

# TECHNICAL CHARACTERISTICS

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### TECHNICAL FEATURES OF TSUNAMI SERIES DRYERS

| RSD SERIES                    | UNITS       | 15                 | 20   | 35   | 50   | 51   | 75   | 100  | 150  | 175  | 220                | 300  |
|-------------------------------|-------------|--------------------|------|------|------|------|------|------|------|------|--------------------|------|
| Air flow rate                 | CFM         | 15                 | 20   | 35   | 50   | 60   | 75   | 100  | 150  | 175  | 220                | 300  |
|                               | m³/h        | 25                 | 34   | 59   | 85   | 102  | 127  | 170  | 254  | 297  | 374                | 510  |
| Power consumptions            | kW          | 0.18               | 0.18 | 0.23 | 0.23 | 0.34 | 0.34 | 0.61 | 0.82 | 0.82 | 1.04               | 1.38 |
| Full load consumptions        | kW          | 0.39               | 0.39 | 0.44 | 0.44 | 0.55 | 0.55 | 0.82 | 1.00 | 1.00 | 1.23               | 1.64 |
| Nominal current               | A           | 1.77               | 1.77 | 2.10 | 2.10 | 3.00 | 3.00 | 6.80 | 7.38 | 7.38 | 3.85               | 6.40 |
| Full load current             | A           | 2.47               | 2.47 | 2.80 | 2.80 | 3.70 | 3.70 | 7.50 | 8.91 | 8.91 | 4.59               | 7.63 |
| Locked rotor current          | A           | 8.50               | 8.50 | 10   | 10   | 12   | 12   | 16   | 42   | 42   | 30                 | 40   |
| Power supply                  | V/ph/<br>Hz | 115/1/60           |      |      |      |      |      |      |      |      | 230/1/60           |      |
| Air connection IN/OUT         | NPTF        | 3/4"               |      |      |      |      | 1"   |      |      |      | 1 1/2"             |      |
| Refrigerant type              |             | R134a              |      |      |      |      |      |      |      |      | R407c              |      |
| Charge                        | lbs         | 0.66               | 0.66 | 0.88 | 1.10 | 1.10 | 1.21 | 1.32 | 1.54 | 2.65 | 3.31               | 3.97 |
| Maximum inlet air temperature | °F          | 130                |      |      |      |      |      |      |      |      |                    |      |
| Maximum ambient temperature   | °F          | 115                |      |      |      |      |      |      |      |      |                    |      |
| Maximum inlet air pressure    | psi         | 232                |      |      |      |      |      |      |      |      |                    |      |
| Fan motor working pressure    | psi         | Start 159/Stop 116 |      |      |      |      |      |      |      |      | Start 290/Stop 232 |      |
| Sound level                   | dB          | <70                |      |      |      |      |      |      |      |      |                    |      |

### CORRECTION FACTORS

| Correction Factor for Inlet Air Pressure Changes |      |      |      |       |       |       |       |       |
|--------------------------------------------------|------|------|------|-------|-------|-------|-------|-------|
| Inlet Air Pressure (PSI)                         | 58.0 | 72.5 | 87.0 | 101.5 | 116.0 | 145.0 | 174.0 | 203.1 |
| Correction Factor                                | 0.77 | 0.86 | 0.93 | 1     | 1.05  | 1.14  | 1.21  | 1.27  |

| Correction Factor for Inlet Air Temperature Changes |     |      |    |      |      |      |      |
|-----------------------------------------------------|-----|------|----|------|------|------|------|
| Inlet Air Temperature (°F)                          | 77  | 86   | 95 | 104  | 113  | 122  | 131  |
| Correction Factor                                   | 1.2 | 1.11 | 1  | 0.81 | 0.67 | 0.55 | 0.45 |

| Correction Factor for Ambient Temperature Changes |    |      |      |      |      |
|---------------------------------------------------|----|------|------|------|------|
| Ambient Temperature (°F)                          | 77 | 86   | 95   | 104  | 113  |
| Correction Factor                                 | 1  | 0.95 | 0.88 | 0.72 | 0.68 |

| Correction Factor for Outlet Dew Point Changes |      |    |      |      |
|------------------------------------------------|------|----|------|------|
| Outlet Dew Point (°F)                          | 37.4 | 41 | 44.6 | 50   |
| Correction Factor                              | 0.91 | 1  | 1.11 | 1.26 |

Use dryer correction factors to calculate the inlet air flow rating with specific inlet conditions to maintain the outlet conditions from the refrigerated dryer.

To calculate the maximum inlet air flow for a specific application, multiply the listed maximum air flow of the dryer by the correction factors for inlet air pressure, inlet air temperature, ambient temperature, and the desired outlet dew point.

#### Example:

|                                     | Condition                      | Correction Factor |
|-------------------------------------|--------------------------------|-------------------|
| RSD-050 Max. Inlet Air Flow         | 50 CFM                         |                   |
| Inlet Air Pressure                  | 174 PSI                        | 1.21              |
| Inlet Air Temperature               | 77°F                           | 1.20              |
| Ambient Temperature                 | 95°F                           | 0.88              |
| Outlet Dew Point                    | 34.4°F                         | 0.91              |
|                                     |                                |                   |
| Multiply                            | 50 x 1.21 x 1.20 x 0.88 x 0.91 |                   |
|                                     |                                |                   |
| Corrected Dryer Max. Inlet Air Flow | 58.14 CFM                      |                   |