

## Raccordi meccanici a tenuta O-Ring



## Mechanical fittings with O-Ring seal



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## 900 series

### Funzione Function

I raccordi meccanici a tenuta O-Ring serie 900 sono progettati per l'uso specifico con **tubazioni in rame ricotto, rame crudo, ottone, acciaio dolce e acciaio inox**. Tutte le versioni sono dotate di **guarnizione di colore nero** per l'utilizzo dei raccordi in **impianti idraulici e di distribuzione di acqua potabile**. Solo alcune versioni, contraddistinte dall'asterisco nella tabella sottostante, sono dotate anche di **guarnizione di colore giallo** che ne consente l'utilizzo in **impianti gas e idrocarburi fluidi** da utilizzare in alternativa alla guarnizione di colore nero.

The O-Ring seal mechanical fittings 900 series are designed to be used with **soft (annealed) copper, hard copper, brass, mild steel and stainless steel pipes**. All the series are provided with a **black seal for hydraulic systems and drinking water systems**. Only some series, marked by a "star" in the following table, are provided with a **yellow seal for gas and fluid hydrocarbons** to be used instead of the black O-Ring.

### Product range

#### 900 Brass version



| Code    | Connection | Pipe (mm) |
|---------|------------|-----------|
| 900308  | 3/8" F     | Ø 8       |
| 900310* | 3/8" F     | Ø 10      |
| 900312* | 3/8" F     | Ø 12      |
| 900314* | 3/8" F     | Ø 14      |
| 900410* | 1/2" F     | Ø 10      |
| 900412* | 1/2" F     | Ø 12      |
| 900414* | 1/2" F     | Ø 14      |
| 900415* | 1/2" F     | Ø 15      |
| 900416* | 1/2" F     | Ø 16      |
| 900418* | 1/2" F     | Ø 18      |
| 900516* | 3/4" F     | Ø 16      |
| 900518* | 3/4" F     | Ø 18      |
| 900522* | 3/4" F     | Ø 22      |
| 900622* | 1" F       | Ø 22      |
| 900628  | 1" F       | Ø 28      |

#### 903 Brass version



| Code   | Pipe (mm) |
|--------|-----------|
| 903008 | Ø 8       |
| 903010 | Ø 10      |
| 903012 | Ø 12      |
| 903014 | Ø 14      |
| 903015 | Ø 15      |
| 903016 | Ø 16      |
| 903018 | Ø 18      |
| 903022 | Ø 22      |

#### 904 Brass version



| Code     | Connection | Pipe (mm) |
|----------|------------|-----------|
| 904308   | 3/8" M     | Ø 8       |
| 904310*  | 3/8" M     | Ø 10      |
| 904312*  | 3/8" M     | Ø 12      |
| 904314*  | 3/8" M     | Ø 14      |
| 904410*  | 1/2" M     | Ø 10      |
| 904412*  | 1/2" M     | Ø 12      |
| 904414*  | 1/2" M     | Ø 14      |
| 904415*  | 1/2" M     | Ø 15      |
| 904416*  | 1/2" M     | Ø 16      |
| 904418*  | 1/2" M     | Ø 18      |
| 904514*  | 3/4" M     | Ø 14      |
| 904516*  | 3/4" M     | Ø 16      |
| 904518*  | 3/4" M     | Ø 18      |
| 904522*  | 3/4" M     | Ø 22      |
| 904618*  | 1" M       | Ø 18      |
| 904622*  | 1" M       | Ø 22      |
| 904628** | 1" M       | Ø 28      |

\* With yellow O-Ring for gas and fluid hydrocarbon systems

\*\* Use only for non hazardous water and glycol solutions

### 9050 Brass version



| Code   | Pipe (mm) |
|--------|-----------|
| 905010 | Ø 10      |
| 905012 | Ø 12      |
| 905014 | Ø 14      |
| 905015 | Ø 15      |
| 905016 | Ø 16      |
| 905018 | Ø 18      |
| 905022 | Ø 22      |

### 9057 Brass version



| Code    | Connection | Pipe (mm) |
|---------|------------|-----------|
| 905730* | 3/8" M     | Ø 10      |
| 905732* | 3/8" M     | Ø 12      |
| 905740* | 1/2" M     | Ø 10      |
| 905742* | 1/2" M     | Ø 12      |
| 905744* | 1/2" M     | Ø 14      |
| 905745* | 1/2" M     | Ø 15      |
| 905746* | 1/2" M     | Ø 16      |
| 905748* | 1/2" M     | Ø 18      |
| 905756* | 3/4" M     | Ø 16      |
| 905758* | 3/4" M     | Ø 18      |
| 905752* | 3/4" M     | Ø 22      |

### 9058 Brass version



| Code    | Connection | Pipe (mm) |
|---------|------------|-----------|
| 905830* | 3/8" F     | Ø 10      |
| 905832* | 3/8" F     | Ø 12      |
| 905840* | 1/2" F     | Ø 10      |
| 905842* | 1/2" F     | Ø 12      |
| 905844* | 1/2" F     | Ø 14      |
| 905845* | 1/2" F     | Ø 15      |
| 905846* | 1/2" F     | Ø 16      |
| 905848* | 1/2" F     | Ø 18      |
| 905856* | 3/4" F     | Ø 16      |
| 905858* | 3/4" F     | Ø 18      |
| 905852* | 3/4" F     | Ø 22      |

### 9060 Brass version



| Code   | Pipe (mm) |
|--------|-----------|
| 906010 | Ø 10      |
| 906012 | Ø 12      |
| 906014 | Ø 14      |
| 906015 | Ø 15      |
| 906016 | Ø 16      |
| 906018 | Ø 18      |
| 906022 | Ø 22      |

### 9067 Brass version



| Code   | Connection | Pipe (mm) |
|--------|------------|-----------|
| 906740 | 1/2" M     | Ø 10      |
| 906742 | 1/2" M     | Ø 12      |
| 906744 | 1/2" M     | Ø 14      |
| 906745 | 1/2" M     | Ø 15      |
| 906746 | 1/2" M     | Ø 16      |
| 906758 | 3/4" M     | Ø 18      |
| 906752 | 3/4" M     | Ø 22      |

### 9068 Brass version



| Code   | Connection | Pipe (mm) |
|--------|------------|-----------|
| 906830 | 3/8" F     | Ø 10      |
| 906832 | 3/8" F     | Ø 12      |
| 906840 | 1/2" F     | Ø 10      |
| 906842 | 1/2" F     | Ø 12      |
| 906844 | 1/2" F     | Ø 14      |
| 906845 | 1/2" F     | Ø 15      |
| 906846 | 1/2" F     | Ø 16      |
| 906858 | 3/4" F     | Ø 18      |
| 906852 | 3/4" F     | Ø 22      |

### 930 Brass version



| Code    | Connection | Pipe (mm) |
|---------|------------|-----------|
| 930412* | 1/2" F     | Ø 12      |
| 930414* | 1/2" F     | Ø 14      |
| 930416* | 1/2" F     | Ø 16      |

### Yellow O-Ring



| Code      |
|-----------|
| R97012    |
| R97013*** |
| R97014    |
| R97015    |
| R97016    |
| R97017    |
| R97018    |
| R97019    |

### Black O-Ring



| Code     |
|----------|
| R97020   |
| R97022** |
| R97021   |
| R97023   |
| R97024   |
| R47037   |
| R97025   |
| R97026   |
| R97027   |

| Connection |
|------------|
| Ø 8        |
| Ø 10       |
| Ø 10       |
| Ø 12       |
| Ø 14       |
| Ø 15       |
| Ø 16       |
| Ø 18       |
| Ø 22       |
| Ø 28       |

\*\* Only for cod. 900310, 903010, 904310, 910310, 913010 and 914310 fittings

\*\*\* Only for cod. 900310, 904310, 905730 and 905830 fittings

\* With yellow O-Ring for gas and fluid hydrocarbon systems

## 910 Chrome plated version



| Code   | Connection | Pipe (mm) |
|--------|------------|-----------|
| 910310 | 3/8" F     | Ø 10      |
| 910312 | 3/8" F     | Ø 12      |
| 910314 | 3/8" F     | Ø 14      |
| 910410 | 1/2" F     | Ø 10      |
| 910412 | 1/2" F     | Ø 12      |
| 910414 | 1/2" F     | Ø 14      |
| 910415 | 1/2" F     | Ø 15      |

## 913 Chrome plated version



| Code   | Pipe (mm) |
|--------|-----------|
| 913010 | Ø 10      |
| 913012 | Ø 12      |
| 913014 | Ø 14      |

## 914 Chrome plated version



| Code   | Connection | Pipe (mm) |
|--------|------------|-----------|
| 914310 | 3/8" M     | Ø 10      |
| 914312 | 3/8" M     | Ø 12      |
| 914314 | 3/8" M     | Ø 14      |
| 914410 | 1/2" M     | Ø 10      |
| 914412 | 1/2" M     | Ø 12      |
| 914414 | 1/2" M     | Ø 14      |
| 914415 | 1/2" M     | Ø 15      |

### Caratteristiche tecniche

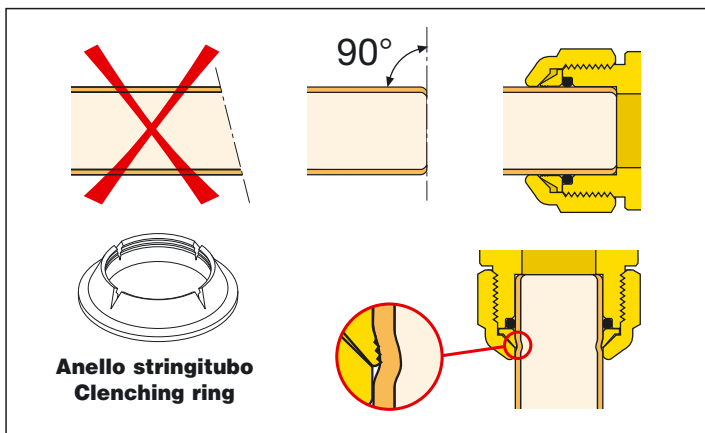
### Technical specifications

|                             |  |
|-----------------------------|--|
| Materiali:                  | - calotta e raccordo: ottone UNI EN 12165 CW617N |
|                             | - anello stringitubo: ottone UNI EN 12164 CW614N |
|                             | ottone UNI EN 12165 CW617N (Ø 22 mm)             |
|                             | - tenute idrauliche <b>O-Ring giallo:</b> HNBR   |
|                             | per impianti gas e idrocarburi fluidi            |
|                             | Conforme norma EN 682                            |
| Pressione max di esercizio: | secondo usi consentiti dalle normative           |
|                             | Campo di temperatura: -15÷50°C                   |
|                             | - tenute idrauliche <b>O-Ring nero:</b> EPDM     |
|                             | per impianti idraulici e acqua potabile          |
|                             | Conforme norma EN 681.1                          |
|                             | Fluidi d'impiego: acqua, soluzioni glicolate     |
|                             | Max percentuale di glicole: 30%                  |
|                             | Pressione max di esercizio: 16 bar               |
|                             | Campo di temperatura: -25÷120°C                  |
| Coppia minima di serraggio: | - Ø 8-Ø 18 mm: 25 N·m                            |
|                             | - Ø 22 mm: 35 N·m                                |
|                             | - Ø 28 mm: 50 N·m                                |
| Materiale tubazione:        | rame ricotto R 220; rame cupro R 290; ottone     |
|                             | acciaio dolce; acciaio inox                      |
| Conformi alla norma:        | - UNI EN 1254-2; serie 903, 913, 9050, 9060      |
|                             | - UNI EN 1254-4; serie 900, 904, 9057, 9058,     |
|                             | 9067, 9068, 910, 914, 930                        |
| Materials:                  | - nut and fitting: brass EN 12165 CW617N         |
|                             | - clenching ring: brass EN 12164 CW614N          |
|                             | brass EN 12165 CW617N (Ø 22 mm)                  |
|                             | - hydraulic seal <b>yellow O-Ring:</b> HNBR      |
|                             | for gas and fluid hydrocarbons                   |
|                             | Conformity to standard EN 682                    |
| Max. working pressure:      | according to use allowed by standards            |
|                             | Working temperature range: -15-50°C              |
|                             | - hydraulic seal <b>black O-Ring:</b> EPDM       |
|                             | for hydraulic and drinking water systems         |
|                             | Conformity to standard EN 681.1                  |
|                             | Medium: water, glycol solutions                  |
|                             | Max. percentage of glycol: 30%                   |
|                             | Max. working pressure: 16 bar                    |
|                             | Working temperature range: -25-120°C             |
| Minimum tightening torque:  | - Ø 8-Ø 18 mm: 25 N·m                            |
|                             | - Ø 22 mm: 35 N·m                                |
|                             | - Ø 28 mm: 50 N·m                                |
| Pipe material:              | soft (annealed) copper R 220; hard copper R 290; |
|                             | brass; mild steel; stainless steel               |
| Conformity to standard:     | - UNI EN 1254-2; 903, 913, 9050, 9060 series     |
|                             | - UNI EN 1254-4; 900, 904, 9057, 9058, 9067      |
|                             | 9068, 910, 914, 930 series                       |

## Installazione Installation

Per l'impiego di questo raccordo è necessario intestare il tubo, ovvero eliminare qualsiasi finitura tagliente all'imbocco dello stesso, calzare la calotta e l'anello stringitubo, introdurre il tubo nel raccordo fino a battuta, dopodiché serrare con una chiave esagonale, esercitando una coppia minima di 25 N·m ( $\varnothing 8$ - $\varnothing 18$ ), 35 N·m ( $\varnothing 22$ ), 50 N·m ( $\varnothing 28$ ).

In order to use this fitting it is necessary to calibrate the pipe, so as to eliminate any sharp edges at its end. Then apply both the nut and the clenching ring on the pipe, insert the pipe fully into the fitting and tighten with an appropriate hexagonal wrench applying a minimum torque of 25 N·m (for fittings coupled with pipes  $\varnothing 8$ - $\varnothing 18$ ), 35 N·m (for fittings coupled with pipes  $\varnothing 22$ ) and 50 N·m (for fittings coupled with pipes  $\varnothing 28$ ).



## Sicurezza Safety



Il raccordo deve essere installato da un installatore qualificato in accordo con i regolamenti nazionali e/o i relativi requisiti locali.

Se i raccordi non sono installati correttamente secondo le istruzioni contenute in questo manuale, possono non funzionare correttamente e porre l'utente in pericolo.

Nella realizzazione delle connessioni idrauliche, prestare attenzione a non sovrasollecitare meccanicamente le filettature. Nel tempo si possono produrre rotture con perdite idrauliche a danno di cose e/o persone.

Temperature dell'acqua superiori a 50°C possono provocare gravi ustioni.

Durante l'installazione e messa in servizio, adottare gli accorgimenti necessari affinché tali temperature non arrechino pericolo per le persone.

**Lasciare il presente manuale ad uso e servizio dell'utente**

The fitting must be installed by a qualified technician, in accordance with national and/or relevant local requirements.

If the fittings are not installed properly according to the instructions provided in this manual, they may not work correctly and might endanger the user.

When connecting water pipes, make sure that threaded connections are not subjected to excessive mechanical stress. Over time this may result in breakage, with loss of water and damage to persons and/or property.

Water temperatures exceeding 50°C may cause severe burns.

During the installation and commissioning, take all the necessary steps to ensure that such temperatures do not cause danger to people.

**Leave this manual with the user**