

Cool Wall Technology
Uniquely Engineered and Developed by Ortal

ORTAL the ONLY fireplace manufacturer that helps maintain a cold wall for the designed installations around your firebox.

ORTAL engineers designed a technique that reduces the heat from the glass and the firebox and prevents excessive heat buildup. ORTAL is the only company in the fireplace market that keeps the walls above your fireplace cool, thereby avoiding any damages that may arise from high heat temperatures. ORTAL's cool wall system, provides option of installing TV or other similar electronics components above the fireplace as well as using other finish materials that a hot wall surface would prohibit.

ORTAL wall temperatures:

	Competitors	ORTAL HEATING SOLUTIONS
Wall temperature (0-6" above the firebox)	280° - 380°	160° - 210°
Wall temperature (6"-12" above firebox)	240° - 320°	160° - ↓
Recommended minimum clearance between bottom edge of TV or other similar device and top of firebox opening is 12"		
Wall temperature (12" above the firebox)	180° - 300°	90°

An ORTAL architect's client followed his client's directive to save some \$ and changed the plans from an ORTAL fireplace to a cheaper, similar fireplace. The client still wanted to keep his dream and include a TV as part of the wall installation above the fireplace. The architect and the fireplace dealer got the following reply the other fireplace manufacturer:

*"20 inches above [the firebox], the temperatures [on the wall] can reach as high as 300 degrees F." ..
.. fireplace manufacturer*

ORTAL's competitors have firebox surrounding wall temperatures ranging from 180° - 380°.

At these high temperatures the following conditions may occur:

1. Distortion of the wall surface
2. Paint on the finished wall will peel or change color
3. Tiles will fall off the wall and the glue will no longer hold above 240°.
4. Wood paneling will pucker, bend and/or splinter
5. Marble may begin to crack.
6. Electrical components will not be compliant

Basic information for max temp allowed for different materials used around the firebox opening

Material	Temperature where it becomes impacted by heat	Damage
Marble	280° (Estimate, there is a lot of variety. Ask your supplier.)	Marble will crack
Tile/Glue	240° (From a sampling of MSDS of a variety of products)	Tiles may fall off the wall as glue will no longer hold them
Paint	170° (From a sampling of MSDS of a variety of products)	Paint will peel or change colors
Wood	Depends on dryness/moisture content	Warp, bows, dries, cracks, burn/fire hazard

Q. How do most manufactures choose to address this concern of hot walls?

1. Avoiding it.

- a. Some think that if they ignore it, the customer will agree that it is not important.
 - i. ORTAL recognizes that modern design demands sophistication, efficiency and vision. Often fireplaces are part of the great room, where the family comes together to socializes, play games, watch TV and relax in front of the fire. The family gathers to do all of this in one room. Similarly, a hotel or restaurant/bar may want to have the TV on during the day showing news and sports with the fireplace on in the evening for the guests to relax. This can all be accomplished in one luxurious setting.
- b. Avoiding it means the heat continues to build up within the walls. This is not a solution.
 - i. ORTAL's technology reduces the heat and gives dealers, architects, builders, designers and owners options.
- c. Avoiding it means that installers may likely waste time sending their installations crew back and forth from the job site to fix a problem that cannot actually be fixed because it is inherent to the product. The client complains about the walls being hot, but hot walls are apparent by design.
 - i. When the fireplace installation is compliant, an ORTAL fireplace is surrounded by cool walls the first time every time. The client isn't complaining and additional trips to address hot walls are not requested or required.

2. Adding a fan.
 - a. Adding a fan can help distribute and move the heat from the walls. However, fireplaces are meant to provide a relaxing ambiance. A fan requires more power, an additional outlet near the fireplace and may result in a dull noise in the background whenever the fan is operating.
 - i. ORTAL does NOT require the use of a fan to keep the walls cool.

ORTAL's Cool Wall Solutions

ORTAL's system allows for the wall to breathe releasing the excess heat from the chase to maintain a lower heat temperature from a high point of 210° to 90° and becoming lower and colder as you move up the finished wall of the fireplace.

Advantages of an ORTAL fireplace:

- Placing TV and other similar devices above the firebox without worry of the TV screen cracking or electrical components burning out.
- Hang artwork without fear of heat impact.
- Use finish materials such as tiles, Venetian plaster paint and regular paint (not high temp) without worry
- Use wood as a decorative finish material (see ORTAL's clearance requirements).
- **A safe wall temperature under 160° at 6" and above the firebox.**
- Save on installation costs. Once you install the fireplace correctly the first time, there is no need to return for an overheating problem.
- ORTAL provides a mounting detail for installation of the TV above the firebox.
- A fan is NOT required to remove heat from walls.

ORTAL provides you with options and solutions that allow you to maintain control and creativity for your fireplace design.

Note:

Make sure to review and understand all of ORTAL's installation manuals, details and clearances before installation. Also be sure to consult the product guides and manuals for whatever products or devices will be used as part of the installation to ensure compliant installation for all products.

If you have any questions, please contact us and our technical department will be happy to assist you fast and free of charge.