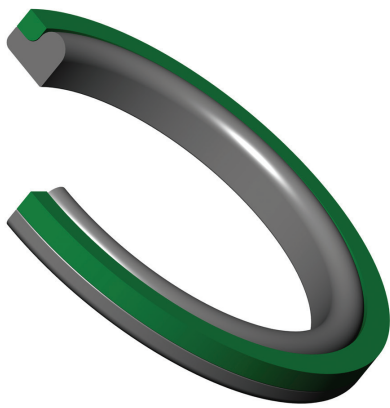


# Static Face™ Seal

## High-Performance Seal for Face-Mounted Assemblies



Static Face™ Seal

### Eliminates Extrusion and Nibbling

Greene Tweed's Static Face™ Seals are designed to eliminate sealing problems in face-mounted assemblies where large clearances can occur and/or pressures up to 10,000 psi (690 bar) are encountered. Engineered as a "drop-in" replacement for o-rings in seal glands with applied depth and length per MIL-G-5514, the Static Face™ seal consists of an L-shaped elastomeric sealing element with a hydromechanically energized mating backup ring.

For the blind mounting conditions of pumps, valves, and manifolds, use the 50 series designator for a press-fit backup that retains the seal within the gland for ease of assembly and field repairs.

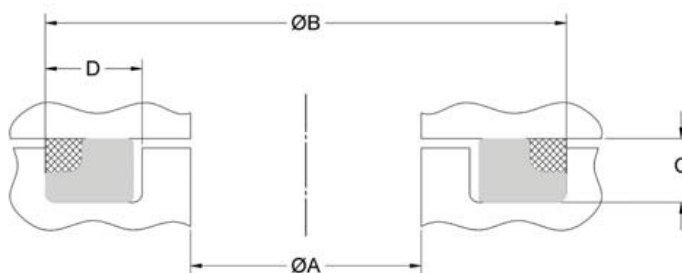
At zero or low pressure, the Static Face™ Seal's elastomeric element functions as a positive sealing element, much like an o-ring. As pressure builds, this element transmits system pressure to the anti-extrusion ring, forcing it against the gland wall and bridging any extrusion gaps that are generated as a result of hardware expansion.

### Static Face Configurations

Standard aerospace Static Face™ Seals are designed for internal pressurization. Seals for external pressurization are available on request.

### Gland Dimensions

Static Face™ Seal Gland



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## Static Face™ Part Numbering System

The part numbering system requires the use of the material designator tables found in the next column. For nonstandard designs, contact Greene Tweed engineering.

|                                 |   |   |   |                                                                                                          |   |   |                                     |   |   |                                       |   |   |   |   |
|---------------------------------|---|---|---|----------------------------------------------------------------------------------------------------------|---|---|-------------------------------------|---|---|---------------------------------------|---|---|---|---|
| 5                               | 4 | 8 | 4 | X                                                                                                        | X | X | X                                   | X | X | X                                     | X | X | X | X |
| Static Face™<br>seal designator |   |   |   | Dash size per<br>MIL-G-5514 (see<br>table on next page)                                                  |   |   | Elastomer<br>compound<br>designator |   |   | Backup ring<br>material<br>designator |   |   |   |   |
|                                 |   |   |   | 00 = Standard<br>01-39 = Nonstandard<br>50 = Interference fit backup<br>51-99 = Nonstandard interference |   |   |                                     |   |   |                                       |   |   |   |   |

### Part Numbering Example

|   |   |   |   |                                             |   |   |          |   |   |                       |   |   |            |   |
|---|---|---|---|---------------------------------------------|---|---|----------|---|---|-----------------------|---|---|------------|---|
| 5 | 4 | 8 | 4 | 1                                           | 1 | 0 | 0        | 0 | 1 | 6                     | 0 | 0 | 1          | 8 |
|   |   |   |   | 0.568 in. Outer gland wall diameter maximum |   |   | Standard |   |   | NBR, Nitrile compound |   |   | NWR backup |   |

Contact your local Greene Tweed representative for specific recommendations to suit higher performance requirements.

### Material Designator Tables

| Code | Elastomer Compound         |
|------|----------------------------|
| 160  | NBR, Nitrile               |
| 161  | NBR, Nitrile               |
| 409  | FVMQ, Fluorosilicone       |
| 731  | FKM, Fluorocarbon          |
| 772  | FKM, Fluorocarbon          |
| 952  | EPM, Ethylene Propylene    |
| 954  | EPDM, Ethylene Propylene   |
| 964  | NBR, Nitrile               |
| 965  | HNBR, Hydrogenated Nitrile |
| 987  | NBR, Nitrile               |

| Code | Backup Material |
|------|-----------------|
| 301  | Avalon® 01      |
| 043  | Avalon® 07      |
| 019  | Avalon® 09      |
| 344  | Avalon® 44      |
| 357  | Avalon® 57      |
| 379  | Avalon® 69      |
| 389  | Avalon® 89      |
| 018  | NWR             |
| 046  | Arlon® 1000     |
| 039  | Arlon® 1330     |
| 036  | Arlon® 1555     |

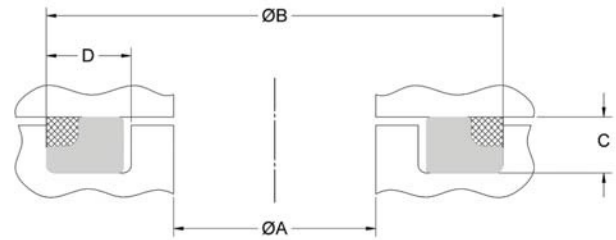
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For Reference: Static Face™ Seal Gland



### Maximum Clearance Gaps

| Dash No.  | Recommended Maximum Extrusion Gap (in Inches)<br>(at normal operating conditions) |
|-----------|-----------------------------------------------------------------------------------|
| 008 – 028 | 0.008                                                                             |
| 110 – 135 | 0.013                                                                             |
| 210 – 247 | 0.018                                                                             |
| 325 – 349 | 0.025                                                                             |

See Greene Tweed Surface Finish guidelines.

## Dimensional Information (in Inches)

| MIL-G-5514<br>GT Dash No. | ØA Max. | ØB* +0.000<br>-0.005 | C ±0.001 | Gland<br>Width<br>D +0.010<br>-0.000 |
|---------------------------|---------|----------------------|----------|--------------------------------------|
| 008                       | 0.034   | 0.316                | 0.057    | 0.094                                |
| 009                       | 0.066   | 0.348                |          |                                      |
| 010                       | 0.097   | 0.379                |          |                                      |
| 011                       | 0.159   | 0.441                |          |                                      |
| 012                       | 0.222   | 0.504                |          |                                      |
| 013                       | 0.284   | 0.566                |          |                                      |
| 014                       | 0.347   | 0.629                |          |                                      |
| 015                       | 0.409   | 0.691                |          |                                      |
| 016                       | 0.472   | 0.754                |          |                                      |
| 017                       | 0.534   | 0.816                |          |                                      |
| 018                       | 0.597   | 0.879                |          |                                      |
| 019                       | 0.659   | 0.941                |          |                                      |
| 020                       | 0.722   | 1.004                |          |                                      |
| 021                       | 0.784   | 1.066                |          |                                      |
| 022                       | 0.847   | 1.129                |          |                                      |
| 023                       | 0.909   | 1.191                |          |                                      |
| 024                       | 0.972   | 1.254                |          |                                      |
| 025                       | 1.034   | 1.316                |          |                                      |
| 026                       | 1.097   | 1.379                |          |                                      |
| 027                       | 1.159   | 1.441                |          |                                      |
| 028                       | 1.222   | 1.504                |          |                                      |
| 110                       | 0.145   | 0.568                | 0.090    | 0.141                                |
| 111                       | 0.207   | 0.630                |          |                                      |
| 112                       | 0.270   | 0.693                |          |                                      |
| 113                       | 0.332   | 0.755                |          |                                      |
| 114                       | 0.395   | 0.818                |          |                                      |
| 115                       | 0.457   | 0.880                |          |                                      |
| 116                       | 0.520   | 0.943                |          |                                      |
| 117                       | 0.582   | 1.005                |          |                                      |
| 118                       | 0.645   | 1.068                |          |                                      |
| 119                       | 0.707   | 1.130                |          |                                      |
| 120                       | 0.770   | 1.193                |          |                                      |
| 121                       | 0.832   | 1.255                |          |                                      |
| 122                       | 0.895   | 1.318                |          |                                      |
| 123                       | 0.957   | 1.380                |          |                                      |
| 124                       | 1.020   | 1.443                |          |                                      |
| 125                       | 1.082   | 1.505                |          |                                      |
| 126                       | 1.145   | 1.568                |          |                                      |
| 127                       | 1.207   | 1.630                |          |                                      |
| 128                       | 1.270   | 1.693                |          |                                      |
| 129                       | 1.332   | 1.755                |          |                                      |
| 130                       | 1.395   | 1.818                |          |                                      |
| 131                       | 1.457   | 1.880                |          |                                      |
| 132                       | 1.520   | 1.943                |          |                                      |
| 133                       | 1.582   | 2.005                |          |                                      |
| 134                       | 1.645   | 2.068                |          |                                      |
| 135                       | 1.708   | 2.131                |          |                                      |
| 210                       | 0.448   | 1.012                | 0.122    | 0.188                                |
| 211                       | 0.510   | 1.074                |          |                                      |
| 212                       | 0.573   | 1.137                |          |                                      |
| 213                       | 0.635   | 1.199                |          |                                      |
| 214                       | 0.698   | 1.262                |          |                                      |
| 215                       | 0.760   | 1.324                |          |                                      |
| 216                       | 0.823   | 1.387                |          |                                      |
| 217                       | 0.885   | 1.449                |          |                                      |
| 218                       | 0.948   | 1.512                |          |                                      |
| 219                       | 1.010   | 1.574                |          |                                      |
| 220                       | 1.073   | 1.637                |          |                                      |
| 221                       | 1.135   | 1.699                |          |                                      |

| MIL-G-5514<br>GT Dash No. | ØA Max. | ØB* +0.000<br>-0.005 | C ±0.001 | Gland<br>Width<br>D +0.010<br>-0.000 |
|---------------------------|---------|----------------------|----------|--------------------------------------|
| 222                       | 1.198   | 1.762                | 0.122    | 0.188                                |
| 223                       | 1.323   | 1.887                |          |                                      |
| 224                       | 1.448   | 2.012                |          |                                      |
| 225                       | 1.573   | 2.137                |          |                                      |
| 226                       | 1.698   | 2.262                |          |                                      |
| 227                       | 1.823   | 2.387                |          |                                      |
| 228                       | 1.948   | 2.512                |          |                                      |
| 229                       | 2.073   | 2.637                |          |                                      |
| 230                       | 2.198   | 2.762                |          |                                      |
| 231                       | 2.323   | 2.887                |          |                                      |
| 232                       | 2.448   | 3.012                |          |                                      |
| 233                       | 2.573   | 3.137                |          |                                      |
| 234                       | 2.698   | 3.262                |          |                                      |
| 235                       | 2.823   | 3.387                |          |                                      |
| 236                       | 2.948   | 3.512                |          |                                      |
| 237                       | 3.073   | 3.637                |          |                                      |
| 238                       | 3.198   | 3.762                |          |                                      |
| 239                       | 3.323   | 3.887                |          |                                      |
| 240                       | 3.448   | 4.012                |          |                                      |
| 241                       | 3.573   | 4.137                |          |                                      |
| 242                       | 3.698   | 4.262                |          |                                      |
| 243                       | 3.823   | 4.387                |          |                                      |
| 244                       | 3.948   | 4.512                |          |                                      |
| 245                       | 4.073   | 4.637                |          |                                      |
| 246                       | 4.198   | 4.762                |          |                                      |
| 247                       | 4.323   | 4.887                |          |                                      |
| 325                       | 1.052   | 1.895                | 0.187    | 0.281                                |
| 326                       | 1.177   | 2.020                |          |                                      |
| 327                       | 1.302   | 2.145                |          |                                      |
| 328                       | 1.427   | 2.270                |          |                                      |
| 329                       | 1.552   | 2.395                |          |                                      |
| 330                       | 1.677   | 2.520                |          |                                      |
| 331                       | 1.802   | 2.645                |          |                                      |
| 332                       | 1.927   | 2.770                |          |                                      |
| 333                       | 2.052   | 2.895                |          |                                      |
| 334                       | 2.177   | 3.020                |          |                                      |
| 335                       | 2.302   | 3.145                |          |                                      |
| 336                       | 2.427   | 3.270                |          |                                      |
| 337                       | 2.552   | 3.395                |          |                                      |
| 338                       | 2.677   | 3.520                |          |                                      |
| 339                       | 2.802   | 3.645                |          |                                      |
| 340                       | 2.927   | 3.770                |          |                                      |
| 341                       | 3.052   | 3.895                |          |                                      |
| 342                       | 3.177   | 4.020                |          |                                      |
| 343                       | 3.302   | 4.145                |          |                                      |
| 344                       | 3.427   | 4.270                |          |                                      |
| 345                       | 3.552   | 4.395                |          |                                      |
| 346                       | 3.677   | 4.520                |          |                                      |
| 347                       | 3.802   | 4.645                |          |                                      |
| 348                       | 3.927   | 4.770                |          |                                      |
| 349                       | 4.052   | 4.895                |          |                                      |

\* For 50 Series ØB Tolerance = +0.000  
-0.003

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