



# DuHandling Series (DH)

## THE ADVANTAGES ARE BUILT IN: BETTER, CLEANER AND MORE EFFICIENT COOLING SYSTEMS

### Superior economics

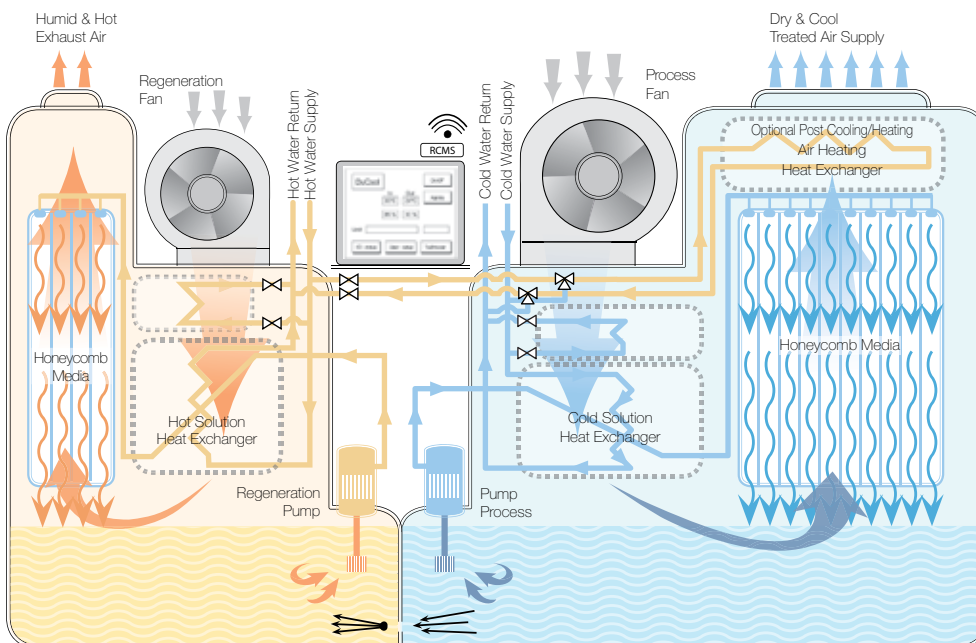
- Upfront cost is comparable to, or in many cases less expensive than, alternative air handling equipment
- Reduces system power requirements by ~40%:
  - Shifts costly latent load from chiller to free latent load at DuHandling unit
  - Lower sensible load due to relaxed temperature requirements
  - Relaxed temperature requirement (higher LWT) also increases chiller COP

### Functional benefits

- More precise control of indoor environment through the ability to directly control humidity and temperature independently
- Greater comfort due to eliminating overcooling of outdoor air
- Improved indoor air quality (IAQ) through removal of airborne particulates and organisms
- Eliminates opportunities for mold formation by eliminating all points of condensation in the system

### Utilization of renewable energy

- Low-quality waste heat or solar thermal energy can easily be utilized as low as 130°F to power dehumidification
- Geothermal cooling can often be used to dramatically reduce or eliminate chiller or cooling tower load



Schematic Process Diagram

# Technical Specifications

## DuHandling (DH) Small

### General Data

| Unit Model   | DH – 300                           | DH – 500        | DH – 800        |
|--|------------------------------------|-----------------|-----------------|
| <b>Air Flow Capacities</b>                         |                                    |                 |                 |
| Supply (Treated) Air                               | 300 CFM                            | 500 CFM         | 800 CFM         |
| Regeneration Air                                   | 270 CFM                            | 450 CFM         | 700 CFM         |
| <b>Hot Water</b>                                   | 130°F to 200°F Maximum flow 66 gpm |                 |                 |
| <b>Cold Water / Glycol</b>                         | 50°F to 95°F Maximum flow 66 gpm   |                 |                 |
| <b>Minimum T between Cold &amp; Hot water</b>      | 45°F                               |                 |                 |
| <b>Desiccant Solution LiCl (40% Concentration)</b> | 14.5 Gallons                       |                 |                 |
| <b>Operation Temperature Range</b>                 | 14°F - 122°F                       |                 |                 |
| <b>Operation Abs. Humidity Range</b>               | 7 gr/lb - 210 gr/lb                |                 |                 |
| <b>Electrical System <sup>(1)</sup></b>            | 208V, 1Ph, 60Hz                    | 208V, 1Ph, 60Hz | 208V, 1Ph, 60Hz |
| Line Current                                       | Amp. 4                             | Amp. 4          | Amp. 6.1        |
| Breaker Size                                       | Amp. 16                            | Amp. 16         | Amp. 16         |

### Thermal (Renewable) Capacity Data

Outdoor conditions at 86°F; 80 % R.H.

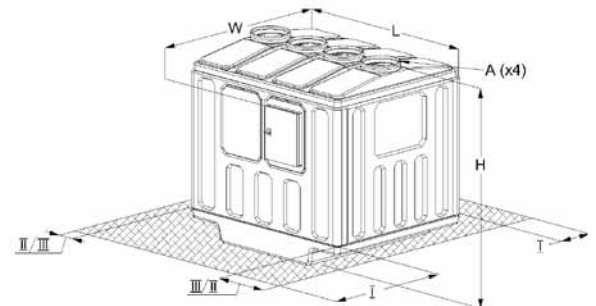
Hot water at 194°F, 26 gpm flow, Cold water at 42.8°F, 35 gpm flow, 6 rows hot coil and 6 rows cold coil.<sup>(5)</sup>

|   |              |          |              |          |              |         |
|---|--------------|----------|--------------|----------|--------------|---------|
| <b>Sensible Cooling</b>                 | 11,100 Btu/h | 3.25 kW  | 17,000 Btu/h | 4.98 kW  | 24,600 Btu/h | 7.20 kW |
| <b>Latent Cooling</b>                   | 21,500 Btu/h | 6.30 kW  | 33,200 Btu/h | 9.73 kW  | 47,400 Btu/h | 13.9 kW |
| <b>Total Cooling</b>                    | 32,600 Btu/h | 9.55 kW  | 50,200 Btu/h | 14.71 kW | 72,000 Btu/h | 21.1 kW |
|   | 2.72 TR      |          | 4.18 TR      |          | 6.0 TR       |         |
| <b>Moisture Extraction</b>              | 2.38 Gal./h  |          | 3.67 Gal./h  |          | 5.23 Gal./h  |         |
| <b>Temperature Reduction</b>            | 35.0°F       |          | 32.2°F       |          | 29.0°F       |         |
| <b>Efficiency Rating <sup>(3)</sup></b> | 17.4 COP     | 59.3 EER | 26.7 COP     | 91 EER   | 26.2 COP     | 90 EER  |

### Physical Data

| Weights                    | Lb  | Lb  | Lb  |
|----------------------------|-----|-----|-----|
| Net                        | 419 | 430 | 452 |
| Operating (including LiCl) | 617 | 628 | 650 |

| Dimensions | Inch | Clearances | Inch |
|------------|------|------------|------|
| L          | 45   | I          | 40   |
| W          | 39   | II         | 20   |
| H          | 43   | III        | 4    |



#### Notes:

- Units are available in different voltages with 50 Hz.
- For a different climate and/or hot and cold water conditions please send data to manufacturer.
- COP/EER ratings are calculated without the units process fan. At hot water at 194°F, cold water at 42.8°F data includes electrical energy consumption only.
- At lower freezing point no pre cooling coil should be used. Post cooling coils should be carefully selected.
- Deviations for the above data (+/-) 5%.
- Specifications are subject to changes without prior notice.