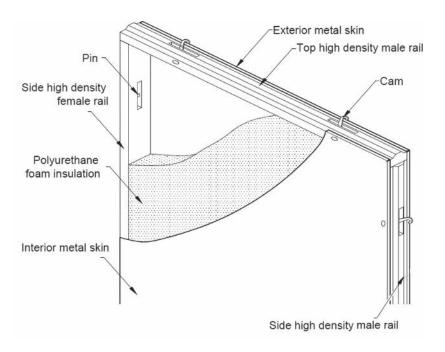


TMB Baking Retarder-Proofers

THE HEART OF ARTISAN BAKERIES™

A retarder-proofer system is designed for the purpose of controlling fermentation in your bakery. TMB Baking R-P systems can be configured to accommodate anything from one single rack to hundreds of double racks or every option in-between. Whether retarding (slowing down) or proofing (speeding up) fermentation, the TMB Baking system is designed to serve the baker's needs.

Retarder-Proofer Design– As with all discussion with bakers, we start by understanding their dough processing needs and any physical space constraints that may impact their objectives. From there, we recommend a solution and a layout is developed with a foot-print of your "box". We work hand-in-glove with Imperial-Brown manufacturing of Portland, Oregon to design an enclosure that will work best for you. These 3 ½" insulted cam-lock stainless steel wall and ceiling panels, with reinforced, diamond-plate base doors provide a perfect environment to condition your dough. These units require a solid, non-water permeable (epoxy coated concrete or tile is most common), and level floor for optimal performance.



Wall & Ceiling Panel Construction



Air & Dough 'Conditioning'– TMB Baking technicians specify the right quantity of our custom design air diffuser

equipment (stainless steel reverse evaporators) inside the box (or boxes) to 'condition' the air to meet your objectives.

Diffusers always include:

• 2 low velocity, energy efficient, corrosion proof fans for circulating air through the chamber, either pulling cool air up for retarding or pushing warm, humid air down for retarding

Then we provide two options:

FOR RETARDING

Baked epoxy-coated refrigeration coil to achieve efficient cooling

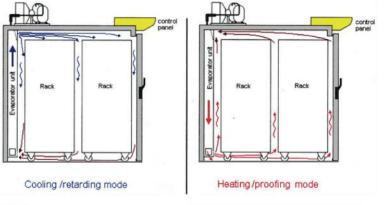
FOR PROOFING

- Heating element to achieve optimal proofing temperature
- Humidity element, always submersed in water to achieve optimal humidity level for proofing

A combination retarder-proofer includes all of the above equipment inside the box. For retarding, one or more condensing units are also specified, which can either be located on top of the box or remotely (on top of bakery, outside at ground level, etc.), with appropriate weather and temperature protection.

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Retarder Proofer Air Circulation System



Cold air

Blown on the top of the box Cold air goes down

Warm air

Directed through the evaporator unit to generate moisture in the proofer-retarder Blown toward the bottom of the box Warm air always goes up

Moisture

In this system, moisture is generated only when the proofer retarder is in proofing mode

Possibility of a slow rise process to get a system generated humidity even at temperature set to $50^\circ {\rm F}$

An easy-to use PLC touch screen

TMB Baking's custom, touchscreen managed retarder proofer controls are the brain of the unit. These are located above the door of the unit in order to protect them from racks or other equipment moving through the bakery. The control allows for both automatic and manual mode to determine temperature and humidity settings. In the automatic mode, preset programming allows the baker to store common retarder-proofer settings, for retarding/proofing on a 7-day calendar/clock for the baker's complete flexibility. Our retarder proofers are a baker's sleep machine, allowing dough to be ready for baking when they are.

| | Reta | rd Temp | | Proof Temp | |
|-----|--------|------------|-------|------------|------|
| | Actual | Set | | Actual | Get. |
| | 69 | 45 | F | 69 | 90 F |
| | Proof | Start time | | Humidity | |
| | Hou | rs Minu | ters. | Actual | Set |
| int | 0 | :00 | | 68% | 60% |

| | al Mode r Auto Mode | WED | WEDNESDAY | | |
|------------------|------------------------|------------------|-----------|--|--|
| | | Proc | Proofing. | | |
| | | Actual | Set | | |
| Tempe | erature | 69 | 69 90 | | |
| | | Hum | Humidity | | |
| Hur | midity | 67% | 60% | | |
| Retard Screen | Ptoof | Maint. Screen | | | |

PLC Touch Screen

TMB Baking Retarder-Proofers require the following utilities:

ELECTRICAL*

- 208-220V/60HZ/1 or 3-ph, neutral & ground (depending on condensing unit used) or
- 480V units are available at a higher cost, but are more energy efficient in the long-run
- Separate connection for light 120v, neutral & ground.
- Amperage based on each equipment configuration
- Water (tap) $\frac{1}{4}'' \frac{1}{2}''$ incoming. $\frac{1}{2}'' \frac{3}{4}''$ condensate.
- Floor drain or floor trench for condensate

REFRIGERATION*

- Refrigeration line connections between diffusers and condensing unit(s)
- * All electrical, plumbing & refrigeration connections should be made according to local codes by licensed contractors. TMB Baking is not licensed to provide these services and they are the customer's responsibility.

Approvals and Assurances

TMB Baking Retarder-Proofers have all of the certifications and approvals required by state, county and city organizations. The box is NSF approved and our controls are both ETL and BISSC certified. Units come with a 90-day warranty on labor and a full-year on parts. TMB always purchases the extra 4-year warranty on condensing units, as well, to give you full 5-years of protection on these units. Furthermore, on larger units we prefer to specify multiple condensing units in order to provide at least limited operation should one condensing unit go down. TMB Baking caries a supply of all of the parts required for your unit, with all electronics being US-manufactured.

References

TMB Baking has installed hundreds of retarder proofers across the US and Canada and in some other international locations, including Australia and South Korea. Please ask us for a reference near you.