



Puretech™  
delivering purity

# WFI DISTILLATION & PURE STEAM GENERATION

For Pharmaceutical Applications

## The ultimate in WFI distillation and pure steam generation

Distillate quality, high efficiency and reliability are key to an effective sterile production system. Puretech offers the ultimate in water for injection (WFI) multi-effect distillation units and pure steam (PS) generators, and Puretech WFI and pure steam combi units bring together energy saving distillation and pure steam generation to offer an efficient, reliable, cost effective solution for the production of WFI and PS.



## Trusted technology, implemented safely

### Low steam velocity and drop separation

Low steam velocity in combination with cycloning in Puretech multi-effect distillation improves the WFI quality, drastically reducing the risk of carryover of droplets and particles to the clean side.

### Float type heat exchangers

Heat exchangers are fully submerged in the boiler water, ensuring tensionless operation and no dry spots, thereby avoiding micro cracks and material exhaustion. The innovative design allows for the equal expansion and contraction of the materials.

### Flexibility and capacity

Pure steam generation units are tailor made to each client's requirements.

### High accessibility for servicing

Skid mounted units designed for easy access and servicing of all components.

### Commissioning and after sales service

Puretech's technical team provide support to clients from design through installation, commissioning and validation to after sales support to guarantee an effective solution.

## Technical data

### Steam heated stills

Columns	Outlet Flowrate	Heating Steam Pressure	Width (mm)	Depth (mm)	Height (mm)
3	120 - 250 l/hr	3-8 bar g (143°- 175°C)	1200	1000	2800
3	200 - 440 l/hr	3-8 bar g (143°- 175°C)	1500	1000	2800
4	300 - 700 l/hr	3-8 bar g (143°- 175°C)	1900	1000	3000
4	500 - 1100 l/hr	3-8 bar g (143°- 175°C)	2350	1000	3400
5	700 - 1500 l/hr	3-8 bar g (143°- 175°C)	2900	1000	3400
5	1000 - 2200 l/hr	3-8 bar g (152°- 175°C)	3200	1200	3900
6	1500 - 3300 l/hr	3-8 bar g (152°- 175°C)	3900	1300	4100
6	2000 - 4000 l/hr	3-8 bar g (159°- 175°C)	3900	1300	4000
7	3000 - 6000 l/hr	3-8 bar g (159°- 175°C)	4800	1300	4200

All figures have a tolerance of +/- 5%

### Electrically heated stills

Columns	Outlet Flowrate	Consumption kWh/h (Connection +20%)	Width (mm)	Depth (mm)	Height (mm)
3	100 - 130 l/hr	29 (35)	1200	1000	2800
4	150 - 200 l/hr	44 (53)	1500	1000	2800
5	300 - 390 l/hr	66 (79)	2300	1000	2800
6	430 - 500 l/hr	80 (90)	2700	1000	3000

All figures have a tolerance of +/- 5%

Other capacities, number of columns and sizes are available upon request.

Water quality standards		
Attribute	US Pharmacopoeia	European Pharmacopoeia
Conductivity ( $\mu\text{S}/\text{cm}$ )	<1.3 @ 25°C (Stage 1)	<1.3 @ 25°C
TOC (ppb)	<500	<500
Bacteria (TVC CFU/100ml)	<10	<10
Endotoxins (EU/ml)	0.25 EU/ml	0.25 EU/ml

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