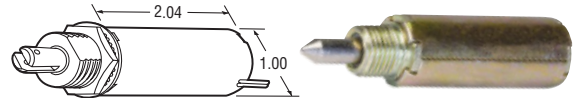


## Tubular Solenoids

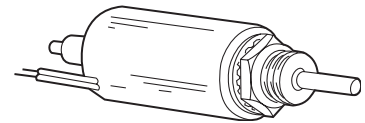
Tubular Solenoids are available for DC power applications. Continuous-duty units can be energized indefinitely. Intermittent-duty units offer higher pulling power, but can only be energized for a maximum of 180 seconds, and then they must cool for a minimum of 540 seconds. The middle letter of the Mfr.'s Type indicates the Continuous or Intermittent-duty cycle. Guardian tubulars come with mounting hardware, nut, and lockwashers.



| Stock No.            | Mfr.'s Type                     | Ohms          | Lift (Oz.) and Stroke (In.) |          |          |          |          | Dia. (In.)     | Length (In.) | Mounting Threads                    | Use with Spring Kit             | EACH           |                |                |                |
|----------------------|---------------------------------|---------------|-----------------------------|----------|----------|----------|----------|----------------|--------------|-------------------------------------|---------------------------------|----------------|----------------|----------------|----------------|
|                      |                                 |               | 0.05"                       | 0.15"    | 0.25"    | 0.50"    | 1.0"     |                |              |                                     |                                 | 1-14           | 15-24          | 25-49          | 50-99          |
| 802-1154<br>802-1156 | T3.5X9-C-12DC<br>T4X7-I-24D     | 60.2<br>131.0 | 3<br>6                      | 1<br>2   | 1<br>1   | 1<br>1   | —        | 0.044<br>0.050 | 1.18<br>0.89 | 0.3125-32UNEF-2A<br>0.375-32UNEF-2A | T3.5X9-C-12DC<br>T4X7-I-24D     | 11.47<br>7.17  | 11.01<br>6.89  | 10.58<br>6.62  | 9.59<br>6.48   |
| 802-1166<br>802-1167 | T6X12-C-24D<br>T6X12-I-12D      | 121.0<br>12.1 | 17<br>24                    | 8<br>12  | 5<br>8   | 2<br>4   | —        | 0.075<br>0.075 | 1.54<br>1.54 | 0.468-32UNEF-2A<br>0.468-32UNEF-2A  | T6X12-C-24D<br>T6X12-I-12D      | 11.86<br>11.86 | 11.38<br>11.38 | 10.94<br>10.94 | 10.69<br>10.69 |
| 802-0565<br>802-1168 | T6X12-C-12D<br>T8X9-I-24D       | 31.7<br>44.0  | 17<br>42                    | 8<br>20  | 5<br>10  | 2<br>4   | —        | 0.750<br>1.000 | 1.54<br>1.17 | 0.468-32UNEF-2A<br>0.75-24UNS-2A    | T6X12-C-12D<br>T8X9-I-24D       | 11.86<br>17.26 | 11.38<br>16.57 | 10.94<br>15.93 | 10.69<br>15.57 |
| 802-1170<br>802-1171 | T8X16-I-24D<br>T8X16-I-12D      | 36.1<br>9.3   | 60<br>60                    | 35<br>35 | 15<br>15 | 15<br>15 | 8<br>8   | 1.000<br>1.000 | 2.04<br>2.04 | 0.75-24UNS-2A<br>0.75-24UNS-2A      | T8X16-I-24D<br>T8X16-I-12D      | 14.92<br>14.92 | 14.31<br>14.31 | 13.77<br>13.77 | 13.46<br>13.46 |
| 802-0573<br>802-1172 | T8X16-C-12D<br>T12X13-I-24D     | 28.3<br>28.4  | 38<br>140                   | 15<br>90 | 11<br>55 | 8<br>15  | 4<br>—   | 1.000<br>1.500 | 2.04<br>1.68 | 0.75-24UNS-2A<br>1-27UNS-2A         | T8X16-C-12D<br>T12X13-I-24D     | 14.92<br>22.14 | 14.31<br>21.27 | 13.77<br>20.45 | 13.46<br>19.99 |
| 802-0010<br>802-0003 | T12X19-I-12DC<br>T12X19-C-12VDC | 5.6<br>17.5   | 145<br>100                  | 90<br>60 | 70<br>35 | 40<br>20 | 20<br>10 | 1.500<br>1.500 | 2.43<br>2.43 | 1-27UNS-2A<br>1-27UNS-2A            | T12X19-I-12DC<br>T12X19-C-12VDC | 22.28<br>23.28 | 21.39<br>22.35 | 20.57<br>21.49 | 20.10<br>21.01 |
| 802-1174<br>802-1175 | T12X19-I-24D<br>T12X19-C-24D    | 22.1<br>68.0  | 145<br>100                  | 90<br>60 | 70<br>35 | 40<br>20 | 20<br>10 | 1.500<br>1.500 | 2.43<br>2.43 | 1-27UNS-2A<br>1-27UNS-2A            | T12X19-I-24D<br>T12X19-C-24D    | 22.28<br>23.28 | 21.39<br>22.35 | 20.57<br>21.49 | 20.10<br>21.01 |

## Guardian TP Push-Type

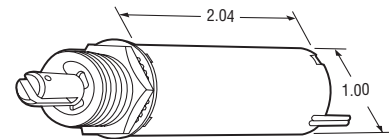
Push-type tubular solenoids are based on the standard tubular line, and are available for DC applications. The plunger pushes out of the body of the solenoid from the threaded end. Continuous-duty and Intermittent-duty cycles are the same as the tubular solenoids listed above.



| Stock No.                        | Mfr.'s Type                                       | Ohms                 | Lift (Oz.) and Stroke (In.) |                |                |                |                | Dia. (In.)           | Length (In.)         | Mounting Threads                       | Use with Spring Kit                               | EACH                    |                         |                         |                         |
|----------------------------------|---------------------------------------------------|----------------------|-----------------------------|----------------|----------------|----------------|----------------|----------------------|----------------------|----------------------------------------|---------------------------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
|                                  |                                                   |                      | 0.05"                       | 0.15"          | 0.25"          | 0.50"          | 1.0"           |                      |                      |                                        |                                                   | 1-14                    | 15-24                   | 25-49                   | 50-99                   |
| 802-1161<br>802-1164             | TP4X12-C-24D<br>TP4X16-C-24D                      | 195.0<br>173.0       | 4<br>5                      | 1<br>2         | 1<br>1         | 1<br>1         | —<br>1         | 1.50<br>2.01         | 1.50<br>2.01         | 0.375-32UNEF-2A<br>0.375-32UNEF-2A     | TP4X12-C-24D<br>TP4X16-C-24D                      | 8.78<br>10.17           | 8.16<br>9.76            | 7.93<br>9.39            | 7.72<br>9.18            |
| 802-0055<br>802-1194             | TP6X12-C-12VDC<br>TP6X12-C-24D                    | 31.7<br>121.0        | 17<br>17                    | 8<br>8         | 5<br>5         | 2<br>2         | —<br>—         | 1.54<br>1.54         | 1.54<br>1.54         | 0.468-32UNEF-2A<br>0.468-32UNEF-2A     | TP6X12-C-12VDC<br>TP6X12-C-24D                    | 12.87<br>12.87          | 12.34<br>12.34          | 11.87<br>11.87          | 11.58<br>11.58          |
| 802-0020<br>802-1000             | TP8X16-C-12D<br>TP8X16-C-24D                      | 28.3<br>110.0        | 38<br>38                    | 15<br>15       | 11<br>11       | 8<br>8         | 4<br>4         | 2.04<br>2.04         | 2.04<br>2.04         | 0.75-24UNS-2A<br>0.75-24UNS-2A         | TP8X16-C-12D<br>TP8X16-C-24D                      | 17.06<br>17.80          | 16.36<br>17.09          | 15.74<br>16.43          | 15.39<br>16.05          |
| 802-1178<br>802-0006             | TP12-X13-I-24D<br>TP12X19-I-12VDC                 | 28.4<br>5.6          | 140<br>145                  | 90<br>95       | 55<br>70       | 15<br>40       | —<br>20        | 1.68<br>2.43         | 1.68<br>2.43         | 1-27UNS-2A<br>1-27UNS-2A               | TP12-X13-I-24D<br>TP12X19-I-12VDC                 | 26.94<br>29.46          | 25.83<br>27.55          | 24.83<br>26.69          | 24.27<br>25.89          |
| 802-0007<br>802-1176<br>802-1177 | TP12X19-C-12VDC<br>TP12X19-I-24D<br>TP12X19-C-24D | 17.5<br>22.1<br>68.0 | 100<br>145<br>100           | 60<br>95<br>60 | 35<br>70<br>35 | 20<br>40<br>20 | 10<br>20<br>10 | 2.43<br>2.43<br>2.43 | 2.43<br>2.43<br>2.43 | 1-27UNS-2A<br>1-27UNS-2A<br>1-27UNS-2A | TP12X19-C-12VDC<br>TP12X19-I-24D<br>TP12X19-C-24D | 29.46<br>29.89<br>29.89 | 27.55<br>28.70<br>28.70 | 26.69<br>27.59<br>27.59 | 25.89<br>26.97<br>26.97 |

## Long-Life Tubular Solenoids

Long-life tubular solenoids incorporate anti-bottoming features, a stainless steel plunger sleeve, and teflon coated plungers to increase mechanical life. The anti-bottoming ring and washers prevent the plunger from hitting the plug, eliminating destructive shock forces. The stainless steel plunger sleeve boosts life expectancy over standard phenolic cores. Teflon coating reduces friction between the plunger and the bobbin over the life of the solenoid, reducing plunger wear.



| Stock No.            | Mfr.'s Type                        | Ohms          | Lift (Oz.) and Stroke (In.) |           |          |          |         | Dia. (In.)   | Length (In.) | Mounting Threads                     | Use with Spring Kit                | EACH           |                |                |                |
|----------------------|------------------------------------|---------------|-----------------------------|-----------|----------|----------|---------|--------------|--------------|--------------------------------------|------------------------------------|----------------|----------------|----------------|----------------|
|                      |                                    |               | 0.05"                       | 0.15"     | 0.25"    | 0.50"    | 1.0"    |              |              |                                      |                                    | 1-14           | 15-24          | 25-49          | 50-99          |
| 802-0008<br>802-0009 | LT6X12-I-12VDC<br>LT6X12-C-12VDC   | 13.8<br>35.0  | 45<br>30                    | 22<br>10  | 13<br>7  | 3<br>2   | —<br>—  | 0.75<br>0.75 | 1.54<br>1.54 | 0.468-32 UNEF-2A<br>0.468-32 UNEF-2A | LT6X12-I-12VDC<br>LT6X12-C-12VDC   | 16.18<br>15.50 | 15.14<br>14.49 | 14.66<br>14.04 | 14.23<br>13.61 |
| 802-0011<br>802-0012 | LT6X12-I-24VDC<br>LT6X12-C-24VDC   | 53.8<br>138.0 | 45<br>30                    | 22<br>10  | 13<br>7  | 3<br>2   | —<br>—  | 0.75<br>0.75 | 1.54<br>1.54 | 0.468-32 UNEF-2A<br>0.468-32 UNEF-2A | LT6X12-I-24VDC<br>LT6X12-C-24VDC   | 15.49<br>15.50 | 14.49<br>14.49 | 14.04<br>14.04 | 13.61<br>13.61 |
| 802-0013<br>802-0014 | LT8X16-I-12VDC<br>LT8X16-C-12VDC   | 6.2<br>19.3   | 78<br>50                    | 49<br>22  | 33<br>14 | 15<br>8  | —<br>—  | 1.00<br>1.00 | 2.04<br>2.04 | 0.75-24UNS-2A<br>0.75-24UNS-2A       | LT8X16-I-12VDC<br>LT8X16-C-12VDC   | 30.34<br>30.34 | 28.38<br>28.38 | 27.49<br>27.49 | 26.66<br>26.66 |
| 802-0016<br>802-0017 | LT8X16-I-24VDC<br>LT8X16-C-24VDC   | 29.7<br>77.2  | 78<br>50                    | 49<br>22  | 33<br>14 | 15<br>8  | —<br>—  | 1.00<br>1.00 | 2.04<br>2.04 | 0.75-24UNS-2A<br>0.75-24UNS-2A       | LT8X16-I-24VDC<br>LT8X16-C-24VDC   | 30.34<br>30.34 | 28.38<br>28.38 | 27.49<br>27.49 | 26.66<br>26.66 |
| 802-0065<br>802-0075 | LT12X19-I-24VDC<br>LT12X19-C-24VDC | 18.6<br>71.8  | 170<br>110                  | 130<br>60 | 97<br>29 | 45<br>15 | 10<br>5 | 1.50<br>1.50 | 2.43<br>2.43 | 1-27UNS-2A<br>1-27UNS-2A             | LT12X19-I-24VDC<br>LT12X19-C-24VDC | 35.44<br>35.44 | 34.01<br>34.01 | 32.71<br>32.71 | 31.97<br>31.97 |

## Spring Kits for DC Tubular Solenoids

| Stock No. | Mfr.'s Type    | For Use With | EACH  |       |       |         |
|-----------|----------------|--------------|-------|-------|-------|---------|
|           |                |              | 1-24  | 25-49 | 50-99 | 100-249 |
| 802-0048  | A490-367460-08 | Model T3.5x9 | 6.70  | 6.51  | 6.12  | 5.77    |
| 802-0047  | A490-367460-07 | Model 22     | 6.70  | 6.51  | 6.12  | 5.77    |
| 802-0046  | A490-367460-04 | Model T6X12  | 8.93  | 8.68  | 8.16  | 7.70    |
| 802-0044  | A490-367460-03 | Model T8X9   | 10.05 | 9.76  | 9.18  | 8.67    |
| 802-0043  | A490-367460-02 | Model T8X16  | 11.73 | 11.40 | 10.72 | 10.11   |
| 802-0042  | A490-367460-01 | Model T12X13 | 13.97 | 13.57 | 12.76 | 12.03   |
| 802-0004  | A490-367460-00 | Model T12X19 | 13.97 | 13.57 | 12.76 | 12.03   |

## Spring Kits for DC Push-Type Tubular Solenoids

| Stock No. | Mfr.'s Type    | For Use With  | EACH  |       |       |         |
|-----------|----------------|---------------|-------|-------|-------|---------|
|           |                |               | 1-24  | 25-49 | 50-99 | 100-249 |
| 802-0051  | A490-367460-15 | Model TP4X12  | 6.70  | 6.51  | 6.12  | 5.77    |
| 802-0064  | A490-367490-14 | Model TP4X16  | 6.00  | 5.83  | 5.48  | 5.17    |
| 802-0050  | A490-367460-13 | Model TP6X12  | 8.93  | 8.68  | 8.16  | 7.70    |
| 802-0063  | A490-367490-11 | Model TP8X16  | 10.50 | 10.20 | 9.59  | 9.05    |
| 802-0062  | A490-367490-10 | Model TP12X13 | 12.50 | 12.14 | 11.42 | 10.77   |
| 802-0049  | A490-367460-09 | Model TP12X19 | 13.97 | 13.57 | 12.76 | 12.03   |

## Spring Kits for DC Long Life Tubular Solenoids

| Stock No. | Mfr.'s Type    | For Use With  | EACH  |       |       |         |
|-----------|----------------|---------------|-------|-------|-------|---------|
|           |                |               | 1-24  | 25-49 | 50-99 | 100-249 |
| 802-0054  | A490-367460-22 | Model LT6X12  | 8.93  | 8.68  | 8.16  | 7.70    |
| 802-0053  | A490-367460-20 | Model LT8X16  | 11.73 | 11.40 | 10.72 | 10.11   |
| 802-0052  | A490-367460-18 | Model LT12X19 | 13.97 | 13.57 | 12.76 | 12.03   |