

IRBX SERIES

INTERCHANGE > ISO 7241-1 "B"



Stucchi®



TECHNICAL FEATURES AND OPTIONS

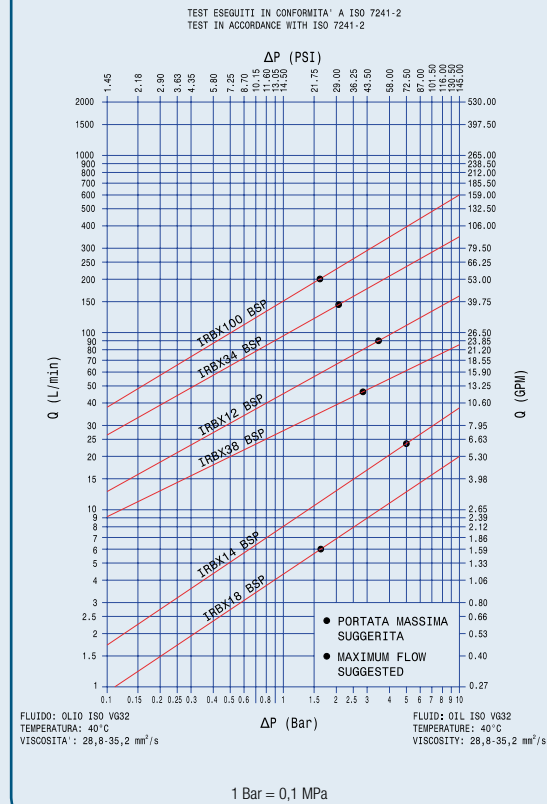
| | | | | | |
|--|--|--|---|--|---|
| | Interchange ISO 7241-1 "B" | | Sealing description FKM (VITON®) | | Connection system Single acting sleeve |
| | Available sizes From 1/8" to 1" | | Material Stainless steel (AISI 316L) Retainer in brass | | Available threads BSP - NPT |
| | Operating pressure Up to 250 bar | | Locking mechanism Locking Ball system | | Flow rate Up to 200 L/Min |
| | Temperature (°C) -15° / +180° | | Valving style Poppet | | Connection under pressure Connection: not allowed Disconnection: not allowed |

BENEFITS

- The poppet valve with elastomer seal provides maximum sealing of the couplings when disconnected.
- Shape of internal parts is designed to reduce turbulence and pressure drop.
- Good corrosion resistance.
- Compact slim design.
- Simple to use.

HOW TO USE

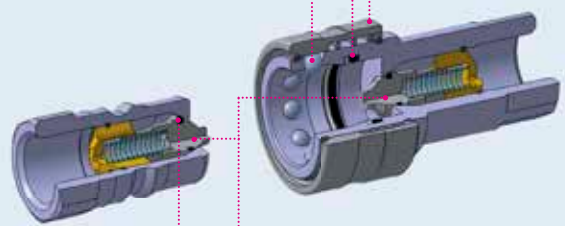
- Before to connect, clean the mating surface of the couplings to avoid dirt inclusion in the circuit.
- To connect pull back the sleeve of the female coupling, align the female with the male coupling and push one into the other until both halves are fully connected and release the sleeve.
- To disconnect push back the sleeve of the female coupling, pull out the mating half.



High number of locking balls to reduce the "brinelling" effect

BackUp rings are designed to prevent extrusion and to avoid premature wearing of O-Ring

Single acting sleeve: connection and disconnection by pulling back the sleeve



Valves with crimped seal to prevent extrusion at high flow rates

Poppet valves

MAIN APPLICATIONS



ISO B



PERFORMANCES

| Size | | Series/Size | Max. flow suggested | | Connect force | | Disconnect force | | Spillage* |
|------|----------|-------------|---------------------|-------|---------------|-------|------------------|-------|-----------|
| Inch | mm (ISO) | | l/min | GPM | N | lbf | N | lbf | ml |
| 1/8 | 5,0 | IRBX18 | 6 | 1,59 | 75 | 16,88 | 35 | 7,88 | 0,18 |
| 1/4 | 6,3 | IRBX14 | 24 | 6,36 | 60 | 13,50 | 30 | 6,75 | 0,33 |
| 3/8 | 10,0 | IRBX38 | 46 | 12,19 | 90 | 20,25 | 35 | 7,88 | 2,20 |
| 1/2 | 12,5 | IRBX12 | 90 | 23,85 | 125 | 28,13 | 45 | 10,13 | 3,00 |
| 3/4 | 20,0 | IRBX34 | 148 | 39,22 | 135 | 30,38 | 55 | 12,38 | 9,40 |
| 1 | 25,0 | IRBX100 | 200 | 53,00 | 140 | 31,50 | 40 | 9,00 | 14,00 |

| Size | Series/Size | Max. operating pressure | | | | | | Burst pressure | | | | | |
|------|-------------|-------------------------|------|------|------|--------|------|----------------|-------|------|-------|--------|-------|
| | | Coupled | | Male | | Female | | Coupled | | Male | | Female | |
| Inch | | MPa | psi | MPa | psi | MPa | psi | MPa | psi | MPa | psi | MPa | psi |
| 1/8 | IRBX18 | 25 | 3625 | 25 | 3625 | 25 | 3625 | 140 | 20300 | 140 | 20300 | 140 | 20300 |
| 1/4 | IRBX14 | 25 | 3625 | 25 | 3625 | 25 | 3625 | 140 | 20300 | 140 | 20300 | 140 | 20300 |
| 3/8 | IRBX38 | 20 | 2900 | 20 | 2900 | 20 | 2900 | 100 | 14500 | 100 | 14500 | 100 | 14500 |
| 1/2 | IRBX12 | 20 | 2900 | 20 | 2900 | 20 | 2900 | 100 | 14500 | 100 | 14500 | 100 | 14500 |
| 3/4 | IRBX34 | 16 | 2320 | 16 | 2320 | 16 | 2320 | 80 | 11600 | 80 | 11600 | 80 | 11600 |
| 1 | IRBX100 | 12,5 | 1813 | 12,5 | 1813 | 12,5 | 1813 | 60 | 8700 | 60 | 8700 | 60 | 8700 |

*Spillage is an indicative value of the fluid loss during disconnection (according to ISO 7241-2 test method)

Different possible configurations

IRB version construction material: carbon steel; seals: standard in NBR

IRBX version construction material: stainless steel (AISI 316L); seals: standard in VITON®

IRBO version construction material: brass; seals: standard in VITON®

IRBX PL full flow version without valves upon request.

Internal retainer in stainless steel upon request.

Temperature range:

IRB = standard seals in NBR (Nitrile) : from -20 °C to +100 °C (from -4 °F to +212 °F)

IRBX, IRBO = Seals in VITON® : from -15°C to +180°C (from +5 °F to +356 °F). Please read carefully "instruction and warning" for proper selection of the products.

Material:

-Construction: Stainless steel AISI 316L

-Springs: AISI 302

-Locking ball: AISI 316

! WARNING

A defect, a wrong choice or an improper use of products, can cause injury to persons, animals and objects.

Connection under pressure are under residual pressure.

Never connect or disconnect with dynamic pressure (e.g. pump on).

Do not use the coupling disconnected with high impulse pressure.

Do not couple-uncouple with flow and/or pressure in the circuit.

Do not couple-uncouple when the temperature inside of the circuit is higher than 80 °C (176 °F).

Check the maximum allowable working pressure of the port in use.

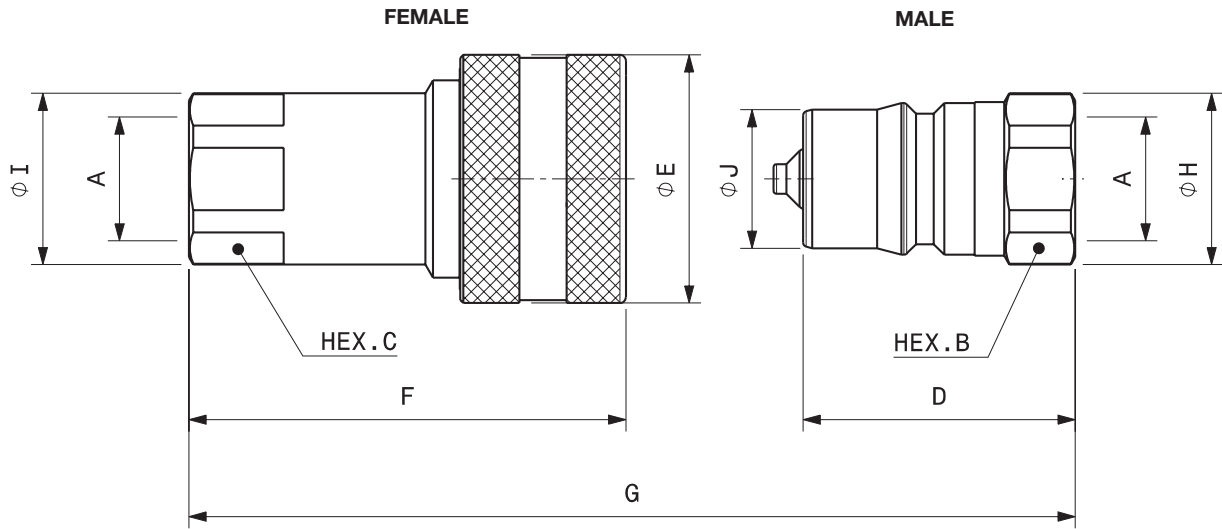
Make sure that the medium used is compatible with seal and material as indicated for each series.

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 read and closely follow the instructions. Last updated version always apply at time of installation, see latest written Instructions on Stucchi website (www.stucchi.it) before selecting or using Stucchi products.

OVERALL DIMENSIONS



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

| BODY SIZE | Descriptive Code | Item Code | ISO DN | PORT (A) | Overall Length | | Length | | Hex | | Overall Diameter | | Body Diameter | | Weight | | | | | | |
|-----------|------------------|------------------|--------|----------|----------------|-------|--------|------|-------|------|------------------|------|---------------|------|--------|------|---|------|------|------|------|
| | | | | | mm | inch | mm | inch | mm | inch | mm | inch | mm | inch | Kg | Lbs | | | | | |
| 1/8" | F IRBX18 BSP | Female 804600100 | 5,0 | 1/8" | G | 60,5 | 2,38 | F | 48,8 | 1,92 | C | 14,0 | 0,55 | I | 15,8 | 0,62 | E | 23,0 | 0,91 | 0,07 | 0,15 |
| | M IRBX18 BSP | Male 804600101 | | | | | | D | 30,0 | 1,18 | B | 14,0 | 0,55 | H | 15,8 | 0,62 | J | 10,8 | 0,43 | 0,02 | 0,04 |
| 1/4" | F IRBX14 BSP | Female 804600102 | 6,3 | 1/4" | G | 70,7 | 2,78 | F | 57,0 | 2,24 | C | 19,0 | 0,75 | I | 21,2 | 0,83 | E | 27,0 | 1,06 | 0,12 | 0,27 |
| | M IRBX14 BSP | Male 804600103 | | | | | | D | 35,0 | 1,38 | B | 19,0 | 0,75 | H | 20,8 | 0,82 | J | 14,2 | 0,56 | 0,04 | 0,08 |
| 3/8" | F IRBX38 BSP | Female 804600104 | 10,0 | 3/8" | G | 82,7 | 3,26 | F | 66,0 | 2,60 | C | 24,0 | 0,94 | I | 27,0 | 1,06 | E | 34,0 | 1,34 | 0,23 | 0,50 |
| | M IRBX38 BSP | Male 804600105 | | | | | | D | 41,0 | 1,61 | B | 24,0 | 0,94 | H | 26,0 | 1,02 | J | 19,1 | 0,75 | 0,07 | 0,15 |
| 1/2" | F IRBX12 BSP | Female 804600106 | 12,5 | 1/2" | G | 92,6 | 3,65 | F | 73,9 | 2,91 | C | 27,0 | 1,06 | I | 29,0 | 1,14 | E | 42,0 | 1,65 | 0,33 | 0,72 |
| | M IRBX12 BSP | Male 804600107 | | | | | | D | 46,0 | 1,81 | B | 27,0 | 1,06 | H | 29,0 | 1,14 | J | 23,5 | 0,93 | 0,10 | 0,23 |
| 3/4" | F IRBX34 BSP | Female 804600108 | 20,0 | 3/4" | G | 111,1 | 4,37 | F | 90,1 | 3,55 | C | 36,0 | 1,42 | I | 38,5 | 1,52 | E | 50,0 | 1,97 | 0,58 | 1,27 |
| | M IRBX34 BSP | Male 804600109 | | | | | | D | 55,0 | 2,17 | B | 36,0 | 1,42 | H | 38,5 | 1,52 | J | 31,4 | 1,24 | 0,21 | 0,45 |
| 1" | F IRBX100 BSP | Female 804600110 | 25,0 | 1" | G | 133,2 | 5,24 | F | 106,2 | 4,18 | C | 41,0 | 1,61 | I | 44,8 | 1,76 | E | 60,0 | 2,36 | 0,88 | 1,94 |
| | M IRBX100 BSP | Male 804600111 | | | | | | D | 66,0 | 2,60 | B | 41,0 | 1,61 | H | 44,8 | 1,76 | J | 37,7 | 1,48 | 0,34 | 0,74 |

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

| BODY SIZE | Descriptive Code | Item Code | ISO DN | PORT (A) | Overall Length | | Length | | Hex | | Overall Diameter | | Body Diameter | | Weight | | | | | | |
|-----------|------------------|------------------|--------|----------|----------------|-------|--------|------|-------|------|------------------|------|---------------|------|--------|------|---|------|------|------|------|
| | | | | | mm | inch | mm | inch | mm | inch | mm | inch | mm | inch | Kg | Lbs | | | | | |
| 1/8" | F IRBX18 NPT | Female 804601100 | 5,0 | 1/8" | G | 60,5 | 2,38 | F | 48,8 | 1,92 | C | 14,0 | 0,55 | I | 15,8 | 0,62 | E | 23,0 | 0,91 | 0,07 | 0,15 |
| | M IRBX18 NPT | Male 804601101 | | | | | | D | 30,0 | 1,18 | B | 14,0 | 0,55 | H | 15,8 | 0,62 | J | 10,8 | 0,43 | 0,02 | 0,04 |
| 1/4" | F IRBX14 NPT | Female 804601102 | 6,3 | 1/4" | G | 70,7 | 2,78 | F | 57,0 | 2,24 | C | 19,0 | 0,75 | I | 21,2 | 0,83 | E | 27,0 | 1,06 | 0,12 | 0,27 |
| | M IRBX14 NPT | Male 804601103 | | | | | | D | 35,0 | 1,38 | B | 19,0 | 0,75 | H | 20,8 | 0,82 | J | 14,2 | 0,56 | 0,04 | 0,08 |
| 3/8" | F IRBX38 NPT | Female 804601104 | 10,0 | 3/8" | G | 82,7 | 3,26 | F | 66,0 | 2,60 | C | 24,0 | 0,94 | I | 27,0 | 1,06 | E | 34,0 | 1,34 | 0,23 | 0,50 |
| | M IRBX38 NPT | Male 804601105 | | | | | | D | 41,0 | 1,61 | B | 24,0 | 0,94 | H | 26,0 | 1,02 | J | 19,1 | 0,75 | 0,07 | 0,15 |
| 1/2" | F IRBX12 NPT | Female 804601106 | 12,5 | 1/2" | G | 92,6 | 3,65 | F | 73,9 | 2,91 | C | 27,0 | 1,06 | I | 29,0 | 1,14 | E | 42,0 | 1,65 | 0,33 | 0,72 |
| | M IRBX12 NPT | Male 804601107 | | | | | | D | 46,0 | 1,81 | B | 27,0 | 1,06 | H | 29,0 | 1,14 | J | 23,5 | 0,93 | 0,11 | 0,24 |
| 3/4" | F IRBX34 NPT | Female 804601108 | 20,0 | 3/4" | G | 111,1 | 4,37 | F | 90,1 | 3,55 | C | 36,0 | 1,42 | I | 38,5 | 1,52 | E | 50,0 | 1,97 | 0,58 | 1,28 |
| | M IRBX34 NPT | Male 804601109 | | | | | | D | 55,0 | 2,17 | B | 36,0 | 1,42 | H | 38,5 | 1,52 | J | 31,4 | 1,24 | 0,21 | 0,46 |
| 1" | F IRBX100 NPT | Female 804601110 | 25,0 | 1" | G | 133,2 | 5,24 | F | 106,2 | 4,18 | C | 41,0 | 1,61 | I | 44,8 | 1,76 | E | 60,0 | 2,36 | 0,89 | 1,96 |
| | M IRBX100 NPT | Male 804601111 | | | | | | D | 66,0 | 2,60 | B | 41,0 | 1,61 | H | 44,8 | 1,76 | J | 37,7 | 1,48 | 0,34 | 0,74 |

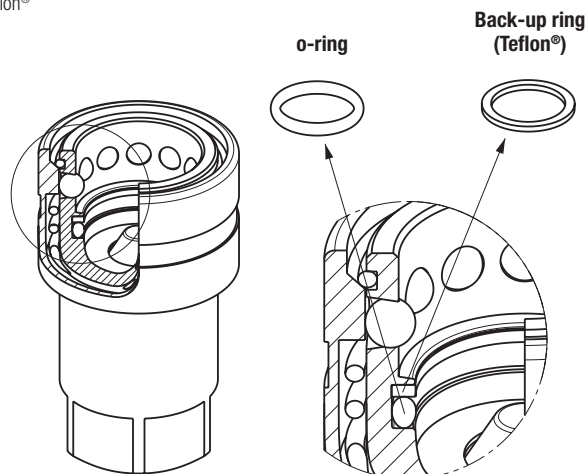
ISO B



SPARE KIT SEAL FOR FEMALE

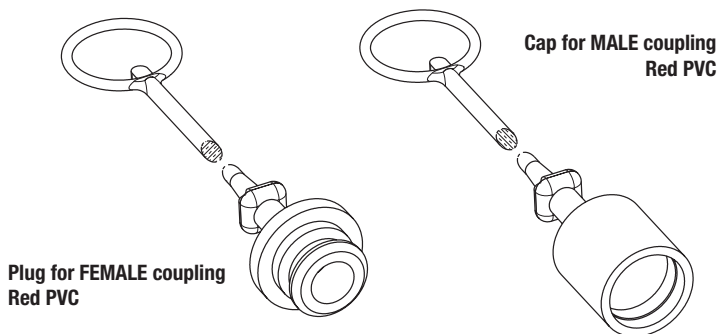
| Repair kit / OR+BK | | |
|--------------------|-------------|-------------|
| Body Size | Description | Part Number |
| 1/8" | F IRBX18 | 815700214 |
| 1/4" | F IRBX14 | 815700216 |
| 3/8" | F IRBX38 | 815700218 |
| 1/2" | F IRBX12 | 815700220 |
| 3/4" | F IRBX34 | 815700222 |
| 1" | F IRBX100 | 815700224 |

O-Ring in VITON®
BackUp in Teflon®



PROTECTIVE CAPS FOR IRBX SERIES

Protective caps are always recommended to protect the couplings from damage, dirt inclusion, and will increase the product life. The protective caps for IRBX series are manufactured in PVC with connection lanyard (standard color red, other colors available upon request).



| Body Size/Description | | Protective Cap | | Material/Color |
|-----------------------|---------|-----------------|--------------|----------------|
| | | Plug for Female | Cap for Male | |
| 1/4" | IRBX14 | 815000032 | 815000033 | PVC/Red |
| 3/8" | IRBX38 | 815000034 | 815000035 | PVC/Red |
| 1/2" | IRBX12 | 815000036 | 815000037 | PVC/Red |
| 3/4" | IRBX34 | 815000038 | 815000039 | PVC/Red |
| 1" | IRBX100 | 815000040 | 815000041 | PVC/Red |