



SoHo-w/c Hydronic Fan-Powered Linear Terminal (Low Profile Heating / Cooling)

Description

SoHo-w/c Hydronic Fan-Powered Linear Terminal is designed to create an efficient and simple solution to meet perimeter heating and cooling needs, in a variety of residential and commercial applications.

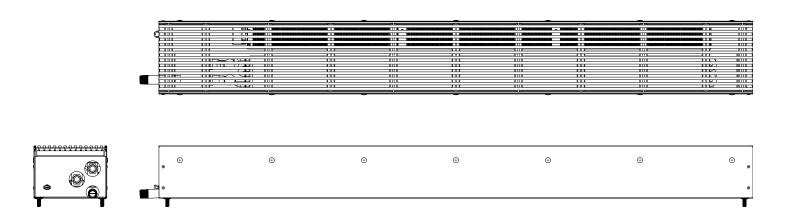
The low profile terminal housing is 20 gauge (1mm) galvanized steel, pre-painted black. It is designed primarily for low-height raised access floor and recessed perimeter trench installation. Multiple mounting options are available; the terminal can be suspended from adjacent finish floor surface via support flanges, or it can be set directly on a floor (or subfloor) on threaded adjustable leveling legs, which provide up to 1" (25mm) of height adjustment.

The hydronic fin pack has been rated in accordance with AHRI Standard 410; rows are 3/8" (9.5mm) copper tubing with 1/2" NPT (15mm) supply and return connections. Finned length varies based on overall terminal length and scheduled performance requirements (specify on order). Hot or chilled water can be passed through to meet seasonal heating and cooling requirements.

An IEQ double deflection drain pan extends under the entire length of the water coil / connections. The drain pan is galvanized steel, pre-painted black, and includes a 3/4" (19mm) condensate drainage connection. The terminal interior (including the drain pan) is fully lined with insulation to prevent undesirable condensate formation.

Active air flow is provided by 24VDC variable speed ECM cross-flow fans, available in standard and high capacity configurations to meet a range of performance requirements. Primary power and controls are housed externally in a separate SoHo Hub control box; signals are transmitted via plug & play molex connection.

The linear grille is available as extruded aluminum or stainless steel, in a variety of sizes and configurations. Ten (10) standard colors are available; custom colors and finishes can be provided to match architectural design (specify on order).

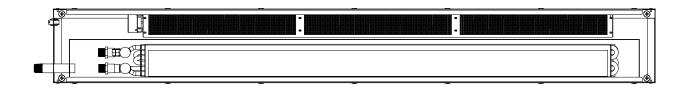


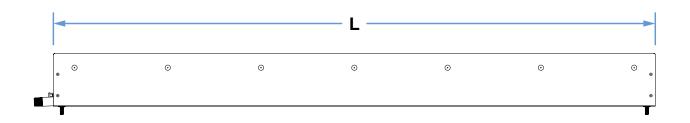


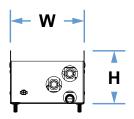


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Unit Dimensions







| STANDARD CAPACITY | | | | | | | |
|---------------------------|-------------------------|---|-----|---|-----|--|--|
| L W H LENGTH WIDTH HEIGHT | | | | | | | |
| (in) | (mm) (in) (mm) (in) (mi | | | | | | |
| 36 | 914 | | | | 127 | | |
| 48 | 1219 | 7 | 170 | 5 | | | |
| 62 | 1575 | 1 | 178 | 3 | | | |
| 78 | 1981 | | | | | | |
| LUCIU O A DA CUTY | | | | | | | |

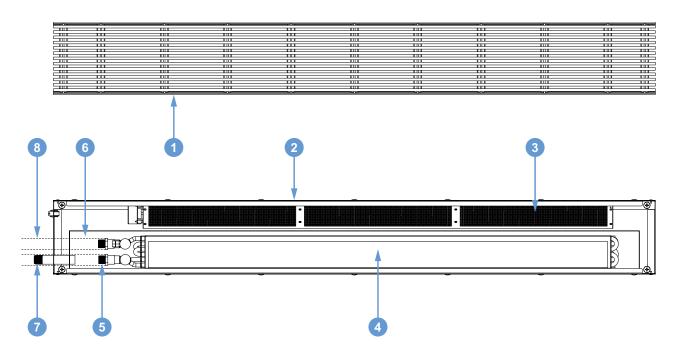
| HIGH CAPACITY | | | | | | | |
|---------------------------------------|------|-------------------|------|-------------|------|--|--|
| L LENGTH | | W WIDTH | | H HEIGHT | | | |
| (in) | (mm) | (in) | (mm) | (in) | (mm) | | |
| 36 | 914 | 12 | | | 127 | | |
| 48 | 1219 | | 305 | 5 | | | |
| 62 | 1575 | 12 | 305 | 3 | | | |
| 78 | 1981 | | | | | | |
| ALL DIMENSIONS NOMINAL ± 0.1" (2.5mm) | | | | | | | |

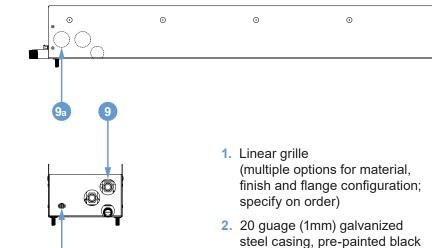




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Unit Detail





6. IEQ double deflection drain pan7. 3/4" (19mm) drainage connection

0

- 8. Piping connections (by others)
- 9. Piping connection access
- **9a.** Alternate piping connection access (specify on order)
- **10.** Molex PAP power & control cable connection
- **11.** Adjustable threaded leveling legs (optional; specify on order)

0

3. 24VDC ECM cross-flow fans

(standard / high capacity available)

4. Hydronic heating / cooling fin pack

5. 1/2" NPT (15mm) supply / return

water connections





SoHo-w/c Hydronic Fan-Powered Linear Terminal (Low Profile Heating / Cooling)

Features

- 20 Gauge (1mm) galvanized steel terminal housing, pre-painted flat black
- Terminal interior (including drain pan) fully lined with ArmaFlex (style) flexible closed cell insulation
- Multiple linear grille options available (specify on order)
 - Extruded aluminum / stainless steel (304 / 316 Series)
 - Flanged or flangeless configurations
 - Ten (10) standard colors; additional colors and finishes available at architect's choice
- Optional threaded leveling legs for unit height adjustment
 - 1" (25mm) manual height adjustment
- 24VDC variable speed ECM cross-flow fans (standard and high capacity configurations available based on terminal dimensions and scheduled performance requirements)

- Single-point plug and play power / control connection
- Hydronic fin pack (performance rated in accordance with AHRI Standard 410)
 - Variable finned length (based on terminal length and scheduled performance requirements)
 - 3/8" (9.5mm) copper rows
 - 1/2" NPT (15mm) supply / return connections
 - Options for same side or opposite end connections, with side or front piping access (specify on order)
 - Supports seasonal heating / cooling changeover
- IEQ double deflection drain pan
 - 3/4"Ø (19mm) drainage connection
- Same-side water supply / return / drainage connections (left end, right end or front side piping access available; specify on order)





SoHo-w/c Hydronic Fan-Powered Linear Terminal (Low Profile Heating / Cooling)

Specifications

Application: Low Profile Fan-Powered Heating / Cooling | Raised Access Floors / Recessed Trenches

Terminal Construction: Galvanized Steel | 20 Gauge (1mm) | Pre-Painted Black

Terminal Dimensions:

Standard Capcity

LxWxH (Nominal)

36" x 7" x 5" (914mm x 178mm x 127mm) 48" x 7" x 5" (1219mm x 178mm x 127mm) 62" x 7" x 5" (1575mm x 178mm x 127mm) 78" x 7" x 5" (1981mm x 178mm x 127mm)

High Capcity

36" x 12" x 5" (914mm x 178mm x 127mm) 48" x 12" x 5" (1219mm x 178mm x 127mm) 62" x 12" x 5" (1575mm x 178mm x 127mm) 78" x 12" x 5" (1981mm x 178mm x 127mm)

Air Flow Capacity: (Nominal Maximum)

Standard Capcity

One (1) Fan (1x Single Assembly) | 62 cfm (105 m^3/hr) | Minimum 33"L (838mm) Unit Two (2) Fans (1x Dual Assembly) | 125 cfm (213 m^3/hr) | Minimum 48"L (1219mm) Unit Three (3) Fans (1x Triple Assembly) | 185 cfm (315 m^3/hr) | Minimum 62"L (1575mm) Unit Four (4) Fans (2x Dual Assembly) | 250 cfm (425 m^3/hr) | Minimum 78"L (1981mm) Unit

High Capcity

One (1) Fan (1x Single Assembly) | 100 cfm (170 m³/hr) | Minimum 33"L (838mm) Unit Two (2) Fans (1x Dual Assembly) | 150 cfm (255 m³/hr) | Minimum 48"L (1219mm) Unit Three (3) Fans (1x Triple Assembly) | 220 cfm (374 m³/hr) | Minimum 62"L (1575mm) Unit Four (4) Fans (2x Dual Assembly) | 300 cfm (510 m³/hr) | Minimum 78"L (1981mm) Unit

Heating / Cooling:

Refer To Example Performance Calculations

Grille Configuration:

Extruded Aluminum | Natural Anodized / Powder-Coated Finish

Fully Flanged / Parially Flanged / Fully Flangeless

Stainless Steel | 304 / 316 Series Finish

Fully Framed / Fully Frameless

Specify Grille Configuration Options On Order

V220314





SoHo-w/c Hydronic Fan-Powered Linear Terminal (Low Profile Heating / Cooling)

Example Performance Calculations (Standard Capacity Heating)

| | | DESIGN | CONDITIONS (INPUTS) | | |
|--------------------------------------|-----------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | | SoHo-w/c 28" 2-Pipe | SoHo-w/c 42" 2-Pipe | SoHo-w/c 56" 2-Pipe | SoHo-w/c 72" 2-Pipe |
| Item/Description | | Heating (Standard Capacity) | Heating (Standard Capacity) | Heating (Standard Capacity) | Heating (Standard Capacity) |
| Entering db | °F | 68 | 68 | 68 | 68 |
| Entering wb | °F | 51.5 | 51.5 | 51.5 | 51.5 |
| Air Flow | cfm | 50 (Std.) | 105 (Std.) | 145 (Std.) | 185 (Std.) |
| Altitude | ft | 0 | 0 | 0 | 0 |
| Absolute Pressure | psi | - | - | - | - |
| Air Flow Orientation | - | Normal | Normal | Normal | Normal |
| Fluid Name | | Water | Water | Water | Water |
| Fluid State | | Liquid | Liquid | Liquid | Liquid |
| Percent Glycol | | - | - | - | - |
| Inlet Tube Pressure | psi | - | - | - | - |
| Entering Fluid Temperature | °F | 170 | 170 | 170 | 170 |
| Tubeside Flow Rate (Mass) | lbm/min | 2.6 | 5.93 | 8.61 | 11.45 |
| Tubeside Flow Rate (Volume) | gal/min | 0.32 | 0.73 | 1.06 | 1.41 |
| Flow Pattern | | Counter | Counter | Counter | Counter |
| Tubeside Fouling Factor | | 0 | 0 | 0 | 0 |
| | | CONS | TRUCTION (INPUTS) | | |
| Coil Code | | 13 | 13 | 13 | 13 |
| Locale | | 0 - Grenada | 0 - Grenada | 0 - Grenada | 0 - Grenada |
| Tube O.D. | in | 3/8 | 3/8 | 3/8 | 3/8 |
| Tube Pattern | in | 1.000 x 0.750 | 1.000 x 0.750 | 1.000 x 0.750 | 1.000 x 0.750 |
| Fin Style | | Corrugated | Corrugated | Corrugated | Corrugated |
| Fin Spacing | /in | 8 | 8 | 8 | 8 |
| Rows | | 3 | 3 | 3 | 3 |
| Fin Height | in | 3 | 3 | 3 | 3 |
| Finned Length in | | 15 | 30 | 44 | 60 |
| Coils in Bank | | 1 | 1 | 1 | 1 |
| Fin Material | in | 0.0060 Aluminum | 0.0060 Aluminum | 0.0060 Aluminum | 0.0060 Aluminum |
| Tube Wall | in | 0.016 | 0.016 | 0.016 | 0.016 |
| Tube Insert | | None | None | None | None |
| Fin Coating | | None | None | None | None |
| Header O.D. | in | 1 | 1 | 1 | 1 |
| Connection O.D. | in | 3/4 | 3/4 | 3/4 | 3/4 |
| Header Length | in | 2.25 | 2.25 | 2.25 | 2 |
| Circuits | | 2 | 2 | 2 | 2 |
| Quantity of Tubes Used | | 8 | 8 | 8 | 8 |
| Madal | | | ALCULATIONS | 05700000 0 00 44 00 | 05700000 0 00 00 00 |
| Model Total Canacity | MDU | 3FZ0803R-3.00x15.00 | 3FZ0803R-3.00x30.00 | 3FZ0803R-3.00x44.00 | 3FZ0803R-3.00x60.00 |
| Total Capacity | MBH | 3.1 3.1 | 7.1 7.1 | 10.3 10.3 | 13.8 13.8 |
| Sensible Capacity Leaving db | MBH °F | 3.1 125 | 7.1 130.2 | | |
| | °F | 70.9 | | 133.6 73.2 | 136.3 |
| Leaving wb Leaving Fluid Temperature | °F | 150.1 | 72.3 150 | 150 | 73.9 150 |
| Tubeside dT | Δ°F | <20.0> | <20.0> | <20.0> | <20.0> |
| Face Velocity | ft/min | 160 | 168 | 158.2 | 148 |
| Air Pressure Drop | in wg | 0.024 | 0.026 | 0.024 | 0.022 |
| Tubeside pd | ft H2O | 0.024 | 0.52 | 1.24 | 2.5 |
| Tubeside Velocity | ft/s | 0.00 | 1.2 | 1.7 | 2.2 |
| Reynolds Number | | 3,478 | 7,926 | 11,502 | 15,296 |
| Quantity of Tubes Dropped | | 1 | 1 | 11,502 | 15,296 |
| Quantity of Tubes Dropped | | <u> </u> | ı | l l | ı |





SoHo-w/c Hydronic Fan-Powered Linear Terminal (Low Profile Heating / Cooling)

Example Performance Calculations (Standard Capacity Cooling)

| | | DESIGN | CONDITIONS (INPUTS) | | |
|-----------------------------|------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Item/Description | | SoHo-w/c 28" 2-Pipe | SoHo-w/c 42" 2-Pipe | SoHo-w/c 56" 2-Pipe | SoHo-w/c 72" 2-Pipe |
| Fuel view of the | o r | Cooling (Standard Capacity) | Cooling (Standard Capacity) | Cooling (Standard Capacity) | Cooling (Standard Capacity) |
| Entering db | °F | 80 | 80 | 80 | 80 |
| Entering wb | °F | 66.7 | 66.7 | 66.7 | 66.7 |
| Air Flow | cfm | 50 (Std.) | 105 (Std.) | 145 (Std.) | 185 (Std.) |
| Altitude | ft | 0 | 0 | 0 | 0 |
| Absolute Pressure | psi | - | - | - | - |
| Air Flow Orientation | | Normal | Normal | Normal | Normal |
| Fluid Name | | Water | Water | Water | Water |
| Fluid State | | Liquid | Liquid | Liquid | Liquid |
| Percent Glycol | | - | - | - | - |
| Inlet Tube Pressure | psi | - | - | - | - |
| Entering Fluid Temperature | °F | 45 | 45 | 45 | 45 |
| Tubeside Flow Rate (Mass) | lbm/min | 1.75 | 3.67 | 5.59 | 8.09 |
| Tubeside Flow Rate (Volume) | gal/min | 0.21 | 0.44 | 0.67 | 0.97 |
| Flow Pattern | | Counter | Counter | Counter | Counter |
| Tubeside Fouling Factor | | 0 | 0 | 0 | 0 |
| | | | TRUCTION (INPUTS) | | |
| Coil Code | | 13 | 13 | 13 | 13 |
| Locale | | 0 - Grenada | 0 - Grenada | 0 - Grenada | 0 - Grenada |
| Tube O.D. | in | 3/8 | 3/8 | 3/8 | 3/8 |
| Tube Pattern | in | 1.000 x 0.750 | 1.000 x 0.750 | 1.000 x 0.750 | 1.000 x 0.750 |
| Fin Style | | Corrugated | Corrugated | Corrugated | Corrugated |
| Fin Spacing | /in | 8 | 8 | 8 | 8 |
| Rows | | 3 | 3 | 3 | 3 |
| Fin Height | in | 3 | 3 | 3 | 3 |
| Finned Length | in | 15 | 30 | 44 | 60 |
| Coils in Bank | | 1 | 1 | 1 | 1 |
| Fin Material | in | 0.0060 Aluminum | 0.0060 Aluminum | 0.0060 Aluminum | 0.0060 Aluminum |
| Tube Wall | in | 0.016 | 0.016 | 0.016 | 0.016 |
| Tube Insert | | None | None | None | None |
| Fin Coating | | None | None | None | None |
| Header O.D. | in | 1 | 1 | 1 | 1 |
| Connection O.D. | in | 3/4 | 3/4 | 3/4 | 3/4 |
| Header Length | in | 2.25 | 2.25 | 2.25 | 2.25 |
| Circuits | | 2 | 2 | 2 | 2 |
| Quantity of Tubes Used | | 8 | 8 | 8 | 8 |
| | | c | ALCULATIONS | | |
| Model | | 3FZ0803R-3.00x15.00 | 3FZ0803R-3.00x30.00 | 3FZ0803R-3.00x44.00 | 3FZ0803R-3.00x60.00 |
| Total Capacity | MBH | 0.9 | 2.0 | 3.0 | 4.3 |
| Sensible Capacity | MBH | 0.9 | 1.8 | 2.6 | 3.6 |
| Leaving db | °F | 64.5 | 64.6 | 63.7 | 62.4 |
| Leaving wb | °F | 60.9 | 60.9 | 60.3 | 59.4 |
| Leaving Fluid Temperature | °F | 53.9 | 53.9 | 53.9 | 53.9 |
| Tubeside dT | Δ°F | <8.9> | <8.9> | <8.9> | <8.9> |
| Face Velocity | ft/min | 160 | 168 | 158.2 | 148 |
| Air Pressure Drop | in wg | 0.025 | 0.027 | 0.025 | 0.023 |
| Tubeside pd | ft H2O | 0.04 | 0.21 | 0.51 | 1.43 |
| Tubeside Velocity | ft/s | 0.3 | 0.7 | 1.1 | 1.5 |
| Reynolds Number | | 699 | 1,465 | 2,232 | 3,230 |
| Quantity of Tubes Dropped | | 1 | 1 | 1 | 1 |





SoHo-w/c Hydronic Fan-Powered Linear Terminal (Low Profile Heating / Cooling)

Example Performance Calculations (High Capacity Heating)

| CALCULATIONS Model 3FZ0804R-6.00x16.50 3FZ0804R-6.00x31.50 3FZ0804R-6.00x46.00 3FZ0804R-6.00x61.50 Total Capacity MBH 7.0 12.4 18.1 22.5 Sensible Capacity MBH 7.0 12.4 18.1 22.5 Leaving db °F 148.6 155.6 157.7 159.6 Leaving wb °F 77 78.7 79.1 79.6 Leaving Fluid Temperature °F 150 150 150 150 Tubeside dT Δ°F <20.0> <20.0> <20.0> <20.0> <20.0> Face Velocity ft/min 116.4 99.1 96.5 87.8 Air Pressure Drop in wg 0.02 0.015 0.015 0.013 Tubeside pd ft H2O 1.01 1.57 2.22 3.76 Tubeside Velocity ft/s 68.6 80.7 88.2 109.6 Reynolds Number 7,797 9,175 10,027 12,469 < | DESIGN CONDITIONS (INPUTS) | | | | | | |
|--|----------------------------|---------|-------------------------|-------------------------|-------------------------|-------------------------|--|
| Reating (High Capacity) | Item/Description | | | | | | |
| Entering wb | item/Description | | Heating (High Capacity) | Heating (High Capacity) | Heating (High Capacity) | Heating (High Capacity) | |
| Air Flow | Entering db | °F | 68 | 68 | 68 | 68 | |
| Abstude | Entering wb | °F | 51.5 | 51.5 | 51.5 | 51.5 | |
| Absolute Pressure | Air Flow | cfm | 80 (Std.) | 130 (Std.) | 185 (Std.) | 225 (Std.) | |
| Normal N | Altitude | ft | 0 | 0 | 0 | 0 | |
| Fluid State | Absolute Pressure | psi | - | - | - | - | |
| Fluid State Liquid Percent Glycol - - - - - | Air Flow Orientation | | Normal | Normal | Normal | Normal | |
| Percent Glycol | Fluid Name | | Water | Water | Water | Water | |
| Inlet Tube Pressure | Fluid State | | Liquid | Liquid | Liquid | Liquid | |
| Entering Fulid Temperature F | Percent Glycol | | - | - | - | - | |
| Tubeside Flow Rate (Volume) Ibm/min 5.8 10.3 15 18.7 Tubeside Flow Rate (Volume) galinin 0.72 1.27 1.85 2.3 Flow Pattern Counter Counter Counter Counter Counter Counter CONSTRUCTION (NPUTS) CONSTRUCTIO | Inlet Tube Pressure | psi | - | - | - | - | |
| Tubeside Flow Rate (Volume) gal/min 0.72 1.27 1.85 2.3 Flow Pattern Counter Counter Counter Counter Tubeside Fouling Factor 0 0 0 0 COII Code 13 13 13 13 13 Locale 10 38 8 <t< th=""><th>Entering Fluid Temperature</th><th>°F</th><th>170</th><th>170</th><th>170</th><th>170</th></t<> | Entering Fluid Temperature | °F | 170 | 170 | 170 | 170 | |
| Flow Pattern Counter Counter Counter Counter Counter | Tubeside Flow Rate (Mass) | lbm/min | 5.8 | 10.3 | 15 | 18.7 | |
| Tubeside Fouling Factor | | gal/min | 0.72 | 1.27 | 1.85 | 2.3 | |
| Coll Code | Flow Pattern | - | Counter | Counter | Counter | Counter | |
| Coll Code | Tubeside Fouling Factor | | 0 | 0 | 0 | 0 | |
| Docale | | | CONS | TRUCTION (INPUTS) | | | |
| Tube O.D. in 3/8 3/8 3/8 3/8 Tube Patern in 1.000 x 0.750 1.000 x 0.750 1.000 x 0.750 1.000 x 0.750 Fin Style Corrugated Corrugated Corrugated Corrugated Corrugated Fin Spacing I/in 8 8 8 8 Rows 4 4 4 4 4 Fin Fleight in 6 6 6 6 6 Fin Height in 16.5 31.5 46 61.5 Colls in Bank 1 | Coil Code | | 13 | 13 | 13 | 13 | |
| Tube O.D. in 3/8 3/8 3/8 3/8 Tube Patern in 1.000 x 0.750 1.000 x 0.750 1.000 x 0.750 1.000 x 0.750 Fin Style Corrugated Corrugated Corrugated Corrugated Corrugated Fin Spacing I/in 8 8 8 8 Rows 4 4 4 4 4 Fin Fleight in 6 6 6 6 6 Fin Height in 16.5 31.5 46 61.5 Colls in Bank 1 | Locale | | 0 - Grenada | 0 - Grenada | 0 - Grenada | 0 - Grenada | |
| Fin Style Corrugated Corrugated Corrugated Corrugated Fin Spacing /in 8 8 8 8 Rows 4 4 4 4 4 Fin Height in 6 6 6 6 6 Finned Length in 16.5 31.5 46 61.5 1 Coils in Bank 1 2 3 <t< th=""><th>Tube O.D.</th><th>in</th><th></th><th>3/8</th><th>3/8</th><th></th></t<> | Tube O.D. | in | | 3/8 | 3/8 | | |
| Fin Spacing | Tube Pattern | in | 1.000 x 0.750 | 1.000 x 0.750 | 1.000 x 0.750 | 1.000 x 0.750 | |
| Rows 4 4 4 4 4 Fin Height in 6 6 6 6 6 Finned Length in 16.5 31.5 46 61.5 Coils in Bank 1 1 1 1 1 Fin Material in 0.0060 Aluminum 0.0060 Aluminum 0.0060 Aluminum 0.0060 Aluminum Tube Name None None None None None None Fin Coating None None None None None None Header O.D. in 1/2 | Fin Style | | Corrugated | Corrugated | Corrugated | Corrugated | |
| Rows 4 4 4 4 4 4 Fin Height in 6 | Fin Spacing | /in | 8 | 8 | 8 | 8 | |
| Finned Length in 16.5 31.5 46 61.5 Coils in Bank 1 0.0060 Aluminum 0.0060 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 0.006 1.00 | | | 4 | 4 | 4 | 4 | |
| Finned Length in 16.5 31.5 46 61.5 Colls in Bank 1 0.0060 Aluminum 0.006 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 0.016 | Fin Height | in | 6 | 6 | 6 | 6 | |
| Coils in Bank 1 0.0060 Aluminum 0.00 | Finned Length | in | 16.5 | 31.5 | 46 | 61.5 | |
| Tube Wall in 0.016 0.016 0.016 0.016 Tube Insert None None None None None Fin Coating None None None None Header O.D. in 7/8 7/8 7/8 7/8 Connection O.D. in 1/2 <th< th=""><th></th><th></th><th>1</th><th>1</th><th>1</th><th>1</th></th<> | | | 1 | 1 | 1 | 1 | |
| Tube Insert None None None None Fin Coating None None None None Header O.D. in 7/8 7/8 7/8 Connection O.D. in 1/2 1/2 1/2 1/2 Header Length in 2.25 2.25 2.25 2.25 2.25 Circuits 2 3 4 4 4 4 Quantity of Tubes Used 24 24 24 24 24 24 24 CALCULATIONS Model 3FZ0804R-6.00x16.50 3FZ0804R-6.00x31.50 3FZ0804R-6.00x46.00 3FZ0804R-6.00x61.50 3FZ0804R-6.00x46.00 3FZ0804R-6.00x61.50 3FZ0804R-6.00x46.00 3FZ0804R-6.00x61.50 3FZ0804R-6.00x46.00 3FZ0804R-6.00x61.50 3FZ0804R-6.00x46.00 3F | Fin Material | in | 0.0060 Aluminum | 0.0060 Aluminum | 0.0060 Aluminum | 0.0060 Aluminum | |
| None None <th>Tube Wall</th> <th>in</th> <th>0.016</th> <th>0.016</th> <th>0.016</th> <th>0.016</th> | Tube Wall | in | 0.016 | 0.016 | 0.016 | 0.016 | |
| Header O.D. in 7/8 7/8 7/8 7/8 Connection O.D. in 1/2 1/2 1/2 1/2 1/2 Header Length in 2.25 2.25 2.25 2.25 2.25 Circuits 2 3 4 4 4 Calculations CALCULATIONS Model 3FZ0804R-6.00x16.50 3FZ0804R-6.00x31.50 3FZ0804R-6.00x46.00 3FZ0804R-6.00x61.50 Total Capacity MBH 7.0 12.4 18.1 22.5 Sensible Capacity MBH 7.0 12.4 18.1 22.5 Leaving db °F 148.6 155.6 157.7 159.6 Leaving Fluid Temperature °F 77 78.7 79.1 79.6 Leaving Fluid Temperature °F 150 150 150 150 Tubeside dT Δ°F <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20. | Tube Insert | | None | None | None | None | |
| Connection O.D. in 1/2 1/2 1/2 1/2 1/2 Header Length in 2.25 2.25 2.25 2.25 2.25 Circuits 2 3 4 4 4 CALCULATIONS Model 3FZ0804R-6.00x16.50 3FZ0804R-6.00x31.50 3FZ0804R-6.00x46.00 3FZ0804R-6.00x61.50 Total Capacity MBH 7.0 12.4 18.1 22.5 Sensible Capacity MBH 7.0 12.4 18.1 22.5 Leaving db °F 148.6 155.6 157.7 159.6 Leaving Fluid Temperature °F 77 78.7 79.1 79.6 Leaving Fluid Temperature °F 150 150 150 150 Tubeside dT Δ°F <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> < | Fin Coating | | None | None | None | None | |
| Header Length in 2.25 2.25 2.25 2.25 Circuits 2 3 4 4 4 Quantity of Tubes Used 24 | Header O.D. | in | 7/8 | 7/8 | 7/8 | 7/8 | |
| Header Length in 2.25 2.25 2.25 2.25 Circuits 2 3 4 4 Cunntity of Tubes Used 24 24 24 24 24 CALCULATIONS Model 3FZ0804R-6.00x16.50 3FZ0804R-6.00x31.50 3FZ0804R-6.00x46.00 3FZ0804R-6.00x61.50 Total Capacity MBH 7.0 12.4 18.1 22.5 Sensible Capacity MBH 7.0 12.4 18.1 22.5 Leaving db °F 148.6 155.6 157.7 159.6 Leaving Fluid Temperature °F 77 78.7 79.1 79.6 Leaving Fluid Temperature °F 150 150 150 150 150 Tubeside dT Δ°F <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> | Connection O.D. | | | | | | |
| Circuits 2 3 4 4 Quantity of Tubes Used 24 24 24 24 24 CALCULATIONS Model 3FZ0804R-6.00x16.50 3FZ0804R-6.00x31.50 3FZ0804R-6.00x46.00 3FZ0804R-6.00x61.50 Total Capacity MBH 7.0 12.4 18.1 22.5 Sensible Capacity MBH 7.0 12.4 18.1 22.5 Leaving db °F 148.6 155.6 157.7 159.6 Leaving Wb °F 77 78.7 79.1 79.6 Leaving Fluid Temperature °F 150 150 150 150 Tubeside dT Δ°F <20.0> <20.0> <20.0> <20.0> <20.0> Face Velocity ft/min 116.4 99.1 96.5 87.8 Air Pressure Drop in wg 0.02 0.015 0.015 0.013 Tubeside Velocity ft/s 68.6 80.7 88.2 109.6 Reynold | Header Length | in | 2.25 | 2.25 | 2.25 | 2.25 | |
| CALCULATIONS Model 3FZ0804R-6.00x16.50 3FZ0804R-6.00x31.50 3FZ0804R-6.00x46.00 3FZ0804R-6.00x61.50 Total Capacity MBH 7.0 12.4 18.1 22.5 Sensible Capacity MBH 7.0 12.4 18.1 22.5 Leaving db °F 148.6 155.6 157.7 159.6 Leaving wb °F 77 78.7 79.1 79.6 Leaving Fluid Temperature °F 150 150 150 150 Tubeside dT Δ°F <20.0> <20.0> <20.0> <20.0> <20.0> Face Velocity ft/min 116.4 99.1 96.5 87.8 Air Pressure Drop in wg 0.02 0.015 0.015 0.013 Tubeside pd ft H2O 1.01 1.57 2.22 3.76 Tubeside Velocity ft/s 68.6 80.7 88.2 109.6 Reynolds Number 7,797 9,175 10,027 12,469 < | | | | | | | |
| Model 3FZ0804R-6.00x16.50 3FZ0804R-6.00x31.50 3FZ0804R-6.00x46.00 3FZ0804R-6.00x61.50 Total Capacity MBH 7.0 12.4 18.1 22.5 Sensible Capacity MBH 7.0 12.4 18.1 22.5 Leaving db °F 148.6 155.6 157.7 159.6 Leaving wb °F 77 78.7 79.1 79.6 Leaving Fluid Temperature °F 150 150 150 150 Tubeside dT Δ°F <20.0> <20.0> <20.0> <20.0> <20.0> Face Velocity ft/min 116.4 99.1 96.5 87.8 Air Pressure Drop in wg 0.02 0.015 0.015 0.013 Tubeside pd ft H2O 1.01 1.57 2.22 3.76 Tubeside Velocity ft/s 68.6 80.7 88.2 109.6 Reynolds Number 7,797 9,175 10,027 12,469 | Quantity of Tubes Used | | | | | 24 | |
| Total Capacity MBH 7.0 12.4 18.1 22.5 Sensible Capacity MBH 7.0 12.4 18.1 22.5 Leaving db °F 148.6 155.6 157.7 159.6 Leaving wb °F 77 78.7 79.1 79.6 Leaving Fluid Temperature °F 150 150 150 150 Tubeside dT Δ°F <20.0> <20.0> <20.0> <20.0> <20.0> Face Velocity ft/min 116.4 99.1 96.5 87.8 Air Pressure Drop in wg 0.02 0.015 0.015 0.013 Tubeside pd ft H2O 1.01 1.57 2.22 3.76 Tubeside Velocity ft/s 68.6 80.7 88.2 109.6 Reynolds Number 7,797 9,175 10,027 12,469 | | | | CALCULATIONS | | | |
| Sensible Capacity MBH 7.0 12.4 18.1 22.5 Leaving db °F 148.6 155.6 157.7 159.6 Leaving wb °F 77 78.7 79.1 79.6 Leaving Fluid Temperature °F 150 150 150 150 Tubeside dT Δ°F <20.0> <20.0> <20.0> <20.0> <20.0> <20.0> Face Velocity ft/min 116.4 99.1 96.5 87.8 Air Pressure Drop in wg 0.02 0.015 0.015 0.013 Tubeside pd ft H2O 1.01 1.57 2.22 3.76 Tubeside Velocity ft/s 68.6 80.7 88.2 109.6 Reynolds Number 7,797 9,175 10,027 12,469 | Model | | 3FZ0804R-6.00x16.50 | 3FZ0804R-6.00x31.50 | 3FZ0804R-6.00x46.00 | 3FZ0804R-6.00x61.50 | |
| Sensible Capacity MBH 7.0 12.4 18.1 22.5 Leaving db °F 148.6 155.6 157.7 159.6 Leaving wb °F 77 78.7 79.1 79.6 Leaving Fluid Temperature °F 150 150 150 150 Tubeside dT Δ°F <20.0> <20.0> <20.0> <20.0> <20.0> Face Velocity ft/min 116.4 99.1 96.5 87.8 Air Pressure Drop in wg 0.02 0.015 0.015 0.013 Tubeside pd ft H2O 1.01 1.57 2.22 3.76 Tubeside Velocity ft/s 68.6 80.7 88.2 109.6 Reynolds Number 7,797 9,175 10,027 12,469 | Total Capacity | MBH | 7.0 | 12.4 | 18.1 | 22.5 | |
| Leaving db °F 148.6 155.6 157.7 159.6 Leaving wb °F 77 78.7 79.1 79.6 Leaving Fluid Temperature °F 150 150 150 150 Tubeside dT Δ°F <20.0> <20.0> <20.0> <20.0> Face Velocity ft/min 116.4 99.1 96.5 87.8 Air Pressure Drop in wg 0.02 0.015 0.015 0.013 Tubeside pd ft H2O 1.01 1.57 2.22 3.76 Tubeside Velocity ft/s 68.6 80.7 88.2 109.6 Reynolds Number 7,797 9,175 10,027 12,469 | Sensible Capacity | MBH | | 12.4 | 18.1 | 22.5 | |
| Leaving wb °F 77 78.7 79.1 79.6 Leaving Fluid Temperature °F 150 150 150 150 Tubeside dT Δ°F <20.0> <20.0> <20.0> <20.0> Face Velocity ft/min 116.4 99.1 96.5 87.8 Air Pressure Drop in wg 0.02 0.015 0.015 0.013 Tubeside pd ft H2O 1.01 1.57 2.22 3.76 Tubeside Velocity ft/s 68.6 80.7 88.2 109.6 Reynolds Number 7,797 9,175 10,027 12,469 | | °F | 148.6 | 155.6 | 157.7 | 159.6 | |
| Leaving Fluid Temperature °F 150 150 150 150 Tubeside dT Δ°F <20.0> <20.0> <20.0> <20.0> Face Velocity ft/min 116.4 99.1 96.5 87.8 Air Pressure Drop in wg 0.02 0.015 0.015 0.013 Tubeside pd ft H2O 1.01 1.57 2.22 3.76 Tubeside Velocity ft/s 68.6 80.7 88.2 109.6 Reynolds Number 7,797 9,175 10,027 12,469 | Leaving wb | °F | 77 | 78.7 | 79.1 | 79.6 | |
| Tubeside dT Δ°F <20.0> <20.0> <20.0> <20.0> Face Velocity ft/min 116.4 99.1 96.5 87.8 Air Pressure Drop in wg 0.02 0.015 0.015 0.013 Tubeside pd ft H2O 1.01 1.57 2.22 3.76 Tubeside Velocity ft/s 68.6 80.7 88.2 109.6 Reynolds Number 7,797 9,175 10,027 12,469 | | °F | | | | | |
| Face Velocity ft/min 116.4 99.1 96.5 87.8 Air Pressure Drop in wg 0.02 0.015 0.015 0.013 Tubeside pd ft H2O 1.01 1.57 2.22 3.76 Tubeside Velocity ft/s 68.6 80.7 88.2 109.6 Reynolds Number 7,797 9,175 10,027 12,469 | Tubeside dT | Δ°F | <20.0> | <20.0> | <20.0> | <20.0> | |
| Air Pressure Drop in wg 0.02 0.015 0.015 0.013 Tubeside pd ft H2O 1.01 1.57 2.22 3.76 Tubeside Velocity ft/s 68.6 80.7 88.2 109.6 Reynolds Number 7,797 9,175 10,027 12,469 | Face Velocity | | 116.4 | | | 87.8 | |
| Tubeside pd ft H2O 1.01 1.57 2.22 3.76 Tubeside Velocity ft/s 68.6 80.7 88.2 109.6 Reynolds Number 7,797 9,175 10,027 12,469 | Air Pressure Drop | | | | | | |
| Reynolds Number 7,797 9,175 10,027 12,469 | Tubeside pd | | 1.01 | | | 3.76 | |
| Reynolds Number 7,797 9,175 10,027 12,469 | • | | 68.6 | | | 109.6 | |
| | Reynolds Number | | 7,797 | 9,175 | 10,027 | 12,469 | |
| | Quantity of Tubes Dropped | | 0 | 0 | 0 | 0 | |





SoHo-w/c Hydronic Fan-Powered Linear Terminal (Low Profile Heating / Cooling)

Example Performance Calculations (High Capacity Cooling)

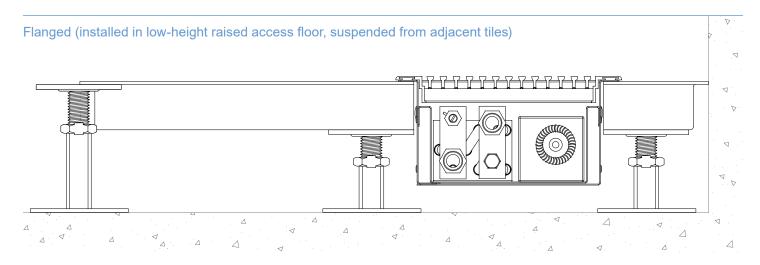
| DESIGN CONDITIONS (INPUTS) | | | | | | |
|--|---------|--|--|--|--|--|
| Item/Description | | SoHo-w/c 28" 2-Pipe Cooling (High Capacity) | SoHo-w/c 42" 2-Pipe Cooling (High Capacity) | SoHo-w/c 56" 2-Pipe Cooling (High Capacity) | SoHo-w/c 72" 2-Pipe Cooling (High Capacity) | |
| Entering db | °F | 80 | 80 | 80 | 80 | |
| Entering wb | °F | 66.7 | 66.7 | 66.7 | 66.7 | |
| Air Flow | cfm | 80 (Std.) | 130 (Std.) | 185 (Std.) | 240 (Std.) | |
| Altitude | ft | 0 | 0 | 0 | 0 | |
| Absolute Pressure | psi | - | - | - | - | |
| Air Flow Orientation | • | Normal | Normal | Normal | Normal | |
| Fluid Name | | Water | Water | Water | Water | |
| Fluid State | | Liquid | Liquid | Liquid | Liquid | |
| Percent Glycol | | - | - | - | - | |
| Inlet Tube Pressure | psi | - | - | - | - | |
| Entering Fluid Temperature | °F | 45 | 45 | 45 | 45 | |
| Tubeside Flow Rate (Mass) | lbm/min | 4.6 | 8.9 | 14.2 | 19.3 | |
| Tubeside Flow Rate (Volume) | gal/min | 0.55 | 1.07 | 1.7 | 2.32 | |
| Flow Pattern | | Counter | Counter | Counter | Counter | |
| Tubeside Fouling Factor | | 0 | 0 | 0 | 0 | |
| | | CONS | TRUCTION (INPUTS) | | | |
| Coil Code | | 13 | 13 | 13 | 13 | |
| Locale | | 0 - Grenada | 0 - Grenada | 0 - Grenada | 0 - Grenada | |
| Tube O.D. | in | 3/8 | 3/8 | 3/8 | 3/8 | |
| Tube Pattern | in | 1.000 x 0.750 | 1.000 x 0.750 | 1.000 x 0.750 | 1.000 x 0.750 | |
| Fin Style | | Corrugated | Corrugated | Corrugated | Corrugated | |
| Fin Spacing | /in | 8 | 8 | 8 | 8 | |
| Rows | | 4 | 4 | 4 | 4 | |
| Fin Height | in | 6 | 6 | 6 | 6 | |
| Finned Length | in | 16.5 | 31.5 | 46 | 61.5 | |
| Coils in Bank | | 1 | 1 | 1 | 1 | |
| Fin Material | in | 0.0060 Aluminum | 0.0060 Aluminum | 0.0060 Aluminum | 0.0060 Aluminum | |
| Tube Wall | in | 0.016 | 0.016 | 0.016 | 0.016 | |
| Tube Insert | | None | None | None | None | |
| Fin Coating | | None | None | None | None | |
| Header O.D. | in | 7/8 | 7/8 | 7/8 | 7/8 | |
| Connection O.D. | in | 1/2 | 1/2 | 1/2 | 1/2 | |
| Header Length | in | 2.25 | 2.25 | 2.25 | 2.25 | |
| Circuits | | 2 | 3 | 4 | 4 | |
| Quantity of Tubes Used | | 24 | 24 | 24 | 24 | |
| | | | CALCULATIONS | | | |
| Model | | 3FZ0804R-6.00x16.50 | 3FZ0804R-6.00x31.50 | 3FZ0804R-6.00x46.00 | 3FZ0804R-6.00x61.50 | |
| Total Capacity | MBH | 2.5 | 4.8 | 7.6 | 10.5 | |
| Sensible Capacity | MBH | 1.9 | 3.5 | 5.3 | 7.1 | |
| Leaving db | °F | 58.1 | 55.7 | 54.1 | 53.1 | |
| Leaving wb | °F | 56.9 54 | 54.7 | 53.2 | 52.2 | |
| Leaving Fluid Temperature Tubeside dT | °F | 54 <9.0> | 54 | 54 <9.0> | 54 | |
| | Δ°F | | <9.0> | 96.5 | <9.0> 93.7 | |
| Face Velocity | ft/min | 116.4 | 99.1 | 0.015 | | |
| Air Pressure Drop | in wg | 0.021 0.54 | 0.016 | 0.015 | 0.014 4.49 | |
| Tubeside pd Tubeside Velocity | ft H2O | 52.6 | 1.14 68.2 | 81.3 | 110.9 | |
| Tubeside Velocity ft/s Reynolds Number | | 1,839 | | | | |
| | | · · · · · · · · · · · · · · · · · · · | 2,384 | 2,840 | 3,878 | |
| Quantity of Tubes Dropped | | 0 | 0 | 0 | 0 | |





SoHo-w/c Hydronic Fan-Powered Linear Terminal (Low Profile Heating / Cooling)

Installation Options



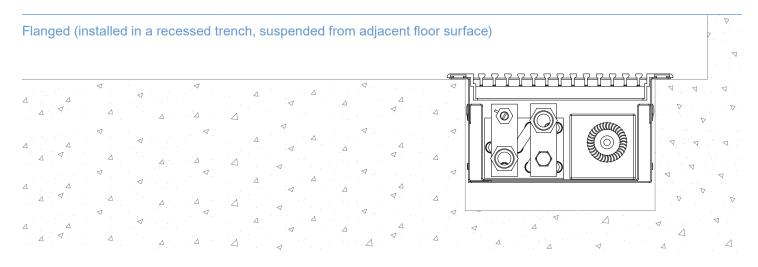


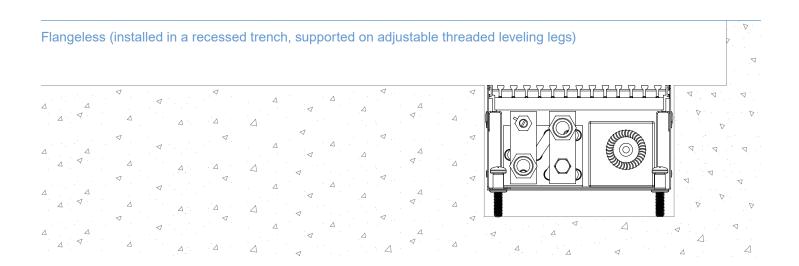




SoHo-w/c Hydronic Fan-Powered Linear Terminal (Low Profile Heating / Cooling)

Installation Options (continued)





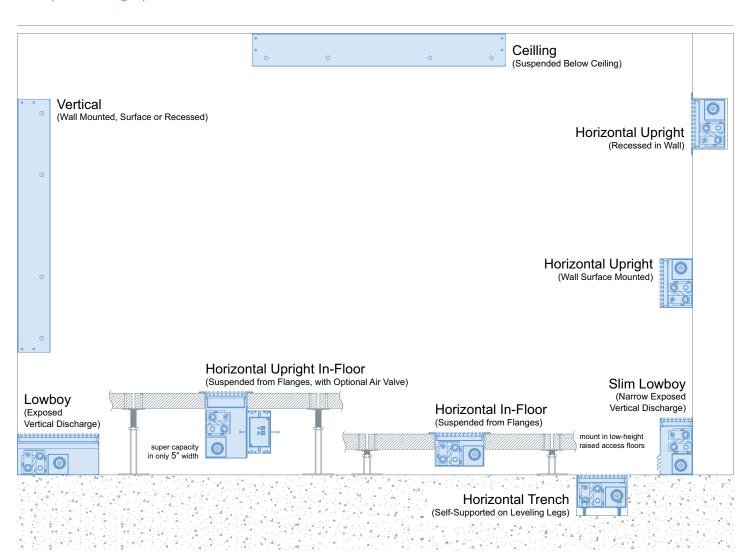




SoHo-w/c Hydronic Fan-Powered Linear Terminal (Low Profile Heating / Cooling)

Installation Options (continued)

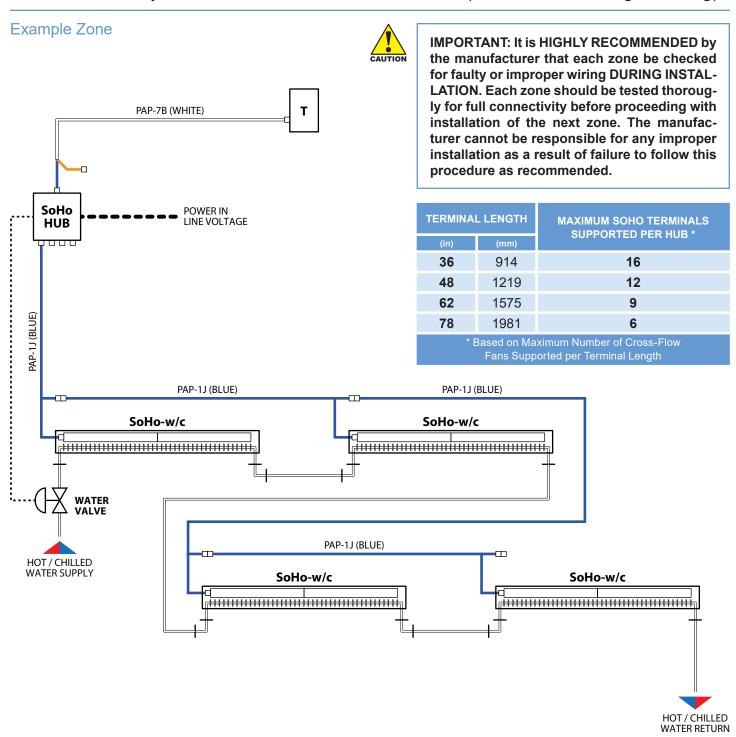
Example Mounting Options







SoHo-w/c Hydronic Fan-Powered Linear Terminal (Low Profile Heating / Cooling)







SoHo-w/c Hydronic Fan-Powered Linear Terminal (Low Profile Heating / Cooling)

