



KORNFEIL



ThermoMax computer



THERMOOIL TROLLEY OVEN

Economical baking by radiating heat



Thermooil oven THERMOMAX is basically deck oven by character of baking, but as for manipulation with metal sheets on trolley, its trolley oven. Basic plan aim and purpose of this technology is baking by soft radiating heat, thereby possible universal application of oven, to achieve first class quality of white and common bakery products.

- rolls, buns
- cereal bread
- bread rolls, baguettes, twists
- cookies
- special breads
- pan breads
- rye-corn breads

THERMOMAX is modern trolley oven with universal application for baking the top-quality bakery products. Oven utilizes all high technology knowledge and potential of present-day technologies. It offers high comfort and easy handling keeping quality and equalization of baking.

The whole baking process is controlled by computer and according to adjusted recipes, including technical support and all oven functions reliability.

Advantages:

- good temperature stability
- trolley after trolley without delay
- baking by radiating heat
- air micro-circuit for good crust of bread and color of products
- maximum oven capacity utilization for high performance
- baking according to adjusted recipes
- all for keeping stable quality of bakery products
- effective oven isolation
- heat accumulation in thermooil
- deck oven
- TURBO system
- by using trolley with 10 or 12 decks, 20 up to 24 trays
- baking process computer control



What is thermooil?

Thermooil serves as heat conductor for energy transfer between a boiler and bakery oven. Thermooil ensures effective heat energy transfer and serves as good heat accumulator. Thermooil at temperature 290°C flows in heating units similar to hydrothermal heating. Because there is minimal temperature difference between thermooil temperature and baking chamber temperature, approximately 10°C–20°C, we can bake by radiating heat like steam ovens.

Advantages:

- fast temperature rise
- baking equality
- soft radiating heat
- economical baking
- good temperature stability
- temperature difference in deck: +/- 1°C
- crunch and soft breads



For effective input energy use is good to tap exhaust and waste steam to EKOBLOCK.

TECHNICAL CONCEPT:

Heating medium: BASIC GAS * FURNACE OIL

Thermooil bakery ovens THERMOMAX

- trolleys with trays are delivered directly to baking chamber
- heating units are just below baking trays
- thermooil ensures effective energy transfer to the oven and products
- as the source of energy serves thermooil boiler including primary circuit of powerful low-pressure pump
- every connected oven has its own circuit, pump and three-way vent
- three-way vent is continuously controlled by computer according to requirements of baking program
- its possible to connect several ovens on one boiler
- boiler can be placed in boiler room, basement or anywhere out of baking area
- its important to respect appropriate specification during bakery projection for thermooil boilers installation
- basic 10-deck model has universal application for baking whole product line including pastry
- 12-deck model is made on request, ideal for rolls, buns and baguettes baking

THERMOMAX oven standard equipment:

- THERMOMAX computer – baking according to baking programs
- automatic door handling with pneumatic seal pressure
- integrated compressor
- turbovent



The next intelligent tool, in the hands of baker, is TURBO in trolley oven. TURBO is part of standard equipment, in final phase of baking ensures air micro-circulation in oven, to achieve optimal crust and color of product. TURBO can be also used during the beginning of baking, also for warming baked or foreheated products and defrosting.



THERMOMAX – trolley after trolley without losing any minute and energy

The effective steam device is guarantee of enough steam amount. The new is an effective system with double outlet valve with overpressure valves- The steam effect in the end of baking process is having positive influence for softness of the product, especially at fine products. Oven is at once equipped by steam device for proofbox COMBI.

Door with automatic closing are having perfect sealing, noiseless progress, easy closing and long life sealing duration. The door closing and outlet valves functions are ensured by pneumatic cylinders with compressor unit included in the oven.

Using of high-quality components and materials is granted. Most important elements of system are pumps with magnetic clutch, three-way servo valve, HITACHI control computer with touch-screen.

Oven inner chamber and valve gear are completely welded. Oven is supplied to customer at full state.

THERMOMAX computer:

Trolley oven is equipped with technological computer unit, which controls all necessary oven functions for baking reliability and safety in service. Product baking is running according to selected and freely programmable baking programs. Basic control element of trolley oven is touch-screen, where operator carries-out programming, program selection and basic oven control. Display simultaneously shows all important oven working values. THERMOMAX computer controls following technical characteristics during baking:

- required and actual temperature
- bake time
- bake temperature-time curve
- damping and steam exhaustion
- TURBO – time
- TURBO – intensity (0–99%)
- product crust character

Control is very simple

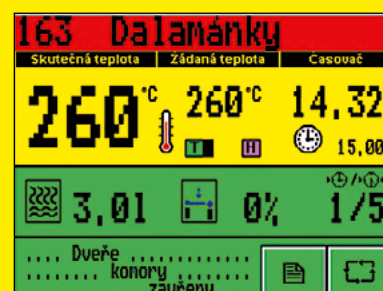
Operator will simply select preconfigured program, fill trolley to the oven, close the rack door, which are automatically secured, and press START button – that is all.

When bake program ends, oven chamber is quickly steam ventilated and computer gives sound and light signal to the operator. Computer unit is ON-LINE connected with PC for particular recipes programming by technologist or operation supervisor. Main checkpoints of the baking process are stored right in computer or in connected PC.



In picture

The recipes programming is possible to do directly on oven or on PC in office. Its possible to transfer baking programs from oven to oven. Software allows preset and store up to 99 baking programs. Access level allows changing baking program only by authorized persons. Service functions are also registered to the particular groups according to access level.



Possibilities of waste heat recovery

Even thermooil ovens produces waste energy in the form of retraction steam and flue gases at temperature 300–330 °C from boiler. This energy represents approximately 20–25% from input energy, which You have to pay.

For using waste power from gas ovens has KORNFEIL company several technical solutions. Heat exchangers and EKO-blocks are using waste power in form of hot water and using it for proofboxes and central heating. For having a free proofbox working in combination with EKO-blocks is possible to use steam device in THERMOMAX oven. Projecting department of our company will propose you complex solution of maximum outlet energy using and combination with new ROTOMAX ovens.

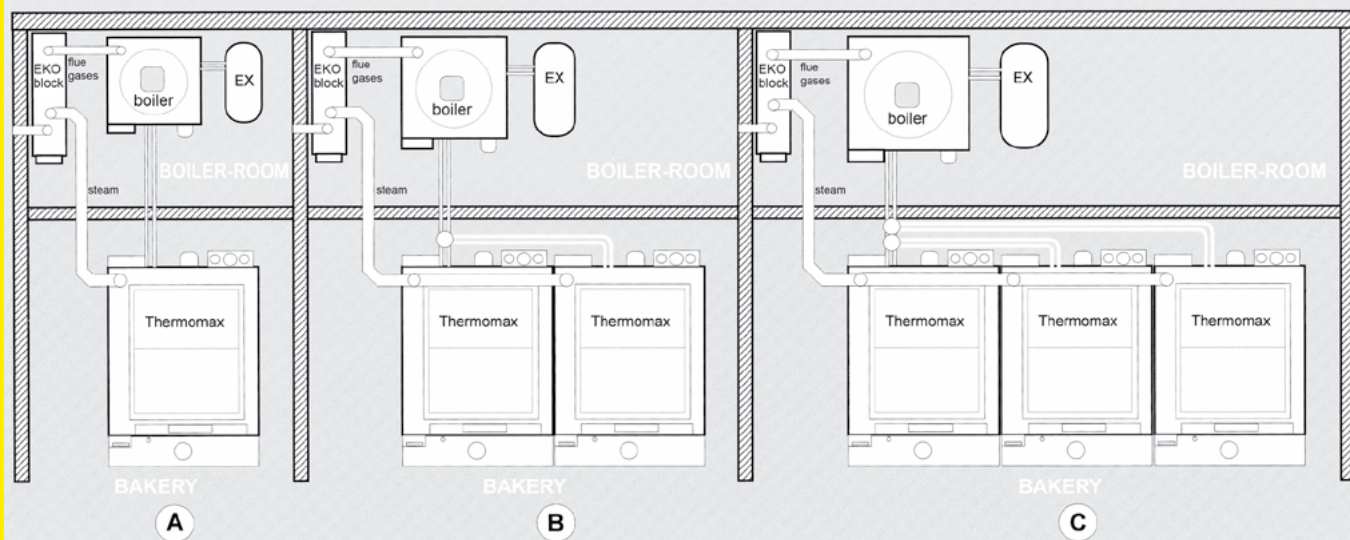
Servising and technical secure

For servising and technical purpose has Computer THERMOMAX celular or internet connection with KORNFEIL company ON-LINE SERVIS. Customer doesn't need watch technical inspection terms, everything is watched by Computer THERMOMAX.

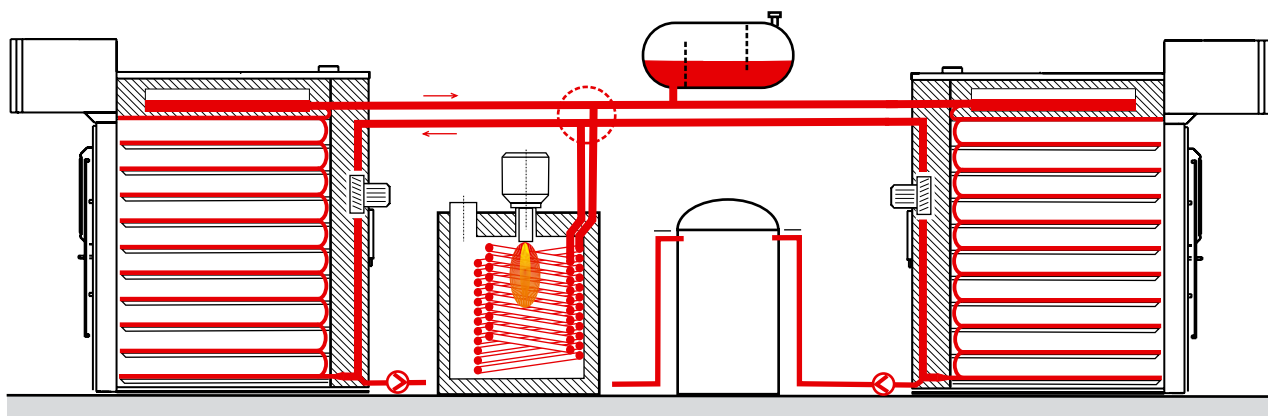
By dint of easy connection from manufacturer to 'brain' of oven ensures easy and fast help. The oven has minimal requirements for servising.

All important aggregates and service components are approachable from a front side of oven. There is only isolation in sides and in rear part. The ovens can be placed side by side, because of using area of bakery. The rear part of ovens requires approximately 600–800 mm for thermooil technical access.

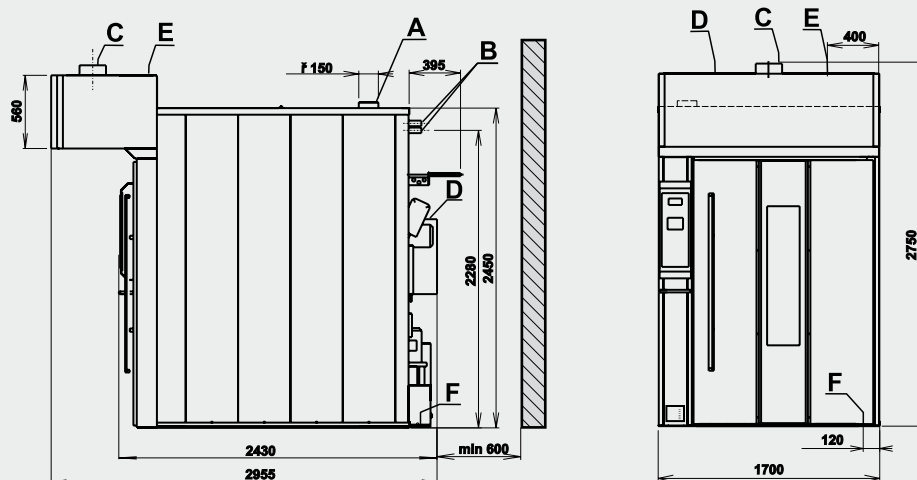
INSTALATION ALTERNATIVES – THERMOMAX 12, 14



THERMOOIL OVEN WORKING PRINCIPLE



INSTALLATION SCHEME



- (A) FLUE STEAM INSTALLATION
- (B) HEATING MEDIUM INSTALLATION
- (C) FLUE INSTALLATION FROM HOOD DN200
- (D) MAINS SUPPLY (cyky 5X2,5)
- (E) WATER SUPPLY DN 1/2"
- (F) WASTE INSTALLATION DN50

TECHNICAL DATA		THERMOMAX 9	THERMOMAX 11	THERMOMAX 12	THERMOMAX 14
Baking surface	m ²	9	11	12	14
Decks number		10	12	10	12
Baking metal plates					
– dimensions		580/780	580/780	580/980	580/980
– metal plates per deck		2	2	2	2
Decks height					
–	mm	130	108	130	108
Dimensions of oven					
– width	mm	1500	1500	1700	1700
– length	mm	2430	2430	2430	2430
– height	mm	2750	2750	2750	2750
Connection to the mains	kW	4	4	4	4
Heat input	kW	55	60	65	70



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