



SILVERLINE

BY HYDRO-THERMAL CORPORATION



Infuze Cooker
heart of the
SilverLine

“Simplicity is the key to good design”

THE INFUZE COOKER

What No One Knew

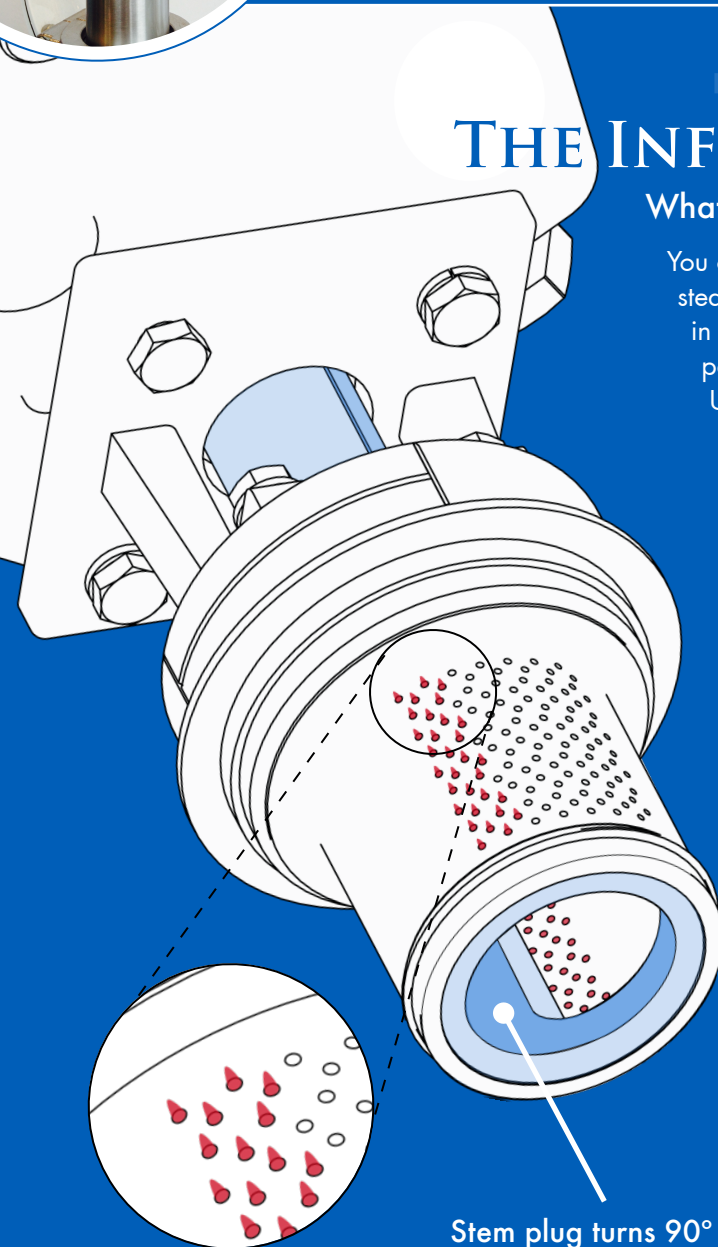
You can't put a camera into a steam chamber, so nobody understood how steam cooking really worked. That is until Hydro-Thermal invested heavily in both time and money to research this innovative cooking and pasteurizing technique. Through a 5-year study in conjunction with the University of Wisconsin, we discovered that everything we thought we knew - was wrong.

What We Discovered

There is a way to reliably control the condensation of steam, which if unchecked will cause steam hammer and the wild vibrations that are seen in other steam injection devices. We also found that it is possible to hold temperature within $\pm 0.5^{\circ}\text{C}$ ($\pm 1^{\circ}\text{F}$), even through flow and pressure changes. Finally, we discovered the secret to repeatably controlling the shear forces that are imparted on the product.

What We Built

You need only look into the heart of the SilverLine to see it's genius. It may look simple, but thousands of research, engineering and testing hours have been alloyed to form the most versatile steam cooker in the world. Forged into the Infuze™ Cooker is variable shear capability, tight temperature control, versatile response to changes, and the high quality inherent in all Hydro-Thermal products.



Stem plug turns 90° to
change nozzle area



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TECHNICAL DETAILS

Available Diffuser Patterns

Model	Size	XS		S		M		L		XL	
		Area	Holes	Area	Holes	Area	Holes	Area	Holes	Area	Holes
Z115	DN40	2.9	36	5.8	72	11.7	144	17.5	216	23.3	288
	1.5"	0.05		0.09		0.18		0.27		0.36	
Z120	DN50	4.9	60	9.7	120	19.5	240	29.2	360	38.9	480
	2"	0.08		0.15		0.30		0.45		0.60	
Z130	DN80	8.3	102	16.5	204	33.1	408	49.6	612	66.0	814
	3"	0.13		0.26		0.51		0.77		1.03	
Z140	DN100	12.2	150	24.3	300	48.6	600	73.0	900	97.1	1198
	4"	0.19		0.38		0.76		1.13		1.51	

Options

Metals	Connectors
316L	Tri-clover
317L	
AL6XN	DIN 11851
Hastelloy	

Model Specifications

Maximum (per cooker)	DN40	DN50	DN80	DN100	
PARTICLE SIZE (SPHERICAL DIAMETER)	13.0	16.3	22.9	33.5	mm
	0.51	0.64	0.90	1.32	in
TEMPERATURE RISE (NO PARTICLES)		50°C	88°F		
TEMPERATURE RISE (UP TO 25%)		35°C	63°F		
TEMPERATURE RISE (25% TO 50%)		25°C	45°F		

Products with or without particles enter cooker

Theory of Operation

The Infuze Cooker creates such tight temperature control by modulating the area of steam penetration, which results in:

- Very fast temperature compensation after process changes
- Decoupling temperature control from pressure control
- Unprecedented regulation of flavor and texture profiles

Steam enters cooker at 6.8 barg (100 psig)

