Heat Transfer Coefficient ("U") vs. Equal-Flow-Rate for 2 to 4 Model G3-60 GFX's in Parallel and a TurboVent Panel.

(NOTE: The coil pressure drops are: \(\sim 0.092 \times \text{gpm}^2\) for a TurboVent Panel, \(\sim 0.098 \times \text{gpm}^2\) for an M2P3-60, \(\sim 0.174 \times \text{gpm}^2\) for 3 G3-60's in parallel & \(\sim 0.392 \times \text{gpm}^2\) for a P3-60)
GFX vs. SHELL & TUBE HEAT EXCHANGERS

PARAMETER | GFX* | SHELL & TUBE (RATIOS)
--- | --- | ---
Recycling Efficiency | 84% | 84% | 1 : 1
LMTD | 12.9°F | 12.9°F | 1 : 1
Overall Heat Transfer Coefficient (Btu/hr·F·ft²) | 442 | 103 | 4.3 : 1
Heat Transfer Area (ft²) | 11.3 | 48.5 | 1 : 4.3
Water Velocity: Waste | 3 | 0.29 | 10 : 1
Cold | 5.5 | 0.32 | 17 : 1
Materials | Copper | Stainless Steel

Notes: 1. Recycling efficiency is the ratio of the measured to maximum theoretical drop in drain water temperature. 2. LMTD is the log mean temperature difference. 3. GFX's efficiency was measured at a textile mill, with flow rates scaled from process rates. 4. Ludell's standard 7-tube design was scaled to yield GFX's high efficiency for identical flow conditions. 5. Substituting GFX's copper DWV tube with a stainless steel tube will lower the efficiency by about 5%.

MODEL 3601 SS:
(Three F-601's stacked to 15)

Coil: 1/2" x 100' Type L (2981/2' Active Length) & 3 Tubes: 3" x 5' Type DWV (1414' Active Length)

Falling Waste Water Film
12 to 27 mils @ .44 to 3.1 gpm & 1.3 to 3.9 ft/sec

Section A-A

Shell: 3" x 171/2' Type K (35' Active Length) & 7 U-Tubes: 5/8" Type L (245' Total Active Length)

Waste Water

Section B-B

* U.S. Patent # 4,619,311