

# Avseal

## 02961 Series

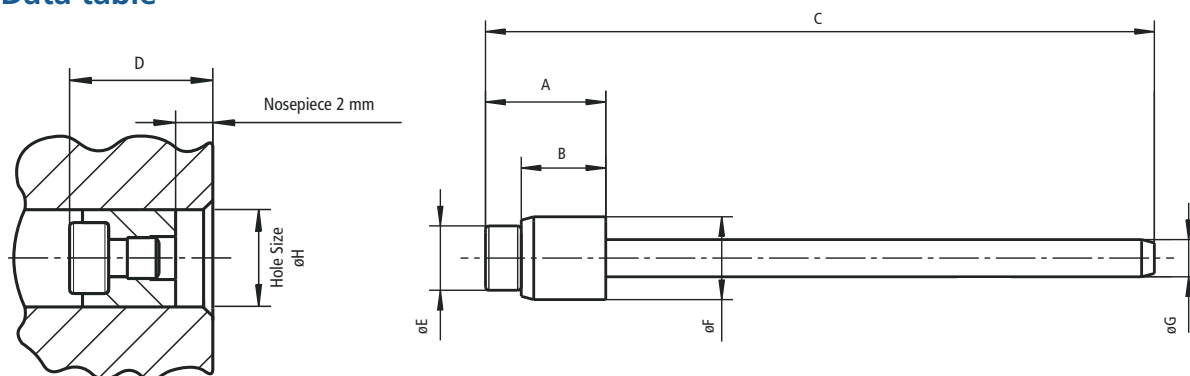
For pressures up to 300 bar

### Material

Sleeve: Aluminium alloy (6061), annealed.

Stem: Medium carbon steel, hardened and tempered.  
Zinc plated, clear trivalent passivated.

### Data table



Installed plug depth  
with 2mm nose tip extension

Hole surface finish  
 $Rz = \text{min. } 5.0 - \text{max } 25.0 \mu\text{m}$

| $\emptyset$ | Part Number | $\phi F$  | $\phi G$  | $\phi E$  | Hole Size $\phi H$ |           | B         | C         | A         | D max. (mm)                                       |
|-------------|-------------|-----------|-----------|-----------|--------------------|-----------|-----------|-----------|-----------|---|
|             |             | Max. (mm) | Ref. (mm) | Ref. (mm) | Min. (mm)          | Max. (mm) | Max. (mm) | Max. (mm) | Max. (mm) | Max. depth of installed Avseal plug Nosepiece 2mm |
| 4           | 02961-00405 | 3.9       | 1.9       | 3.0       | 3.9                | 4.3       | 4.1       | 41.4      | 6.5       | 6.3   |
| 5           | 02961-00506 | 4.9       | 2.2       | 3.8       | 5.0                | 5.4       | 5.0       | 42.2      | 7.2       | 7.7   |
| 6           | 02961-00607 | 5.9       | 2.6       | 4.5       | 6.0                | 6.4       | 6.0       | 50.1      | 8.6       | 10.3  |
| 7           | 02961-00708 | 6.8       | 3.0       | 5.4       | 7.0                | 7.4       | 6.9       | 51.1      | 9.8       | 11.2  |
| 8           | 02961-00810 | 7.8       | 3.6       | 6.1       | 7.8                | 8.4       | 7.9       | 51.9      | 11.1      | 11.5  |
| 9           | 02961-00911 | 8.8       | 3.9       | 6.9       | 8.8                | 9.8       | 8.5       | 53.0      | 12.7      | 11.9  |
| 10          | 02961-01012 | 9.8       | 4.4       | 7.8       | 9.8                | 10.8      | 10.0      | 53.4      | 14.0      | 15.0  |
| 12          | 02961-01215 | 11.8      | 5.3       | 9.4       | 11.8               | 12.8      | 11.5      | 62.8      | 15.8      | 16.6  |

### Ideal applications

#### Industrial

- Fluid handling
- Pneumatic systems
- Hydraulic blocks
- Compressors
- Refrigeration
- Pumps



# Avseal

## 02964 Series

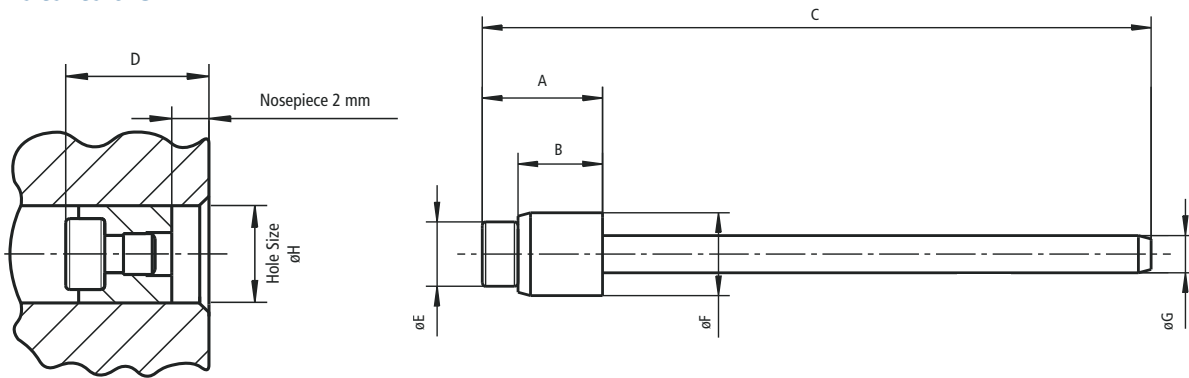
### For thin wall applications

#### Material

Sleeve: Aluminium alloy (6061), annealed.

Stem: Medium carbon steel, hardened and tempered.  
Zinc plated, clear trivalent passivated.

#### Data table



Installed plug depth  
with 2mm nose tip extension

Hole surface finish  
Rz = min. 5.0 - max 25.0  $\mu\text{m}$

| $\varnothing$ | Part Number | $\varnothing F$ | $\varnothing G$ | $\varnothing E$ | Hole Size $\varnothing H$ |           | B    | C    | A    | D max. (mm)<br>Max. depth of installed Avseal plug<br>Nosepiece 2mm |
|---------------|-------------|-----------------|-----------------|-----------------|---------------------------|-----------|------|------|------|---|
|               |             | Max. (mm)       | Ref. (mm)       | Ref. (mm)       | Min. (mm)                 | Max. (mm) |      |      |      |   |
| 9             | 02964-00911 | 8.8             | 3.6             | 6.1             | 9.0                       | 9.4       | 8.5  | 51.8 | 11.7 | 12.6  |
| 10            | 02964-01012 | 9.8             | 3.9             | 7.0             | 10.0                      | 10.4      | 9.5  | 52.6 | 13.1 | 13.5  |
| 11            | 02964-01113 | 10.8            | 4.4             | 7.8             | 11.0                      | 11.4      | 9.8  | 53.4 | 13.7 | 14.1  |
| 12            | 02964-01215 | 11.8            | 4.4             | 7.8             | 12.0                      | 12.4      | 9.5  | 53.4 | 13.4 | 14.0  |
| 13            | 02964-01315 | 12.8            | 4.8             | 8.6             | 13.0                      | 13.4      | 10.3 | 62.0 | 14.7 | 14.5  |
| 14            | 02964-01415 | 13.8            | 5.3             | 9.4             | 14.0                      | 14.4      | 11.0 | 62.8 | 15.7 | 15.9  |
| 16            | 02964-01620 | 15.8            | 6.0             | 11.0            | 16.0                      | 16.4      | 12.6 | 64.8 | 18.0 | 18.0  |

### Ideal applications

#### Automotive

- Engine blocks
- Transmissions
- Cylinders
- Brakes
- Clutch
- Gearbox

#### Industrial

- Fluid handling
- Pneumatic systems
- Refrigeration



# Avseal XT

## 02931 Series

For pressures up to 500 bar

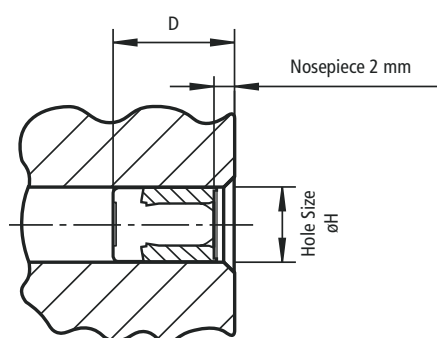
### Material

Sleeve: Aluminium alloy (6061), annealed.

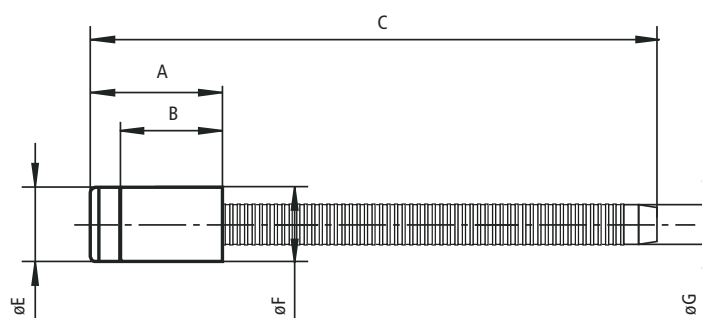
Stem: Medium carbon steel, hardened and tempered.  
Zinc plated, yellow trivalent passivated.



### Data table



Installed plug depth  
with 2mm nose tip extension



Hole surface  
Roughness Rz 10-30µm

| Ø  | Part Number | øF        | øG        | øE        | Hole Size øH |           | B         | C         | A         | D max. (mm)                                       |
|----|-------------|-----------|-----------|-----------|--------------|-----------|-----------|-----------|-----------|---|
|    |             | Max. (mm) | Ref. (mm) | Max. (mm) | Min. (mm)    | Max. (mm) | Ref. (mm) | Ref. (mm) | Max. (mm) | Max. depth of installed Avseal plug Nosepiece 2mm |
| 5  | 02931-00507 | 4.85      | 2.7       | 4.95      | 5.00         | 5.12      | 7.7       | 50.2      | 10.8      | 10.5  |
| 6  | 02931-00608 | 5.85      | 3.1       | 5.95      | 6.00         | 6.12      | 8.2       | 51.7      | 11.7      | 11.4  |
| 7  | 02931-00709 | 6.80      | 3.6       | 6.90      | 7.00         | 7.12      | 9.3       | 53.0      | 13.3      | 13.3  |
| 8  | 02931-00811 | 7.80      | 4.4       | 7.90      | 8.00         | 8.12      | 10.5      | 54.6      | 14.7      | 14.4  |
| 10 | 02931-01013 | 9.80      | 5.3       | 9.90      | 10.00        | 10.12     | 12.7      | 64.7      | 17.7      | 17.5  |

### Ideal applications

#### High versatility

- Restricted space
- Shorter hole length
- High pressure applications
- Holes with large tolerance
- Agriculture / Ground works
- High pressure hydraulics
- Oil & gas



## Installation tool selection guide

The Avseal range of blind sealing plugs can be installed with the current selection of structural hand tools and automated placing equipment.

The tapered end of the plug's stem ensures it is easy to feed into the tooling equipment, while the taper on the sleeve allows ease of entry into an application.

### Hand tools



**Proset XT2**

|            |                           |
|------------|---------------------------|
| Stroke     | 20 mm                     |
| Pull Force | 8.9 kN                    |
| Capacity   | 4.0 - 7.0mm sealing plugs |
| Weight     | 1.26 kg                   |



**Proset XT3**

|            |                            |
|------------|----------------------------|
| Stroke     | 26 mm                      |
| Pull Force | 17 kN                      |
| Capacity   | 6.0 - 10.0mm sealing plugs |
| Weight     | 2.14 kg                    |



**Proset XT4**

|            |                            |
|------------|----------------------------|
| Stroke     | 18 mm                      |
| Pull Force | 23 kN                      |
| Capacity   | 6.0 - 12.0mm sealing plugs |
| Weight     | 2.16 kg                    |



**7287**

|            |                                |
|------------|--------------------------------|
| Stroke     | 32 mm                          |
| Pull Force | 32.4 kN                        |
| Capacity   | 10.0 - 14mm sealing plugs      |
| Weight     | 1.47 kg without nose equipment |



**AV5**

|            |                               |
|------------|-------------------------------|
| Stroke     | 30 mm                         |
| Pull Force | 36 kN                         |
| Capacity   | 10.0 - 19.0mm sealing plugs   |
| Weight     | 2.8 kg without nose equipment |

### Automation

#### Automated systems

Fully automated Viking® system can be robot mounted and integrated into unmanned production cell.

#### Customer example

Application consists of sealing redundant oil galleries on cylinder heads and blocks in order to improve the total quality of the engines.

Oil leaks are undesirable for the engines and lead to a negative impact on quality image.

An automated Viking placing system is integrated into unmanned production cells and three Avseal plugs are placed in 22 seconds.

