



SPECIFICATION SHEET

## DR80D(-)T Single-Stage Series DOWNFLOW GAS FURNACE



**80% A.F.U.E.†**  
**INPUT RATES 50 TO 125 kBTU**

### PRODUCT FEATURES

- 80% residential Gas Furnace CSA certified
- 7 Segment LED all units
- Direct spark ignition for reliability and longevity
- Heat exchanger is removable for improved serviceability. Aluminized steel construction provides maximum corrosion resistance and thermal fatigue reliability.
- Low profile 34" cabinet ideal for space constrained installations
- Integrated Control board features dip switches for easy system set up
- QR code for quick access to product information from your smart phone or tablet
- Constant Torque electrically commutated motor

†A.F.U.E. (Annual Fuel Utilization Efficiency) calculated in accordance with Department of Energy test procedures.

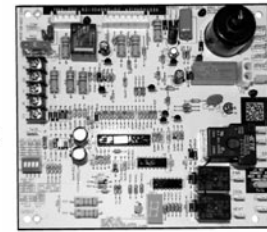




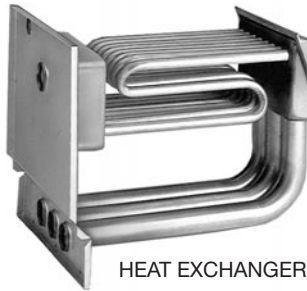
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CONSTANT TORQUE ECM MOTOR

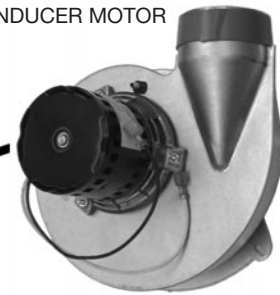


INTEGRATED  
FURNACE  
CONTROL



HEAT EXCHANGER

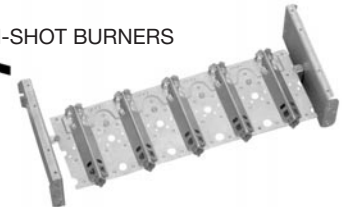
DRAFT INDUCER MOTOR



DIRECT SPARK IGNITOR  
WITH REMOTE SENSE



IN-SHOT BURNERS



## STANDARD EQUIPMENT

Completely assembled and wired; induced draft; pressure switch; redundant main gas control; blower compartment door safety switch; solid state time on/time off blower control; limit control; manual shut-off valve, pressure regulator for natural and L.P. (propane) gas; transformer; direct drive multi-speed blower motor. Furnaces are equipped with cooling/heating relay and transformer (40VA) ready for air conditioning applications. (Please note: a thermostat is not included as standard equipment.) Flame sensor diagnostics; on-board twinning; fused-protection (secondary), **3rd speed option for continuous fan; common heat/cool terminal.**

## OPTIONAL EQUIPMENT

NOTE: Furnace is not listed for use with fuels other than natural or L.P. (propane) gas.

**The complete terms of limited and other warranties are available at our sales office, or through local installer.**

All models can be converted by a qualified Durastar distributor or local service dealer to use L.P. (propane) gas without changing burners. Factory approved kits must be used to convert from natural to L.P. (propane) gas and may be ordered as optional accessories from a Durastar parts distributor.

For L.P. (propane) operation, refer to Conversion Kit Index Form.

NOTE: For natural and L.P. (propane) gas models, direct spark ignition is 100% lockout type.

## WARNING

THIS FURNACE IS NOT APPROVED  
OR RECOMMENDED  
FOR USE IN MOBILE HOMES



## Model Features

- 80% residential Gas Furnace CSA certified
- 7 Segment LED all units
- DSI for reliability and longevity
- Heat exchanger is removable for improved serviceability. Aluminized steel construction provides maximum corrosion resistance and thermal fatigue reliability.
- Low profile 34" cabinet ideal for space constrained installations
- Integrated Controls board features dip switches for easy system set up
- QR code for quick access to product information from your smart phone or tablet
- Constant Torque electrically commutated motor

## Physical Data and Specifications

### U.S. and Canadian Models

| MODEL NUMBERS<br>DR80D(-)T SERIES                            | 0501314SA                             | 0751317SA               | 0751521SA             | 1001521SA             | 1251524SA             |
|--|---------------------------------------|-------------------------|-----------------------|-----------------------|-----------------------|
| Input in BTU's/Hr [kW] ②                                     | 50,000 [15]                           | 75,000 [22]             | 75,000 [22]           | 100,000 [29]          | 125,000 [37]          |
| Heating Capacity in BTU's/Hr [kW] ①                          | 40,000 [12]                           | 60,000 [18]             | 60,000 [18]           | 80,000 [23]           | 100,000 [29]          |
| Heat Ext. Static Pressure in wc [kPa]                        | .10 [.025]                            | 0.12 [0.029]            | 0.12 [0.029]          | 0.15 [0.037]          | 0.2 [0.05]            |
| Blower (D x W) in inches [mm]                                | 11 x 6 [279 x 152]                    | 11 x 7 [279 x 178]      | 11 x 10 [279 x 254]   | 11 x 10 [279 x 254]   | 11 x 10 [279 x 254]   |
| Motor H.P.-Speeds - Type [W]                                 | 1/2 hp [373] 5 Spd<br>Constant Torque | 1/2hp, 5spd, X-13 [373] | 1hp, 5spd, X-13 [746] | 1hp, 5spd, X-13 [746] | 1hp, 5spd, X-13 [746] |
| Min. Circuit Ampacity  | 9                                     | 9                       | 13                    | 12                    | 15                    |
| Min. Overload Protection                                     | 15                                    | 15                      | 15                    | 15                    | 20                    |
| Max. Overload Protection                                     | 15                                    | 15                      | 20                    | 15                    | 25                    |
| Heating Speed (factory setting)                              | MED-LOW                               | MED-HIGH                | MED                   | MED-HIGH              | MED-HIGH              |
| Cooling Speed (factory setting)                              | HIGH                                  | HIGH                    | HIGH                  | HIGH                  | HIGH                  |
| Cooling in CFM [L/s] @ 0.5 wc<br>[0.12 kPa] E.S.P. (nominal) | 1301[614]                             | 1200 [566]              | 2000 [944]            | 2000 [944]            | 2000 [944]            |
| Rated E.S.P. in wc [kPa]                                     | 0.5 [.12]                             | 0.5 [0.12]              | 0.5 [0.12]            | 0.5 [0.12]            | 0.5 [0.12]            |
| Temperature Rise Range in °F [°C]                            | 25-55 [13.9-30.6]                     | 35-65 [19.4-36.1]       | 25-55 [13.9-30.6]     | 30-60 [17-33]         | 35-65 [19.4-36.1]     |
| Max Outlet Air in °F [°C]                                    | 155 [68.3]                            | 190 [87.7]              | 165 [73.8]            | 190 [87.7]            | 185 [85.0]            |
| Approx. Shipping Weight in Lbs. [kg]                         | 85 [38.6]                             | 105 [48]                | 120 [54]              | 120 [54]              | 140 [63]              |
| AFUE - Electronic Ignition Modules ①                         | 80%                                   | 80%                     | 80%                   | 80%                   | 80%                   |

NOTES: All models are 115V, 60HZ, 1Ø. Gas connection size for all models is 1/2" N.P.T.

① In accordance with D.O.E. test procedures.

② See Conversion Kit Index Form for high altitude derate in U.S. applications.

This furnace does not meet air district requirements of 14 ng/J NOx emissions limit, and thus is subject to a mitigation fee of up to \$450. This furnace is not eligible for the Clean Air Furnace Rebate Program: [www.CleanAirFurnaceRebate.com](http://www.CleanAirFurnaceRebate.com).

This furnace is to be installed for propane firing only in air districts requiring 14 ng/J NOx emission limits. Operating in natural gas mode is in violation of these Rules.

[ ] Designates Metric Conversions

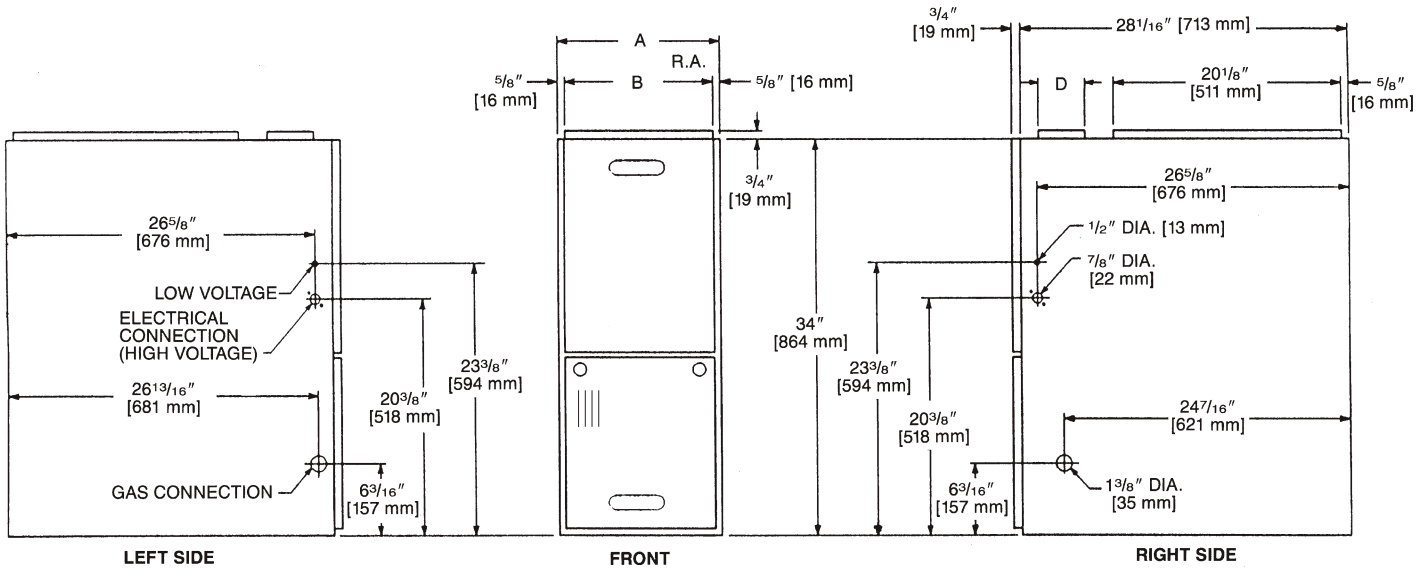
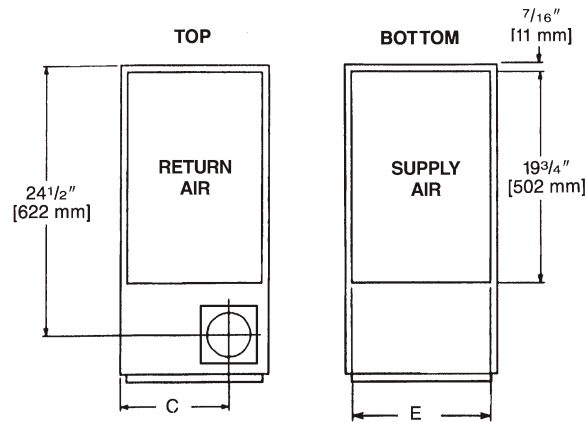


## Model Number Identification—Downflow Models

| <u>DR</u> | <u>80</u>        | <u>D</u>                    | <u>A</u>            | <u>T</u>                      | <u>050</u>  | <u>1</u>          | <u>3</u>   | <u>14</u>  | <u>S</u>     | <u>A</u>  |
|-----------|------------------|-----------------------------|---------------------|-------------------------------|---|-------------------|--|--|--------------|---|
| Durastar  | 80 =<br>80% AFUE | Configuration -<br>Downflow | Revision<br>R&D - A | Motor -<br>Constant<br>Torque | Input<br><u>BTU/HR [kW]</u><br>050 = 50,000 [14.7]<br>075 = 75,000 [22.0]<br>100 = 100,000 [29.0]<br>125 = 125,000 [37.0] | Stage -<br>Single | 3 = Up to<br>3 Ton<br>4 = 2 1/2 to<br>4 Ton<br>5 = 3 1/2 to<br>5 Ton | Cabinet<br>Width<br>14 = 14"<br>17 = 17.5"<br>21 = 21"<br>24 = 24.5" | S = Standard | Revision-<br>Marketing<br>A – First Time<br>Release |

[ ] Designates Metric Conversions

## Downflow Dimensions



## Dimensional Data

| MODEL<br>DR80D(-)T<br>(DOWNFLOW)<br>SERIES | A                                    | B                                      | C                                    | D | E                                    | REDUCED CLEARANCES (IN.) [mm] |               |      |        |        |           |                            |
|--|--------------------------------------|--|--------------------------------------|---|--------------------------------------|-------------------------------|---------------|------|--------|--------|-----------|----------------------------|
|  |                                      |  |                                      |   |                                      | LEFT<br>SIDE                  | RIGHT<br>SIDE | BACK | TOP    | FRONT  | VENT      | SHIP. WGTS.<br>(LBS.) [kg] |
| 050  | 14 [356]                             | 27 <sup>27</sup> / <sub>32</sub> [326] | 10 <sup>3</sup> / <sub>8</sub> [264] | ① | 13 <sup>1</sup> / <sub>8</sub> [333] | 0                             | 4 ②           | 0    | 1 [25] | 3 [76] | 6 [152]   | 85 [38.6]                  |
| 075317                                     | 17 <sup>1</sup> / <sub>2</sub> [445] | 16 <sup>11</sup> / <sub>32</sub> [415] | 12 <sup>1</sup> / <sub>8</sub> [308] | ① | 16 <sup>5</sup> / <sub>8</sub> [422] | 0                             | 3 ②           | 0    | 1 [25] | 3 [76] | 6 [152]   | 105 [47.6]                 |
| 075521                                     | 21 [533]                             | 19 <sup>27</sup> / <sub>32</sub> [504] | 13 <sup>7</sup> / <sub>8</sub> [352] | ① | 20 <sup>1</sup> / <sub>8</sub> [511] | 0                             | 0             | 0    | 1 [25] | 3 [76] | 6 [152] ③ | 120 [54.4]                 |
| 100  | 21 [533]                             | 19 <sup>27</sup> / <sub>32</sub> [504] | 13 <sup>7</sup> / <sub>8</sub> [352] | ① | 20 <sup>1</sup> / <sub>8</sub> [511] | 0                             | 0             | 0    | 1 [25] | 3 [76] | 6 [152] ③ | 120 [54.4]                 |
| 125  | 24 <sup>1</sup> / <sub>2</sub> [622] | 23 <sup>11</sup> / <sub>32</sub> [593] | 15 <sup>5</sup> / <sub>8</sub> [397] | ① | 23 <sup>5</sup> / <sub>8</sub> [600] | 0                             | 0             | 0    | 1 [25] | 3 [76] | 6 [152] ③ | 140 [63.5]                 |

NOTES: ① May require a 3" [76 mm] to 4" [102 mm] or 3" [76 mm] to 5" [127 mm] adapter.

② May be 0" [0 mm] with type B vent.

③ May be 1" [25 mm] with type B vent.

Furnaces must be vented in accordance with the National Fuel Gas Code, ANSI Z223.1 and in accordance with local codes.

[ ] Designates Metric Conversions



## Blower Performance Data—Downflow Models

| AIR FLOW PERFORMANCE - DR80D(-)T SINGLE-STAGE SERIES (Downflow) MODELS |                                |              |  |               |               |              |               |               |               |              |              |              |
|--|--------------------------------|--------------|--|---------------|---------------|--------------|---------------|---------------|---------------|--------------|--------------|--------------|
| INPUT<br>(Btu)<br>CABINET<br>WIDTH (in)                                | AIRFLOW<br>CONTROL<br>SETTINGS | SPEED<br>TAP | CFM [L/s] AIR DELIVERY<br>EXTERNAL STATIC PRESSURE INCHES WATER COLUMN [kPa] |               |               |              |               |               |               |              |              |              |
|  |                                |              | 0.1<br>[0.02]  | 0.2<br>[0.05] | 0.3<br>[0.07] | 0.4<br>[.10] | 0.5<br>[0.12] | 0.6<br>[0.15] | 0.7<br>[0.17] | 0.8<br>[.19] | 0.9<br>[.22] | 1.0<br>[.25] |
|  |                                |              | 50k<br>14"   | CIRC FAN      | LOW           | 889          | 770           | 615           | 475           | 428          | 377          | 335          |
| HEAT OR<br>HEAT/COOL   | MED. LO                        | 1029         |  | 989           | 954           | 918          | 884           | 841           | 798           | 759          | 722          | 679          |
| COOL   | MEDIUM                         | 1190         |  | 1155          | 1116          | 1083         | 1059          | 1032          | 1000          | 971          | 939          | 904          |
| COOL   | MED. HIGH                      | 1364         |  | 1329          | 1310          | 1288         | 1264          | 1228          | 1205          | 1176         | 1155         | 1117         |
| COOL   | HIGH                           | 1419         |  | 1395          | 1362          | 1336         | 1309          | 1298          | 1271          | 1249         | 1222         | 1192         |
| 75k<br>17"   | CIRC FAN                       | LOW          | 940  | 812           | 673           | 619          | 566           | 508           | 457           | 403          | 362          | 326          |
|  | COOL                           | MED. LO      | 1013   | 968           | 916           | 875          | 824           | 772           | 729           | 683          | 642          | 605          |
|  | COOL                           | MEDIUM       | 1222   | 1184          | 1126          | 1089         | 1051          | 1016          | 971           | 939          | 897          | 864          |
|  | HEAT OR<br>HEAT/COOL           | MED. HIGH    | 1384   | 1348          | 1310          | 1269         | 1235          | 1206          | 1171          | 1139         | 1109         | 1076         |
|  | COOL                           | HIGH         | 1510   | 1471          | 1439          | 1407         | 1374          | 1342          | 1310          | 1285         | 1255         | 1213         |
| 75k<br>21"   | CIRC FAN                       | LOW          | 1231   | 1108          | 1040          | 982          | 915           | 855           | 798           | 738          | 690          | 642          |
|  | COOL                           | MED. LO      | 1413   | 1346          | 1297          | 1242         | 1190          | 1141          | 1088          | 1039         | 992          | 939          |
|  | HEAT OR<br>HEAT/COOL           | MEDIUM       | 1616   | 1563          | 1516          | 1466         | 1425          | 1370          | 1327          | 1289         | 1245         | 1204         |
|  | COOL                           | MED. HIGH    | 1925   | 1879          | 1839          | 1798         | 1764          | 1721          | 1678          | 1639         | 1599         | 1569         |
|  | COOL                           | HIGH         | 2154   | 2117          | 2074          | 2041         | 2008          | 1969          | 1933          | 1881         | 1804         | 1715         |
| 100k<br>21"  | CIRC FAN                       | LOW          | 1236   | 1117          | 1051          | 995          | 942           | 873           | 820           | 770          | 713          | 670          |
|  | COOL                           | MED. LO      | 1360   | 1300          | 1255          | 1203         | 1152          | 1101          | 1059          | 1011         | 954          | 924          |
|  | COOL                           | MEDIUM       | 1564   | 1516          | 1476          | 1433         | 1388          | 1345          | 1312          | 1267         | 1222         | 1187         |
|  | HEAT OR<br>HEAT/COOL           | MED. HIGH    | 1822   | 1786          | 1742          | 1703         | 1670          | 1629          | 1597          | 1556         | 1520         | 1485         |
|  | COOL                           | HIGH         | 1990   | 1949          | 1914          | 1877         | 1838          | 1802          | 1776          | 1741         | 1708         | 1661         |
| 125k<br>24"  | CIRC FAN                       | LOW          | 1172   | 989           | 919           | 852          | 781           | 715           | 651           | 613          | 570          | 522          |
|  | COOL                           | MED. LO      | 1261   | 1199          | 1137          | 1072         | 1009          | 950           | 889           | 834          | 778          | 735          |
|  | COOL                           | MEDIUM       | 1519   | 1454          | 1398          | 1350         | 1295          | 1242          | 1190          | 1142         | 1097         | 1051         |
|  | HEAT OR<br>HEAT/COOL           | MED. HIGH    | 1817   | 1767          | 1722          | 1674         | 1622          | 1583          | 1544          | 1494         | 1467         | 1427         |
|  | COOL                           | HIGH         | 2391   | 2350          | 2299          | 2214         | 2151          | 2070          | 1990          | 1904         | 1787         | 1661         |

NOTE: Bold data is factory heating tap

[ ] Designates Metric Conversions

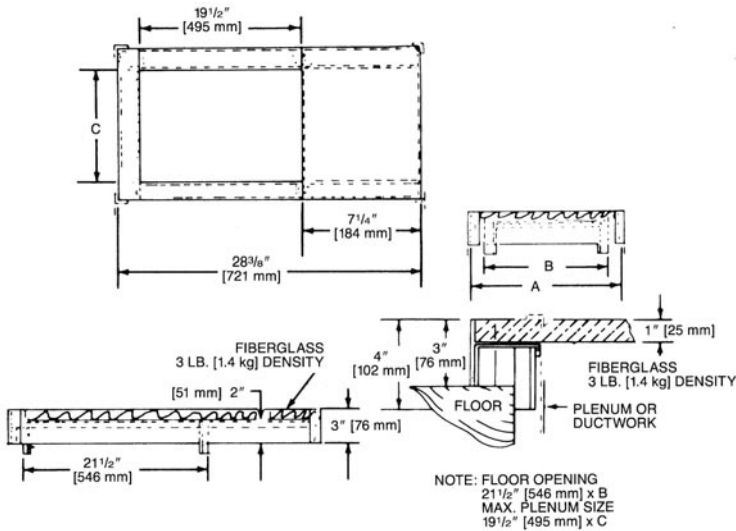
## DOWNFLOW ACCESSORIES

**DOWNFLOW WARNING:** Unit design is certified for installation on non-combustible floor. A special factory supplied combustible floor sub-base is required when installing on a combustible floor. Failure to install the sub-base may result in fire, property damage and personal injury.

## COMBUSTIBLE FLOOR BASE DIMENSIONS

| COMBUSTIBLE FLOOR BASE | USE WITH FURNACE SIZES | A IN. [mm]                           | B IN. [mm]                           | C IN. [mm]                           |
|------------------------|------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| RXGC-B14               | 050                    | 14 <sup>1</sup> / <sub>2</sub> [368] | 13 <sup>1</sup> / <sub>4</sub> [337] | 11 <sup>1</sup> / <sub>4</sub> [286] |
| RXGC-B17               | 075317                 | 18 [457]                             | 16 <sup>3</sup> / <sub>4</sub> [425] | 14 <sup>3</sup> / <sub>4</sub> [451] |
| RXGC-B21               | 100521, 075521         | 21 <sup>1</sup> / <sub>2</sub> [546] | 20 <sup>1</sup> / <sub>4</sub> [514] | 18 <sup>1</sup> / <sub>4</sub> [464] |
| RXGC-B24               | 125                    | 25 [635]                             | 23 <sup>3</sup> / <sub>4</sub> [603] | 21 <sup>3</sup> / <sub>4</sub> [552] |

[ ] Designates Metric Conversions



## RXGF-CC

**FILTER RACK**—Downflow top return mount. Requires (2) 14 x 20 Filters.

**NOTE:** Filter racks are shipped without filters.

## FOR HIGH ALTITUDES:

**HIGH ALTITUDE OPTION CODE:** U.S. & Canada –  
 None required for high altitudes.

**HIGH ALTITUDE CONVERSION KITS:** U.S. & Canada –  
 None required for high altitudes.

### 80+ HIGH ALTITUDE INSTRUCTIONS

Caution: Always follow National Fuel Gas Code (NFGC) guidelines when converting for high altitudes.

High altitude option codes are not required for these models. However, the burner orifice size needs to be recalculated and verified at elevations above 2000 ft. See Installation Instructions for more information.

**NOTE:** For Canadian installations only, an optional derate (manifold gas pressure reduction) method may be used to adjust the furnace for altitude. See Installation Instructions for more information. This optional method may **NOT** be used for U.S. installations.





**GENERAL TERMS OF LIMITED WARRANTY\***

Durastar will furnish a replacement for any part of this product which fails in normal use and service within the applicable period stated, in accordance with the terms of the limited warranty.

Heat Exchanger .....Ten (10) Years  
Parts .....Five (5) Years

**\*For complete details of the Limited and Conditional Warranties, including applicable terms and conditions, contact your local contractor or the Manufacturer for a copy of the product warranty certificate.**





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**Before proceeding with installation, refer to installation instructions packaged with each model, as well as complying with all Federal, State, Provincial, and Local codes, regulations, and practices.**



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*"In keeping with its policy of continuous progress and product improvement, Durastar reserves the right to make changes without notice."*