Air Dryer Products
For Vehicles With Air Braking Systems
Racor Air Dryer Series
Improve Performance, Reduce Maintenance Cost

Braking systems used in commercial vehicles normally use air generated by on-board compressors. The nature of the operating environment, however, can lead to the generation of moisture in air lines that, in turn, can freeze or cause rust to form on internal metal surfaces. Over time, these problems can lead to increased maintenance costs, reduced braking efficiency and potentially failure in braking systems. Installing a Racor air dryer effectively removes moisture from the compressed air system and delivers clean, dry air to the brakes.

Racor’s air dryer provides vapor-free compressed air to a vehicle’s air brake system reservoir. These dryers are used in compressed air systems to improve the performance and safety of air braking units, and to reduce operator’s maintenance costs.

Some Value Added Features Include:
- Compact Design
- Uses Proprietary Desiccant
- Automatic Regeneration of Desiccant
- Integral Purge Chamber
- Available in a Number Of Sizes

DR Series
- Conventional type Air Dryer.
- No additional purge chamber is required.
- Heater is attached.

DU Series
- Pressure governor and check valve are integrated.
- No additional purge chamber is required.
- Heater is attached.

NX Series
- Pressure governor, check valve, and silencer are integrated.
- Protection Valve Unit is available as an option.
- Turbo cut-off valve is available.
- No additional purge chamber is required.
- Heater is attached.

Desiccant
Racor proprietary high performance desiccant absorbs more moisture and is more durable than the competition for better performance and longer service life.
**DU Series**

**DU-4**
Class 6 and under (also for air suspension, hydraulic brake system), GVW less than 26,000 lbs.

**DU-3** (standard)
Class 7, GVW from 26,001 to 33,000 lbs.

<table>
<thead>
<tr>
<th><strong>Inlet/Outlet Ports</strong></th>
<th>1/2&quot; NPTF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard Flow Per Cycle</strong></td>
<td>3,051 in.$^3$ (60L)</td>
</tr>
<tr>
<td><strong>Desiccant Weight</strong></td>
<td>0.4 lbs (0.2 kg)</td>
</tr>
<tr>
<td><strong>Regenerate Time Required</strong></td>
<td>30 seconds</td>
</tr>
<tr>
<td><strong>Purge Chamber Capacity</strong></td>
<td>61 in.$^3$ (1.0L)</td>
</tr>
<tr>
<td><strong>Height</strong></td>
<td>11.9 in. (30.1 cm)</td>
</tr>
<tr>
<td><strong>Width</strong></td>
<td>6.32 in. (16.1 cm)</td>
</tr>
<tr>
<td><strong>Approx. Weight</strong></td>
<td>7.9 lbs (3.6 kg)</td>
</tr>
<tr>
<td><strong>Also Included:</strong></td>
<td></td>
</tr>
<tr>
<td>Heater (12V)</td>
<td>Yes (70W)</td>
</tr>
<tr>
<td>Purge Chamber</td>
<td>Yes</td>
</tr>
<tr>
<td>Pressure Governor</td>
<td>Yes</td>
</tr>
<tr>
<td>Check Valve</td>
<td>Yes</td>
</tr>
<tr>
<td>Silencer</td>
<td>No</td>
</tr>
<tr>
<td><strong>Governor Cut-Out Pressure</strong></td>
<td>100-129 PSI (6.9-8.9 bar)</td>
</tr>
<tr>
<td><strong>Governor</strong></td>
<td>14.5 PSI (1.0 bar)</td>
</tr>
<tr>
<td><strong>Differential Pressure</strong></td>
<td>18.8 PSI (1.3 bar)</td>
</tr>
<tr>
<td><strong>Air Reservoir Volume</strong></td>
<td>13 gal (at 14.5 PSI)</td>
</tr>
<tr>
<td><strong>Ambient Temp. Range</strong></td>
<td>-22°F to +158°F (-30°C to +70°C)</td>
</tr>
</tbody>
</table>

Notes: $^1$Inlet temperature at 140°F (60°C).

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<table>
<thead>
<tr>
<th><strong>Inlet/Outlet Ports</strong></th>
<th>1/2&quot; NPTF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard Flow Per Cycle</strong></td>
<td>6,041 in.$^3$ (89L)</td>
</tr>
<tr>
<td><strong>Desiccant Weight</strong></td>
<td>1.1 lbs (0.5 kg)</td>
</tr>
<tr>
<td><strong>Regenerate Time Required</strong></td>
<td>50 seconds</td>
</tr>
<tr>
<td><strong>Purge Chamber Capacity</strong></td>
<td>85 in.$^3$ (1.4L)</td>
</tr>
<tr>
<td><strong>Height</strong></td>
<td>12.8 in. (32.4 cm)</td>
</tr>
<tr>
<td><strong>Width</strong></td>
<td>7.1 in. (18.1 cm)</td>
</tr>
<tr>
<td><strong>Approx. Weight</strong></td>
<td>12.3 lbs (5.6 kg)</td>
</tr>
<tr>
<td><strong>Also Included:</strong></td>
<td></td>
</tr>
<tr>
<td>Heater (12V)</td>
<td>Yes (70W)</td>
</tr>
<tr>
<td>Purge Chamber</td>
<td>Yes</td>
</tr>
<tr>
<td>Pressure Governor</td>
<td>Yes</td>
</tr>
<tr>
<td>Check Valve</td>
<td>Yes</td>
</tr>
<tr>
<td>Silencer</td>
<td>No</td>
</tr>
<tr>
<td><strong>Governor Cut-Out Pressure</strong></td>
<td>100-129 PSI (6.9-8.9 bar)</td>
</tr>
<tr>
<td><strong>Governor</strong></td>
<td>14.5 PSI (1.0 bar)</td>
</tr>
<tr>
<td><strong>Differential Pressure</strong></td>
<td>18.8 PSI (1.3 bar)</td>
</tr>
<tr>
<td><strong>Air Reservoir Volume</strong></td>
<td>26 gal (at 14.5 PSI)</td>
</tr>
<tr>
<td><strong>Ambient Temp. Range</strong></td>
<td>-22°F to +158°F (-30°C to +70°C)</td>
</tr>
</tbody>
</table>

Notes: $^1$Inlet temperature at 140°F (60°C).
### DU-3 (extended)

Class 7, GVW from 26,001 to 33,000 lbs.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inlet/Outlet Ports</strong></td>
<td>1/2&quot; NPTF</td>
</tr>
<tr>
<td><strong>Standard Flow Per Cycle(^\d)</strong></td>
<td>9,459 in.(^3) (155L)</td>
</tr>
<tr>
<td><strong>Desiccant Weight</strong></td>
<td>1.8 lbs (0.8 kg)</td>
</tr>
<tr>
<td><strong>Regenerate Time Required</strong></td>
<td>40 seconds</td>
</tr>
<tr>
<td><strong>Purge Chamber Capacity</strong></td>
<td>85 in.(^3) (1.4L)</td>
</tr>
<tr>
<td><strong>Height</strong></td>
<td>13.4 in. (34.0 cm)</td>
</tr>
<tr>
<td><strong>Width</strong></td>
<td>7.1 in. (18.1 cm)</td>
</tr>
<tr>
<td><strong>Approx. Weight</strong></td>
<td>12.3 lbs (5.6 kg)</td>
</tr>
<tr>
<td><strong>Also Included:</strong></td>
<td></td>
</tr>
<tr>
<td>Heater (12V)</td>
<td>Yes (70W)</td>
</tr>
<tr>
<td>Purge Chamber</td>
<td>Yes</td>
</tr>
<tr>
<td>Pressure Governor</td>
<td>Yes</td>
</tr>
<tr>
<td>Check Valve</td>
<td>Yes</td>
</tr>
<tr>
<td>Silencer</td>
<td>No</td>
</tr>
<tr>
<td><strong>Governor Cut-Out Pressure</strong></td>
<td>100-129 PSI (6.9-8.9 bar)</td>
</tr>
<tr>
<td><strong>Governor Differential Pressure</strong></td>
<td>14.5 PSI (1.0 bar)</td>
</tr>
<tr>
<td><strong>Air Reservoir Volume</strong></td>
<td>40 gal (at 14.5 PSI)</td>
</tr>
<tr>
<td><strong>Ambient Temp. Range</strong></td>
<td>-22°F to +158°F (-30°C to +70°C)</td>
</tr>
</tbody>
</table>

Notes: \(^\d\)Inlet temperature at 140°F (60°C).

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### DU-5

Class 8, GVW from 33,001 to 44,000 lbs.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inlet/Outlet Ports</strong></td>
<td>1/2&quot; NPTF</td>
</tr>
<tr>
<td><strong>Standard Flow Per Cycle(^\d)</strong></td>
<td>11,594 in.(^3) (190L)</td>
</tr>
<tr>
<td><strong>Desiccant Weight</strong></td>
<td>2.4 lbs (1.1 kg)</td>
</tr>
<tr>
<td><strong>Regenerate Time Required</strong></td>
<td>50 seconds</td>
</tr>
<tr>
<td><strong>Purge Chamber Capacity</strong></td>
<td>165 in.(^3) (2.7L)</td>
</tr>
<tr>
<td><strong>Height</strong></td>
<td>14.9 in. (38.0 cm)</td>
</tr>
<tr>
<td><strong>Width</strong></td>
<td>8.8 in. (22.3 cm)</td>
</tr>
<tr>
<td><strong>Approx. Weight</strong></td>
<td>21.1 lbs (9.6 kg)</td>
</tr>
<tr>
<td><strong>Also Included:</strong></td>
<td></td>
</tr>
<tr>
<td>Heater (12V)</td>
<td>Yes (70W)</td>
</tr>
<tr>
<td>Purge Chamber</td>
<td>Yes</td>
</tr>
<tr>
<td>Pressure Governor</td>
<td>Yes</td>
</tr>
<tr>
<td>Check Valve</td>
<td>Yes</td>
</tr>
<tr>
<td>Silencer</td>
<td>No</td>
</tr>
<tr>
<td><strong>Governor Cut-Out Pressure</strong></td>
<td>100-139 PSI (6.9-9.6 bar)</td>
</tr>
<tr>
<td><strong>Governor Differential Pressure</strong></td>
<td>14.5 PSI (1.0 bar)</td>
</tr>
<tr>
<td><strong>Air Reservoir Volume</strong></td>
<td>50 gal (at 14.5 PSI)</td>
</tr>
<tr>
<td><strong>Ambient Temp. Range</strong></td>
<td>-22°F to +158°F (-30°C to +70°C)</td>
</tr>
</tbody>
</table>

Notes: \(^\d\)Inlet temperature at 140°F (60°C).
### DR-6

- **Inlet/Outlet Ports**: 1/2” NPTF
- **Standard Flow Per Cycle**: 24,409 in.³ (400L)
- **Desiccant Weight**: 4.0 lbs (1.8 kg)
- **Regenerate Time Required**: 60 seconds
- **Purge Chamber Capacity**: 208 in.³ (3.4L)
- **Height**: 13.7 in. (34.9 cm)
- **Width**: 9.8 in. (24.8 cm)
- **Approx. Weight**: 30.1 lbs (13.7)

**Also Included:**
- Heater (12V): Yes (100W)
- Purge Chamber: Yes
- Pressure Governor: No
- Check Valve: No
- Silencer: No

**Governor Cut-Out Pressure**: 139 PSI (9.6 bar)

**Governor Differential Pressure**: n/a

**Air Reservoir Volume**: n/a

**Ambient Temp. Range**: -22°F to +158°F (-30°C to +70°C)

Notes: †Inlet temperature at 140°F (60°C), ††Applicable pressure Class 6 and under (also for air suspension, hydraulic brake system), GVW less than 26,000 lbs.

### DR-42

- **Inlet/Outlet Ports**: 1/2” RC
- **Standard Flow Per Cycle**: 3,051 in.³ (50L)
- **Desiccant Weight**: 0.4 lbs (0.2 kg)
- **Regenerate Time Required**: 30 seconds
- **Purge Chamber Capacity**: 61 in.³ (1.0L)
- **Height**: 9.3 in. (23.6 cm)
- **Width**: 6.3 in. (16.1 cm)
- **Approx. Weight**: 6.2 lbs (2.8 kg)

**Also Included:**
- Heater (12V): Yes (70W)
- Purge Chamber: Yes
- Pressure Governor: No
- Check Valve: No
- Silencer: No

**Governor Cut-Out Pressure**: 139 PSI (9.6 bar)

**Governor Differential Pressure**: n/a

**Air Reservoir Volume**: n/a

**Ambient Temp. Range**: -22°F to +158°F (-30°C to +70°C)

Notes: †Inlet temperature at 140°F (60°C).
### NX-65

**Inlet/Outlet Ports**
- 1/2" NPTF

**Standard Flow Per Cycle†**
- 26,850 in.³ (440L)™

**Desiccant Weight**
- (1.6mm standard) 1.8 lbs (0.8 kg)

**Regenerate Time Required**
- 60 seconds

**Purge Chamber Capacity**
- 183 in.³ (3.0L)

**Height**
- 12.8 in. (32.6 cm)

**Width**
- 7.5 in. (19.0 cm)

**Approx. Weight**
- 19.8 lbs (9.0 kg)

**Also Included:**
- Heater (12V)
- Yes (70W)
- Purge Chamber
- Yes
- Pressure Governor
- Yes
- Check Valve
- Yes
- Silencer
- Yes

**Governor Cut-Out Pressure**
- 116-174 PSI (8-12 bar)

**Governor Differential Pressure**
- 13 to 29 PSI (0.9 to 2.0 bar)

**Air Reservoir Volume**
- Depends on governor differential pressure

**Ambient Temp. Range**
- -22°F to +158°F (-30°C to +70°C)

**Notes:**
- †Inlet temperature at 140°F (60°C), ™Governor cut-out pressure 159 PSI (11 bar).

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### Air Dryer Service Kits

<table>
<thead>
<tr>
<th>Group</th>
<th>Racor Base Part Number</th>
<th>Full Kit</th>
<th>Cartridge Kit</th>
<th>Desiccant Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>DU-4</td>
<td>AD-DU4</td>
<td>AD-DU4-FKIT</td>
<td>AD-DU4-CKIT</td>
<td>AD-DU4-DKIT</td>
</tr>
<tr>
<td>DR-42</td>
<td>AD-DR42</td>
<td>AD-DR42-FKIT</td>
<td>AD-DR42-CKIT</td>
<td>AD-DR42-DKIT</td>
</tr>
<tr>
<td>DU-3</td>
<td>AD-DU3</td>
<td>AD-DU3-FKIT</td>
<td>AD-DU3-CKIT</td>
<td>AD-DU3-DKIT</td>
</tr>
<tr>
<td>DU-3 EXT</td>
<td>AD-DU3-EXT</td>
<td>AD-DU3-EXT-FKIT</td>
<td>AD-DU3-EXT-CKIT</td>
<td>AD-DU3-EXT-DKIT</td>
</tr>
<tr>
<td>DU-5</td>
<td>AD-DU5</td>
<td>AD-DU5-FKIT</td>
<td>AD-DU5-CKIT</td>
<td>AD-DU5-DKIT</td>
</tr>
<tr>
<td>DR-6</td>
<td>AD-DR6</td>
<td>AD-DR6-FKIT</td>
<td>AD-DR6-CKIT</td>
<td>AD-DR6-DKIT</td>
</tr>
<tr>
<td>NX-65</td>
<td>AD-NX65</td>
<td>AD-NX65-FKIT</td>
<td>AD-NX65-CKIT</td>
<td>AD-NX65-DKIT</td>
</tr>
</tbody>
</table>
At Parker, we’re guided by a relentless drive to help our customers become more productive and achieve higher levels of profitability by engineering the best systems for their requirements. It means looking at customer applications from many angles to find new ways to create value. Whatever the motion and control technology need, Parker has the experience, breadth of product and global reach to consistently deliver. No company knows more about motion and control technology than Parker.

For further info call 1 800 C-Parker (1 800 272 7537).

PARKER'S MOTION & CONTROL TECHNOLOGIES

**Key Products**
- Flight control systems & components
- Fluid conveyance systems
- Fuel systems & components
- Hydraulic systems & components
- Inert nitrogen generating systems
- Pneumatic systems & components
- Wheels & brakes

**Key Markets**
- Aerospace
- Agriculture
- Bulk chemical handling
- Construction machinery
- Food & beverage
- Fuel & gas delivery
- Industrial machinery
- Mobile
- Oil & gas
- Transportation
- Welding

**Key Products**
- Quick disconnects
- Rubber & thermoplastic hose & couplings
- Tube fittings & adapters
- Quick disconnects

**CLIMATE CONTROL**

**Key Markets**
- Agriculture
- Air conditioning
- Food & beverage & dairy
- Life sciences & medical
- Precision cooling
- Processing
- Transportation

**Key Products**
- CO2 controls
- Electronic controllers
- Filter driers
- Hand shut-off valves
- Pressure regulating valves
- Refrigerant distributors
- Safety relief valves
- Solenoid valves
- Thermostatic expansion valves

**Key Products**
- Aircraft engines
- Business & general aviation
- Commercial transports
- Land-based weapons systems
- Military aircraft
- Missiles & launch vehicles
- Regional transports
- Unmanned aerial vehicles

**HYDRAULICS**

**Key Markets**
- Aerospace
- Aerial lift
- Agriculture
- Construction machinery
- Forestry
- Industrial machinery
- Mining
- Oil & gas
- Power generation & energy
- Truck hydraulics

**Key Products**
- Brass fittings & valves
- Diagnostic equipment
- Fluid conveyance systems
- Industrial hose
- PTFE & PFA hose, tubing & plastic fittings
- Rubber & thermoplastic hose & couplings
- Tube fittings & adapters
- Quick disconnects

**AEROSPACE**

**Key Markets**
- Aerospace engines
- Business & general aviation
- Commercial transports
- Land-based weapons systems
- Military aircraft
- Missiles & launch vehicles
- Regional transports
- Unmanned aerial vehicles

**Key Products**
- Air preparation
- Compact cylinders
- Field bus valve systems
- Grippers
- Guided cylinders
- Manifolds
- Miniature fluidics
- Pneumatic accessories
- Pneumatic actuators & grippers
- Pneumatic valves & controls
- Rodless cylinders
- Rotary actuators
- Tie rod cylinders
- Vacuum generators, cups & sensors

**PROCESS CONTROL**

**Key Markets**
- Chemical & refining
- Food, beverage & dairy
- Medical & dental
- Microelectronics
- Oil & gas
- Power generation

**Key Products**
- Analytical sample conditioning products & systems
- Fluoropolymer chemical delivery fittings, valves & pumps
- High purity gas delivery fittings, valves & regulators
- Instrumentation fittings, valves & regulators
- Medium pressure fittings & valves
- Process control manifolds

**FILTRATION**

**Key Markets**
- Food & beverage
- Industrial machinery
- Life sciences
- Marine
- Mobile equipment
- Oil & gas
- Power generation
- Process
- Transportation

**Key Products**
- Analytical gas generators
- Compressed air & gas filters
- Condition monitoring
- Engine air, fuel & oil filtration & systems
- Hydraulic, lubrication & coolant filters
- Process, chemical, water & microfiltration filters
- Nitrogen, hydrogen & zero air generators

**SEALING & SHIELDING**

**Key Markets**
- Aerospace
- Chemical processing
- Consumer
- Energy, oil & gas
- Fluid power
- General Industrial
- Information technology
- Life sciences
- Military
- Semiconductor
- Telecommunications
- Transportation

**Key Products**
- Dynamic seals
- Elastomeric o-rings
- EMI shielding
- Extruded & precision-cut, fabricated elastomeric seals
- Homogenous & inserted elastomeric shapes
- High temperature metal seals
- Metal & plastic retained composite seals
- Thermal management

**ELECTROMECHANICAL**

**Key Markets**
- Aerospace
- Factory automation
- Food & beverage
- Life sciences & medical
- Machine tools
- Packaging machinery
- Paper machinery
- Plastics machinery & converting
- Primary metals
- Semiconductors & electronics
- Textile
- Wire & cable

**Key Products**
- AD/CDC drives & systems
- Electric actuators
- Controllers
- Gantry robots
- Gearheads
- Human machine interfaces
- Industrial PCs
- Inverters
- Linear motors, slides and stages
- Precision stages
- Stepper motors
- Servo motors, drives & controls
- Structural extrusions

**PNEUMATICS**

**Key Markets**
- Aerospace
- Conveyor & material handling
- Factory automation
- Food & beverage
- Life sciences & medical
- Machine tools
- Packaging machinery
- Transportation & automotive

**Key Products**
- Air preparation
- Compact cylinders
- Field bus valve systems
- Grippers
- Guided cylinders
- Manifolds
- Miniature fluidics
- Pneumatic accessories
- Pneumatic actuators & grippers
- Pneumatic valves & controls
- Rodless cylinders
- Rotary actuators
- Tie rod cylinders
- Vacuum generators, cups & sensors