# DRYPOINT® RAx

## Premium Refrigeration Dryers

### Features and Benefits

**UNIQUE HEAT EXCHANGER:**
*vertical profile allows for minimum pressure drop and self cleans using gravitational force*

**VARIOFLOW HOT GAS BY-PASS:**
*stable dew point regardless of varying operating conditions - patented design*

**INTEGRATED BEKOMAT®:**
*reliable condensate discharge and maximum energy savings*

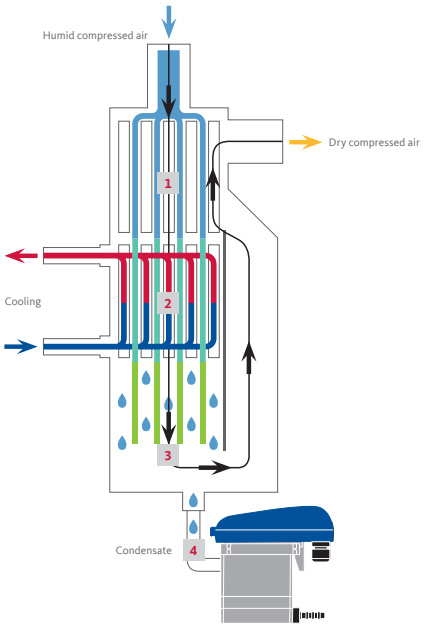




**ENERGY SAVING TECHNOLOGY:**
*oversized condensers and smaller high performance compressor maximize energy savings*

**MAINTENANCE FRIENDLY:**
*the entire range features an open frame that provides easy access to all components*

### Operating Principle

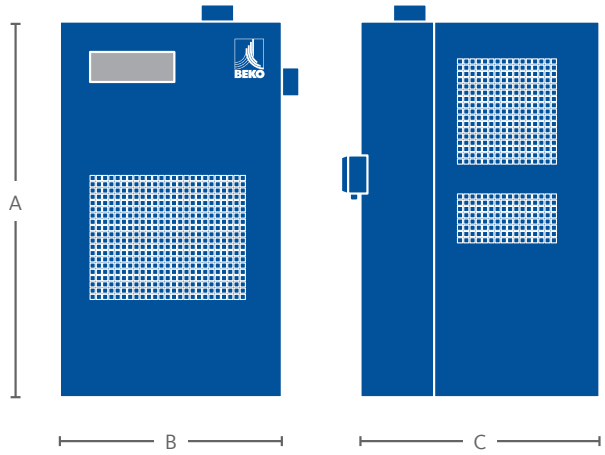



Warm compressed air, saturated with water vapor, is precooled in the air/air heat exchanger **(1)** when entering the refrigeration dryer. The required cooling capacity of the refrigerant in the downstream air/refrigerant heat exchanger **(2)** is reduced by this action and the system becomes more energy-efficient. The gravitational force sustains a particularly high droplet separation of nearly 99%. In the very large condensate collection chamber with subsequent recirculation, the flow velocity is significantly reduced. Re-entrainment of already separated droplets is reliably prevented in this manner **(3)**. The accumulated condensate is discharged from the DRYPOINT® RA via the level-controlled BEKOMAT® condensate drain avoiding any compressed air losses, and can be processed reliably using processing systems such as the QWIK-PURE® oil-water separation system or the BEKOSPLIT® emulsion-splitting plant **(4)**. Prior to leaving the DRYPOINT®, the dried and cold compressed air is reheated in the air/air heat exchanger. Through this process, the relative air humidity is significantly reduced and the cooling capacity employed is recovered by up to 60%.

# DRYPOINT® RAx Premium Refrigeration Dryers

equipped with all premium features including BEKOMAT® as standard

| | |
|---|---|
| **Standard outlet pressure dew point** | 38 °F |
| **Max. inlet air temperature** | 160 °F |
| **Min./ Max. ambient temperature** | 34/120 °F |
| **Max. inlet pressure** | |
| RAx 20-50 | 232 psig |
| RAx 75-7800 | 200 psig |
| **Required Pre-filtration** | 1.0 µm |
| **Recommended Post-filtration** | .01 µm |




| Model | Flow Rate (scfm) | Pressure Drop (psid) | Connection Size | Standard Voltage | Power Input (kW) | A (in) | B (in) | C (in) | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|---|
| RAx 20 | 20 | .44 | ½" NPT-F | 115V/1Ph | .26 | 29 | 14 | 17 | 62 |
| RAx 30 | 30 | 1.16 | ½" NPT-F | 115V/1Ph | .27 | 29 | 14 | 17 | 64 |
| RAx 50 | 50 | 1.60 | ½" NPT-F | 115V/1Ph | .39 | 29 | 14 | 17 | 75 |
| RAx 75 | 75 | 1.89 | 1" NPT-F | 115V/1Ph | .48 | 29 | 14 | 17 | 79 |
| RAx 100 | 100 | 2.47 | 1¼" NPT-F | 115V/1Ph | .58 | 32 | 19 | 18 | 82 |
| RAx 125 | 125 | 2.18 | 1¼" NPT-F | 115V/1Ph | 1.00 | 32 | 19 | 18 | 101 |
| RAx 150 | 150 | 2.90 | 1¼" NPT-F | 115V/1Ph | 1.05 | 32 | 19 | 18 | 110 |
| RAx 200 | 200 | 2.18 | 1½" NPT-F | 115V/1Ph | 1.10 | 35 | 22 | 23 | 121 |
| RAx 200 | 200 | 2.18 | 1½" NPT-F | 230V/1Ph | 1.10 | 35 | 22 | 23 | 121 |
| RAx 200 | 200 | 2.18 | 1½" NPT-F | 460V/3Ph | 1.22 | 35 | 22 | 23 | 121 |
| RAx 250 | 250 | 2.61 | 1½" NPT-F | 230V/1Ph | 1.39 | 35 | 22 | 23 | 139 |
| RAx 250 | 250 | 2.61 | 1½" NPT-F | 460V/3Ph | 1.38 | 35 | 22 | 23 | 139 |
| RAx 300 | 300 | 1.31 | 2" NPT-F | 230V/1Ph | 1.64 | 38 | 22 | 25 | 203 |
| RAx 300 | 300 | 1.31 | 2" NPT-F | 460V/3Ph | 1.41 | 38 | 22 | 25 | 203 |
| RAx 350 | 350 | 1.89 | 2" NPT-F | 230V/1Ph | 2.19 | 38 | 22 | 25 | 207 |
| RAx 350 | 350 | 1.89 | 2" NPT-F | 460V/3Ph | 1.80 | 38 | 22 | 25 | 207 |
| RAx 400 | 400 | 1.02 | 2 ½" NPT-F | 230V/1Ph | 2.48 | 44 | 26 | 29 | 331 |
| RAx 400 | 400 | 1.02 | 2 ½" NPT-F | 460V/3Ph | 2.70 | 44 | 26 | 29 | 331 |
| RAx 500 | 500 | 1.89 | 2 ½" NPT-F | 460V/3Ph | 2.97 | 44 | 26 | 29 | 355 |
| RAx 600 | 600 | 2.47 | 3" Flange | 460V/3Ph | 2.65 | 58 | 31 | 39 | 529 |
| RAx 800 | 800 | 3.05 | 3" Flange | 460V/3Ph | 3.25 | 58 | 31 | 39 | 534 |
| RAx 1000 | 1000 | 2.76 | 3" Flange | 460V/3Ph | 4.10 | 58 | 31 | 39 | 608 |
| RAx 1250 | 1250 | 3.77 | 3" Flange | 460V/3Ph | 4.60 | 58 | 31 | 39 | 686 |
| RAx 1500 | 1500 | 3.05 | 4" Flange | 460V/3Ph | 5.60 | 69 | 45 | 47 | 1021 |
| RAx 1750 | 1750 | 2.03 | 4" Flange | 460V/3Ph | 6.40 | 69 | 45 | 47 | 1186 |
| RAx 2000 | 2000 | 2.90 | 4" Flange | 460V/3Ph | 7.50 | 69 | 45 | 47 | 1190 |
| RAx 2500 | 2500 | 3.77 | 4" Flange | 460V/3Ph | 8.60 | 69 | 45 | 47 | 1349 |
| RAx 3000 | 3000 | 2.90 | 6" Flange | 460V/3Ph | 12.20 | 71 | 51 | 69 | 1830 |
| RAx 4000 | 4000 | 2.90 | 8" Flange | 460V/3Ph | 15.70 | 74 | 55 | 87 | 2330 |
| RAx 5000 | 5000 | 3.77 | 8" Flange | 460V/3Ph | 23.50 | 74 | 55 | 87 | 2650 |
| RAx 6300 | 6300 | 3.20 | 8" Flange | 460V/3Ph | 23.70 | 96 | 61 | 85 | 4040 |
| RAx 7800 | 7800 | 4.50 | 8" Flange | 460V/3Ph | 26.60 | 96 | 61 | 85 | 4430 |

## Correction Factors

| Operating Pressure psig | 60 | 80 | 100 | 120 | 140 | 160 | 180 | 200 |
|---|---|---|---|---|---|---|---|---|
| Correction Factor | .79 | .91 | 1.00 | 1.07 | 1.13 | 1.18 | 1.23 | 1.27 |

| Inlet Air Temperature °F | 90 | 100 | 110 | 120 | 130 | 140 | 150 | 160 |
|---|---|---|---|---|---|---|---|---|
| Correction Factor | 1.16 | 1.00 | .82 | .68 | .61 | .52 | .45 | .40 |

| Ambient Air Temperature °F | 80 | 90 | 100 | 105 | 110 | 115 | 120 |
|---|---|---|---|---|---|---|---|
| Correction Factor | 1.11 | 1.09 | 1.00 | .94 | .87 | .78 | .69 |

| Pressure Dew Point °F | 38 | 41 | 45 | 50 |
|---|---|---|---|---|
| Correction Factor | 1.00 | 1.08 | 1.20 | 1.36 |