

# Grease Fittings and Bleed Fittings

GCF Series, GCR Series, GCRH Series, GSF Series,  
GST Series and VFS Series



**FITOK**

[www.fitokgroup.com](http://www.fitokgroup.com)

# Contents

## Grease Fittings

GCF Series	01
GCR Series	03
GCRH Series	05
GSF Series	07
GST Series	08

## Bleed Fittings

VFS Series	10
------------	----

# Grease Fittings

## Application

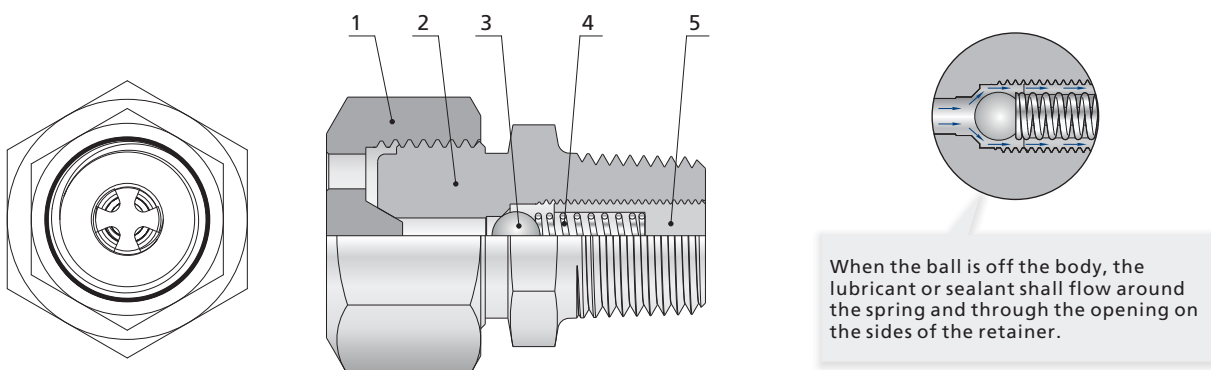
Installed onto the seat and stem of valves. Leakage may occur when the sealed part wears off or for other reasons. By injecting the grease through the grease fitting, the leakage will be sealed temporarily to secure time for remedial measures.

## GCF Series

### Features

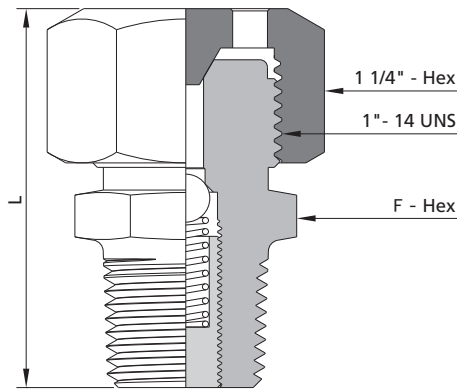
- Maximum working pressure: 10,000 psig (690 bar)
- Special design to enable lubricant or sealant to flow around the spring and through the opening on the sides of the retainer smoothly
- All-metal construction, applicable in both high and low temperature environments

## Standard Materials of Construction



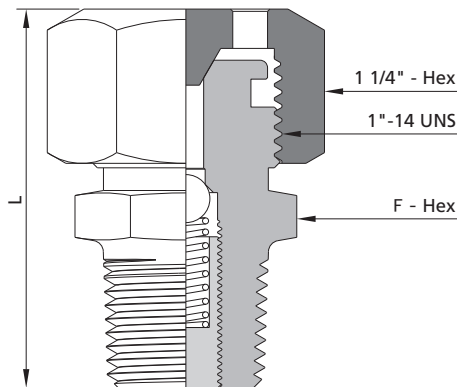
No.	Component	Material	
		Carbon Steel	316 SS
		Material Grade/ASTM Standard	
1	Vent Cap	CS (Zinc)	316 SS/A479
2	Body	CS (Zinc)	316 SS/A479
3	Ball	440C/A276	440C/A276
4	Spring	302 SS/A313	X-750/AMS 5699
5	Retainer	CS (Zinc)	316 SS/A479

## Dimensions



NPT Male Thread			
Basic Ordering Number	Connection Type and Size	Dimension, in.(mm)	
		L	F
□□-GCF-NS4	1/4" NPT Male Thread	1.95(49.6)	1.00(25.4)
□□-GCF-NS6	3/8" NPT Male Thread	1.95(49.6)	1.00(25.4)
□□-GCF-NS8	1/2" NPT Male Thread	1.95(49.6)	1.00(25.4)
□□-GCF-NS12	3/4" NPT Male Thread	1.97(50.1)	1.13(28.58)
□□-GCF-NS16	1" NPT Male Thread	2.17(55.0)	1.31(33.34)

Male ISO Tapered Thread			
Basic Ordering Number	Connection Type and Size	Dimension, in.(mm)	
		L	F
□□-GCF-RT4	1/4" BSPT Male Thread	1.95(49.6)	1.00(25.4)
□□-GCF-RT6	3/8" BSPT Male Thread	1.95(49.6)	1.00(25.4)
□□-GCF-RT8	1/2" BSPT Male Thread	1.95(49.6)	1.00(25.4)
□□-GCF-RT12	3/4" BSPT Male Thread	1.97(50.1)	1.13(28.58)
□□-GCF-RT16	1" BSPT Male Thread	2.17(55.0)	1.31(33.34)



NPT Male Thread			
Basic Ordering Number	Connection Type and Size	Dimension, in.(mm)	
		L	F
□□-GCF-NS4-BH	1/4" NPT Male Thread	1.95(49.6)	1.00(25.4)
□□-GCF-NS6-BH	3/8" NPT Male Thread	1.95(49.6)	1.00(25.4)
□□-GCF-NS8-BH	1/2" NPT Male Thread	1.95(49.6)	1.00(25.4)
□□-GCF-NS12-BH	3/4" NPT Male Thread	1.97(50.1)	1.13(28.58)
□□-GCF-NS16-BH	1" NPT Male Thread	2.17(55.0)	1.31(33.34)

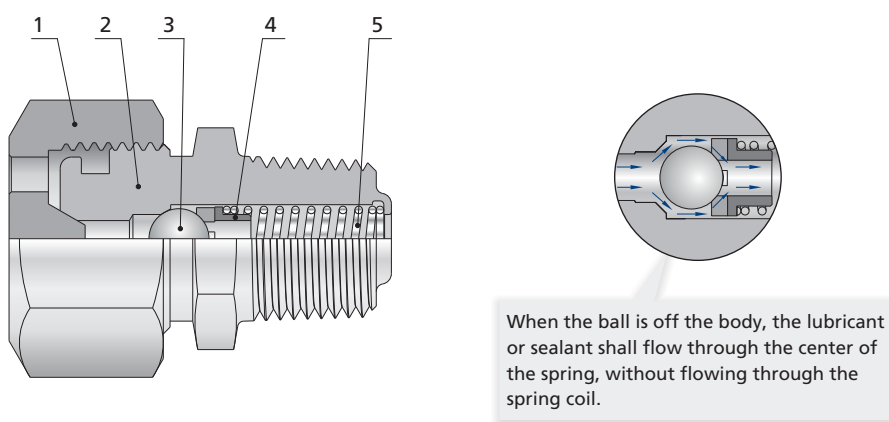
Male ISO Tapered Thread			
Basic Ordering Number	Connection Type and Size	Dimension, in.(mm)	
		L	F
□□-GCF-RT4-BH	1/4" BSPT Male Thread	1.95(49.6)	1.00(25.4)
□□-GCF-RT6-BH	3/8" BSPT Male Thread	1.95(49.6)	1.00(25.4)
□□-GCF-RT8-BH	1/2" BSPT Male Thread	1.95(49.6)	1.00(25.4)
□□-GCF-RT12-BH	3/4" BSPT Male Thread	1.97(50.1)	1.13(28.58)
□□-GCF-RT16-BH	1" BSPT Male Thread	2.17(55.0)	1.31(33.34)

## GCR Series

### Features

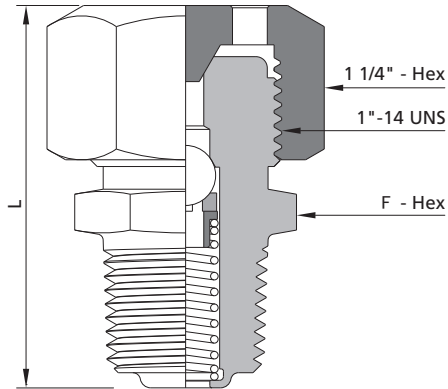
- ⦿ Maximum working pressure: 10,000 psig (690 bar)
- ⦿ Special design to enable the lubricant or sealant to flow through the ball support and the opening of the spring, reducing the tendency to "pack-off"
- ⦿ Special curling design to secure the spring and internal parts from dropping out
- ⦿ All-metal construction, applicable in both high-temperature and low-temperature environments

### Standard Materials of Construction



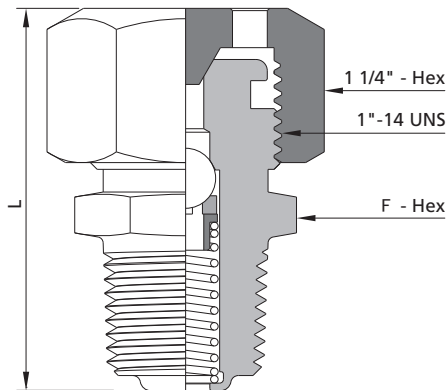
No.	Component	Material	
		Carbon Steel	316 SS
		Material Grade/ASTM Standard	
1	Cap	CS (Zinc)	316 SS/A479
2	Body	CS (Zinc)	316 SS/A479
3	Ball	440C/A276	440C/A276
4	Ball Support	CS (Zinc)	316 SS/A479
5	Spring	302 SS/A313	X-750/AMS 5699

## Dimensions



NPT Male Thread			
Basic Ordering Number	Connection Type and Size	Dimension, in.(mm)	
		L	F
□□-GCR-NS4	1/4" NPT Male Thread	1.91(48.6)	1.00(25.4)
□□-GCR-NS6	3/8" NPT Male Thread	1.95(49.6)	1.00(25.4)
□□-GCR-NS8	1/2" NPT Male Thread	1.97(50.1)	1.00(25.4)
□□-GCR-NS12	3/4" NPT Male Thread	1.97(50.1)	1.13(28.6)
□□-GCR-NS16	1" NPT Male Thread	1.67(55.0)	1.31(33.3)

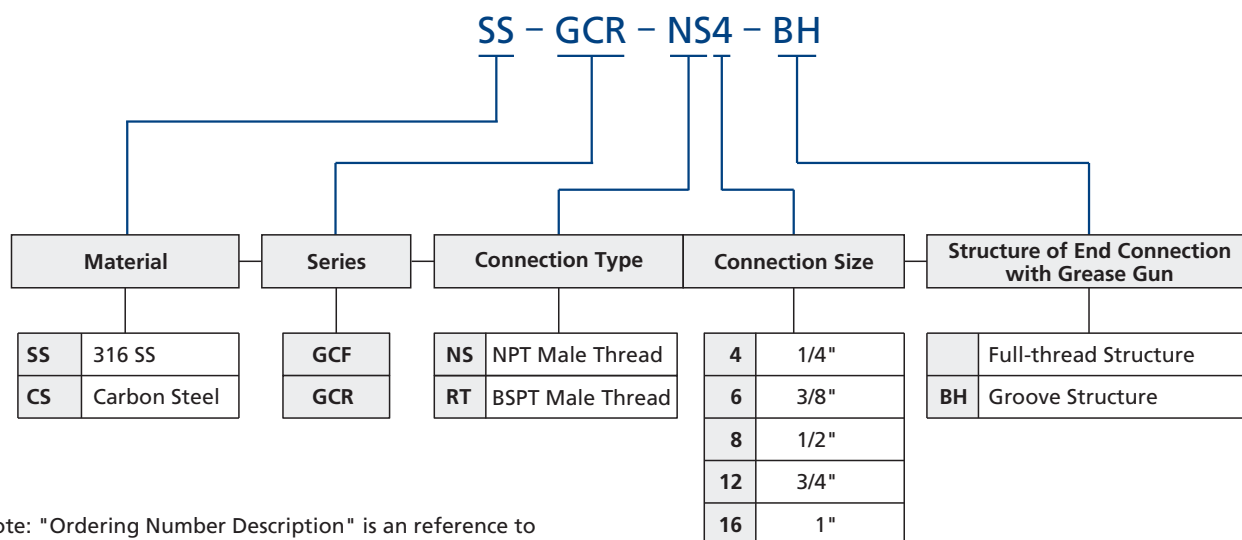
Male ISO Tapered Thread			
Basic Ordering Number	Connection Type and Size	Dimension, in.(mm)	
		L	F
□□-GCR-RT4	1/4" BSPT Male Thread	1.91(48.6)	1.00(25.4)
□□-GCR-RT6	3/8" BSPT Male Thread	1.95(49.6)	1.00(25.4)
□□-GCR-RT8	1/2" BSPT Male Thread	1.97(50.1)	1.00(25.4)
□□-GCR-RT12	3/4" BSPT Male Thread	1.97(50.1)	1.13(28.6)
□□-GCR-RT16	1" BSPT Male Thread	1.67(55.0)	1.31(33.3)



NPT Male Thread			
Basic Ordering Number	Connection Type and Size	Dimension, in.(mm)	
		L	F
□□-GCR-NS4-BH	1/4" NPT Male Thread	1.91(48.6)	1.00(25.4)
□□-GCR-NS6-BH	3/8" NPT Male Thread	1.95(49.6)	1.00(25.4)
□□-GCR-NS8-BH	1/2" NPT Male Thread	1.97(50.1)	1.00(25.4)
□□-GCR-NS12-BH	3/4" NPT Male Thread	1.97(50.1)	1.13(28.6)
□□-GCR-NS16-BH	1" NPT Male Thread	1.67(55.0)	1.31(33.3)

Male ISO Tapered Thread			
Basic Ordering Number	Connection Type and Size	Dimension, in.(mm)	
		L	F
□□-GCR-RT4-BH	1/4" BSPT Male Thread	1.91(48.6)	1.00(25.4)
□□-GCR-RT6-BH	3/8" BSPT Male Thread	1.95(49.6)	1.00(25.4)
□□-GCR-RT8-BH	1/2" BSPT Male Thread	1.97(50.1)	1.00(25.4)
□□-GCR-RT12-BH	3/4" BSPT Male Thread	1.97(50.1)	1.13(28.6)
□□-GCR-RT16-BH	1" BSPT Male Thread	1.67(55.0)	1.31(33.3)

## Ordering Number Description



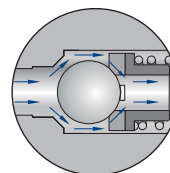
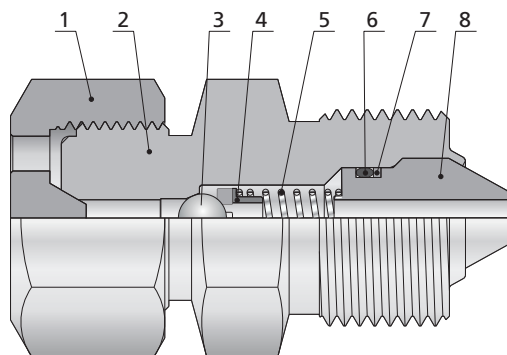
Note: "Ordering Number Description" is an reference to understand the combination rules of FITOK product part number. Not all combinations are available.

## GCRH Series

### Features

- ⦿ Maximum working pressure: 20,000 psig (1379 bar)
- ⦿ Special design to enable the lubricant or sealant to flow through the ball support and the opening of the spring, reducing the tendency to "pack-off"

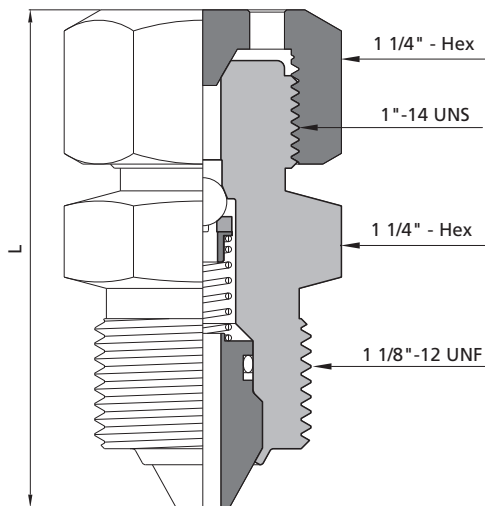
### Standard Materials of Construction



When the ball is off the body, the lubricant or sealant shall flow through the center of the spring, without flowing through the spring coil.

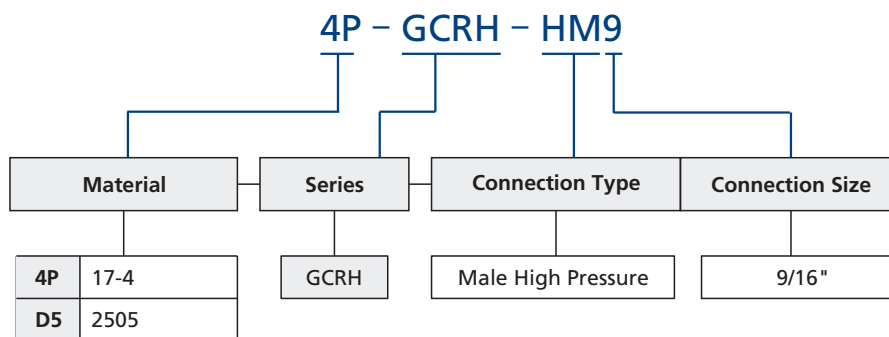
No.	Component	Material	
		17-4	2505
		Material Grade/ASTM Standard	
1	Cap	316SS/A479	S31803/A479
2	Body	S17400/A564	S31803/A479
3	Ball	Tungsten Carbide	Tungsten Carbide
4	Ball Support	S17400/A564	S31803/A479
5	Spring	X-750/AMS 5699	X-750/AMS 5699
6	O-ring	FKM	FKM
7	Backup Ring	PTFE/D1710	PTFE/D1710
8	Floating Cone	316SS/A479	S31803/A479

## Dimensions



Basic Ordering Number	Connection Type and Size	Dimension, in.(mm)
		L
□□-GCRH-HM9	9/16" Male High Pressure	2.59(65.8)

## Ordering Number Description



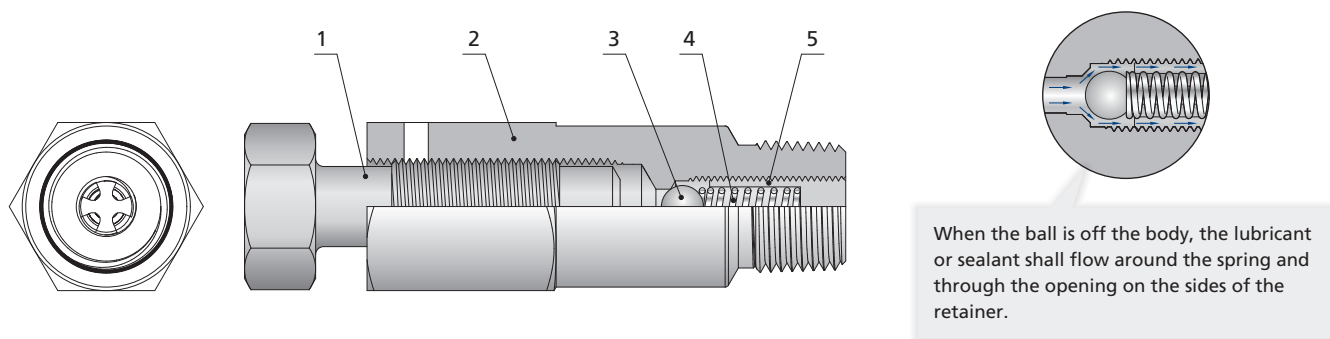


# GSF Series

## Features

- Maximum working pressure: 10,000 psig (690 bar)
- Special design to enable lubricant or sealant to flow through the spring and through the opening on the sides of the retainer smoothly
- All-metal construction, applicable in both high and low temperature environments

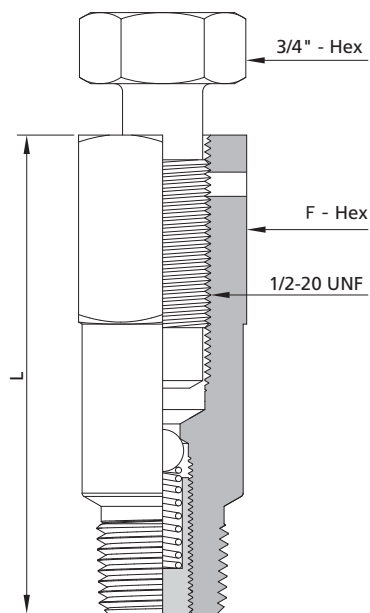
## Standard Materials of Construction



No.	Component	Material	
		Carbon Steel	316 SS
		Material Grade/ASTM Standard	
1	Screw	CS (QPQ Processed <sup>^</sup> +Zinc)	316 SS/A479 (QPQ Processed)
2	Body	CS (Zinc)	316 SS/A479
3	Ball	440C/A276	440C/A276
4	Spring	302 SS/A313-	X-750/AMS 5699
5	Retainer	CS (Zinc)	316 SS/A479

QPQ is the abbreviation of "Quench-Polish-Quench". Metal components are immersed into two salt baths, in which a variety of elements are diffused into surface of the metal, forming a compound layer. The process optimizes the surface hardness, wear and corrosion resistance and fatigue strength.

## Dimensions



NPT Male Thread			
Basic Ordering Number	Connection Type and Size	Dimension, in.(mm)	
		L	F
□□-GSF-NS4	1/4" NPT Male Thread	2.49(63.3)	0.88(22.23)
□□-GSF-NS6	3/8" NPT Male Thread	2.49(63.3)	0.88(22.23)
□□-GSF-NS8	1/2" NPT Male Thread	2.49(63.3)	0.88(22.23)

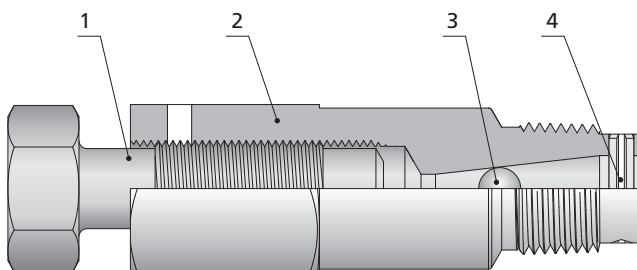
Male ISO Tapered Thread			
Basic Ordering Number	Connection Type and Size	Dimension, in.(mm)	
		L	F
□□-GSF-RT4	1/4" BSPT Male Thread	2.49(63.3)	0.88(22.23)
□□-GSF-RT6	3/8" BSPT Male Thread	2.49(63.3)	0.88(22.23)
□□-GSF-RT8	1/2" BSPT Male Thread	2.49(63.3)	0.88(22.23)

## GST Series

### Features

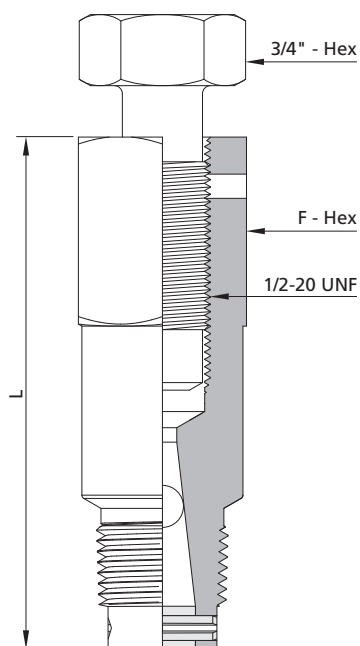
- Maximum working pressure: 10,000 psig (690 bar)
- All-metal construction, applicable in both high-temperature and low-temperature environments

### Standard Materials of Construction



No.	Component	Material	
		Carbon Steel	316 SS
		Material Grade/ASTM Standard	
1	Screw	CS (QPQ Processed+Zinc)	316 SS/A479 (QPQ Processed)
2	Body	CS (Zinc)	316 SS/A479
3	Ball	440C/A276	440C/A276
4	Spring Round Pin	Stainless Steel	Stainless Steel

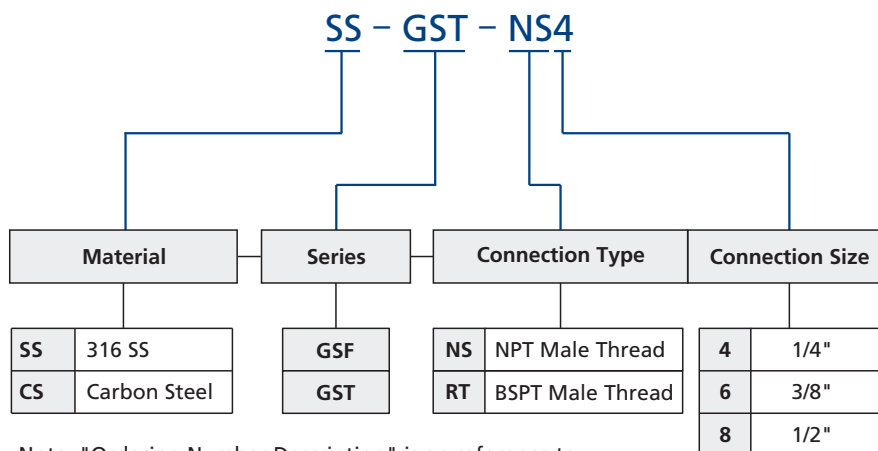
## Dimensions



NPT Male Thread			
Basic Ordering Number	Connection Type and Size	Dimension, in.(mm)	
		L	F
□□-GST-NS4	1/4" NPT Male Thread	2.34(59.5)	0.86(22.23)
□□-GST-NS6	3/8" NPT Male Thread	2.43(61.8)	0.86(22.23)
□□-GST-NS8	1/2" NPT Male Thread	2.35(59.8)	0.86(22.23)

Male ISO Tapered Thread			
Basic Ordering Number	Connection Type and Size	Dimension, in.(mm)	
		L	F
□□-GST-RT4	1/4" BSPT Male Thread	2.34(59.5)	0.86(22.23)
□□-GST-RT6	3/8" BSPT Male Thread	2.43(61.8)	0.86(22.23)
□□-GST-RT8	1/2" BSPT Male Thread	2.35(59.8)	0.86(22.23)

## Ordering Number Description



Note: "Ordering Number Description" is an reference to understand the combination rules of FITOK product part number. Not all combinations are available.

# Bleed Fittings

## Application

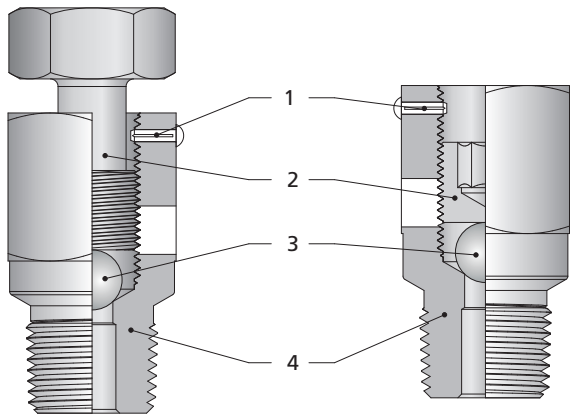
Installed onto the valve seat to vent the small amount of gas and pollutant in the valve.

## VFS Series

### Features

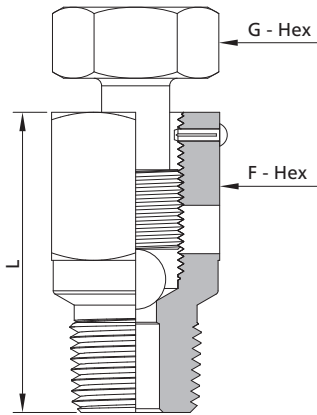
- ⦿ Maximum working pressure: 10,000 psig (690 bar)
- ⦿ All-metal construction, applicable in both high and low temperature environments

### Standard Materials of Construction



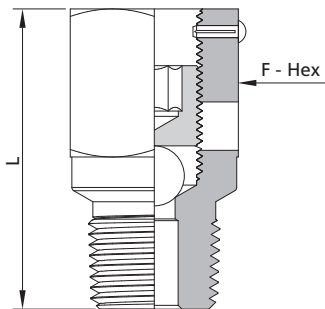
No.	Component	Material	
		Carbon Steel	316 SS
		Material Grade/ASTM Standard	
1	Round Head Grooved Pin	316 SS/A479	316 SS/A479
2	Screw	CS (Zinc)	316 SS/A479
3	Ball	440C/A276	440C/A276
4	Body	CS (Zinc)	316 SS/A479

## Dimensions



NPT Male Thread				
Basic Ordering Number	Connection Type and Size	Dimension, in.(mm)		
		L	F	G
□□-VFS-NS4	1/4" NPT Male Thread	1.63(41.3)	0.88(22.23)	0.75(19.05)
□□-VFS-NS6	3/8" NPT Male Thread	1.56(39.7)	0.88(22.23)	0.75(19.05)
□□-VFS-NS8	1/2" NPT Male Thread	1.50(38.1)	0.88(22.23)	0.75(19.05)
□□-VFS-NS12	3/4" NPT Male Thread	1.63(41.3)	1.13(28.58)	0.75(19.05)
□□-VFS-NS16	1" NPT Male Thread	2.19(55.6)	1.31(33.34)	0.81(20.64)
□□-VFS-NS20	1 1/4" NPT Male Thread	2.31(58.7)	1.75(44.45)	0.88(22.23)
□□-VFS-NS24	1 1/2" NPT Male Thread	2.63(66.7)	2.00(50.8)	0.88(22.23)

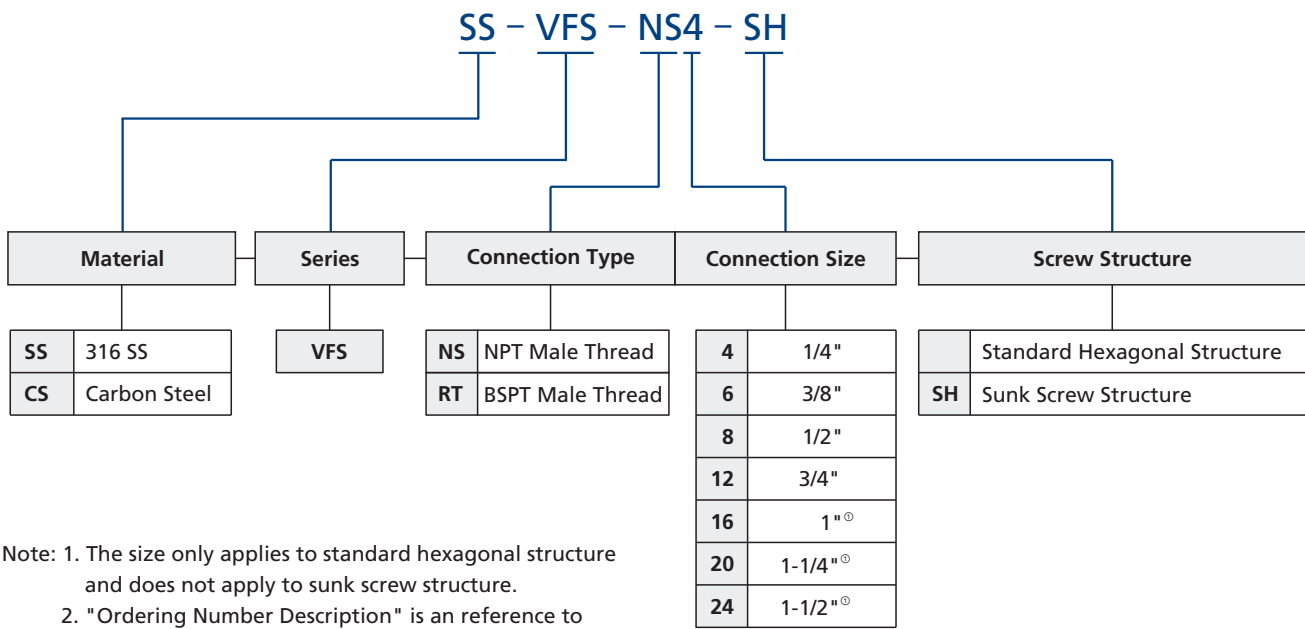
Male ISO Tapered Thread				
Basic Ordering Number	Connection Type and Size	Dimension, in.(mm)		
		L	F	G
□□-VFS-RT4	1/4" BSPT Male Thread	1.63(41.3)	0.88(22.23)	0.75(19.05)
□□-VFS-RT6	3/8" BSPT Male Thread	1.56(39.7)	0.88(22.23)	0.75(19.05)
□□-VFS-RT8	1/2" BSPT Male Thread	1.50(38.1)	0.88(22.23)	0.75(19.05)
□□-VFS-RT12	3/4" BSPT Male Thread	1.63(41.3)	1.13(28.58)	0.75(19.05)
□□-VFS-RT16	1" BSPT Male Thread	2.19(55.6)	1.31(33.34)	0.81(20.64)
□□-VFS-RT20	1 1/4" BSPT Male Thread	2.31(58.7)	1.75(44.45)	0.88(22.23)
□□-VFS-RT24	1 1/2" BSPT Male Thread	2.63(66.7)	2.00(50.8)	0.88(22.23)



NPT Male Thread			
Basic Ordering Number	Connection Type and Size	Dimension	
		L	F
□□-VFS-NS4-SH	1/4" NPT Male Thread	1.63(41.3)	0.88(22.23)
□□-VFS-NS6-SH	3/8" NPT Male Thread	1.56(39.7)	0.88(22.23)
□□-VFS-NS8-SH	1/2" NPT Male Thread	1.50(38.1)	0.88(22.23)
□□-VFS-NS12-SH	3/4" NPT Male Thread	1.63(41.3)	1.13(28.58)

Male ISO Tapered Thread			
Basic Ordering Number	Connection Type and Size	Dimension	
		L	F
□□-VFS-RT4-SH	1/4" BSPT Male Thread	1.63(41.3)	0.88(22.23)
□□-VFS-RT6-SH	3/8" BSPT Male Thread	1.56(39.7)	0.88(22.23)
□□-VFS-RT8-SH	1/2" BSPT Male Thread	1.50(38.1)	0.88(22.23)
□□-VFS-RT12-SH	3/4" BSPT Male Thread	1.63(41.3)	1.13(28.58)

Ordering Number Description



Note: 1. The size only applies to standard hexagonal structure and does not apply to sunk screw structure.  
2. "Ordering Number Description" is an reference to understand the combination rules of FITOK product part number. Not all combinations are available.

## **FITOK Group**

### **FITOK GmbH (Headquarter)**

Sprendlinger Landstr. 115, 63069 Offenbach am Main, Germany  
Tel.: +49 69 8900 4498 Fax: +49 69 8900 4495

### **FITOK, Inc.**

13843 North Promenade Blvd., Suite 750, Stafford, Texas 77477, USA  
Tel.: +1 281 888 0077 Fax: +1 281 582 4051

### **FITOK Incorporated**

1-4F, Block C, Zone E, Yingtai Industrial Park, Dalang Street,  
Longhua District, Shenzhen, 518109, China  
Tel.: +86 755 2803 2500 Fax: +86 755 2803 2619

### **FITOK Middle East Oil Equipment Trading LLC**

208-209, Makateb Building, Airport Road, P.O.Box 185412, Deira, Dubai, UAE  
Tel.: +971 4 2959 853 Fax: +971 4 2959 854

info@fitokgroup.com  
www.fitokgroup.com

FK-IC-GF-13-EN-190125