

FIRST Heating

Company and product overview

Introductions to group companies

- FIRST Heating is 100% owned by investment group profit park.cz, s.r.o.
- FIRST Heating is part of a group of companies with international exposure and histories
- This group employs over 4000 people
- 2011 turnover of the group exceeded 192 mil. Eur

PROBAEQ, s.r.o.

- Development and production of infrared heating panels – partner company of FIRST Heating s.r.o.
- Located in Prostějov, Czech Republic



FIRST Heating

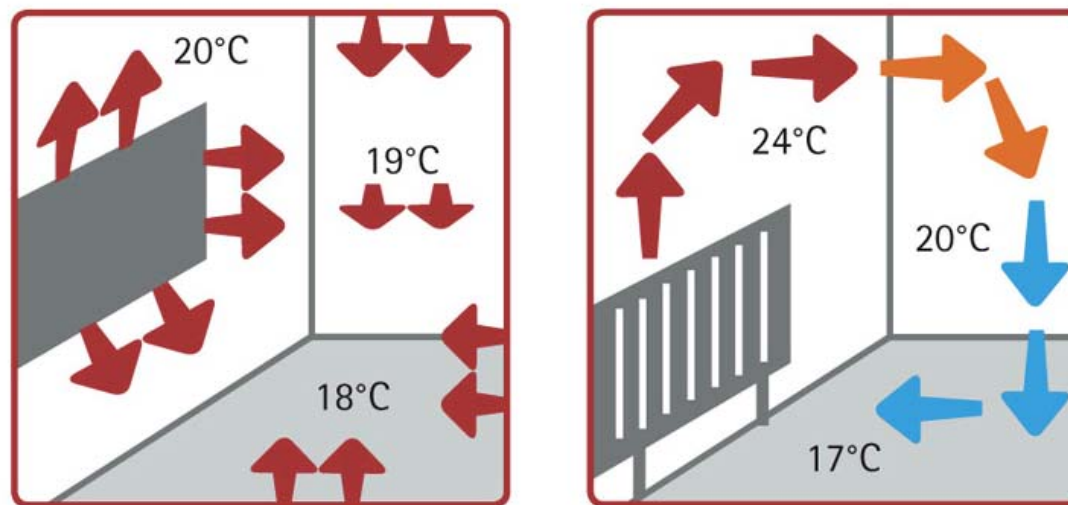
- 100% focus on IR heating panels
- Business organization that coordinates the development, manufacture and sale of FIRST Heating IR panels

Vision:

Significant global producer that offers high-quality infrared heating panels with excellent thermal properties

The principles of Infrared Heating

- First, heat up the walls and floor
- 2° C temperature difference between floor/ceiling
 - Convection and air flow/rotation suppressed
- Warm walls, cold air vs. Cold walls and warm air



Slide 5

C1

Heat rays that contact solids are converted into heat,
this heat accumulates in the walls and the floor, which is then released back into the room....

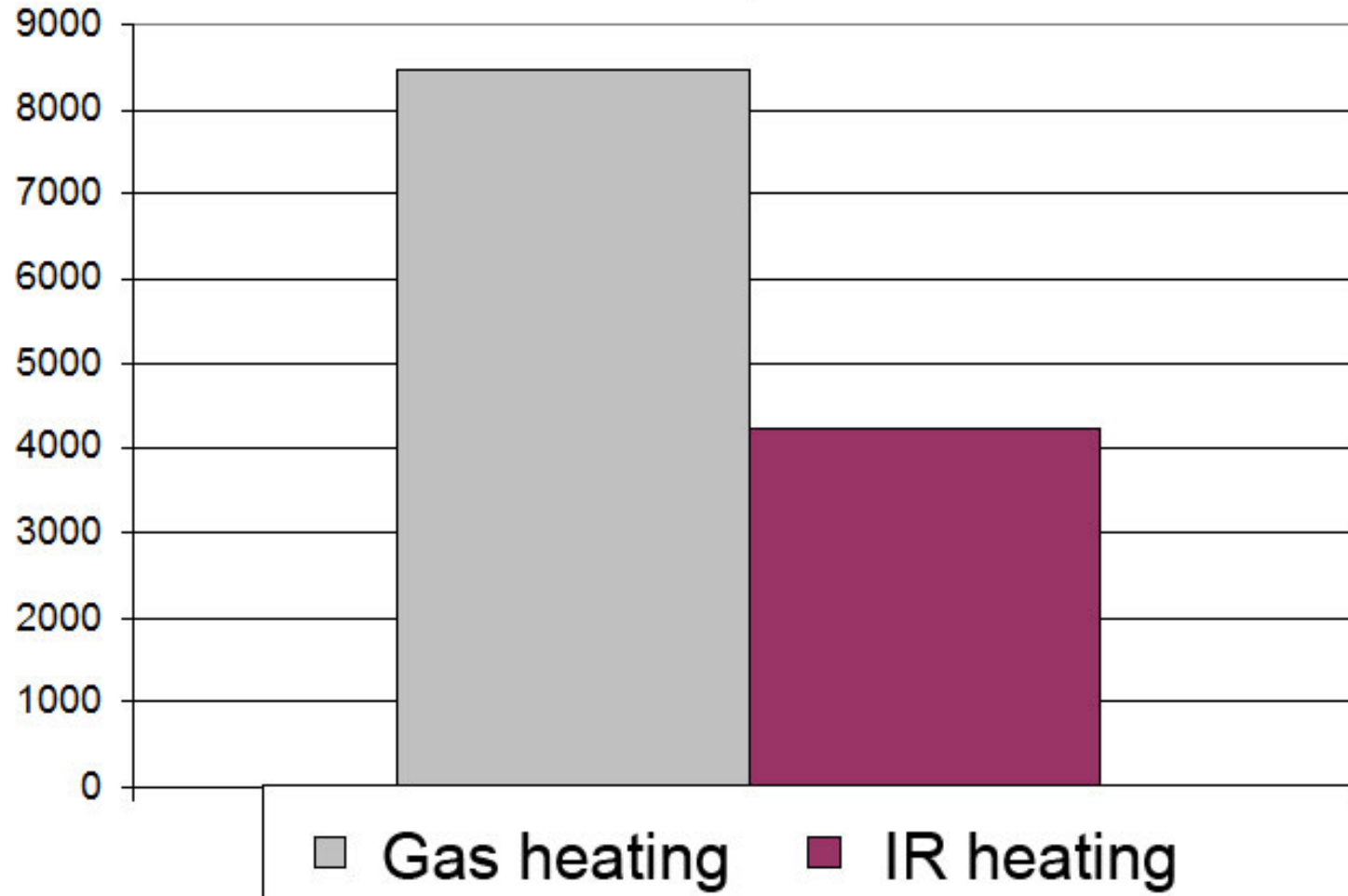
Chris, 10/26/2012

Infrared Heating

- Low investment costs
- Low operating costs
- Maintenance-free
- Useful as an architectural element
- Modern heating
- Healthy heating
- Space-saving

Investment costs

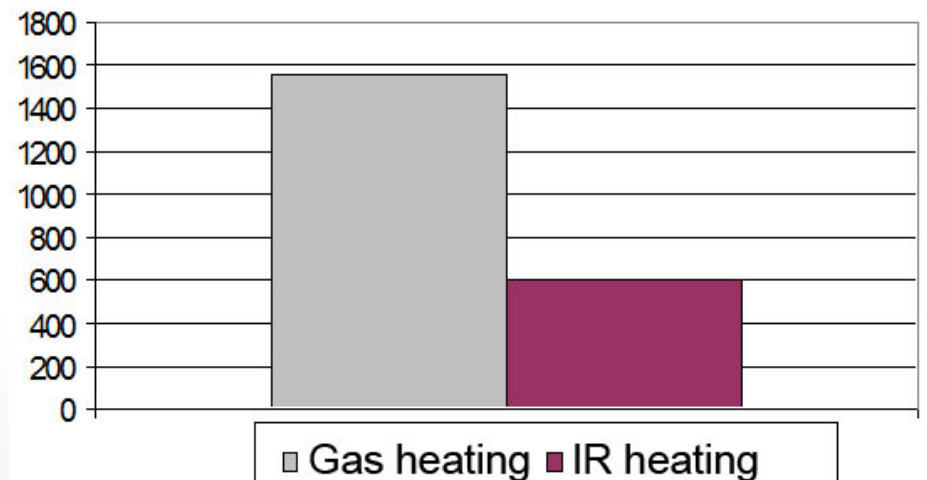
Investment comparison in EUR



Low operating costs

- Indirect air heating
- Option to control each room individually
- Slightly lower temperature requirement
- Uniform radiant heat
- 40% cheaper than gas heating

Comparison of operating costs per year



No maintenance costs

- No Chimney cleaning
- No Chimney inspection
- No Boiler pressure test
- No Radiator venting

Design and modern heating

- Classic radiator
 - Difficult to clean
 - System maintenance required
 - Loses space
- FIRST Heating
 - 130 variants
 - Standard glass
 - RAL glass
 - Mirrors, pictures



Space Saving

Radiators & pipes in a 100m² living area can occupy

8 m²

of space

IR panels in a 100 m² living area occupy

0 m²

of space

Healthy heating

Convective heat

- Dries out air
- Overheats air
- Circulates dust
- Burns oxygen

IR heating

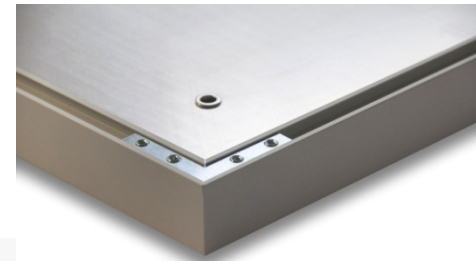
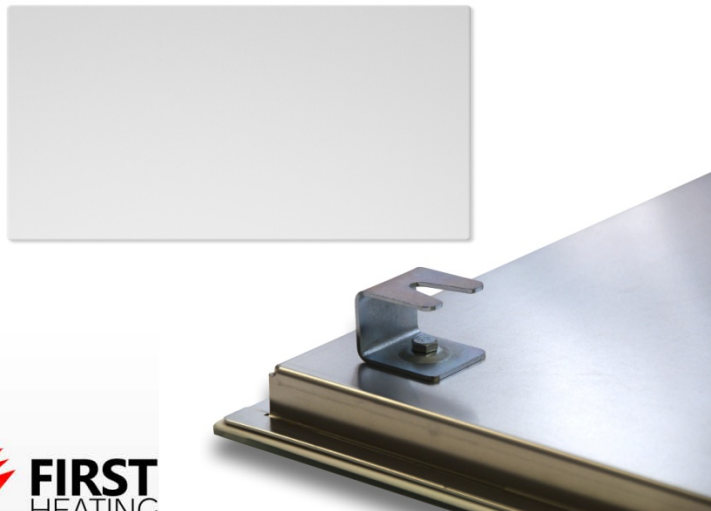
- Helps allergy sufferers
- Relaxes muscles
- Better metabolism
- Detoxifying effects
- Benefits circulation
- Eases chronic inflammatory conditions

Installations and their advantages

- 80% of installations done in family homes
- Average size of occupied space 120m²
- Vast majority of installations on ceilings
 - More space for occupant use within the home
- 2° C temperature difference between floor/ceiling
 - Convection and air flow/rotation suppressed

FIRST Heating models

- 2 basic product lines:
 - **WIST FIRST** Heating panels
 - Framed version
 - **WIST Elegant** FIRST Heating Panels
 - Frameless version
- 60x30cm, 60x60cm, 60x90cm, 60x120cm, 60x150cm



WIST and WIST Elegant

- Controlled electronically via the WIST
- WIST – Wireless Intelligent Saving Thermostat
- ON/OFF switch
- Power cable be detached from panel
- Silicon heating foil “Heatmat”
- Very efficient insulation “BASF”
- Various colors of frames and glass, Mirrors
- Panel mounting system
 - Free-standing panel placement with new support rack

ON/OFF switch and larger LED



Socket to detach or connect power cable



Bracketing system/method



Easy to attach or remove from floor stand



FIRST infrared heating panels with WIST

- Simple, fast, cheap installation
- The thermostat can be positioned almost anywhere
- Possibility to control up to 10 panels in one area
- Integrated electronics in the panel for highly accurate, safe control



The advantages of WIST FIRST Heating

- The electronic components are protected by 3 thermal fuses
- The WIST is the smallest programmable, wireless thermostat available on the market
- The WIST has a large, backlight LCD display
- Intuitive control
- Wide selection of useful features in the WIST

Overview of the WIST's advantages

- Large display with on/off backlighting
- Individual daily programming (7+0) or weekdays/weekends (5+2)
- Holiday (away) scheduling or “home” mode
- Optimal start function



Overview of the WIST's advantages

- Function turn off (standby) for thermostat & panel
- Keypad lock function
- Celsius or Fahrenheit scale
- Precise temperature calibration for specific environment/location



Framed heaters (“FRAME WIST”):

- Ceiling or wall installation
- Aluminum frame clamps the appliance together.
- Radio receiver for thermostat at back of panel
- Max. surface temp 125° C
- Black polished glass surface with black frame
- White polished glass surface with white frame
- Mirrors with silver frame

FRAME WIST example:



Black/white/silver frames:



Frameless Heaters (“WIST ELEGANT”)

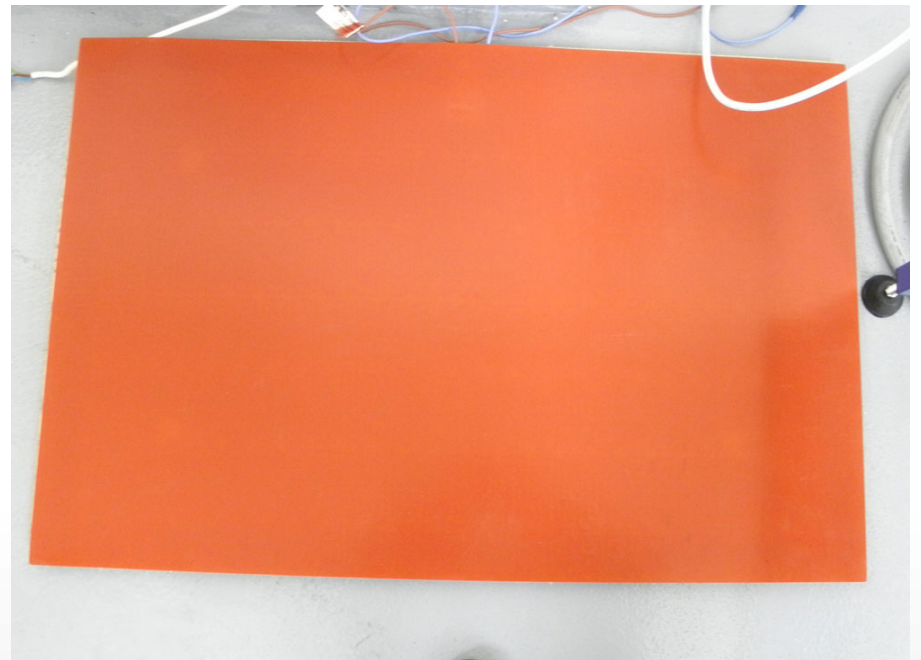
- Ceiling or wall installation
- Smooth-edged glass heat surface/ concealed casing
- Radio receiver for thermostat at back of panel
- Max. surface temp 125° C
- Black polished glass surface
- White polished glass surface
- Mirrors

WIST ELEGANT EXAMPLES:



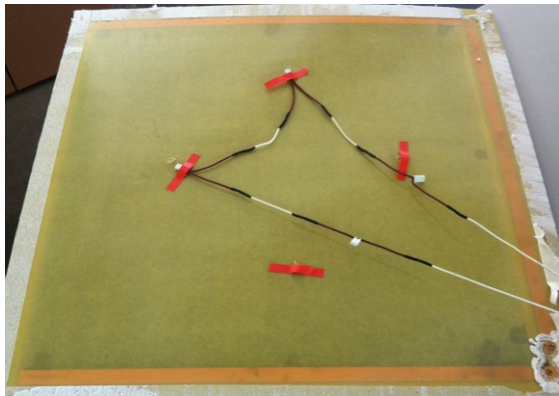
Silicone-rubber heat mat

- Made in Germany
- 30-year lifetime
- Even temperature distribution
- Critical-component applications (aerospace, medical eqpt., telecom stations...)



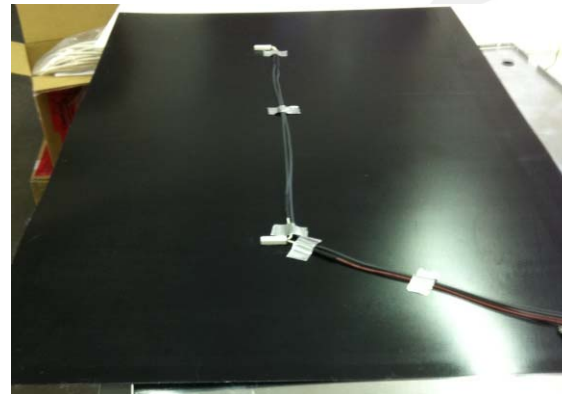
Infrared-heater competitors

Many competitors use cheap, low-quality elements



Carbon-heater with polyester

- Max. temp. 85 ° C
- Lower lifetime of material
- System permanently operates at the maximum
- Surface contact is insufficient because the heater is inflexible

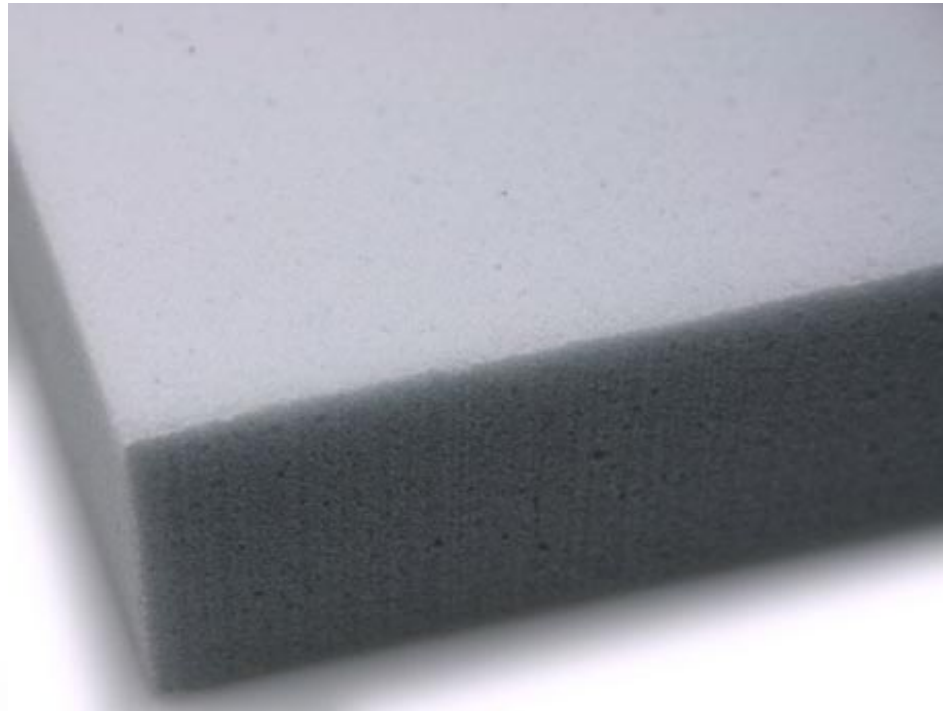


Carbon-heater

- Max. temp. 95 ° C
- Lower lifetime of material
- System permanently operates at the maximum
- Surface contact is insufficient because the heater is inflexible

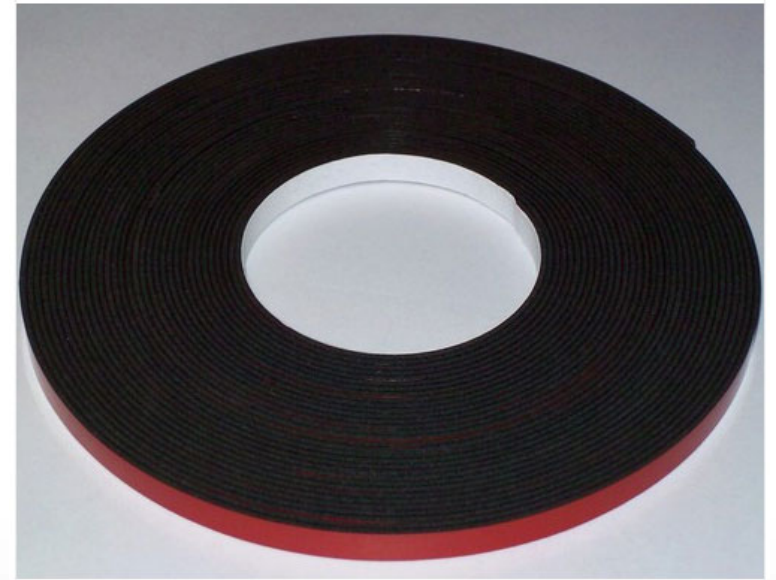
Insulation

- Basotect-G (produced by BASF)
- Made in Germany
- Used in the auto industry



3M VHB tape

- Extremely high bonding strength
- High-temperature durability
- Youtube video:
http://www.youtube.com/watch?v=S_fm5cqSODc



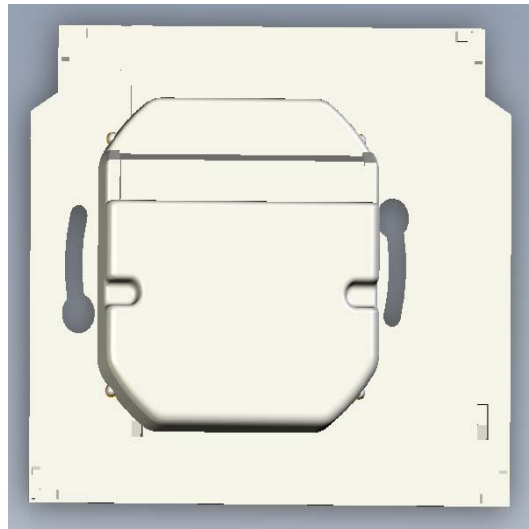
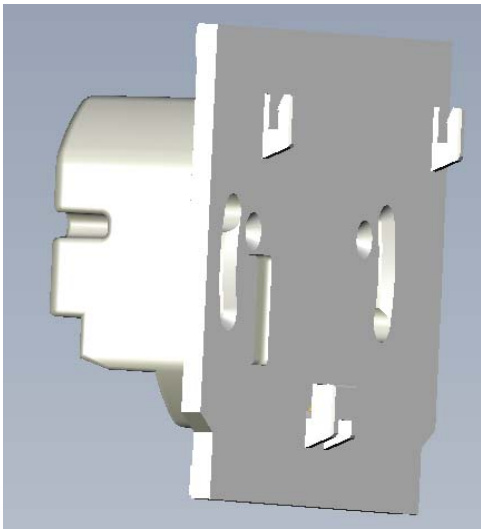
Production / Testing:

- Every panel and thermostat are tested / documented for correct function after assembly and before final packaging. The panel/thermostat are pre-assigned to each other for “out of the box”, convenient consumer use.



230V thermostat

- Possibility to connect the WIST to a 230V power source
- A WIST connected to the power source can control/switch IR panels up to 16A!



Installation tips:

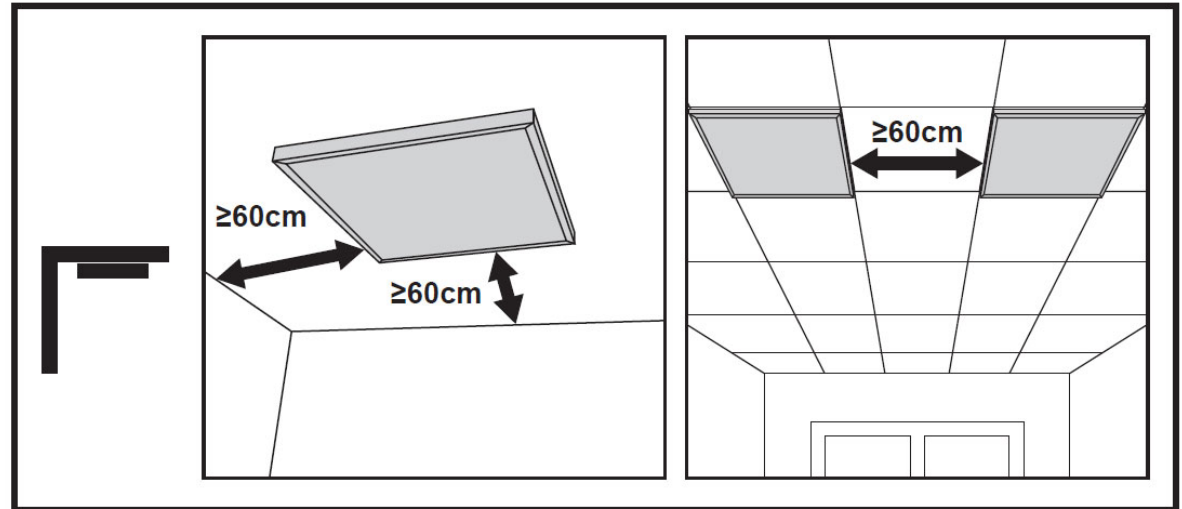
- Use date/time programs with the “optimal start” option
- If wall-installed, do not face the heater toward windows or external walls, but into the dwelling. Should be at a height for best “view” of room.
- Place thermostat on an inner wall in view of the heater.
- Ceiling always best; distributed/ spaced similar as light sources.

Safety:

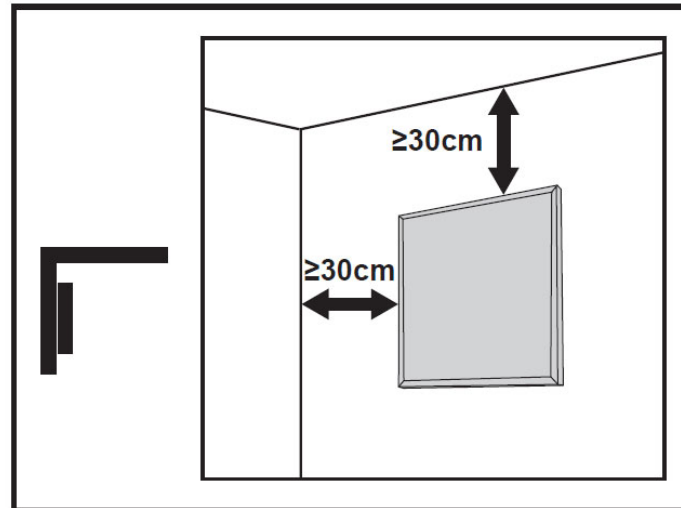
- Never cover the appliance.
- Install only at Zone 3 in bathrooms/ other rooms having water sources.
- Do not cover the electrical socket with the heater.
- Check for wires/ pipes before drilling.
- More on page 11 of manual.

Best placement:

MINIMUM CEILING DISTANCES:

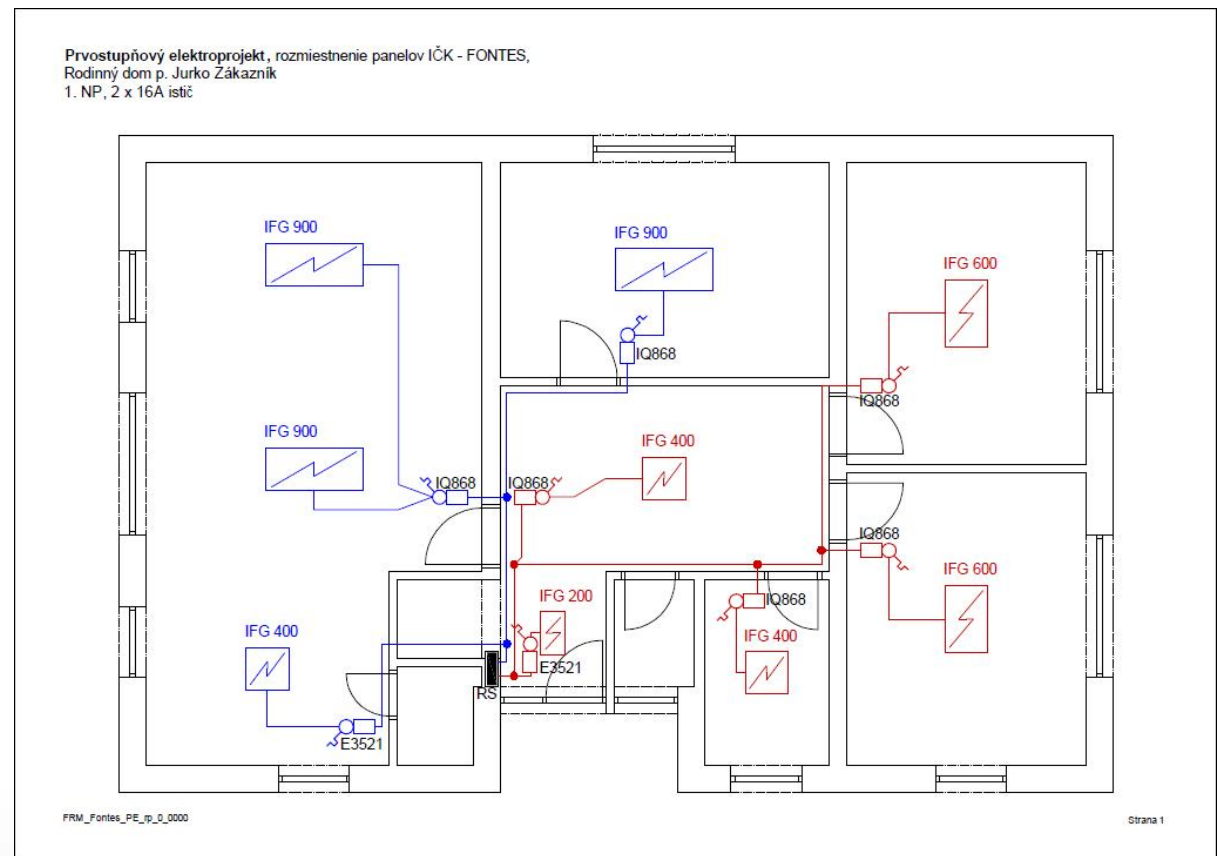


MINIMUM WALL DISTANCES:



Installation:

- Phase 1
 - Spatial distribution and orientation of the individual heaters
- Phase 2
 - Additional electrical requirements for the installation of the heating project



Installation

- Each element installs fast



Annual operating costs, ex.1

- Location: Liberec, Czech Rep.
- 152,55 m² home / 2 floors.
- Based on the projection, annual consumption was calculated to be 8864 kWh/year
- Use of the equipment for two heating seasons yielded consumption that was 7565 kWh for the first year and 8084 kWh for the second. (2011/2012).
- m² consumption 50kWh / 53kWh

Annual operating costs, ex.2

- Family home, 170.34 m² occupied space.
Material/insulation: Perimeter wall: Ytong 375 mm+100 mm mineral wool
Floor: 140mm extruded polystyrene Ceiling: 300mm mineral wool
- Heaters put into operation: 15.10.2010
- Date of meter reading: 6.9.2012.
- Value: 15 168 kWh / 7584kWh per year
- Total power installed: 8 kW
- Heating seasons tested: 2
- m² consumption average 44.5kWh

Conclusion

- We will provide you with maximum support
- We need your ambition and passion
- We gladly look forward to working with you!

Videos:

<http://www.firstheating.com/o-spolecnosti>

<https://www.youtube.com/watch?v=lv9cl6Mm89s>