



PILOT PLANT CAPABILITIES

OVERVIEW

Packaging:	Aseptic BIB (1-2L), Clean-Fill Sterile Bottles (250, 500mL), Customer must supply packaging
Minimum Batch Size:	<ul style="list-style-type: none">Estimated minimum batch size is 5-20 gallons depending on the process required.DSI requires more product than indirect. <p>Actual minimums will be calculated for each project after the project scope has been established.</p>
Fully automated and computer controlled for consistent processing.	
Data logging available upon request.	
Steam sterilization (SIP) with all points verified by the system as sterile prior to processing.	
Multiple redundancies with the system flagging and alarming any non-sterile conditions during aseptic processing.	
60 L/hr processing speed.	

HTST INDIRECT PROCESSING

Common Uses: acidified beverages, functional beverages, low protein content, and hot-fill products. Some syrups, sauces, dressings and fruit preps with a viscosity less than 2500cps. No hard particles larger than 1mm (about 0.04 in) or soft particles larger than 3mm (about 0.12 in).

Processing:

- Tube-in-tube heat exchangers simulating large scale production
- Multiple hold times available as well as multiple heating and cooling curves



flavorchem[®]

(800) 4 - FLAVOR
www.flavorchem.com

Headquarters

Downers Grove, IL 60515
p (630) 932 - 8100
f (630) 932 - 4626

West (USA)

San Clemente, CA 92672
p (949) 369 - 7900

Europe

H-2144 Kerepes, Hungary
p + 36 28 509 105



Filling:

- Hot-fill option with sanitary clean-fill hood
- Sanitary cold-fill with glycol chilling available (NOT commercially sterile)
- Upstream and downstream homogenization available

UHT INDIRECT PROCESSING

Common Uses: Beverages - Low acid beverages and syrups, higher viscosity protein beverages

Processing:

- Tube-in-tube heat exchangers simulating large scale processing
- Multiple hold times available as well as multiple heating and cooling curves

Filling:

- Cold-fill with sanitary clean-fill hood (NOT commercially sterile, refrigeration required)
- Bag filling available, fully aseptic: 3 liter bags
- Upstream and downstream homogenization available

UHT DIRECT HEATING

Common Uses: Beverage; dairy, plant-based, and high protein content products with a viscosity less than 1500cps. Some lower viscosity sauces and dressings may be applicable as long as they contain no hard or soft particles.

Processing:

- Culinary grade steam used to quickly heat the product before immediately being cooled with vacuum recovery.
- Specialty injectors for high protein, plant-based, and viscous products
- Downstream homogenization only



flavorchem[®]

(800) 4 - FLAVOR
www.flavorchem.com

Headquarters

Downers Grove, IL 60515
p (630) 932 - 8100
f (630) 932 - 4626

West (USA)

San Clemente, CA 92672
p (949) 369 - 7900

Europe

H-2144 Kerepes, Hungary
p + 36 28 509 105



Filling:

- Same filling options as UHT Indirect

ADDITIONAL EQUIPMENT

- USE FOR beverages, sauces and dressings with no hard or soft particles.
- High pressure/velocity dedicated CIP circuit
- Aseptic 3 piston homogenizer
- Insulated hold tubes at 6 and 9 seconds and an insulated hold box with 30sec – 2min hold times, adjustable
- 5 ton glycol chiller for rapidly cooling product post-process, also allows for flexibility in cooling curves
- 30 gal blending tank with integrated agitator/mixer
- 5hp Dry-blender (tri-blender) with shearing capabilities
- Plate and frame heat exchanger for chilling with glycol
- Floor scale for batch weighing
- PD pumps for recirculation

FILLERS

- **Clean Fill Hood:**
 - ✓ Can fill plastic bottles in a clean environment with HEPA filtration and the ability to flush the headspace with sterile nitrogen to prevent oxidation. 250mL and 500mL sterile bottles available. Customer may supply their own containers as long as they are plastic.
- **Aseptic Bag Filler:**
 - ✓ Fully aseptic filling of Scholle bags. 16mm IPN Scholle bags can be aseptically filled from 0.5L to 3L. Product is commercially sterile when used. Customer can supply bags as long as they have a 16mm IPN fitment.



(800) 4 - FLAVOR
www.flavorchem.com

Headquarters

Downers Grove, IL 60515
p (630) 932 - 8100
f (630) 932 - 4626

West (USA)

San Clemente, CA 92672
p (949) 369 - 7900

Europe

H-2144 Kerepes, Hungary
p + 36 28 509 105



INSTRUMENTATION

- Balances
- Refractometer
- Densitometer
- pH meter / auto-titrator
- Turbidity meter
- RTD Temperature probes
- ATP detector

UTILITIES

- Tap, soft, DI water
- Compressed air, 110 psi
- Nitrogen
- 110v 1-phase and 208v 3-phase power (20 and 40 amp)
- Steam/Glycol

FUTURE EQUIPMENT

- Automated canning line (multiple can sizes available) Late 2023 – early 2024
- Spray pasteurizer (tunnel pasteurization) Mid – Late 2023
- 50 gal heating tank
- 50 gal cooling tank
- 6 gal steam jacketed kettle
- Steam fed heat exchanger



(800) 4 - FLAVOR
www.flavorchem.com

Headquarters

Downers Grove, IL 60515
p (630) 932 - 8100
f (630) 932 - 4626

West (USA)

San Clemente, CA 92672
p (949) 369 - 7900

Europe

H-2144 Kerepes, Hungary
p + 36 28 509 105