

designed the prototype. After preliminary testing, ABCO, a major fish-processing equipment manufacturer, became involved. By 1978, ABCO had developed and successfully tested an industrial prototype in a food processing plant. The system was introduced in 1980, and has since won awards in Canada and abroad for its innovative design.

Conventional blanchers use hot water or pressurized steam to heat food until its centre reaches a certain temperature. Energy costs rise with the length of time required to achieve that temperature. ABCO blanchers reduce that time by using a unique, two-part process.

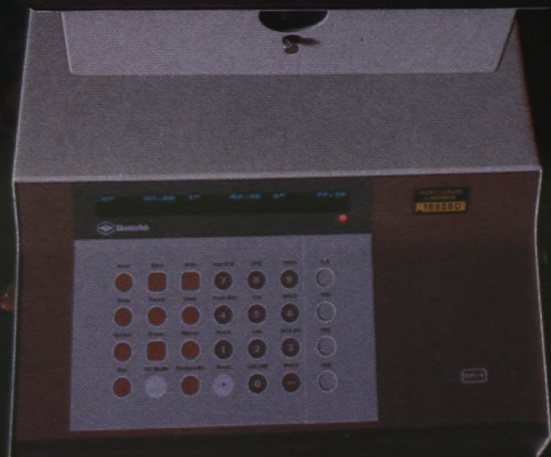
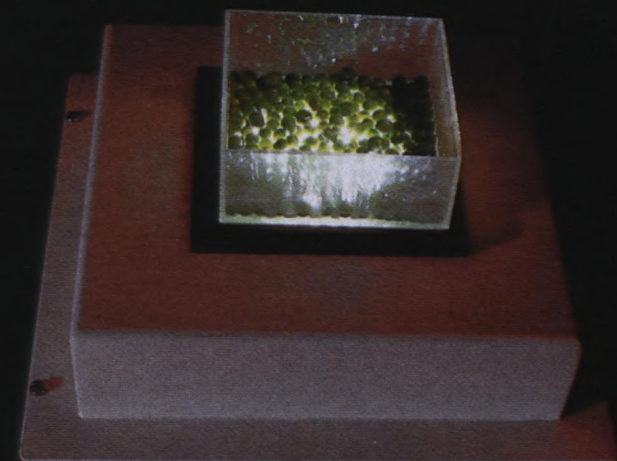
"Most other systems use overkill," ABCO marketing manager Alec Gingell explains. "They keep the temperature up until the core of a vegetable is sufficiently heated, but as a result the surface ends up overcooked."

The ABCO system avoids such "overkill" by first applying a short burst of steam to a single layer of food in the blancher's heating section. Specially designed valves and seals min-

imize heat loss, and direct all steam energy to this section. Peas, for example, are subjected to heat for only 35 seconds, compared to up to 120 seconds in conventional blanchers.

After heating, the food moves to the blancher's fully insulated holding section, where it is heaped in buckets with heat-reflective sides. The food is kept in the bucket until the heat is conducted from the food's exterior to its centre. Peas, again, require just 55 seconds in the holding section to reach the desired internal temperature.

In addition to saving energy, the system offers improved quality by increasing the amount of nutrients and vitamins retained in foods. Broccoli, for example, retains 52 per cent more vitamin C than if it were blanched by a conventional system. Other laboratory tests have shown better colour retention, with french fries coming out golden instead of with a grey tinge. And the results of taste tests have verified that the flavour of a wide variety of fruits and vegetables is enhanced.



The natural colour retention of a product blanched in ABCO K-Series blanchers has been measured by instrumentation. The enhanced appearance of the ABCO product is noticeable even when visually compared with a product processed by conventional blanchers. The ABCO product also retains a higher nutrient value.