

Effective waste heat utilization

EkoBlok Bypass



EkoBlok Bypass

Eco friendly device for maximum utilization of waste heat

How do you make the bakery operation more efficient without any loss of energy? With the EkoBlok Bypass not only do you save up to 25% in input energy and regulate steam and waste gases outlet, but you also run a bakery that is eco-friendly.



What is the EkoBlok Bypass?

The EkoBlok is an eco-friendly device for the complete utilization and processing of waste energy, waste gases, and steam from gas and oil bakery ovens, as well as steam and thermal oil boilers. It reduces waste gases pollutants along with CO₂ emissions produced by individual ovens, thus protecting the environment.

The EkoBlok in conjunction with the KORNFEIL automatic bypass constitutes an ideal system for any bakery. The KORNFEIL bypass system ensures a completely safe bakery operation even in the case of surplus energy by conducting oven waste gases and steam away from Ekoblok exchangers. KORNFEIL is able to custom-design, based on your energy balance, the size of EkoBloks and the capacity of accumulation tanks, providing you with a solution that is just right for your operation.

Energy saving of up to 25%

With the EkoBlok application, the bakery is able to significantly reduce its energy requirements. In small and mid-sized bakeries, the energy savings range from 20 to 25%, whereas large and industrial bakeries can save up to 25% of energy. All flue piping, drawing off of waste gases and steam from the bakery ovens, is connected directly to the EkoBlok, thus significantly reducing the costs expended on certified chimney and venting systems. Thanks to the EkoBlok installation, all you need is a single outlet pipe.

Utilizing free energy

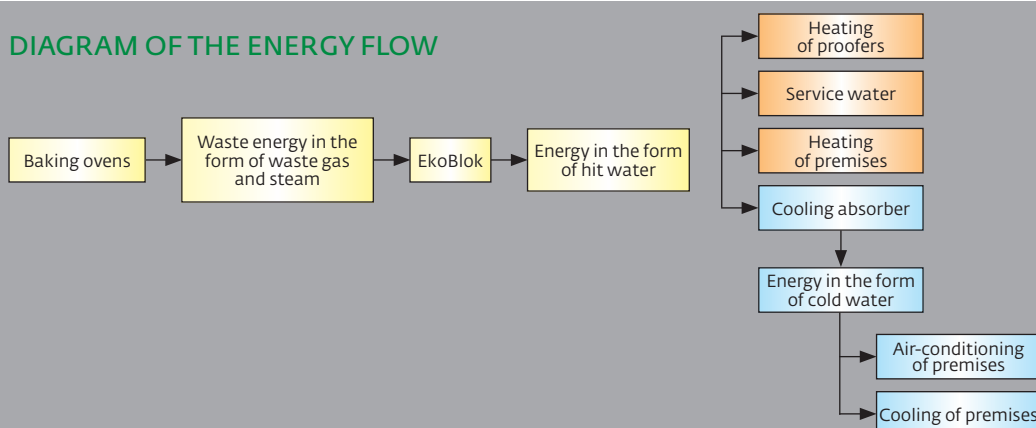
The energy obtained from waste gases and condensed steam heat is transferred to hot water (about 85°C) and further accumulated in tanks to be further utilized for both heating and cooling purposes.

The second waste heat output (about 40°C) is used in preheating cold pressure water for DHW tanks and steam-feed water.

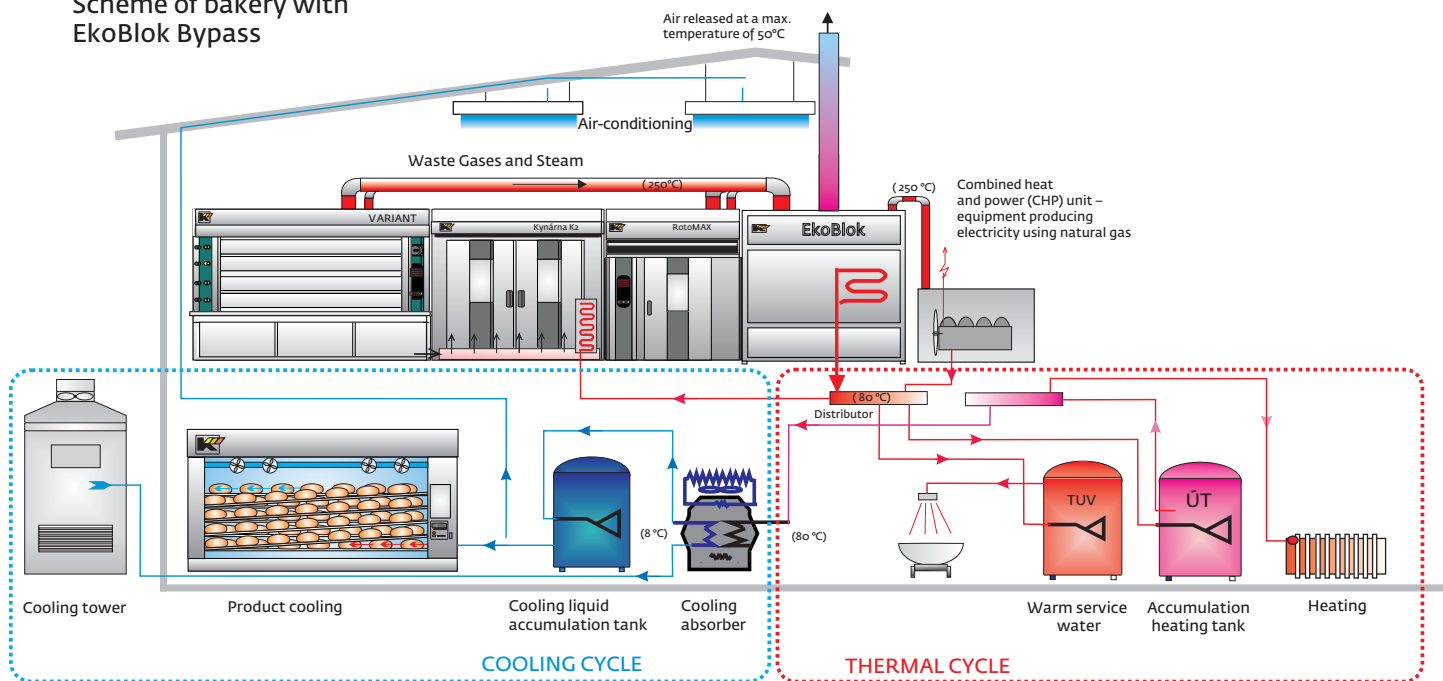
Energy for heating purposes

- Heating of service and process water
- Heating of bakery premises
- Preheating for steam production
- Heating of proofers and stop-proofers
- Washer operation

DIAGRAM OF THE ENERGY FLOW



Scheme of bakery with EkoBlok Bypass



Energy for cooling purposes

Waste energy in the form of hot water is transformed via the absorption assembly into a cooling medium used for:

- cooling of the shipping department,
- air-conditioning of the working area,
- cooling of bakery products.

Part of the energy management projects is also utilization of waste energy from refrigeration units for freezing and cooling. The waste water temperature is kept between 50 and 60°C and is readily available for heating both service water and your bakery premises.

User-friendly EkoBlok

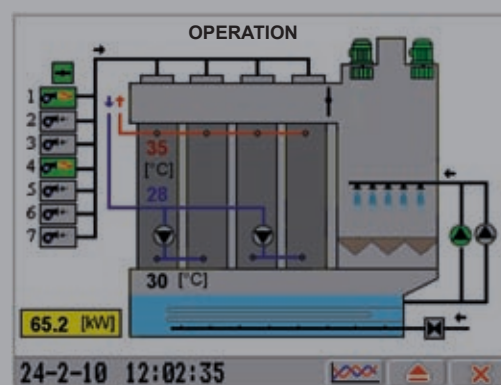
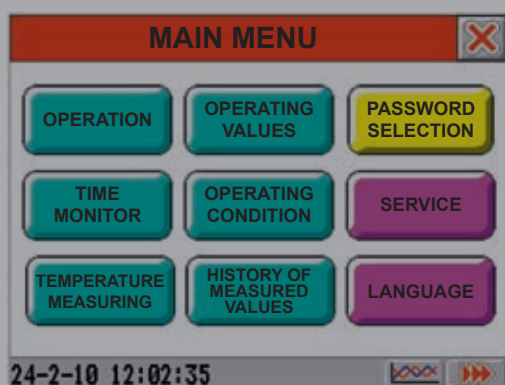
Continuous monitoring of temperature and energy processes in the bakery is secured by a control touch panel – Touch screen, also used for controlling EkoBlok's functions.

Thanks to the fully automated system, including process visualization, of energy measuring and regulation, you are able to constantly monitor and archive energy flows of all operation indicators and EkoBlok Values.

Computer programmed functions

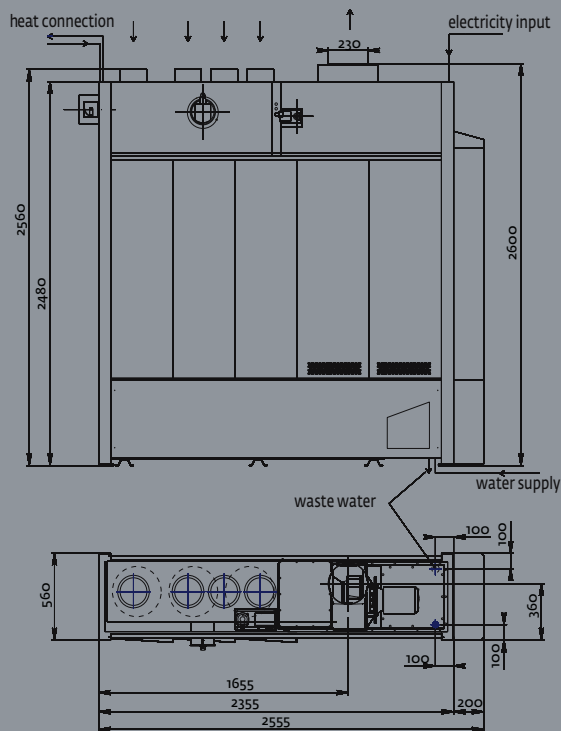
- Regulation of heating water temperature
- Measuring and evaluation of waste heat
- Graphic representation of the system temperatures and output
- The system operating condition
- Safety of operation

Every bakery has its individual needs. KORNFEIL uses your energy balance to custom design the size of EkoBlok's and the capacity of accumulation tanks, providing you with a solution that is just right for your operation.

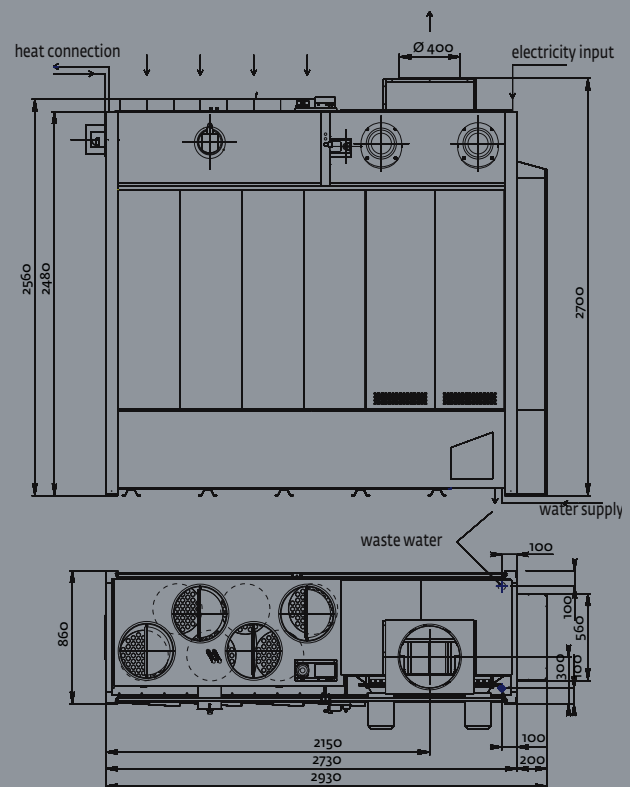


Technical data	EkoBlok I	EkoBlok II	EkoBlok III	EkoBlok IV	EkoBlok V	EkoBlok VI
Max. output of burners [kW]	120	200	300	400	600	800
Min. volume of water tanks [l]	1,500	3,000	4,000	5,000	6,000	8,000
Temperature of output air [°C]	50–60	51–60	52–60	53–60	54–60	55–60
Max. water temperature – primary circuit [°C]	95	95	95	95	95	95
Max. water temperature – secondary circuit [°C]	40	40	40	40	40	40
Diameter of input piping [mm]	180	180	180, 250	180, 200	180, 250, 350	180, 250, 350, 400
Diameter of output piping [mm]	180	200	230	260	350	400
Water line [inches]	G 1/2	G 1/2	G 1/2	G 1/2	G 1/2	G 1/2
Waste water	>DN50	>DN51	>DN52	>DN53	>DN54	>DN55
Heating output – primary circuit	G1	G1	G 1 1/2	G 1 1/2	G 1 1/2	G2
Pressure water line – secondary circuit [inches]	G1	G1	G1	G1	G1	G1
Electrical connection [kW]	0.95	0.95	2	2	3.5	3.5
Line protection 3×400 V / 50 Hz	C16A	C16A	C20A	C20A	C20A	C20A
Water volume [l]	135	270	420	540	540	830
Net weight [kg]	380	615	865	1,027	1,050	1,600

EkoBlok I–IV



EkoBlok V–VI



KORNFEIL spol. s r. o.

696 14 Čejč 66

Tel.: +420 518 309 611

Fax: +420 518 309 610

E-mail: kornfeil@kornfeil.cz

www.kornfeil.cz

MANUFACTURE • SALE • INSTALLATION • SERVICE

Quality • Affordability • Reliable service partner for your future