 | 35 | 45 |
|---|---|---|---|---|
| Heat output range | (kW) | 25 | 35 | 45 |
| Boiler mass | (kg) | 750 | 875 | 930 |
| Depth/Width | (mm) | 1400/1055 | 1450/1255 | 11450/1260 |
| Height | (mm) | 1350 | 1450 | 1585 |
| Energy efficiency class | | A+ | A+ | A+ |




*BioTec Plus*

# WOOD PELLET STOVES (HOT AIR HEATING)

## CentroPelet

Pellet firing stoves **CentroPelet Z6N** and **CentroPelet A10** are hot air **wood pellet stoves** that heat the room with hot air using a fan built into the stove. They are made of steel with a modern design and high efficiency. **CentroPelet A10** are delivered with a remote control. Delivery standardly includes a digital controller that can be used to control the operation of the stove. Main advantages are easy operation, maintenance, and installation (no need for radiators, pipes, etc.).

| CentroPelet | | Z6N | A10 | ZR12 | ZS10 |
|---|---|---|---|---|---|
| Heat output range | (kW) | 2,8 - 6,2 | 3,4 - 8,3 | 2,64 - 9,05 | 2,92 - 9,01 |
| Stove mass | (kg) | 55 | 55 | 91 | 100 |
| Depth/Width | (mm) | 490/425 | 465/440 | 490/495 | 280/935 |
| Height | (mm) | 765 | 965 | 1000 | 935 |
| Pellet consumption | (kg/h) | 0,7 - 1,4 | 0,8 - 1,9 | 0,6 - 2,6 | 0,62 - 1,98 |



*CentroPelet Z6N*



*CentroPelet A10*



*CentroPelet ZR12*



*CentroPelet ZS10*

# WOOD PELLET STOVES (AIR AND WATER HEATING)

Hot water stoves **CentroPelet ZV** are **wood pellet** stoves designed for heating a room with air via a built-in fan and water through radiator central heating. They are made of steel, featuring a modern design and high efficiency. These stoves include a built-in circulation pump, safety valve, pressure switch, expansion vessel, and automatic vent valve. They come standard with a remote control and a digital controller, which can be used to manage the stove's operation and select the weekly program.

| CentroPelet | | ZV16 | ZV20 | ZV24 | ZV32 |
|---|---|---|---|---|---|
| Heat output range | (kW) | 4,8 - 17,1 | 5,0 - 18,2 | 5,0 - 21,9 | 8,5 - 30,4 |
| Stove mass | (kg) | 160 | 246 | 230 | 290 |
| Depth/Width | (mm) | 630/521 | 686/572 | 686/572 | 722/672 |
| Height | (mm) | 1314 | 1433 | 1433 | 1572 |
| Pellet consumption | (kg/h) | 0,84 - 3,71 | 1,11 - 4,02 | 1,11 - 4,89 | 1,8 - 6,6 |



*CentroPelet ZV16*



*CentroPelet ZV 20-32*

# BY ORDER



*CentroPelet*
*ZCY14, ZCY16, Z12CAN, Z14C, Z16C*

Pellet firing stoves **CentroPelet Z14, Z16, Z12CAN, Z14C** and **Z16C** are hot air **wood pellet** stoves that heat the room with hot air using a fan built into the stove. They are made of steel with a modern design and high efficiency. **CentroPelet Z12CAN, Z14CAN,** and **Z16CAN** have the capability of channeling hot air distribution to nearby rooms. Standard delivery includes a digital controller that can be used to control the operation of the stove.



*CentroPelet*
*ZRGL8, ZRGL12, ZRGL12CAN*

Pellet firing stoves **CentroPelet ZRGL8, ZRGL12** and **ZRGL12CAN** are hot air **wood pellet** stoves with decorative rounded glass, intended for heating the room with hot air using a fan built into the stove. They are made of steel with a modern design and high efficiency. **CentroPelet ZRGL12CAN** has the capability of channeling hot air distribution to nearby rooms. Standard delivery includes a digital controller that can be used to control the operation of the stove. The main advantages are easy operation, maintenance, and installation.



*CentroPelet*
*ERMETICA 98ZHE 6, 98ZHE 8,*
*98ZHE 10CAN, 98ZHE 12CAN*

Pellet firing stoves **CentroPelet ERMETICA 98ZHE 6, 98ZHE 8, 98ZHE 10CAN** and **98ZHE 12CAN** are hot air **wood pellet** stoves with extremely high efficiency, intended for heating the room with hot air using a fan built into the stove. They are made of steel with a modern design. **CentroPelet 98ZHE 10CAN** and **98ZHE 12CAN** have the capability of channeling hot air distribution to nearby rooms. Standard delivery includes a digital controller that can be used to control the operation of the stove. Main advantages are easy operation, maintenance, and installation.



*CentroPelet*
*ZVC14, ZVC20, ZVC24, ZVC28, ZVC32*

Hot water stoves **CentroPelet ZVC14, ZVC20, ZVC24, ZVC28** and **ZVC32** are **wood pellet** stoves designed for heating a room with air via a built-in fan and water through radiator central heating. They are made of steel, featuring a modern design and high efficiency. These stoves include a built-in circulation pump, safety valve, pressure switch, expansion vessel, and an automatic air vent valve. They come with a remote control and a digital controller, which can be used to manage the stove's operation and select the weekly program.



*CentroPelet*
*ZVRGL17, ZVRGL20, ZVRGL24*

Hot water stoves **CentroPelet ZVRGL17, ZVRGL20** and **ZVRGL24** are **wood pellet** stoves with decorative round glass, designed for heating a room with air via a built-in fan and water through radiator central heating. They are made of steel, featuring a modern design and high efficiency. These stoves include a built-in circulation pump, safety valve, pressure switch, expansion vessel, and an automatic air vent valve. They come with a remote control and a digital controller, which can be used to manage the stove's operation and select the weekly program. Digital controller can be used to manage the operation of the stove and select the weekly program.

# WOOD PELLET FIRING BOILERS



*CentroPelet ZVB*

## CentroPelet ZVB

Compact hot water boilers **CentroPelet ZVB** are **wood pellet** firing boilers. They are designed for hot water heating of the smallest up to medium sized facilities. They are made out of steel with modern design and high efficiency. The boiler has a built-in burner for combustion of wood pellets with the auto ignition and digital boiler regulation control which operates flue vent corresponding to flue and boiler water temperatures. They are delivered with a built-in pump, safety valve, vent pot, pressure switch and expansion tank. The pellet tank is part of the boiler. As an additional equipment, it is possible to order an additional larger tank (with a full conveyor that automatically replenishes the tank in the boiler).

| CentroPelet | | ZVB16 | ZVB20 | ZVB24 | ZVB32 |
|---|---|---|---|---|---|
| Heat output range | (kW) | 4,29 - 14,4 | 5,21 - 17,51 | 5,21 - 21,51 | 6,34 - 29,14 |
| Depth/width | (mm) | 700/562 | 785/610 | 785/610 | 870/670 |
| Height | (mm) | 1081 | 1240 | 1240 | 1360 |
| Pellet consume | kg/h | 1,02 - 3,37 | 1,2 - 3,88 | 1,2 - 4,85 | 1,43 - 6,48 |
| Energy efficiency class | | $A^+$ | $A^+$ | $A^+$ | $A^+$ |

## ZVB II

Compact hot water boilers **ZVB II** are **wood pellet** fired boilers. They are intended for hot water heating (radiator, floor, fan coil, etc.) from the smallest to medium-sized buildings. They are of steel construction, with a modern design and high efficiency. Boilers are equipped with a burner for burning wood pellets with an automatic ignition function and turbulators with manual cleaning. Digital boiler controller, with a 7" touch screen, guides the flue gas fan according to the smoke and boiler water temperatures. Boiler controller, in addition to the boiler, can manage one mixing circuit or direct heating circuit and one sanitary water circuit with recirculation, i.e., a maximum of 3 pumps and one mixing valve. It is also possible to expand the heating circuits with additional equipment. They are supplied with a built-in pump, safety valve, vent pot, pressure switch, and expansion valve. Pellet tank is part of the boiler. As additional equipment, it is possible to order a fuel level sensor, an additional larger tank with a conveyor that automatically replenishes the tank in the boiler, and a module for additional heating circuits or room thermostats.

| ZVB II | | ZVB II 16 / ZVB 16 II -AUTO | ZVB II 20 / ZVB 20 II -AUTO | ZVB II 24 / ZVB 24 II -AUTO |
|---|---|---|---|---|
| Heat output range | (kW) | 13,8/14,5 | 17,5 | 21,0 |
| Depth/Width | (mm) | 760/560 | 900/610 | 900/610 |
| Height | (mm) | 1345 | 1495 | 1495 |
| Pellet tank volume | (kg) | 30 | 65 | 65 |
| Pellet consumption | (kg/h) | 1,02 - 3,37 | 1,2 - 3,88 | 1,2 - 4,85 |
| Energy efficiency class | | A+ | A+ | A+ |



*ZVB II*

## CentroPelet ZVBS

Hot water boilers **CentroPelet ZVBS** are boilers fired with **wood pellets**. They are intended for hot water heating from the smallest to medium-sized buildings. They are of steel construction, with a modern design and high efficiency. Boilers are equipped with a burner for burning wood pellets with an automatic ignition function and a digital boiler controller that guides the flue gas fan according to the temperatures of the smoke and boiler water. Pellet tank is part of the boiler.

| CentroPelet | | ZVBS 25 | ZVBS 35 |
|---|---|---|---|
| Heat output range | (kW) | 5,21 - 21,51 | 6,34 - 29,14 |
| Boiler mass | (kg) | 250 | 305 |
| Depth/Width | (mm) | 757/624 | 831/688 |
| Height | (mm) | 1249 | 1599 |
| Pellet consumption | (kg/h) | 1,2 - 4,85 | 1,43 - 6,48 |
| Energy efficiency class | | A+ | A+ |



*CentroPelet ZVBS*

## PelTec II Lambda

**PelTec II Lambda** steel hot water boilers are intended for burning **wood pellets.** Boiler is equipped with a burner for burning wood pellets with the functions of automatic ignition, self-cleaning of the grate and flue passages, which ensures continuous operation without the need for frequent maintenance. Standard built-in **lambda probe** optimizes pellet combustion, which directly affects "cleaner" combustion and reduced fuel consumption. Function of automatic cleaning of flue pipes ensures uniform heat exchange and a high and uniform level of utilization of the boiler. With multifunctional digital controller and a 7" touch screen, PelTec II Lambda offers modulating operation with one heating mixing circuit and one DHW circuit with recirculation. Integrated WiFi enables control of the boiler and heating circuit via mobile phone or computer, while the built-in protection of the return line ensures correct operation of the boiler even at lower return temperatures. A pellet tank with a pellet level sensor is part of the standard equipment, and the boiler is delivered in parts for easier installation in the boiler room. Boiler can be connected to the accessories listed in the chapter "Accessories" for boilers with a touch screen.

| PelTecII Lambda | | 12 | 18 | 24 | 36 | 48 | 69 | 96 |
|---|---|---|---|---|---|---|---|---|
| Heat output range | (kW) | 3,6 - 12 | 5,4 - 18 | 7,2 - 24 | 10,8 - 36 | 14,4 - 48 | 20,7 - 69 | 28,8 - 96 |
| Boiler mass | (kg) | 328 | 349 | 402 | 455 | 478 | 740 | 835 |
| Depth/Width | (mm) | 1100/1210 | 1090/1435 | 1050/1380 | 1150/1465 | 1150/1465 | 1375/1940 | 1305/1965 |
| Height | (mm) | 1560 | 1560 | 1560 | 1560 | 1560 | 1590 | 1590 |
| Energy efficiency class | | A+ | A+ | A+ | A+ | A+ | A+ | A+ |



*PelTec II Lambda*

## PelTec-Compact

| PelTec-Compact | | 12 | 18 | 24 |
|---|---|---|---|---|
| Heat output range | (kW) | 12 | 18 | 24 |
| Boiler mass | (kg) | 380 | 440 | 440 |
| Depth/Width | (mm) | 1135/680 | 1205/780 | 1205/780 |
| Height | (mm) | 1430 | 1430 | 1430 |
| Energy efficiency class | | A+ | A+ | A+ |



**PelTec-Compact** steel hot water boiler is intended for burning **wood pellets**. Boiler has the function of automatic self-cleaning of flue passages and burner grate, which ensures reliable operation even with pellets of poorer quality. The built-in **lambda probe** with a modulating fan enables optimal combustion and a high level of utilization of the boiler. Multifunctional digital boiler controller with a 7'' touch screen enables the management of one heating circuit with a mixing valve depending on the outdoor temperature and the heating of sanitary water. Simple and quick installation of the boiler is made possible by the built-in hydraulic crossover with return line protection. Compact dimensions and factory built-in equipment in the boiler, such as a vacuum turbine, expansion vessel, and air vent valve, ensure ease of installation and enviable comfort of pellet heating.

# WOOD PELLET FIRING BOILERS

**Cm Pelet-set Touch** central heating equipment is intended for installation on new or pre-installed **EKO-CK P** and **EKO-CKB P** hot water boilers with a nominal output from **20** to **110 kW**. The "Touch" model's specialty is a color touchscreen controller that can control up to 2 mixing heating circuits over the outdoor temperature. Cm Pelet-set Touch and the hot-water boiler form a functional unit, a "mini plant" for wood pellet firing. Automatic operation of these "mini-plants" provides the user with a high level of comfort and makes the equipment suitable for a wide range of users. It is manufactured in accordance with EN 303-5 and ISO 9001. From an operational point of view, such systems do not fall behind compared to oil or gas-powered heating systems. Wood pellets are a renewable energy source and an environmentally friendly fuel.



*Cm Pelet-set Touch*

## Cm Pelet-set Touch

| Cm Pelet-set | | 14 | 20 | 25 | 30 | 35 | 40 | 50 | 60 | 70 | 90 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Type of the burner | | CPPL-14 | CPPL-35 | CPPL-35 | CPPL-35 | CPPL-35 | CPPL-50 | CPPL-50 | CPPL-90 | CPPL-90 | CPPL-90 |
| Heat output range (set + boiler) | (kW) | 14 | 20 | 25 | 30 | 35 | 40 | 50 | 60 | 70 | 90 |
| Type - EKO-CK/-B P | | 20 | 25 | 30 | 35 | 40 | 50 | 60 | 70 | 90 | 110 |
| Tank volume pellet CPSP | (lit.) | 370 | 370 | 370 | 370 | 370 | 370 | 370 | - | - | - |
| Volume of the pellet CPSP-800 | (lit.) | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| Energy efficiency class | | A+ | A+ | A+ | A+ | A+ | A+ | A+ | A+ | A+ | A+ |

**Additional equipment for Cm Pelet-set Touch:**

*Flap on the burner fan (CPPL 14/35/50)*



*Air cleaning of the burner (CPPL 14/35/50/90)*



*Pellets level sensor in the tank*





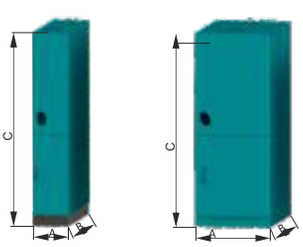
*EKO-CKS P Unit*

## EKO-CKS P UNIT

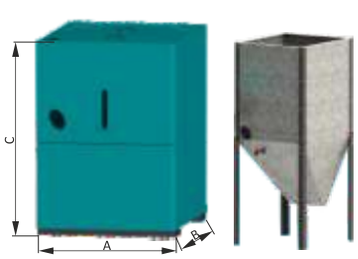
**EKO-CKS P UNIT** hot water central heating boiler is designed for burning **wood pellets.** It consists of the **EKO-CKS P** boiler body with a welded steel design and equipment for the combustion of wood pellets Cm Pelet-set **200-600 kW**. It is necessary to upgrade the **EKO-CKS P UNIT** boiler with a pellet tank (e.g., CentroPelet box), while the **EKO CKS P UNIT 499** and **560** boilers standard delivery includes a cyclone and fan. Standard version is equipped with a pellet burner prearranged for automatic air-cleaning of the grate, while the boiler can be additionally equipped with an automatic ash removal set and air cleaning of flue passages in the boiler. A digital controller manages the operation of the burner (boiler), pellet transporter and additional equipment. All mentioned parts compose a functional pellet-fired unit.

| EKO-CKS P UNIT | | 140 | 180 | 230 | 280 | 320 | 430 | 499 | 560 |
|---|---|---|---|---|---|---|---|---|---|
| Depth - without cyclone | (mm) | 2590 | 2960 | 3020 | 3330 | 3330 | 4225 | - | - |
| Width - without cyclone | (mm) | 1875 | 1875 | 2105 | 2300 | 2400 | 2565 | - | - |
| Width | (mm) | 3105 | 3210 | 3210 | 3210 | 3350 | 3600 | 4300 | 4300 |
| Depth - with cyclone | (mm) | 3300 | 3650 | 3650 | 3985 | 4160 | 4690 | 5200 | 5200 |
| Width - with cyclone | (mm) | 2215 | 2210 | 2580 | 2580 | 2725 | 2895 | 2890 | 3250 |
| Connections inlet/outlet | (R)/DN | 2" | 2" | DN80 | DN80 | DN80 | DN100 | DN100 | DN100 |
| Energy efficiency class | | A+ | A+ | A+ | A+ | A+ | A+ | A+ | A+ |

# PELLET TANKS




*CPSP-M* *CPSP*




*CPSP-800* *CPSP-H*

## CPSP

Pellet tanks **CPSP** are intended for the storage of **wood pellets (230, 370, 390, 800 lit.)** and are installed in boiler rooms next to the boiler, where there is a possibility to connect the tank to the pellet burner by means of a screw feeder. The tanks are made of plasticized steel sheet. Screw transporter is installed in the tanks at an angle of 45° and in the CPSP-800 tank, it can also be installed on the upper side at an angle of 60°. It is possible to install two screw feeders in one tank (with the exception of CPSP-M). They are to be filled by hand (from bags) or using special equipment, automatically refilled. Tanks are delivered dismantled, which makes it easier to transport them and enter the room.

| Pellet tank | | CPSP-M | CPSP | CPSP-H | CPSP-800 |
|---|---|---|---|---|---|
| Volume | (lit.) | 230 | 370 | 390 | 800 |
| Capacity | (kg) | 142 | 255 | 255 | 520 |
| Width A | (mm) | 300 | 625 | 625 | 1010 |
| Depth B | (mm) | 730 | 730 | 730 | 980 |
| Height C | (mm) | 1585 | 1585 | 1585 | 1395 |



The **pellet vacuum suction system** is intended for pellet systems up to **96 kW** heat output where the pellet storage is not right next to the boiler and it's automatic supply is required. With the help of flexible pipes, the maximum length of which is up to 10 meters in one direction, the pellets are transported from a larger storage to a tank next to the boiler to ensure a continuous supply of pellets to the boiler. Supply system can be connected to three different pellet storage types: pellet storage with mole, large pellet tank CentroPelet Box and pellet tank with the feeder screw (transporter). System has been tested for wood pellet supply sized 6 mm in diameter, manufactured according to DINplus or ENplusA1, with a maximum share of dust < 0.7%.

**Cyclone vacuum suction system for dust removal (CVDOP)**
It is placed between the vacuum turbine and the larger storage as additional system equipment.



*CVDOP*

## CentroPelet box

**CentroPelet boxes** are designed for storing larger quantities of **wood pellets (0,8 m³, 1,2 m³, 2,7 m³, 3,4 m³, 4,0 m³)** and are installed either in boiler rooms next to boilers, where the connection of the tank and the pellet burner is enabled by a screw conveyor, or as dislocated tanks from which smaller tanks are filled using screw conveyors or vacuum suction systems. Pellet tank casing is made of steel. On one side, there are windows for checking the pellet's level.




| CentroPelet box | | 1500 | 2700 | 3400 | 4000 |
|---|---|---|---|---|---|
| Volume | (lit.) | 1200 | 2700 | 3400 | 4000 |
| Capacity | (kg) | 780 | 1755 | 2210 | 2600 |
| Width=Depth | (mm) | 1180 | 1645 | 1645 | 1936 |
| Height[2] (a/b/c) | (mm) | 1795/1845/1895 | 2275/2325/2375 | 2715/2765/2375 | 2510/2560/2610 |

[1] It depends on the type of pellets
[2] The height of the tank depends on the method of mounting the wheels with the extension on the legs of the tank



*CentroPelet box*

# WOOD CHIP BOILERS

Steel hot water boilers **EKO-CKS Multi Plus** with **170** to **580 kW** nominal heat output are designed to be fired by **wood chips** and **wood pellets**. They can be installed in both closed and open central heating systems in medium and large facilities. Automatic operation of these systems provides the user with enviable comfort and makes the system suitable for wide application. Boilers are equipped with a moving grate for fuel burning, a lambda probe, an automatic fuel feeding system, automatic ignition, thermal protection, automatic ash removal from the combustion chamber, and a cyclone to extricate particles from flue gases. Additional equipment includes air cleaning of flue gas tubes. They are distinguished by a successful combination of modern technologies and quality construction materials, as well as simplicity of installation and use. Proven technical solutions make these boilers safe and reliable in operation.

## EKO CKS Multi Plus

| EKO-CKS Multi Plus | | 170 | 250 | 340 | 450 | 580 |
|---|---|---|---|---|---|---|
| Heat output range | (kW) | 51 - 170 | 75 - 250 | 102 - 340 | 135 - 450 | 174 - 580 |
| Boiler mass | (kg) | 2790 | 3855 | 4300 | 5300 | 5940 |
| Depth/Width | (mm) | 3995/1740 | 4350/1650 | 4345/1600 | 4620/1880 | 4620/1970 |
| Height | (mm) | 2220 | 2470 | 2485 | 2555 | 2735 |
| Energy efficiency class | | A+ | A+ | A+ | A+ | A+ |



*EKO CKS Multi Plus*

## BIO-SC

Steel hot water boiler for central heating **BIO-SC** with a nominal heat output **48** and **96 kW** is designed for burning **wood chips**. Boiler is equipped with a burner for burning wood chips, with the function of automatic ignition and self-cleaning of the grate and flue passages. Factory-installed back burn protection and thermal protection against boiler overheating are important safety elements of the boiler. Integrated low-temperature protection of the boiler return flow ensures trouble-free operation of the boiler even at lower return temperatures. Multifunctional digital boiler controller with a touch screen controls the operation of the boiler via a built-in **lambda probe** and a modulating flue gas fan. The controller can also control the heating system according to the selected scheme. Integrated Wi-Fi enables remote control via mobile phone or computer. Boiler needs to be upgraded with a wood chip transporter and mixer that can be located either in the storage room or in the wood chip tank.

| BIO-SC | | 48 | 96 |
|---|---|---|---|
| Heat output range | (kW) | 14,4 - 48 | 28,8-96 |
| Boiler mass | (kg) | 780 | 1020 |
| Depth/Width | (mm) | 1335/1920 | 1580/2120 |
| Height | (mm) | 1440 | 1440 |
| Energy efficiency class | | A+ | A+ |



*BIO-SC*

# WOOD CHIP TANKS

## Wood chip feeding systems from a storage

These systems are designed for **wood chips** supply (max. moisture content up to 35%) from a storage room to the firing equipment **BIO-SC** and **EKO-CKS Multi Plus.** They are equipped with a rotating plate with springs for wood chip mixing (Ø 1.2 - 5m), connected to a screw transporter (2.5 - 8m) driven by an electric motor with a gearbox. System is operated by the digital controller of the boiler in its standard configuration.

## Wood chip tanks with a mixer and feeder

These systems are designed for the storage and supply of **wood chips** to the firing equipment **BIO-SC** and **EKO-CKS Multi Plus**. They can be placed in a covered area or outside the building. They are equipped with a screw transporter, an electric motor with a gearbox, and a wood chip mixer. Tanks are filled from the top after opening the lid, and wood chips may contain up to 35% moisture. System is operated by the digital controller of the boiler in its standard configuration. Storage tanks are produced in the following dimensions: **5.5m³, 9m³.**



*Wood chip tanks*

# ADDITIONAL EQUIPMENT

**PelTec/-lambda/Hermetic, PelTec-Compact, PelTec II Lambda, ZVB II, Cm Pelet-set Touch, BioTec-L/-Plus, EKO-CKS P Unit, BIO-SC, EKO-CKS Multi Plus, CUPREG-Touch**



*CM2K*

## CM2K (additional heating circuits control)

- Possibility to control up to two heating circuits according to the outdoor temperature and heating curve (control up to two mixing valves and up to two heating pumps or up to two DHW circuits or up to two recirculation circuits or up to 2 DHW circuits + recirculation)
- Possibility to connect up to 2 room correctors CSK or CSK-Touch (wired) as additional equipment
- Possibility to connect up to 4 modules (8 heating circuits)
- Possibility to connect PelTec/PelTec-lambda/PelTec-HERMETIC, PelTec-Compact, PelTec II Lambda, ZVB II, BioTec-L, BioTec Plus, Cm Pelet-set Touch, EKO-CKS P UNIT, EKO-CKS Multi Plus, BIO-SC, CUPREG-Touch



*CSK*

## CSK (analog room corrector)

- The room corrector enables the adjustment of the room temperature according to the set temperature on the boiler controller
- It is possible to turn the heating circuit on or off
- Can be connected to CM2K module and directly to Pelet-set Touch, PelTec-Compact, PelTec II Lambda, ZVB II, BioTec-L and BioTec Plus boilers
- Connection to the boiler or CM2K module via 2 or 3 wires




*CSK-Touch*

## Digital room corrector CSK-Touch

- Wireless connection (via CM-WiFi box or 7'' display with WiFi chip: on CM2K module, BioTec-L, BioTec Plus, Cm Pelet-set Touch), PelTec-Compact, PelTec II Lambda, ZVB II
- Wire connection (with 2 wires) to CM2K, PelTec-Compact, PelTec II Lambda, BIO-SC
- Possibility of wireless communication between multiple CSK-Touch devices
- Enables room temperature management, switching the heating circuit on or off, timers and weather forecast (only with connection to the internet with CM-WiFi box or 7'' display)
- Enables basic management of the boiler and heating system temperatures, notification of errors and warnings from the boiler and setting of administrator rights for each corrector



*CM WiFi-box*

## CM-WiFi box (boiler monitoring and controling through internet)

- It enables monitoring and management of boiler operation using a computer, mobile phone, etc., by connecting to a web portal via WiFi
- Turning on/off the boiler, setting the temperature and timers, receiving warnings and errors on the portal and email, weather forecast...
- Wireless connection of CSK-Touch to the CM2K module or Cm Pelet-set Touch, BioTec-L and BioTec Plus boiler
- Possibility to connect to PelTec/PelTec-lambda/PelTec-HERMETIC, PelTec-Compact, BioTec-L, BioTec Plus, Cm Pelet-set Touch, EKO-CKS P Unit, BIO-SC, EKO-CKS Multi Plus, CUPREG-Touch, Cm-Sol



*CAL*

## CAL (error and warning through sound and light signal)

- Module for sound or light notifications about boiler errors and warnings
- Possibility to connect to PelTec/PelTec-lambda/PelTec-HERMETIC, PelTec-Compact, PelTec II Lambda, BioTec-L, BioTec Plus, Cm Pelet-set Touch, EKO- CKS P UNIT, EKO-CKS Multi Plus, BIO-SC



*CMNET*

## CMNET (boiler cascade connection)

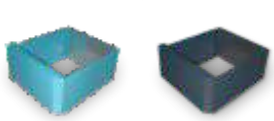
- Possibility to cascade 2 to 8 boilers
- For cascade of 2 boilers = 1x CMNET, for cascade 3 to 8 boilers = every boiler one CMNET
- Connection to the boilers by UTP cables
- Possibility to connect to PelTec/PelTec-lambda/PelTec-HERMETIC, PelTec-Compact, PelTec II Lambda, Cm Pelet-set Touch, EKO- CKS P UNIT, EKO-CKS Multi Plus, BIO-SC, CUPREG-Touch



*RSE*

## RSE (rotary protection against flame return)

- It prevents the flame from the combustion chamber from reaching the pellet supply tube
- Possibility to connect to PelTec/PelTec-lambda, PelTec II Lambda, EKO CK P+Cm Pelet set Touch, EKO-CKS P UNIT



*Extension for PelTec/PelTec II Lambda boiler tank*

## Extension for PelTec tank

- Increase the volume of the pellet tank by +77kg
- Increase the height of the tank by 300mm
- Extension dimensions: 580 x 680 x 300 mm
- Possible installation on new and existing PelTec/PelTec II Lambda tanks



*Ash box*

## Ash box for PelTec-lambda 69/96 and PelTec II Lambda 69/96

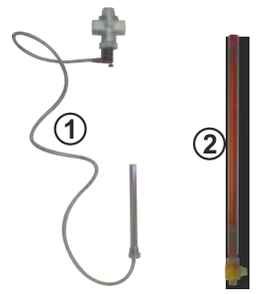
- Automatic ash extraction
- Two boxes with a volume of 68 liters, equipped with wheels for easy transport and a telescopic adjustable handle
- Significantly extends the autonomy of the boiler
- Connects to the existing boiler controller
- Possible installation on PelTec-lambda 69/96 and PelTec II Lambda 69/96 boilers

## Thermal protection of the boiler

Hot water boilers designed for manual firing with solid fuel, installed in a closed central heating system, must have, among other safety regulation equipment, built-in **thermal protection**. **Thermal protection** protects the boiler from overheating due to power failure or circuit pump failure. **Thermal protection** cools the boiler using the domestic water supply system, which is connected to the public water supply and not to the water pressure tank. Cooling the boiler starts when the boiler water temperature reaches 95°C. In case of power failure or circuit pump failure, thermal protection must prevent the boiler water temperature from rising above 110°C. For proper operation of thermal protection, it is essential to use the boiler in accordance with its technical instructions. **Thermal protection** is not intended to protect the boiler from overheating caused by irresponsible and improper use of the boiler.

Thermal protection parts:

1. **Thermal valve** - thermal valve sensor is installed in the boiler and detects the boiler water temperature. If it rises above 95°C, the thermal valve opens to allow cold water from the domestic water supply to cool the boiler through the exchanger.
2. **Thermal exchanger** - installed in the boiler, it conducts cold water through the boiler and serves as a heat exchange surface between the boiler and the water supply.




*Thermal protection*

Hot water boilers fired with solid fuel or oil/gas and which can be connected directly to central heating systems without a CAS accumulation tanks and feature only basic boiler controls—must be equipped with a manual **4-way manual mixing valve.** This valve protects the boiler from condensation of steam vapor in the flue gases and allows the regulation of the flow temperature in the central heating system. It is recommended to install a thermometer on the heating flow line immediately after the four-way manual mixing valve to monitor the set temperature of the flow line in the central heating system.

## 4-way manual mixing valve



*4-way manual mixing valve*

**The operation of the 4-way manual mixing valve:**

By changing the ratio of mixing the inlet water from the boiler and the return water from the heating installation, desired flow temperature of the central heating system is set up. On the thermometer behind the 4-way manual mixing valve, adjusted flow temperature of the central heating system is monitored.

| Boiler power (kW) | 4-way mixing valve |
|---|---|
| 14-50 | 5/4" |
| 51-70 | 6/4" |
| 71-110 | 2" |

## 3-way load valve ESBE VTC

Three-way thermostatic valves **ESBE VTC 512** are designed for installation in central heating systems with boilers fired by **solid fuel** (Bio-Tec-C, Bio-Tec-L, Bio-Tec Plus, EKO-CK P, EKO-CKB P, CentroPlus, CentroPlus-B...) and CAS accumulation tanks, to protect boilers from flue gas condensation. ESBE VTC 512 valves enable the operating temperature to be reached quickly and maintained by regulating the flow between the boiler's outlet to the central heating system and a return connection directly back to the boiler. A circulation pump must also be installed in heating systems where ESBE VTC 512 valves are used.

| Heat output range (kW) | Connection VTC 512 (outher thread) | Circulation pump type | | Volume of CAS accumulation tank for BioTec wood gasification boilers |
|---|---|---|---|---|
| | | Grundfos | Wilo | |
| 14 - 25 | 5/4'' | Alpha1 25/32-40 | Yonos PICO 30/1-4 | Minimum 40 lit./kW of boiler power |
| 26 - 40 | 5/4'' | Alpha1 32-60 | Yonos PICO 30/1-6 | |
| 41 - 50 | 5/4'' | Alpha1 32-80 | Yonos PICO 30/1-8 | |
| 51 - 60 | 5/4'' | Alpha1 32-40 | Yonos PICO 30/1-8 | |
| 61 - 70 | 6/4'' | Alpha1 32-40 | Yonos PICO 30/1-8 | |



*3-way load valve ESBE VTC*

## 3-way load valve ESBE LTC 361,381 and ESBE CRA 211/121

**ESBE LTC 361** and **381** 3-way thermostatic valves are designed for use with **solid fuel-fired** central heating systems (Bio-Tec, BioTec-L, BioTec-Plus, EKO-CK P, EKO-CKB P, CentroPlus, -/B) and CAS accumulation tanks to protect boilers from flue gas condensation. **ESBE VTC 361** and **381** valves enable the operating temperature to be reached quickly and maintained by regulating the flow between the boiler's outlet to the central heating system and a return connection directly back to the boiler, maintaining the return line always above 60°C. They include a built-in circulation pump, thermostatic valve (60°C), stop valves, and thermometers.

**ESBE CRA 211/121** is a motor actuator with a controller for maintaining a constant return flow temperature (set at 60°C), intended for installation on 3-way mixing valves from DN50 to DN150. They are designed for installation with larger boilers **71-580 kW**.

| Heat output range (kW) | Connection LTC 361 (outher thread) | Connection LTC 381 (inner thread) | Connection VTC 512 + pump like Grundfos Magna3 32-60 (pump like Grundfos UPS 32-60) | Connection CRA 211 + 3-way valve + pump | |
|---|---|---|---|---|---|
| 14 - 40 | 5/4'' | -- | -- | -- | -- |
| 41 - 50 | -- | 6/4'' | -- | -- | -- |
| 51 - 70 | -- | -- | 6/4'' | -- | -- |
| 71 - 110 | -- | -- | -- | DN50 | -- |
| 111-580 | -- | -- | -- | -- | DN65-DN150 |



*3-way load valve ESBE LTC 361,381 and ESBE CRA 211/121*

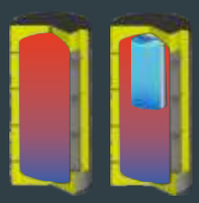
## Safety airvent group

**Safety airvent** boiler group with insulation is used for heating systems with boilers up to **50 kW**. Safety airvent group consists of an automatic vent pot, a safety valve and a manometer.

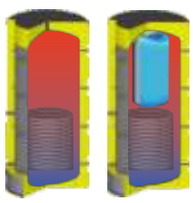


*Safety airvent group*

# ACCUMULATION TANKS



CAS CAS-B



CAS-S CAS-BS



**CAS** accumulation (buffer) tanks are meant to be integrated into central heating systems, mostly with biomass fired boilers, in order to store heat energy and enable a more economical and efficient functioning of the boiler. They are produced in a range of sizes and types: as an accumulation tank **(CAS)**, with a built-in stainless steel water heater for heating domestic hot water **(CAS-B)**, with a built-in tube exchanger for connecting solar collectors **(CAS-S)** and with a built-in stainless steel water heater and a tube exchanger **(CAS-BS)**.

## CAS

| | | CAS | | | | | | | | | CAS-S | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Type** | | **303** | **503** | **803** | **1003** | **1503** | **2003** | **3003** | **4003** | **5003** | **503** | **803** | **1003** | **1503** | **2003** |
| Volume | (lit.) | 325 | 465 | 727 | 920 | 1426 | 2122 | 2960 | 3820 | 5022 | 465 | 727 | 920 | 1426 | 2122 |
| Tank diameter | (mm) | 500 | 650 | 790 | 790 | 1000 | 1200 | 1250 | 1400 | 1600 | 650 | 790 | 790 | 1000 | 1200 |
| Outer diameter | (mm) | 700 | 850 | 990 | 990 | 1200 | 1400 | 1450 | 1600 | 1800 | 850 | 990 | 990 | 1200 | 1400 |
| Total height | (mm) | 1805 | 1600 | 1690 | 2100 | 2050 | 2140 | 2660 | 2765 | 2815 | 1600 | 1690 | 2100 | 2050 | 2140 |
| Min. room height | (mm) | 2010 | 1800 | 1890 | 2300 | 2250 | 2435 | 2895 | 3015 | 3000 | 1800 | 1890 | 2300 | 2250 | 2430 |
| Tube exchanger DHW | (lit.) | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Energy efficiency class | | C | C | C | C | C | C | - | - | - | C | C | C | C | C |

| | | CAS-B | | | | | CAS-BS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Type** | | **503** | **803** | **1003** | **1503** | **2003** | **503** | **803** | **1003** | **1503** | **2003** |
| Volume | (lit.) | 465 | 727 | 920 | 1426 | 2122 | 465 | 727 | 920 | 1426 | 2122 |
| Tank diameter | (mm) | 650 | 790 | 790 | 1000 | 1200 | 650 | 790 | 790 | 1000 | 1200 |
| Outer diameter | (mm) | 850 | 990 | 990 | 1200 | 1400 | 850 | 990 | 990 | 1200 | 1400 |
| Total height | (mm) | 1585 | 1675 | 2080 | 2040 | 2140 | 1585 | 1675 | 2080 | 2040 | 2130 |
| Min. room height | (mm) | 1785 | 1875 | 2295 | 2240 | 2430 | 1785 | 1875 | 2280 | 2240 | 2420 |
| Tube exchanger DHW | (lit.) | 125 | 170 | 170 | 170 | 170 | 125 | 170 | 170 | 170 | 170 |
| Energy efficiency class | | C | C | C | C | C | C | C | C | C | C |

Selection of accumulation tank:

- pellets / wood chips = min. 20 lit./kW, recommendation
- wood / pyrolysis = min. 40 lit./kW



CAS to order

With standard accumulation tanks, it is possible to order other sizes and types of connections. Installation of well-dimensioned accumulation tanks with biomass boilers brings numerous benefits and advantages to households. Increasing the efficiency of the boiler and heating system, enhancing the comfort of burning and heating (digital controls regulated by outdoor temperature can be installed), reducing heating costs make this solution essential for modern heating and cooling systems. In the production range, it is possible to **order larger volumes of storage tanks, up to 250.000 lit**. The installation of storage tanks is especially important in central heating systems where energy is distributed to several locations. By using large tanks (**10.000** to **250.000 lit**. or as needed), it is possible to better coordinate energy production and consumption in different locations, resulting in optimized system operation and better use of available resources.

### CAS-HV

**CAS-HV** storage tanks are designed to store **hot** or **cold technical water.** They are most commonly connected to heat pumps or water chillers where greater energy storage capacity is required. The **CAS-HV** tank is coated with zinc paint and features high-quality thermal insulation that prevents energy losses to the surroundings and condensation when storing cold water. **CAS-HV 50/100** models are manufactured from high-quality steel using advanced welding technology and are designed for wall or floor mounting in a vertical position. All storage tanks are made from certified materials in accordance with ISO 9001 standards.



CAS-HV



CAS-HV 50/100

| CAS-HV | | 50 | 100 | 303 | 503 | 803 | 1003 | 1503 | 2003 | 3003 | 4003 | 5003 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Volume | (lit.) | 50 | 100 | 325 | 465 | 727 | 920 | 1426 | 2122 | 2960 | 3820 | 5022 |
| Tank diameter | (mm) | - | - | 500 | 650 | 790 | 790 | 1000 | 1200 | 1250 | 1400 | 1600 |
| Outer diameter | (mm) | 400[1] | 475[1] | 550 | 700 | 840 | 840 | 1050 | 1250 | 1300 | 1450 | 1650 |
| Total height | (mm) | 880 | 1030 | 1805 | 1600 | 1690 | 2100 | 2050 | 2140 | 2660 | 2765 | 2815 |
| Min. room height | (mm) | 1000 | 1050 | 2010 | 1800 | 1890 | 2300 | 2250 | 2435 | 2895 | 3015 | 3000 |
| Energy efficiency class | | C | C | C | C | C | C | C | C | - | - | - |

[1] It is not possible to remove the insulation.

### PSS



PSS

Storage tanks type **PSS 50, 100, 200, 300, 400** and **500** are manufactured from high-quality steel using advanced welding technology. They are designed for **storing energy from heat pumps** and ensure more economical and efficient operation of the system in which they are installed.

| PSS | | 50 | 100 | 200 | 300 | 400 | 500 |
|---|---|---|---|---|---|---|---|
| Volume | (lit.) | 57 | 123 | 203 | 277 | 390 | 473 |
| Tank diameter | (mm) | 400 | 500 | 550 | 600 | 700 | 700 |
| Mass | (kg) | 25 | 35 | 45 | 55 | 95 | 100 |
| Total height | (mm) | 935 | 1095 | 1395 | 1560 | 1555 | 1855 |
| Min. room height | (mm) | 1050 | 1250 | 1550 | 1700 | 1750 | 2000 |
| Energy effici. class | | C | C | C | C | C | C |

## WATER PRESSURE TANK



CH

### CH

**CH** stainless steel water pressure tanks with capacities from **90** to **300 liters** are designed for storing fresh drinking water in households, hospitality facilities and other buildings where larger quantities of water under a certain pressure are required. They are also frequently used for water storage in various industrial processes. The tanks are made of stainless steel for reliable and long-lasting operation.

| CH | | 90 | 140 | 180 | 260 | 300 |
|---|---|---|---|---|---|---|
| Volume | (l) | 90 | 140 | 180 | 260 | 300 |
| Mass | (kg) | 15 | 19 | 22 | 28 | 32 |
| Tank diameter | (mm) | 480 | 480 | 480 | 480 | 480 |
| Total height | (mm) | 689 | 977 | 1197 | 1627 | 1877 |

# STAINLESS STEEL AND ENAMELED WATER HEATERS

**SKB Digi** (**80, 100** and **120 liter** capacities) and **LKB Digi** (**100** and **120 liters** capacities) combination water heaters, featuring digital controls, are designed for heating and storing domestic hot water in residential and commercial buildings. These heaters offer a versatile choice between heating water via a boiler circuit connected to the unit's internal heat exchanger or using the built-in electric heating element. They ensure consistent water flow and pressure regardless of the number of active draw-off points and are constructed from stainless steel to ensure a high level of hygiene.

## SKB Digi / LKB Digi



*SKB Digi*

*LKB Digi*

| | | SKB Digi | | | LKB Digi | |
|---|---|---|---|---|---|---|
| **Type** | | **80** | **100** | **120** | **100** | **120** |
| Capacity | (lit.) | 80 | 100 | 120 | 100 | 120 |
| Water heater mass | (kg) | 31 | 35 | 39,5 | 35,5 | 40 |
| Diameter/Height | (mm) | 475/815 | 475/955 | 475/1090 | 475/950 | 475/1090 |
| Energy effici. class | | C | C | C | C | C |

### TB

Inox water heaters type **TB 120** to **850** are designed for **heating and storing domestic hot water** by connection to a boiler circuit or another heat source within a technological process. They are often installed in solar systems as additional storage alongside STB solar stainless steel water heaters.

| TB | | 120 | 150 | 200 | 300 | 600 | 850 |
|---|---|---|---|---|---|---|---|
| Capacity | (lit.) | 121 | 150 | 200 | 294 | 545 | 860 |
| Water heater mass | (kg) | 30 | 41 | 46 | 63 | 129 | 157 |
| Diameter/Height | (mm) | 640/970 | 640/1125 | 640/1450 | 640/1900 | 810/1995 | 960/1940 |
| Energy effici. class | | B | C | C | C | C | C |

### BW i WW

Enameled water heaters type **BW 200** to **1.000** and type **WW 1.500** to **2.000** are designed for **heating and storing DHW** by connecting to a boiler circuit or another heat source. BW water heaters are often installed alongside solar systems as additional storage in combination with BE enameled water heaters. They are made of carbon steel and are double-enameled. They are made of steel and enamelled according to DIN 4753 standard.

| | | BW | | | | | | WW | |
|---|---|---|---|---|---|---|---|---|---|
| **Type** | | **200** | **300** | **400** | **500** | **800** | **1000** | **1500** | **2000** |
| Capacity | (lit.) | 196 | 273 | 400 | 475 | 738 | 930 | 1500 | 1950 |
| Water heater mass | (kg) | 77 | 93 | 113 | 128 | 190 | 480 | 335 | 503 |
| Diameter/Height | (mm) | 600/1215 | 600/1615 | 750/1475 | 750/1705 | 990/1875 | 990/2205 | 1200/2185 | 1300/2470 |
| Energy effici. class | | C | C | C | C | C | C | C | C |



*TB*

*BW / WW*

## SOLAR ENAMELED WATER HEATERS

### STB

Inox water heaters type **STB 200** to **800 liters**, are designed for **heating and storing domestic hot water** using solar energy, with additional heating provided by boiler water or alternatively by an electric heating element.

| STB | | 200 | 300 | 600 | 850 |
|---|---|---|---|---|---|
| Capacity | (lit.) | 198 | 283 | 537 | 850 |
| Water heater mass | (kg) | 49 | 66 | 125 | 162 |
| Diameter/Height | (mm) | 640/1420 | 640/1900 | 810/1995 | 960/1940 |
| Energy effici. class | | C | C | C | C |

### BE i EP

Bivalent solar enameled water heaters type **BE 200** to **1.000** and type **EP 1.500** to **2.000** are designed to heat **domestic hot water using solar energy,** with the option of auxiliary heating via boiler water or an electric heater. They ensure high efficiency, long service life, and minimal heat loss, and are manufactured in accordance with the DIN 4753 standard.

| | | BE | | | | | | EP | |
|---|---|---|---|---|---|---|---|---|---|
| **Tip** | | **200** | **300** | **400** | **500** | **800** | **1000** | **1500** | **2000** |
| Capacity | (lit.) | 196 | 273 | 400 | 475 | 738 | 930 | 1390 | 1950 |
| Water heater mass | (kg) | 83 | 112 | 127 | 151 | 210 | 235 | 350 | 542 |
| Diameter/Height | (mm) | 600/1215 | 600/1615 | 750/1475 | 750/1705 | 990/1875 | 990/2205 | 1200/2185 | 1300/2470 |
| Energy effici. class | | C | C | C | C | C | C | C | C |

### EPM

Bivalent solar enameled water heaters type **EPM 300** to **2.000** are designed for **heating DHW** using solar energy, supplemented by additional sources such as a heat pump or an electric heating element. They offer high efficiency and multi-source operation and are manufactured in accordance with DIN 4753 standard.

| EPM | | 300 | 500 | 800 | 1000 | 1500 | 2000 |
|---|---|---|---|---|---|---|---|
| Capacity | (lit.) | 260 | 455 | 702 | 900 | 1390 | 1900 |
| Water heater mass | (kg) | 30 | 41 | 46 | 63 | 129 | 157 |
| Diameter/Height | (mm) | 640/970 | 640/1125 | 640/1450 | 640/1900 | 810/1995 | 960/1940 |
| Energy effici. class | | B | C | C | C | C | C |



*STB*

*EPM*

*BE / EP*

## ENAMELED WATER HEATERS FOR HEAT PUMPS

### WWM

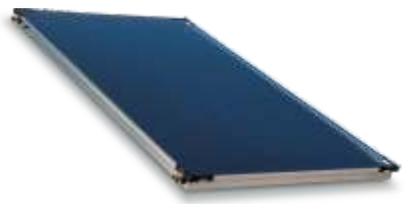
Enameled water heaters type **WWM 200** to **2.000** are designed for **heating and storing DHW** by connecting to a heat pump, boiler, or another heat source. They can also be used in solar systems alongside EPM water heaters. They are manufactured from steel and enameled in accordance with DIN 4753 standard.

| WWM | | 200 | 300 | 500 | 800 | 1000 | 1500 | 2000 |
|---|---|---|---|---|---|---|---|---|
| Capacity | (lit.) | 196 | 263 | 470 | 702 | 900 | 1300 | 1900 |
| Water heater mass | (kg) | 90 | 124 | 175 | 235 | 265 | 370 | 573 |
| Diameter/Height | (mm) | 600/1215 | 600/1615 | 750/1475 | 750/1705 | 990/1875 | 990/2205 | 990/2205 |
| Energy effici. class | | C | C | C | C | C | C | C |



*WWM*

# SOLAR HOT WATER COLLECTORS



*CPK-8203N 4H*

## CPK-8203N 4H

**CPK-8203N 4H** hot water collectors represents a modern product of high quality and contemporary design. It is engineered for domestic water heating systems, swimming pool heating and for central heating systems with the ability to store accumulated heat. **CPK-8203N 4H** collector is made of high quality materials, which give it a long life while operating under different atmospheric conditions. Use of a high quality surface coating and a single absorbing panel across the whole surface of the collector, provides the best possible heat transfer and the optimal usage of the absorbing surface.

| | | CPK-8203N 4H |
|---|---|---|
| Bruto area | ($m^2$) | 2,02 |
| Collector weight | (kg) | 31 |
| Collector width | (mm) | 1170 |
| Collector height | (mm) | 1730 |

# SOLAR CONTROLLER

- Universal **solar controller** with touchscreen and the possibility of connecting additional equipment (Cm WiFi-box, web portal...)
- 10 inputs (Pt1000 or NTC5k) and 8 outputs
- Controls up to 4 tanks, 2 collector circuits, 2 boilers, electric heater, recirculation, flow meter, pressure switch...
- Protection functions: collector cooling (through tanks), tanks cooling (through collectors or recirculation), disinfection (legionella protection), pumps and valves blockage protection
- Statistics view (numeral and graphical view), errors/warnings list, glycol replacement warning
- Electric heater controller
- Protection of circulation pumps against high temperatures
- View of energy received from the Sun in kWh
- Delivered in a box with all necessary temperature sensors



*Cm-SOL*

Wi Fi READY

## Cm-SOL



### Differential thermostat

- **Differential thermostat** is intended for installation in solar systems or central heating systems where it is needed to switch on/off the pump according to the set temperature difference
- Compact housing for easy mounting on the wall
- Differential thermostat operation can be selected as either automatic (auto) or manual
- It also offers the possibility to set the thermostat switch on/off range from 0-20°C

# SOLAR PUMP GROUP



*CSPG TL-6600*



*3-way zone valve*

### CSPG TL-6600 and 3-way zone valve

Important elements of solar systems are solar pump groups **CSPG TL-6600**. Solar pump group **CSPG TL-6600** contains all necessary elements (with collectors, tank, controller, solar air vent valve, and expansion vessel) needed for the normal functioning of the solar system. With the advantage of having all necessary functional and safety elements in one device, solar pump groups are thermally and sound insulated, require a small installation surface and are easy to install.

If there is an additional accumulation tank, besides the solar pump group **CSPG TL-6600**, a **3-way zone valve** is needed to expand the solar system.

| | | CSPG TL-6600 |
|---|---|---|
| Pump | (type) | Grundfos Solar UPM3 15-75 130 |
| Medium | - | water and max. 50% glycol |
| Width | (mm) | 170/430 |
| Height | (mm) | 250 |

# GAS CONDENSING COMBI BOILER

High-efficiency gas condensing combi boiler **GasTec** is designed to fully meet all your requirements for heating and domestic hot water. It is recognizable by the successful combination of modern technologies and quality building materials, as well as the ease of installation and monitoring. The use of proven technical solutions makes this boiler extremely economical, safe, and reliable in operation.

## GasTec

| GasTec | | 20 | 24 | 35 |
|---|---|---|---|---|
| Max. heat output (80/60°C) | (kW) | 19,7 | 24,5 | 26,9 |
| Min. heat output (80/60°C) | (kW) | 7,65 | 7,65 | 8,7 |
| Max. heat output (50/30°C) | (kW) | 21,1 | 26,2 | 28,8 |
| Min. heat output (50/30°C) | (kW) | 8,1 | 8,1 | 9,2 |
| Pump type | - | 15/65 | 15/65 | 15/65 |
| Dimensions (WxHxD) | (mm) | 400x600x320 | 400x600x320 | 400x600x320 |
| Energy efficiency class | | A | A | A |



*GasTec*

# OIL/GAS HOT WATER BOILERS

## EKO-CUP M3 and EKO-CUP M3 Bg

**EKO-CUP M3** steel hot water boilers with heat outputs ranging from **18** to **80 kW** and **EKO-CUP M3 Bg** with heat outputs ranging from **25** to **80 kW** are of modern design and are notable for their high efficiency level, resulting from continual development of design features, the application of modern technologies, and the use of high-quality materials. These factors also make these boilers safe and reliable. Economy of use is assured by the triple pass combustion gas flow system. A special feature of **EKO-CUP M3 Bg** boilers is an integrated domestic stainless steel water heater placed inside the boiler's water chamber. This feature makes the product especially interesting because the control functions of the boiler are always able to maintain the required temperature of domestic hot water. Boiler controller is sold separately and one of two models can be ordered (basic boiler controller / 90°C or CUPREG-Touch / 90°C).

| EKO CUP M3/M3 Bg | | 18 | 25 | 35 | 50 | 65 | 80 |
|---|---|---|---|---|---|---|---|
| Heat output range | (kW) | 18 | 25 | 35 | 50 | 65 | 80 |
| Boiler mass | (kg) | 105 | 117/195 | 147/220 | 168/236 | 206/275 | 235/315 |
| Depth/Width | (mm) | 1090/505 | 1190/505 | 1190/582 | 1190/632 | 1190/692 | 1340/692 |
| Height | (mm) | 805 | 805 / 1210 | 885 / 1290 | 910 / 1340 | 1005 / 1400 | 1005/ 1400 |
| DHW heater content | (lit.) | - | - / 80 | - / 80 | - / 80 | - / 80 | - / 120 |



*EKO-CUP M3 and EKO-CUP M3 Bg*

## EKO-CUP S3/SU3 and EKO-CUP V3/SV3

**EKO-CUP S3/SU3** steel hot water boilers with heat outputs ranging from **125** to **600 kW**, **EKO-CUP V3** with heat outputs ranging from **0.8** to **1.5 kW**, and **EKO-CUP SV3 2500** with a heat output of **2.1 kW** are engineered for heating medium and larger buildings and as a heat source for various technological processes. They can be installed either as separate units or connected in a cascade. They are recognizable by the successful combination of modern technologies and quality building materials, as well as the ease of installation and monitoring. The use of proven technical solutions makes these boilers safe and reliable in operation. Three-pass flue gas system is an important reason for the economy of these boilers. A wide range of automatic controllers, as additional equipment, provides the possibility of complete automation of the boiler room and central or remote monitoring. Boiler controller is sold separately, and one of four models can be ordered (Basic boiler controller /90°C or /100°C, CUPREG-Touch /90°C, CUPREG-Touch /100°C, CUPREG-Touch /105°C).

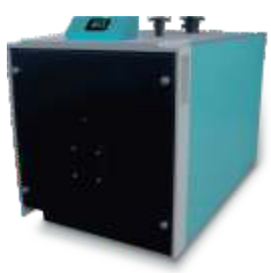
**EKO-CUP SU3** boilers are on average 200mm narrower, slightly deeper, and higher than EKO-CUP S3 boilers.

| EKO CUP S3 | | 125 | 160 | 240 | 320 | 400 | 460 | 530 | 600 |
|---|---|---|---|---|---|---|---|---|---|
| Heat output range | (kW) | 37,5 - 125 | 48 - 160 | 72 - 240 | 96 - 320 | 120 - 400 | 138 - 460 | 168 - 530 | 180 - 600 |
| Boiler mass | (kg) | 445 | 563 | 673 | 867 | 1080 | 1184 | 1418 | 1515 |
| Depth/Width | (mm) | 1650/770 | 1510 / 945 | 1915/945 | 1915/1045 | 1970/1150 | 2270/1150 | 2270/1250 | 2520/1250 |
| Height | (mm) | 1080 | 1195 | 1195 | 1305 | 1405 | 1405 | 1505 | 1505 |

| EKO CUP V3 | | 800 | 1000 | 1250 | 1500 | SV3 2500 |
|---|---|---|---|---|---|---|
| Heat output range | (kW) | 240 - 800 | 300 - 1000 | 375 - 1250 | 450 - 1500 | 630 - 2100 |
| Boiler mass | (kg) | 2104 | 2320 | 2770 | 2950 | 5200 |
| Depth/Width | (mm) | 2505/1400 | 2510/ 1470 | 2520/1620 | 2500/1600 | 3480/1932 |
| Height | (mm) | 1630 | 1700 | 1890 | 1920 | 2145 |



*EKO-CUP S3/SU3*



*EKO-CUP V3/SV3*

# BOILER CONTROLLER

## CUPREG-Touch

**CUPREG-Touch digital boiler controller** is intended for installation on hot water boilers **EKO-CUP M3, EKO-CUP MU3, EKO-CUP S3, EKO-CUP SU3, EKO-CUP V3** and **EKO-CUP SV3**. It controls the operation of a boiler with a single-stage, two-stage, or modulating oil or gas burner, manages the central heating system and prepares domestic hot water (DHW). It enables control of the boiler temperature and the hydraulic crossover/buffer tank, controls up to 2 heating circuits with mixing valves regulated by the outdoor temperature and heating curve, controls the heating of the DHW tank and recirculation according to a timer and connects additional equipment as requested.

**Basic boiler controller** controls the boiler according to the set temperature and turns on/off the single-stage or two-stage oil or gas burner.



*Basic boiler controller*




*Boiler controller CUPREG-Touch*

## FLUE GAS TUBES/ELBOWS



*Flue gas elbows and tube*

### Flue gas elbows and tube

**Flue gas elbows and tubes** are engineered for the quick and easy connection of all kinds of boilers to the chimney.

| FLUE GAS ELBOWS/TUBES | | 120 | 130 | 150 | 160 | 180 | 200 |
|---|---|---|---|---|---|---|---|
| Diameter | (mm) | 120 | 130 | 150 | 160 | 180 | 200 |
| Flue tube L=500 | (mm) | Ø120 | Ø130 | Ø150 | Ø160 | Ø180 | Ø200 |
| Flue tube L=1000 | (mm) | Ø120 | Ø130 | Ø150 | Ø160 | Ø180 | Ø200 |

## OPEN EXPANSION VESSEL



*OPC*

### OPC

**OPC** (open expansion vessels) are engineered for installation in open central heating systems. They are made of welded steel construction and painted in a basic color. They are ready to be installed on a vertical surface (wall or carrier), in either a horizontal or vertical position. Standard delivery does not include insulation.

| OPC | | 30 | 50 | 100 | 200 |
|---|---|---|---|---|---|
| Capacity | (lit.) | 30 | 50 | 100 | 200 |
| Vessel lenght | (mm) | 500 | 750 | 835 | 1150 |
| Vessel diameter | (mm) | 300 | 300 | 400 | 480 |
| Total width | (mm) | 350 | 350 | 455 | 535 |
| Connection | (R) | 1" | 1" | 5/4" | 6/4" |
| Mass | (kg) | 13 | 18 | 26 | 42 |

# ELECTRIC BOILERS



*El-Cm Classic*

**El-Cm Classic** range of electric boilers, with nominal heat outputs of **6, 9, 12, 18, 24** and **27 kW**, and the **El-Cm ePlus** with nominal heat outputs of **6, 9, 12, 18** and **24 kW,** are intended for heating smaller houses or apartments as an independent or auxiliary heat source using electricity. Today, they are frequently used for heating domestic hot water in storage tanks connected to the heat exchanger of the boiler. Boilers are equipped with a circulation pump, expansion vessel, the most modern modulating digital controller and necessary safety elements. Silent operation and modern design make them suitable for installation in any part of the house or apartment, especially since they do not require ventilation or a chimney. The wide application of modern technologies and the quality materials used make these boilers safe and reliable.

## El-Cm Classic i El-Cm ePlus



*El-Cm ePlus*

| El-Cm Classic | | 6 | 9 | 12 | 18 | 24 | 27 |
|---|---|---|---|---|---|---|---|
| Heat output range | (kW) | 6 | 9 | 12 | 18 | 24 | 27 |
| Boiler mass (without water) | (kg) | 23 | 24 | 24 | 25 | 25 | 25 |
| Depth/Width | (mm) | 230/430 | 230/430 | 230/430 | 230/430 | 230/430 | 230/430 |
| Height | (mm) | 710 | 710 | 710 | 710 | 710 | 710 |
| Energy efficiency class | | D | D | D | D | D | D |

| El-Cm ePlus | | 6 | 9 | 12 | 18 | 24 |
|---|---|---|---|---|---|---|
| Heat output range | (kW) | 6 | 9 | 12 | 18 | 24 |
| Boiler mass (without water) | (kg) | 25 | 25 | 25 | 25 | 25 |
| Depth/Width | (mm) | 230/430 | 230/430 | 230/430 | 230/430 | 230/430 |
| Height | (mm) | 710 | 710 | 710 | 710 | 710 |
| Energy efficiency class | | D | D | D | D | D |



*El-Cm eBasic*

### El-Cm eBasic

Steel hot water boilers **El-Cm Basic**, with rated thermal outputs ranging from **6** to **40 kW**, are intended for heating small houses or apartments as self-contained units or as independent or auxiliary heat sources using electricity. Today, they are increasingly being used to heat hot water in storage tanks by connecting to the tank heat exchanger.

| El-Cm eBasic | | 6 | 9 | 12 | 18 | 24 | 30 | 36 | 40 |
|---|---|---|---|---|---|---|---|---|---|
| Heat output range | (kW) | 6 | 9 | 12 | 18 | 24 | 30 | 36 | 40 |
| Boiler mass (without water) | (kg) | 12 | 12,7 | 13,5 | 13,5 | 13,5 | 17,2 | 17,2 | 17,2 |
| Depth/Width | (mm) | 162/450 | 162/450 | 162/450 | 162/450 | 162/450 | 215/450 | 215/450 | 215/450 |
| Height | (mm) | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 |
| Energy efficiency class | | D | D | D | D | D | D | D | D |

## Heat pumps R32 - Monoblock

**Heat pump** can be defined as a comprehensive solution for heating and cooling. It is an integrated system that can heat or cool the space and simultaneously prepare domestic hot water (DHW). It can replace any boiler or work in combination with it in an integrated hybrid system. The advantage of the monoblock design is that the entire heat pump with all components is outside the house and that the working medium is factory-charged, so the heating installer only has to bring the supply/return pipes to the heat pump, but the pipes must be well insulated. Controller with a color touch screen controls the heat pump, up to two mixing heating/cooling circuits, one direct heating/cooling circuit and DHW heating (with recirculation). It can be connected to underfloor heating/cooling, fan coils, and/or low-temperature radiator heating and subsequent connection to the web portal and mobile application is possible.

| R32 Monoblock | | 5 kW | 9 kW | 16 kW P3 | 22 kW P3 | 30 kW P3 |
|---|---|---|---|---|---|---|
| Connection voltage | (V/Ph/HZ) | 220-240/1/50 | 220-240/1/50 | 380-415/3/50 | 380-415/3/50 | 380-415/3/50 |
| Power (heating A7/W35)[1] | (kW) | 6,50 | 10,0 | 16,0 | 22,0 | 30,10 |
| Power (heating A7/W55)[2] | (kW) | 6,30 | 9,40 | 16,0 | 22,0 | 30,0 |
| Performance (cooling A35/W18)[3] | (kW) | 6,50 | 10,0 | 15,40 | 23,0 | 31,00 |
| Performance (cooling A35/W7) [4] | (kW) | 5,50 | 9,00 | 14,0 | 21,0 | 29,50 |
| Expansion vessel | (lit.) | 5,0 | 5,0 | 5,0 | 8,0 | 8,0 |
| Energy eff. class (from 35°C/55°C) | | A+++/A++ | A+++/A++ | A+++/A++ | A+++/A++ | A++/A++ |

[1] Outside temperature 7°C, 85% RH; water temperature departure/return 35/30°C
[2] Outside temperature 7°C, 85% RH; water temperature departure/return 55/47°C
[3] Outside temperature 35°C, water temperature departure/return 18/23°C
[4] Outside temperature 35°C, water temperature departure/return 7/12°C



*Heat pumps R32 - Monoblock*

## Heat pumps R32 - Split

In the **split version**, the external unit of the heat pump (which contains a compressor) is connected to the internal unit (which contains an exchanger and a circulation pump) with pipes containing the working medium. For maximum utilization, heat pumps are connected to low-temperature heating/cooling systems (underfloor heating and fan coils). For this heating/cooling system in the house, very little space is needed in a technical room, and there is no need for a boiler room, while 0.5m² is enough on the outside of the house.

| R32 Split | | 6 kW | 10 kW | 16 kW P3 |
|---|---|---|---|---|
| Connection voltage | (V/Ph/HZ) | 220-240/1/50 | 220-240/1/50 | 380-415/3/50 |
| Power (heating A7/W35)[1] | (kW) | 6,20 | 10,0 | 16,0 |
| Power (heating A7/W55)[2] | (kW) | 6,00 | 9,50 | 16,0 |
| Performance (cooling A35/W18)[3] | (kW) | 6,55 | 10,0 | 14,90 |
| Performance (cooling A35/W7)[4] | (kW) | 7,00 | 8,20 | 14,0 |
| Energy eff. class (from 35°C/55°C) | | A+++/A++ | A+++/A++ | A+++/A++ |

[1] Outside temperature 7°C, 85% RH; water temperature departure/return 35/30°C
[2] Outside temperature 7°C, 85% RH; water temperature departure/return 55/47°C
[3] Outside temperature 35°C, water temperature departure/return 18/23°C
[4] Outside temperature 35°C, water temperature departure/return 7/12°C

*Indoor unit*



*Outdoor unit*

*Heat pumps R32 - Split*

| R32 Split (Indoor unit) | | 6 kW | 10 kW | 16 kW |
|---|---|---|---|---|
| Connection voltage | (V/Ph/HZ) | 220-240/1/50 | 220-240/1/50 | 220-240/1/50, 380-415/3/50[1] |
| Comp. outdoor unit | - | 6 | 10 | 16 |
| Range of temp. gen. water (cooling) | (°C) | 5-25 | 5-25 | 5-25 |
| Range of temp. gen. water (heating) | (°C) | 25-65 | 25-65 | 25-65 |
| Range of temp. gen. water (DHW) | (°C) | 30-60 | 30-60 | 30-60 |
| Range of room temp. | (°C) | 5-35 | 5-35 | 5-35 |

[1] If heater with 9 kW is used



*Our heat pumps are equipped with color controller with a 4,3" touch screen*

High-temperature monoblock heat pumps, thanks to the excellent thermodynamic properties of the working medium **R290** and advanced technology, show excellent performance even in cold conditions. By using the working medium **R290**, heat pumps can reach water temperatures of up to 75°C, while at -20°C outside temperatures, they can reach water temperatures of up to 65°C. Centrometal high-temperature monoblock heat pumps are supplied with a factory-installed electric heater with a power of 3 or 9 kW*. Hermetically sealed electronic box makes this heat pump extremely safe to use. Heat pumps R290 can also be connected to radiators. With an additional module, it is possible to connect to the web portal and monitor and manage the operation of the heat pump via a mobile device or computer.

* The 6 kW and 10 kW heat pumps are supplied with a 3 kW electric heater, while the 16 kW heat pump is supplied with a 9 kW heater.



*Heat pumps R290 6-16 kW*

## Heat pumps R290 - Monoblock



*Heat pumps R290 26-40 kW*

| R290 Monoblok | | 6 kW | 10 kW | 16 kW | 26 kW | 30 kW | 35 kW | 40 kW |
|---|---|---|---|---|---|---|---|---|
| Connection voltage | (V/Ph/HZ) | 220-240/1/50 | 220-240/1/50 | 380-415/3/50 | 380-415/3/50 | 380-415/3/50 | 380-415/3/50 | 380-415/3/50 |
| Power (heating A7/W35)[1] | (kW) | 6,20 | 10,0 | 15,0 | 26,0 | 30,0 | 35,0 | 39,0 |
| Power (heating A7/W45)[2] | (kW) | 6,40 | 10,0 | 15,0 | 26,0 | 30,0 | 35,0 | 39,0 |
| Performance (cooling A35/W18)[3] | (kW) | 6,50 | 10,0 | 16,00 | 26,0 | 30,0 | 35,0 | 39,0 |
| Performance (cooling A35/W7)[4] | (kW) | 6,80 | 8,90 | 14,0 | 26,0 | 30,0 | 32,0 | 32,0 |
| Energy eff. class (from 35°C/55°C) | | A+++/A++ | A+++/A++ | A+++/A++ | A+++/A+++ | A+++/A++ | A++/A++ | A++/A++ |

[1] Outside temperature 7°C, 85% RH; water temperature departure/return 35/30°C
[2] Outside temperature 7°C, 85% RH; water temperature departure/return 55/47°C
[3] Outside temperature 35°C, water temperature departure/return 18/23°C
[4] Outside temperature 35°C, water temperature departure/return 7/12°C

# TOWER - INDOOR UNIT OF SPLIT HEAT PUMP

## Tower-S 210

Heat pump can be defined as a comprehensive solution for heating, cooling and heating domestic hot water. Internal unit of the split heat pump **Tower-S 210** is an integrated 'all-in-one' system that can heat or cool the space and prepare hot water for consumption. One of the great advantages of the **Tower-S 210** is the minimal space it takes up, as its floor plan dimensions of 600x600mm are the same as a washing machine, next to which it is usually installed in apartments. It can replace any boiler or work in combination with it in an integrated hybrid system. During installation, it is only necessary to connect the heating supply/return, hot/cold/recirculation pipes, and the freon part to the outdoor unit to the Tower. A very practical and efficient solution for apartments and houses.




*Tower-S/M 210*

| Tower-S 210 | | | | |
|---|---|---|---|---|
| Compatible outdoor unit | | SHAO6RP24CM | SHAO10RP24CM | SHAO16RP24CM |
| Power supply | (V/Ph/Hz) | 220-240/1/50 | 220-240/1/50 | 380-415/3/50 |
| Dimensions (WxHxD) | (mm) | | 600x2004x600 | |
| Mass | (kg) | | 265 | |
| Volume of the DHW tank | (lit.) | | 210 | |
| Energy efficiency class | L | | C | |
| Declared load profile | - | | L | |

## Tower-M 210

**Tower-M 210** units are intended for installation next to **monoblock heat pumps** with working mediums **R32** or **R290**. **Tower-M 210** unit consists of a DHW tank made of stainless steel, an accumulation tank, a direct heating circuit pump, a controller for heat pumps and an expansion vessel for DHW. All components are located in a compact housing with floor plan dimensions of 600x600 mm, which takes up minimal space. In combination with a monoblock heat pump, this unit can replace any boiler or work in combination with it in an integrated hybrid system. **Tower-M 210** is a very practical and efficient solution for apartments and houses, providing optimal comfort while saving space.

| Tower-M 210 | | |
|---|---|---|
| Power supply | (V/Ph/Hz) | 220-240/1/50 |
| Dimensions (WxHxD) | (mm) | 600x1935x600 |
| Net mass | (kg) | 185 |
| Volume of the DHW tank | (lit.) | 210 |
| Energy efficiency class | L | C |
| Declared load profile | - | L |

# HEAT PUMP CONTROLLER



*HPCU360iCM / HPCU360iCMP*

### HPCU360iCMP

Control units **HPCU360iCMP** are intended for controlling the heat pump, the heating or cooling system, and the preparation of domestic hot water (DHW). A controller with a heat pump is mandatory, and it is also possible to order an additional panel. The controller manages the operation of the heat pump in accordance with the demand for heating or cooling the space. The control unit can manage one direct and two mixing heating/cooling circuits and DHW with recirculation, and it can be additionally expanded with a module for two heating/cooling circuits HPx2kCM.

# AIR CONDITIONERS




*Air conditioners*

### Air conditioners

**Air conditioners** are the ideal solution for cooling and heating your home or cottage. They are energy efficient and can be easily installed and maintained. They are available in different sizes, with inverter models ranging from **2.6** to **7 kW** cooling in mono version, and combinations with 2 to 5 indoor units with one outdoor unit, providing cooling power from **4.1** to **12.3 kW**.

# CONTAINER BOILER ROOMS



*CKK*

### CKK

**CKK** container boiler rooms are intended to be connected to central heating systems with domestic hot water processing as a temporary or even permanent solution. Depending on the request, oil or gas firing boilers can be installed with nominal heat outputs ranging from **18** to **2.100 kW** or biomass firing boilers with nominal heat outputs ranging from **12** to **340 kW**. Boiler rooms are equipped with all the necessary equipment, so that, in addition to the connection to the central heating installation and the installation of the chimney, it is necessary to provide the electrical and water connections and fuel. Compact design ensures simple management, maintenance and moving of the boiler room from one location to another. Heating room has its own thermal insulation and is manufactured in accordance with ISO 9001 and ISO 14001.

## DISTRIBUTORS IN:

*Albania*
*Algeria*
*Austria*
*Belgium*
*Bosnia and Herzegovina*
*Bulgaria*
*Croatia*
*Czech Republic*
*Denmark*
*England*
*Finland*
*France*
*Germany*
*Greece*
*Hungary*
*Ireland*
*Italy*
*Japan*
*Kosovo*
*Latvia*
*Liechtenstein*
*Luxembourg*
*Montenegro*
*Morocco*
*Netherlands*
*Norway*
*North Macedonia*
*Poland*
*Portugal*
*Romania*
*Slovakia*
*Slovenia*
*Serbia*
*Spain*
*Sweden*
*Switzerland*
*Ukraine*



## OTHER ACTIVITIES

Centrometal d.o.o. is a family company that has grown in a region with hard-working people, surrounded by beautiful nature and all its precious fruits. One of these fruits is certainly good wine. Zidarić family is extraordinarily proud of their own vineyard and wine cellars, which, without any doubt, are central to their spare time activities. High appreciation of sporting spirit and a healthy lifestyle is expressed by the Zidarić family's sponsorship of sports teams and other outgoing activities. This demonstrates that the development of the company brings with it the development of the quality of life and the environment.



VC M. "Centrometal" Macinec - Super League



*FC "Centrometal" Macinec - Međimurska Premier League*

Centrometal
HEATING TECHNIQUE

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