# VOF SERIES

INTERCHANGE > **Similar Couplings (Oil & Gas)**

Stucchi®



BOP



## TECHNICAL FEATURES AND OPTIONS

**Interchange**
Similar Couplings (Oil & Gas)

**Sealing description**
Nitrile NBR

**Connection system**
Screw

**Available sizes**
From 3/4" to 2"

**Material /treatment**
Carbon steel /Cr3

**Available threads**
BSP - NPT - SAE

**Operating pressure**
Up to 345 bar

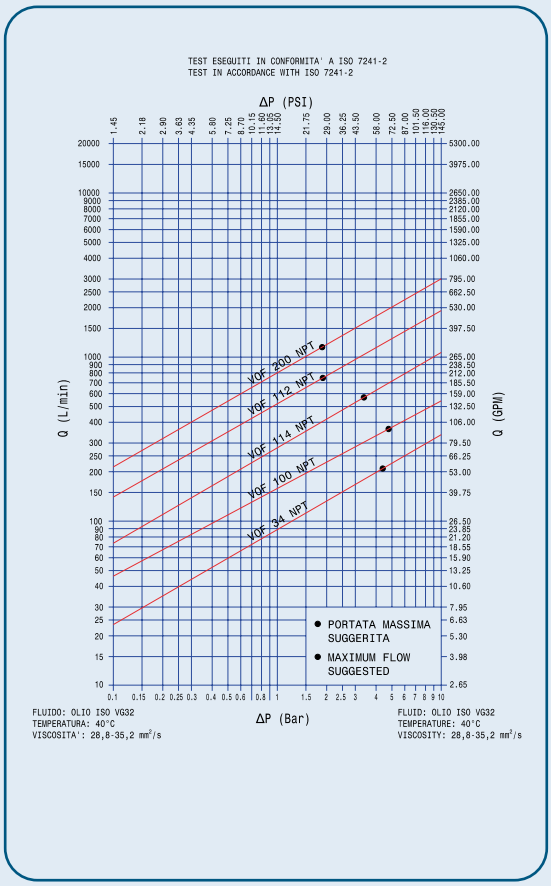
**Locking mechanism**
Screw to connect

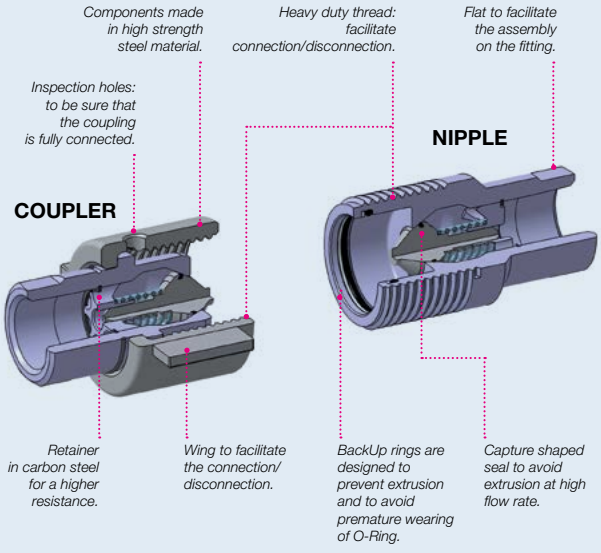
**Flow rate**
Up to 1100 l/min

**Temperature (°C)**
-20°C / +100°C

**Valving style**
Poppet

**Connection under pressure**
Connection: one side
Disconnection: not allowed




## BENEFITS

- Connection under residual pressure is allowed in one side.
- Inspection hole to control if the coupling is completely connected.
- All dimensions of Stucchi VOF series are certified with Lloyd Type Approval in accordance with API 16D at specific rating pressure of 345 bar/5000 psi for all sizes except size 2" that is 333 bar/4830 psi.
- Wrench flat on the bodies to facilitate the fitting assembly.
- The poppet valve with elastomer seal provides maximum sealing of the couplings when disconnected.
- Retainer in high resistance carbon steel.
- Shape of internal parts is designed to reduce turbulence and pressure drop.
- High resistance to pressure impulses (500.000 connected).
- Compact design.
- Simple to use.

## HOW TO USE

- Before to connect, clean the mating surface of the couplings to avoid dirt inclusion in the circuit.
- To connect insert the nipple in the coupler, screw the sleeve until positive stop (surface contact of two moving parts), do not push together the couplings, screw only.
- The use of tools for the second part of the connection can be necessary if there is high residual pressure in the circuit.
- Check inspection holes to ensure that the coupling is fully connected (no free space allowed).
- To disconnect unscrew totally the sleeve from the nipple.

## MAIN APPLICATIONS



## PERFORMANCES

| Size | | Series/Size | Max. flow suggested | | Manual connect torque* | | Manual disconnect torque* | | Spillage** |
|---|---|---|---|---|---|---|---|---|---|
| in | mm | | l/min | gpm | Nm | lbf ft | Nm | lbf ft | ml |
| 3/4” | 20 | VOF34 | 212 | 56,18 | 1,2 | 0,89 | 0,6 | 0,44 | 11,5 |
| 1” | 25 | VOF100 | 378 | 100,17 | 1,6 | 1,18 | 1,1 | 0,81 | 21,2 |
| 1-1/4” | 31,5 | VOF114 | 576 | 152,64 | 2,8 | 2,07 | 1,9 | 1,40 | 42,3 |
| 1-1/2” | 40 | VOF112 | 758 | 200,87 | 4 | 2,95 | 3,6 | 2,66 | 82,6 |
| 2“ | 50 | VOF200 | 1100 | 291,50 | 7,5 | 5,53 | 5,1 | 3,76 | 192,0 |

| Size | Series/Size | Max. operating pressure | | | | | | Burst pressure | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Coupled | | Nipple | | Coupler | | Coupled | | Nipple | | Coupler | |
| in | | MPa | psi | MPa | psi | MPa | psi | MPa | psi | MPa | psi | MPa | psi |
| 3/4” | VOF34 | 34,5 | 5000 | 34,5 | 5000 | 34,5 | 5000 | 137,9 | 20000 | 137,9 | 20000 | 100,0 | 14500 |
| 1” | VOF100 | 34,5 | 5000 | 34,5 | 5000 | 34,5 | 5000 | 137,9 | 20000 | 137,9 | 20000 | 100,0 | 14500 |
| 1-1/4” | VOF114 | 34,5 | 5000 | 34,5 | 5000 | 34,5 | 5000 | 137,9 | 20000 | 137,9 | 20000 | 100,0 | 14500 |
| 1-1/2” | VOF112 | 34,5 | 5000 | 34,5 | 5000 | 34,5 | 5000 | 137,9 | 20000 | 137,9 | 20000 | 82,8 | 12000 |
| 2 “ | VOF200 | 34,5 | 5000 | 34,5 | 5000 | 34,5 | 5000 | 100,0 | 14500 | 90,0 | 13050 | 75,9 | 11000 |

* Connect torque and disconnect torque without residual pressure.
The torque will increase as internal residual pressure increases.

** Spillage is an indicative value of the fluid loss during disconnection (according to ISO norm test method).

BOP Only configurations mentioned in the dedicated BOP section of this catalog are BOP certified.
For complete technical information please contact Stucchi Technical Support.

**Different possible configurations:**
SAE thread available upon request.

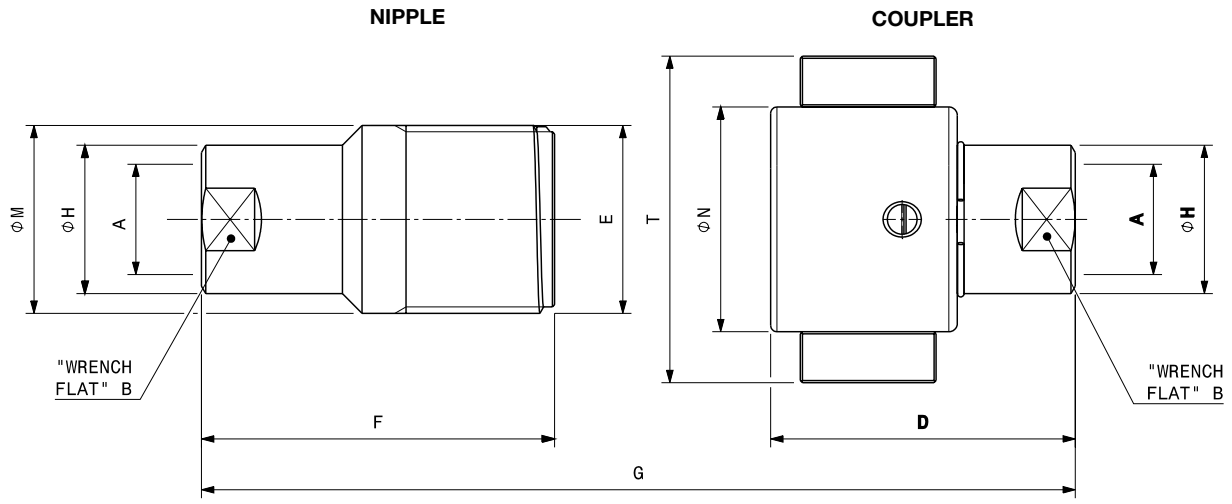
**Temperature range:**
Standard seals NBR from -20 °C to +100 °C (from -4 °F to +212 °F).
Please read carefully Instructions and warnings for proper selection of the products.

**Tests performed:**
The connected couplings have been tested at maximum operating pressure for 500.000 impulses in according to ISO norm.
The couplings disconnected have been tested for 100.000 impulses.

## WARNING

A defect, a wrong choice or an improper use of products, can cause injury to persons, animals and objects.
Never connect or disconnect with dynamic pressure (e.g. pump on).
Do not couple-uncouple with flow in the circuit.
Do not couple-uncouple when the temperature inside of the circuit is higher than 80 °C (176 °F).
Do not use the coupling disconnected with high impulse pressure.
Connect under pressure products are suitable to be connected under residual (static) pressure.
Connection with residual pressure (pressure trapped in the circuit) allowed with other side coupling to drain.
Check the maximum allowable working pressure of the port in use.
Make sure that the medium used is compatible with seal and material as indicated for each series.
In case of doubt please contact Stucchi Technical Support.
The interchangeability is mentioned under the assumption that the manufacturer of the considered products has not changed any dimension.
**It is mandatory to carefully read and closely follow the instructions before selecting or using any Stucchi products.**
**Always refer to the version uploaded in the Instructions and warning section of stucchigroup.com website for the latest release.**
**For specific, product-related, instructions, please contact Stucchi technical service.**

## OVERALL DIMENSIONS



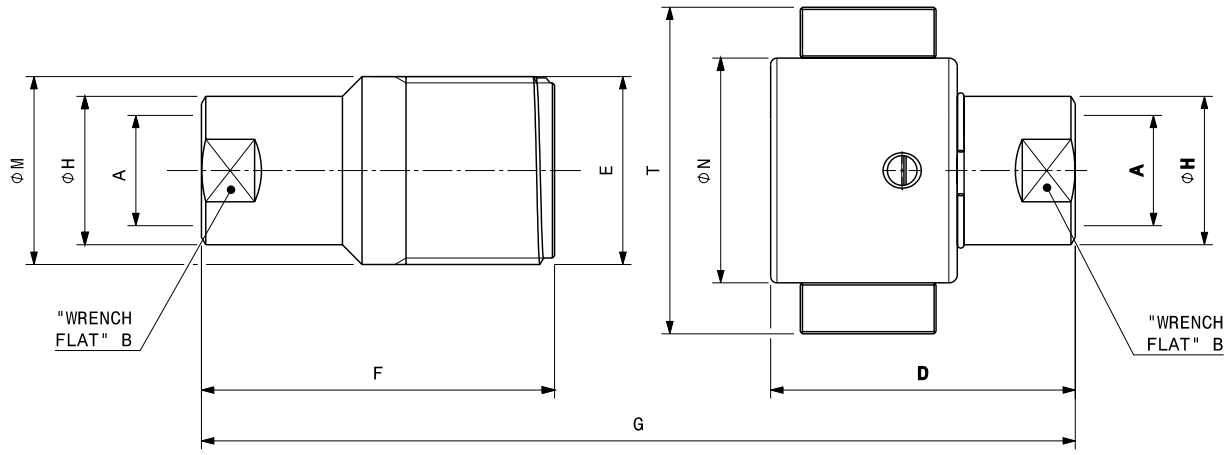

**Port description: FEMALE THREAD NPT (ANSI B.1.20.1)**

| BODY SIZE | Descriptive Code | Item Code | | PORT (A) | | Thread | | Overall Length mm | Overall Length in | | Length mm | Length in | | Hex mm | Hex in | | Diameter mm | Diameter in |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3/4" | VOF34 NPT | Nipple | 811201002 | 3/4" | E | 1 3/4-8 special | G | 123,6 | 4,87 | F | 83,2 | 3,28 | B | 31,8 | 1,25 | H | 35,0 | 1,38 |
| | VOF34 NPT | Coupler | 811201003 | | | | | | | D | 71,8 | 2,83 | | | | | | |
| 1" | VOF100 NPT | Nipple | 811201000 | 1" | E | 2 1/4-6 Stub ACME | G | 152,9 | 6,02 | F | 105,8 | 4,17 | B | 41,3 | 1,63 | H | 45,0 | 1,77 |
| | VOF100 NPT | Coupler | 811201001 | | | | | | | D | 87,3 | 3,44 | | | | | | |
| 1-1/4" | VOF114 NPT | Nipple | 811201004 | 1-1/4" | E | 2 5/8-6 Stub ACME | G | 197,9 | 7,79 | F | 136,7 | 5,38 | B | 50,8 | 2,00 | H | 54,5 | 2,15 |
| | VOF114 NPT | Coupler | 811201005 | | | | | | | D | 112,4 | 4,43 | | | | | | |
| 1-1/2" | VOF112 NPT | Nipple | 811201006 | 1-1/2" | E | 3 1/4-4 Stub ACME | G | 220,3 | 8,67 | F | 151,2 | 5,95 | B | 57,2 | 2,25 | H | 63,5 | 2,50 |
| | VOF112 NPT | Coupler | 811201007 | | | | | | | D | 126,9 | 5,00 | | | | | | |
| 2" | VOF200 NPT | Nipple | 811201008 | 2" | E | 4-4 Stub ACME | G | 255,2 | 10,05 | F | 179,0 | 7,05 | B | 76,2 | 3,00 | H | 82,6 | 3,25 |
| | VOF200 NPT | Coupler | 811201009 | | | | | | | D | 154,2 | 6,07 | | | | | | |

| BODY SIZE | Descriptive Code | Item Code | | Diameter mm | Diameter in | | Max overall dimension mm | Max overall dimension in | Weight kg | Weight lb |
|---|---|---|---|---|---|---|---|---|---|---|
| 3/4" | VOF34 NPT | Nipple | 811201002 | M | 44,3 | 1,74 | | | 0,48 | 1,05 |
| | VOF34 NPT | Coupler | 811201003 | N | 53,0 | 2,09 | T 77,0 | 3,03 | 0,61 | 1,34 |
| 1" | VOF100 NPT | Nipple | 811201000 | M | 57,2 | 2,25 | | | 1,19 | 2,62 |
| | VOF100 NPT | Coupler | 811201001 | N | 69,0 | 2,72 | T 109,0 | 4,29 | 1,38 | 3,03 |
| 1-1/4" | VOF114 NPT | Nipple | 811201004 | M | 66,7 | 2,62 | | | 1,95 | 4,30 |
| | VOF114 NPT | Coupler | 811201005 | N | 80,0 | 3,15 | T 120,0 | 4,72 | 2,27 | 5,01 |
| 1-1/2" | VOF112 NPT | Nipple | 811201006 | M | 82,6 | 3,25 | | | 3,22 | 7,11 |
| | VOF112 NPT | Coupler | 811201007 | N | 95,0 | 3,74 | T 145,0 | 5,71 | 3,84 | 8,47 |
| 2" | VOF200 NPT | Nipple | 811201008 | M | 101,6 | 4,00 | | | 6,04 | 13,32 |
| | VOF200 NPT | Coupler | 811201009 | N | 122,5 | 4,82 | T 182,5 | 7,19 | 8,10 | 17,86 |

NIPPLE

COUPLER




**Port description: FEMALE THREAD BSPP (ISO 1179-1)**

| BODY SIZE | Descriptive Code | Item Code | | PORT (A) | | Thread | Overall Length | | | Length | | | Hex | | | Diameter | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | mm | in | | mm | in | | mm | in | | mm | in |
| 3/4" | VOF34 BSP | Nipple | 811200002 | 3/4" | E | 1 3/4-8 special | G | 123,6 | 4,87 | F | 83,2 | 3,28 | B | 31,8 | 1,25 | H | 35,0 | 1,38 |
| | VOF34 BSP | Coupler | 811200003 | | | | | | | D | 71,8 | 2,83 | | | | | | |
| 1" | VOF100 BSP | Nipple | 811200000 | 1" | E | 2 1/4-6 Stub ACME | G | 152,9 | 6,02 | F | 105,8 | 4,17 | B | 41,3 | 1,63 | H | 45,0 | 1,77 |
| | VOF100 BSP | Coupler | 811200001 | | | | | | | D | 87,3 | 3,44 | | | | | | |
| 1-1/4" | VOF114 BSP | Nipple | 811200004 | 1-1/4" | E | 2 5/8-6 Stub ACME | G | 197,9 | 7,79 | F | 136,7 | 5,38 | B | 50,8 | 2,00 | H | 54,5 | 2,15 |
| | VOF114 BSP | Coupler | 811200005 | | | | | | | D | 112,4 | 4,43 | | | | | | |
| 1-1/2" | VOF112 BSP | Nipple | 811200006 | 1-1/2" | E | 3 1/4-4 Stub ACME | G | 220,3 | 8,67 | F | 151,2 | 5,95 | B | 57,2 | 2,25 | H | 63,5 | 2,50 |
| | VOF112 BSP | Coupler | 811200007 | | | | | | | D | 126,9 | 5,00 | | | | | | |
| 2" | VOF200 BSP | Nipple | 811200008 | 2" | E | 4-4 Stub ACME | G | 255,2 | 10,05 | F | 179,0 | 7,05 | B | 76,2 | 3,00 | H | 82,6 | 3,25 |
| | VOF200 BSP | Coupler | 811200009 | | | | | | | D | 154,2 | 6,07 | | | | | | |

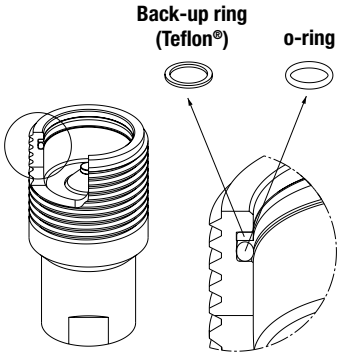
| BODY SIZE | Descriptive Code | Item Code | | Diameter | | | Max overall dimension | | | Weight | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | mm | in | | mm | in | kg | lb |
| 3/4" | VOF34 BSP | Nipple | 811200002 | M | 44,30 | 1,74 | | | | 0,50 | 1,10 |
| | VOF34 BSP | Coupler | 811200003 | N | 53,00 | 2,09 | T | 77,0 | 3,03 | 0,63 | 1,38 |
| 1" | VOF100 BSP | Nipple | 811200000 | M | 57,15 | 2,25 | | | | 1,17 | 2,58 |
| | VOF100 BSP | Coupler | 811200001 | N | 69,00 | 2,72 | T | 109,0 | 4,29 | 1,35 | 2,99 |
| 1-1/4" | VOF114 BSP | Nipple | 811200004 | M | 66,67 | 2,62 | | | | 1,92 | 4,23 |
| | VOF114 BSP | Coupler | 811200005 | N | 80,00 | 3,15 | T | 120,0 | 4,72 | 2,24 | 4,93 |
| 1-1/2" | VOF112 BSP | Nipple | 811200006 | M | 82,55 | 3,25 | | | | 3,16 | 6,97 |
| | VOF112 BSP | Coupler | 811200007 | N | 95,00 | 3,74 | T | 145,0 | 5,71 | 3,82 | 8,43 |
| 2" | VOF200 BSP | Nipple | 811200008 | M | 101,60 | 4,00 | | | | 6,03 | 13,29 |
| | VOF200 BSP | Coupler | 811200009 | N | 122,50 | 4,82 | T | 182,5 | 7,19 | 8,09 | 17,83 |



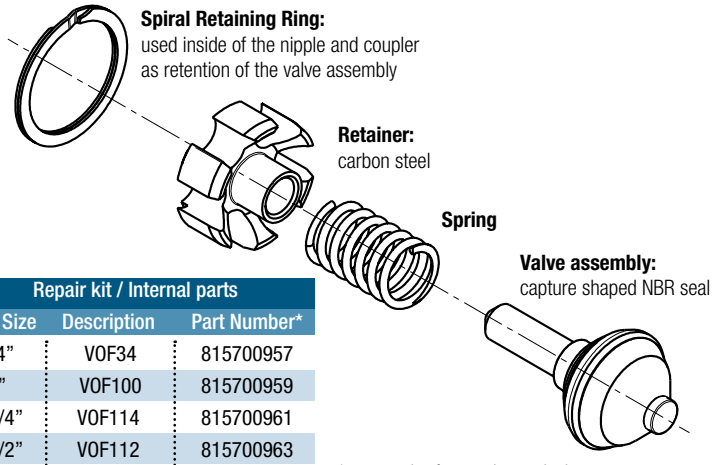
## SPARE KIT SEAL FOR NIPPLE

| Repair kit / OR+BK | | |
|---|---|---|
| Body Size | Description | Part Number |
| 3/4” | VOF34 | 815700956 |
| 1” | VOF100 | 815700958 |
| 1-1/4” | VOF114 | 815700960 |
| 1-1/2” | VOF112 | 815701122 |
| 2” | VOF200 | 815700964 |

O-Ring in Nitrile
BackUp in Teflon®




## SPARE KIT INTERNAL PARTS

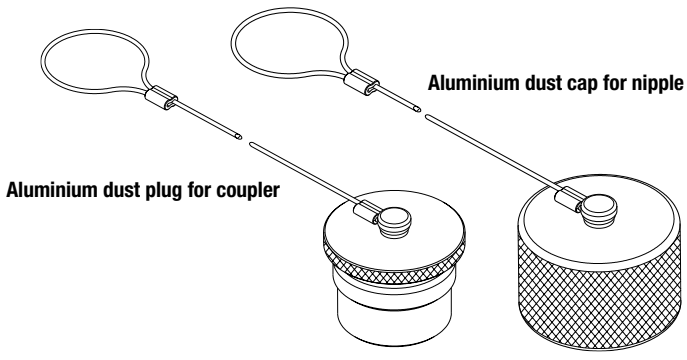



| Repair kit / Internal parts | | |
|---|---|---|
| Body Size | Description | Part Number* |
| 3/4” | VOF34 | 815700957 |
| 1” | VOF100 | 815700959 |
| 1-1/4” | VOF114 | 815700961 |
| 1-1/2” | VOF112 | 815700963 |
| 2” | VOF200 | ** |

*same codes for coupler or nipple
**contact Stucchi for the correct Part Number

## PROTECTIVE CAPS FOR VOF SERIES

Protective caps are always recommended to protect the couplings from damage, dirt inclusion, and will increase the product life.
This is particularly important in Oil&Gas and mobile applications where exposure to weather and aggregate materials are common.
The protective caps for VOF couplings are manufactured in aluminum (natural color).




| Protective Cap | | | |
|---|---|---|---|
| Body Size/Description | Part Number | | Material/Color |
| | Plug for Coupler | Cap for Nipple | |
| 3/4” | 815405013 | 815405012 | Aluminum/Natural |
| 1” | 815405011 | 815405010 | Aluminum/Natural |
| 1-1/4” | 815405015 | 815405014 | Aluminum/Natural |
| 1-1/2” | 815405017 | 815405016 | Aluminum/Natural |
| 2” | 815405019 | 815405018 | Aluminum/Natural |



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