

Only 42 seconds

THE FIRST AASTED DFT PIZZA OVEN FITTED WITH STONE SLABS AND INFRA-RED TECHNOLOGY HAS BEEN OPERATING IN GREAT BRITAIN FOR A FEW MONTHS. THIS SHORTENS THE PRE-BAKING TIME FOR ITALIAN STYLE PIZZA SEVERELY



++ figure 1

++ figure 1
The oven outlet

++ figure 2
Transfer conveyor

++ figure 3
The Conny stone plate pizza oven

+ Conny is the name of the oven series to which this pizza oven belongs. However this is the first time the 28 m long oven has been fitted with a stone belt, and the distinctiveness already starts here. To optimize reduction in energy consumption the oven belt runs back inside the oven, thus minimising heat loss. In addition another controlled heating takes place before re-entry and reloading, so all the pizzas encounter a belt at the same high temperature, which yields a unique crust. The oven width is 1,250 mm. The stone plates run side by side in a stainless steel holder. Stones are also installed on request to bake especially small format products. The stone belt conveyor is designed in such a way that stones can be easily changed if required.

The surface of each stone is slightly higher in the centre. This shape ensures that the surface is somewhat larger compared to flat stones, and there is no danger that impressions of the

holders will remain in the pizza base after baking.

The stone holders are supported by heavy chains which are in turn moved through the oven on bearings. The bearings themselves are resistant to high temperatures, so according to Aasted ApS from Farum, Denmark, they can remain on duty for years without needing replacement. The ball bearings run on a steel angle bracket mounted inside the oven, which guarantees less friction and quiet, reliable running. An additional protective metal plate mounted above them protects the ball bearings and their track from contamination.

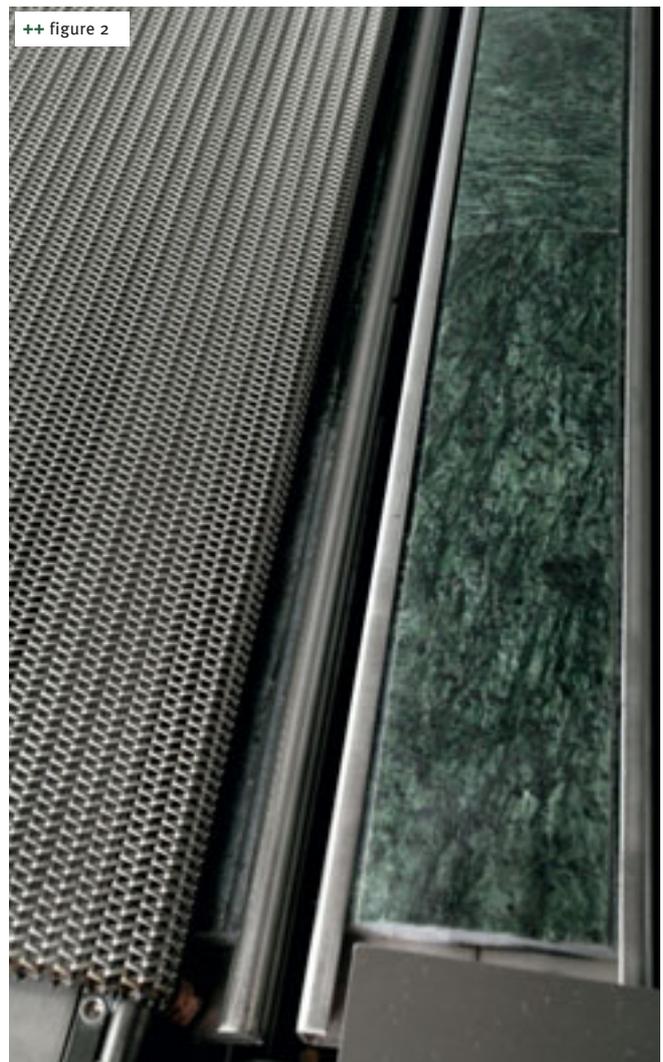
The belt runs over large drums at the front and back, and is pulled by sprockets. Whereas the drum at the end of the baking process is on a fixed mounting, the drum at the oven entry can move so as to guarantee optimum belt tension all the time. The drive is located on the outfeed drum axle.

The oven is heated electrically using special designed elements above the belt. “STIR” (= Selective Transformed Infra-Red, an IBT trademark). The elements are generated using emitters (radiators) made of high-strength support material with functional ceramics on their radiation-emitting surfaces. The particular type of functional ceramic, the emitter shape, emitter temperature and primary energy type are governed by their respective intended purpose. At particular temperatures this coating generates the specific selective transformed infra-red which is an optimum match to the absorption spectra of the product being baked. Consequently the heat penetration and thus the baking process are speeded up. In the new Aasted stone oven this reduces the pre-baking of a 25 or 27 cm pizza.

There are conventional electrical heaters under the belt, and a third heating zone pre-heats the returning belt to the required temperature. All three heaters are separately controlled. The advantage of electrical heating is rapid heat availability and dryer air in the baking chamber compared to heating with gas.

Aasted has combined both the upper and the lower heating elements to form modules. The oven’s total connected load is about 1300 kW. This comparatively high value is based not on the average consumption but on the desire to reach the required temperature quickly even with a cold Monday morning start.

Aasted’s Sales Manager Jacob Jacobson says that apart from this the oven uses less energy than conventional ovens. The heat is controlled by a PLC (programmable logic controller) separately in zones to the upper and lower heaters – there are four zones here. A fixed allocation of control parameters to recipes ensures that no oven-related quality fluctuations occur. The cover panels are easy removable for maintenance or to change the heating elements, thus giving immediate access to the upper heating elements, while the lower ones are accessible by opening big maintenance doors located along the entire line.



As standard, the entire oven rests on legs 450 mm high, allowing cleaning underneath it as well. The leg length is variable if necessary. A scraper pulled through the oven on a belt over the whole width of the oven ensures that crumbs or pieces that have fallen down are swept out regularly. +++

