



Stucchi®



a constant flow of solutions

# Quick Couplings Product Directory

[stucchigroup.com](http://stucchigroup.com)

# The Company

Founded in 1960 by the two brothers Tino and Renzo in the province of Bergamo (Northern Italy), today Stucchi is one of the major worldwide manufacturers of quick couplings and solutions for hydraulic power transmission.

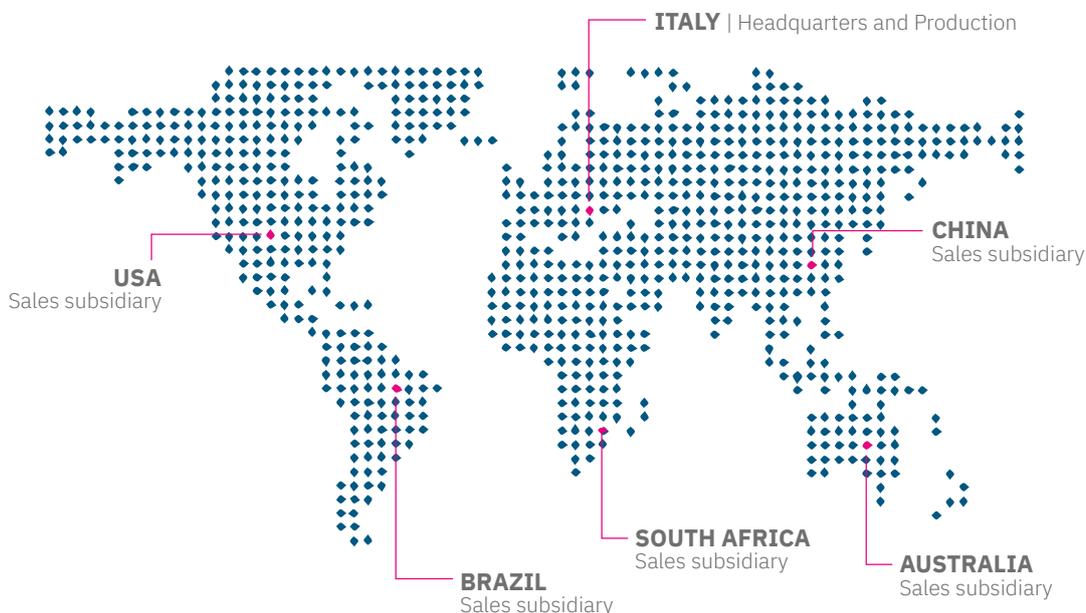
The vision that drives us to the future is to be recognized by our customers as their supplier of choice for fluid power products and solutions that are easy to use, safe, long lasting, environmentally friendly and that help in saving energy.

# Why choose Stucchi Quick Couplings

- **Specialized** in quick couplings
- We **listen** to the needs of our customers
- **Full range** of products and interchangeability
- We **design** and **test** innovative solutions
- We have a **dedicated stock**
- **Diversified services** for our clients
- Our products are suitable for **many areas of applications**
- **Safety** and **respect for the environment** first
- 100% **Made in Italy** production, with a global sales network



# Stucchi in the world



# The Stucchi proposition

## A complete range

The offer of Stucchi quick couplings allows us to **meet the different needs** of producers and end users, guaranteeing in any case the Stucchi certified quality.

From the most traditional poppet couplings to the latest generation multicouplings plates, up to the exclusive flat-face screw couplings: the range of Stucchi quick couplings covers the **most diverse applications** thanks to the experience and skills acquired in 60 years of history.

## Quick couplings specialists

Stucchi products, capable of operating up to **pressures of 700 bar**, are designed to cover a wide range of applications thanks to the use of different types of **materials**, different **sizes** (from 1/8" to 2") and **configurations** (BSP, NPT, SAE, METRIC, etc.).

The table on pages 18-22 summarizes the offer in the Stucchi catalog, providing a **complete overview** of the available products, with the characteristics and options that can be ordered.

## Special solutions

The **Special Series** section includes products developed for particular applications and it is available on the [stucchigroup.com](http://stucchigroup.com) website or through the Stucchi sales network.

In addition to the products in the catalog, Stucchi also offers its customers an advanced **Technical-Commercial support**: thanks to its skills and a customer-oriented discovery approach, many manufacturers choose Stucchi for the conception, design and development of **specific and customized solutions**.



# Applications

In the course of its over 60 years of history, Stucchi has developed the most suitable products for each sector of use.

Thanks to the constant collaboration with the main players of each market, it has been able to conceive and design specific solutions that meet the needs of manufacturers and end users.



## Earth moving

In this sector, hydraulic circuits must reach particularly high operating standards: high power levels, prolonged contact with debris and dust, and frequent replacement of tools, call for meticulous care in the design of the couplings to ensure maximum operating efficiency, preventing damage to machinery and injury to personnel.



## Oil & Gas

The hydraulic circuits in this field must transmit the fluid dynamic power to the machinery required for the exploration, perforation and extraction (upstream), transportation and storage (midstream) of crude oil and natural gas. The upstream sector, where quick couplings are more commonly used, is subject to intense mechanical stress and challenging environmental conditions.



## Vehicles

In the Vehicles sector, safety and durability are the keywords because a malfunction could cause serious injuries to staff and damages to property. Heavy vehicles use hydraulic circuits to connect trailers, to steer the wheels and operate suspensions: the ability of the couplings to withstand these demanding applications is essential.



## Agriculture

Agricultural machinery requires frequent equipment changeovers to be carried out directly on-site: in these conditions, operations must be carried out quickly and safely to prevent contamination of both the circuit and the soil, which is the most precious resource of this sector.



## Hydraulic tools

The need to manage high pressures is combined with the need for tool portability: the hydraulic lines that power tools, such as pneumatic hammers must be available for use in any environment and under any conditions, while maintaining the highest degree of performance and safety.



## High pressure

Roadside assistance tools, such as shears, jacks and retractors, require high pressure and frequent connection and disconnection of the lines: in this field of application, the speed of operations can make the difference between life and death.



## Refrigeration

Special couplings are used in vehicles air conditioning recharging stations, or in eutectic plates used on insulated vans transporting frozen and fresh products. These fields of use call for specific components, guaranteeing the absence of fluid or gas leaks, which would otherwise cause the machinery to malfunction.



## Industry

Machinery which must apply a high force, such as sheet metal shearing systems and hot rolling mills, are powered by hydraulic circuits. In this context it is necessary to be able to remove individual segments for maintenance and inspection purposes, by disconnecting parts of the circuit without stopping the rest of production.



## Cooling

Liquid cooling systems offer improved performances and require smaller dimensions compared to air systems: on the other hand, their use with electronic components in systems for rail transport, server-farms, etc. means there must be a total absence of leaks to prevent damage to the entire system.



## Chemical & Food Industry

In this sector numerous machines are used that require hydraulic circuits to operate correctly. The absence of leaks is a fundamental requirement for these applications when operating in an environment where the contamination of chemicals or foodstuffs with oil is inadmissible.

# FLAT FACE

Stucchi Flat Face quick couplings were developed on the model of the FIRG coupling which in 1998 was one of the references to define the ISO 16028 international standard.

The special configuration of the interface allows connections in total safety, without the inclusion of dirt or air and with fluid losses reduced to a minimum, for greater protection of the working environment.



## FIRG



Valving style: Flat face  
Interchange: ISO 16028  
Sealing: Nitrile NBR  
Sizes: From 1/4" to 2"  
Operating pressure: Up to 330 bar  
Flow rate: Up to 1000 l/min  
Material / Treatment: Carbon steel / Cr3

## APM



Valving style: Flat face  
Interchange: ISO 16028  
Sealing: Nitrile NBR  
Sizes: From 3/8" to 1-1/2"  
Operating pressure: Up to 350 bar  
Flow rate: Up to 750 l/min  
Material / Treatment: Carbon steel / Cr3  
Connection under pressure: One side

## A



Valving style: Flat face  
Interchange: ISO 16028  
Sealing: Nitrile NBR  
Sizes: From 1/8" to 1-1/2"  
Operating pressure: Up to 420 bar  
Flow rate: Up to 750 l/min  
Material / Treatment: Carbon steel / Cr3

## AX



Valving style: Flat face  
Interchange: ISO 16028  
Sealing: Nitrile NBR  
Sizes: From 1/4" to 1"  
Operating pressure: Up to 350 bar  
Flow rate: Up to 378 l/min  
Material / Treatment: Stainless steel (AISI 316L)

## A-HD



Valving style: Flat face  
Interchange: ISO 16028  
Sealing: Nitrile NBR  
Sizes: From 3/8" to 1/2"  
Operating pressure: Up to 350 bar  
Flow rate: Up to 90 l/min  
Material / Treatment: Carbon steel / Cr3  
Connection under pressure: One side

## FL



Valving style: Flat face  
Interchange: ISO 16028  
Sealing: FKM (Viton®)  
Sizes: From 1/8" to 2"  
Operating pressure: Up to 350 bar  
Flow rate: Up to 1000 l/min  
Material / Treatment: Stainless steel (AISI 316L)

## FIRG-Q



Valving style: Flat face  
Interchange: ISO 16028  
Sealing: Nitrile NBR, FKM (Viton®), DM, Kalrez®  
Sizes: From 1/4" to 2"  
Operating pressure: Up to 300 bar  
Flow rate: Up to 1000 l/min  
Material / Treatment: Carbon steel, stainless steel (AISI 316L) / QPQ

# FLAT FACE SCREW

Developed by Stucchi designers, these specific couplings are particularly suitable for applications with high stresses and in the presence of residual pressure in the circuit; the characteristic screw closure system allows effortless connections and disconnections, in addition to the advantages of the flat face valve.



## VP-P



Valving style: Flat face  
 Interchange: Stucchi profile  
 Sealing: Nitrile NBR  
 Sizes: From 1/4" to 1-1/2"  
 Operating pressure: Up to 600 bar  
 Flow rate: Up to 750 l/min  
 Material / Treatment:  
 Carbon steel / Cr3, QPQ  
 Connection under pressure: Allowed

## VEP-P



Valving style: Flat face  
 Interchange: Stucchi profile  
 Sealing: Nitrile NBR  
 Sizes: From 1/4" to 2"  
 Operating pressure: Up to 600 bar  
 Flow rate: Up to 1000 l/min  
 Material / Treatment:  
 Carbon steel / Cr3, QPQ, (Zn-Ni)  
 Connection under pressure: Allowed

## VEP-HD\*



Valving style: Flat face  
 Interchange: Stucchi profile  
 Sealing: Nitrile NBR  
 Sizes: From 5/8" to 1-1/2"  
 Operating pressure: Up to 500 bar  
 Flow rate: Up to 750 l/min  
 Material / Treatment:  
 Carbon steel / QPQ  
 Connection under pressure: Allowed

\* VEP-HDL version with safety cotter pin

## MULTICOUPLINGS

Stucchi multicouplings are the ideal solution when there are multiple hydraulic lines to be connected and disconnected in a circuit, allowing you to connect the two parts with great ease and without the aid of tools.

The two plates, one mobile and one fixed, welcome one all the males and the other all the females; thanks to different mechanical systems (lever or cam), the operator can connect or disconnect with a single movement up to 10 hydraulic lines simultaneously.



The main advantages of using Stucchi Multicouplings:

- configuration flexibility
- widest range in the market
- maximum speed of execution
- minimum effort required of the operator
- no risk of wrong connections
- strong and secure connection thanks to the locking mechanisms
- connection and disconnection even in presence of residual pressure
- easy connection even in presence of large lines
- cleaning and safety of the flat face quick couplings
- less wear on the couplings
- possibility to insert electrical connectors

## Multicouplings for hydraulic oil circuits

### DP

DP is the series of compact manual multicouplings that offers solutions for applications that need to couple and uncouple multiple hydraulic lines in small spaces. Up to four 1/2" lines can be connected and disconnected simultaneously with a safe, simple and fast movement.



**Valving style:** Flat face  
**Interchange:** Stucchi profile  
**Sealing:** Nitrile NBR  
**Sizes:** From 3/8" to 1"  
**Flow rate:** Up to 378 l/min  
**Material / Treatment:** Carbon steel, Aluminium / Cr3  
**Connection under pressure:** Allowed

### GR

GR is the manual multiconnection series that allows the simultaneous connection and disconnection of up to 10 lines in complete safety, through a fast and effortless movement. The lines can have the same size or each line can be different from the others according to the applications.



**Valving style:** Flat face  
**Interchange:** Stucchi profile  
**Sealing:** Nitrile NBR  
**Sizes:** From 3/8" to 1"  
**Flow rate:** Up to 378 l/min  
**Material / Treatment:** Carbon steel, Brass / Cr3  
**Connection under pressure:** Allowed

DP and GR plates are designed to be used with specific couplings, which are divided into:

- FAP-ZN (usable with hydraulic oil up to 350 bar and connectable with residual pressure)
- FAP-HD (usable with hydraulic oil up to 700 bar and connectable with residual pressure)
- FAQ (usable with air, water and glycol up to 20 bar)



## Multicouplings for water/glycole or air/oil circuits

### GRE

The GRE series, with its brass couplings, is designed for hydraulic applications with low oil-water pressure or for pneumatic cooling. Up to 18 lines can be connected and disconnected simultaneously in a safe, simple and quick movement that requires minimal effort.



**Valving style:** Flat face  
**Interchange:** Stucchi profile  
**Sealing:** Nitrile NBR  
**Sizes:** From 3/8" to 1/2"  
**Operating pressure:** Up to 10 bar  
**Flow rate:** Up to 90 l/min  
**Material / Treatment:** Aluminium



GRE plates mount CS brass couplings, suitable for use with hydraulic oil up to 10 bar, water or air.

# Summary table for DP and GR

| Name   | Family | Total lines | FAP9 (A)    | FAP13 (B)   | FAP15 (C) | FAP17 (D) | FAP21 (E)   | EC*       | Previous description | Page      |            |     |
|--|--------|-------------|-------------|-------------|-----------|-----------|-------------|-----------|----------------------|-----------|------------|-----|
| <i>Body size</i>                                     |        |             | 3/8"        | 1/2"        | 5/8"      | 3/4"      | 1"          | 3/8" 1/2" |                      |           |            |     |
| <i>Max flow suggested (l/min)</i>                    |        |             | 46          | 90          | 148       | 200       | 378         |           |                      |           |            |     |
| <i>Mostly used adaptor (main alternative thread)</i> |        |             | 3/8" (1/2") | 1/2" (3/4") | 3/4"      | 1" (3/4") | 1-1/4" (1") |           |                      |           |            |     |
| DP2 2A-1EC   | DP     | 2           | 2           | A           |           |           |             | 1         | DP2-9ZN              | 30        |            |     |
| DP2 2A-2EC V04                                       | DP     | 2           | 2           | A           |           |           |             | 2         | DP2-9L               | 32        |            |     |
| DP2 2B-1EC   | DP     | 2           |             |             | 2         |           |             |           | 1                    | DP2-13ZN  | 34         |     |
| DP2 2B-2EC V04                                       | DP     | 2           |             |             | 2         |           |             |           | 2                    | DP2-13L   | 36         |     |
| DP2 2C   | DP     | 2           |             |             |           | 2         |             |           |                      | DP2-15    | 38         |     |
| DP2 2D   | DP     | 2           |             |             |           |           | 2           |           |                      | DP2-17ZN  | 40         |     |
| DP2 1A-1B  | DP     | 2           | 1           | D           | 1         |           |             |           |                      | DPT2ZN    | 42         |     |
| DP3 1A-1B-1EC  | DP     | 3           | 1           | D           | 1         |           |             | 1**       |                      | DPT3ZN    | 44         |     |
| DP3 1A-2C-1EC V04                                    | DP     | 3           | 1           | D           |           | 2         |             | 1         |                      |           | 46         |     |
| DP3 1C-2E  | DP     | 3           |             |             | 1         |           | 2           |           |                      | DP3GE     | 48         |     |
| DP3 2A-1EC   | DP     | 3           | 2           | A           |           |           |             | 1**       |                      | DPJ3ZN    | 50         |     |
| DP4 4A V02   | DP     | 4           | 4           | A           |           |           |             |           |                      | DP4-9FAZN | 50         |     |
| DP4 4A-2EC   | DP     | 4           | 4           | A           |           |           |             | 2         |                      | DP4-9ZN   | 52         |     |
| DP4 4B-2EC   | DP     | 4           |             |             | 4         |           |             |           | 2                    | DP4-13ZN  | 54         |     |
| DP6 2A-4D-2EC  | DP     | 6           | 2           | D           |           |           |             | 2         |                      | DP6AD     | 56         |     |
| GR3 3A-1EC   | GR     | 3           | 3           | A           |           |           | 4           | 1         |                      | GR3-9ZN   | 58         |     |
| GR3 3B-1EC   | GR     | 3           |             |             | 3         |           |             |           | 1                    | GR3-13ZN  | 60         |     |
| GR3 1A-2E-1EC  | GR     | 3           | 1           | D           |           |           |             | 2         | 1                    | GRK3ZN    | 62         |     |
| GR3 2B-1C-2EC  | GR     | 3           |             |             | 2         | 1         |             |           | 2                    | GRI3      | 64         |     |
| GR4 2A-1B-1C-2EC                                     | GR     | 4           | 2           | D           | 1         | 1         |             |           | 2                    | GRI4SBZN  | 66         |     |
| GR4 2A-2B-2EC  | GR     | 4           | 2           | D           | 2         |           |             |           | 2                    | GRB4ZN    | 68         |     |
| GR4 2A-1B-1D-2EC                                     | GR     | 4           | 2           | D           | 1         |           | 1           |           | 2                    | GR4MRZN   | 70         |     |
| GR4 2A-1C-1D-2EC                                     | GR     | 4           | 2           | D           |           | 1         | 1           |           | 2                    | GRI4ZN    | 72         |     |
| GR4 2A-2C-2EC  | GR     | 4           | 2           | D           |           | 2         |             |           | 2                    | GRI4TBZN  | 74         |     |
| GR5 1A-1B-1C-2D-1EC                                  | GR     | 5           | 1           | D           | 1         | 1         | 2           |           | 1                    | GRP6ZN    | 76         |     |
| GR5 2B-3D-2EC  | GR     | 5           |             |             | 2         |           | 3           |           | 2                    | GR5AAZN   | 78         |     |
| GR5 3A-1D-1E-2EC                                     | GR     | 5           | 3           | D           |           |           | 1           | 1         | 2                    | GRD5ZN    | 80         |     |
| GR5 2B-2C-1E-2EC                                     | GR     | 5           |             |             | 2         | 2         |             | 1         |                      | GRZ5ZN    | 82         |     |
| GR5 5C   | GR     | 5           |             |             |           | 5         |             |           |                      | GR5-15ZN  | 84         |     |
| GR6 6A-2EC   | GR     | 6           | 6           | A           |           |           |             |           | 2                    | GR6-9ZN   | 86         |     |
| GR6 4A-2B-2EC  | GR     | 6           | 4           | D           | 2         |           |             |           | 2                    | GRT6ZN    | 88         |     |
| GR6 4B-2D-4EC  | GR     | 6           |             |             | 4         |           | 2           |           |                      | 4         | GR6ABZN    | 90  |
| GR6 2A-2B-2C-2EC                                     | GR     | 6           | 2           | D           | 2         | 2         |             |           | 2                    | GRM6MCZN  | 92         |     |
| GR6 6B-2EC   | GR     | 6           |             |             | 6         |           |             |           |                      | 2         | GR6-13ZN   | 94  |
| GR6 3A-1B-1C-1D-2EC                                  | GR     | 6           | 3           | D           | 1         | 1         | 1           |           | 2                    | GRC6ZN    | 96         |     |
| GR6 2A-2C-2D-2EC                                     | GR     | 6           | 2           | D           |           | 2         |             |           | 2                    | GRM6ZN    | 98         |     |
| GR6 2A-2B-1D-1E-2EC                                  | GR     | 6           | 2           | D           | 2         |           | 1           | 1         | 2                    | GRU6ZN    | 100        |     |
| GR6 2B-4D-2EC  | GR     | 6           |             |             | 2         |           | 4           |           |                      | 2         | GR6LLZN    | 102 |
| GR6 2A-4C-2EC  | GR     | 6           | 2           | D           |           | 4         |             |           | 2                    | GRM6ALZN  | 104        |     |
| GR6 2A-1B-2D-1E-3EC                                  | GR     | 6           | 2           | D           |           |           | 2           | 1         | 2                    | 1         | GR6AF      | 106 |
| GR7 4A-3B-4EC  | GR     | 7           | 4           | D           |           |           |             |           | 4                    |           | GR7ABZN    | 108 |
| GR7 4A-3B-4EC V01                                    | GR     | 7           | 4           | D           |           |           |             |           | 4                    |           | GR7ABZNLC  | 108 |
| GRHP7 7A-4EC   | GR     | 7           | 4           | D           |           |           |             |           | 4                    |           | GR7ACZN    | 110 |
|  |        |             | 3           | HP          |           |           |             |           |                      |           |            |     |
| GR7 4A-1B-2D-4EC                                     | GR     | 7           | 4           | D           | 1         |           | 2           |           | 4                    |           | GR7AAZN    | 112 |
| GR8 6A-2B-6EC  | GR     | 8           | 6           | D           | 2         |           |             |           | 6                    |           | GR8ABZN    | 114 |
| GR8 7A-1D-7EC  | GR     | 8           | 7           | D           |           |           | 1           |           | 7                    |           | GR8AAZN    | 116 |
| GR10 10A-2EC   | GR     | 10          | 10          | D           |           |           |             |           | 2                    |           | GR10-9LCZN | 118 |
| GR10 10A-2EC V01                                     | GR     | 10          | 10          | D           |           |           |             |           |                      |           | GR10-9ZNSD | 118 |
| GR10 10A-2EC V03                                     | GR     | 10          | 10          | D           |           |           |             |           |                      |           | GR10-9ZN   | 118 |
| GR10 10B-2EC   | GR     | 10          |             |             | 10        |           |             |           | 2                    |           | GR10-13ZN  | 120 |

\* Electrical Connector instead of hydraulic line

\*\* this line is only dedicated for EC

FAP9 "A" and "D": the version is depending on the type of multicoupling in use.



# CASTING

This family of products meets the needs of modern skid steers, summarizing all the experience gained by Stucchi in the management of fluids.

Designed and developed in close collaboration with primary references in the earth-moving sector, they are equipped with a manual drain system that allows connections and disconnections of the power lines in complete safety, even in presence of residual pressure.



## SATURN 3 | 3 LINES



Valving style: Flat face  
Interchange: ISO 16028  
Sealing: Nitrile NBR  
Sizes: From 1/2" to 3/4"  
Operating pressure: Up to 350 bar  
Flow rate: Up to 200 l/min  
Material / Treatment: Carbon steel / Cr3  
Connection under pressure: One side

## SATURN 5 | 5 LINES



Valving style: Flat face  
Interchange: ISO 16028  
Sealing: Nitrile NBR  
Sizes: From 1/2" to 3/4"  
Operating pressure: Up to 350 bar  
Flow rate: Up to 200 l/min  
Material / Treatment: Carbon steel / Cr3  
Connection under pressure: One side

# POPPET SCREW

All the winning features of Stucchi poppet quick couplings with the addition of the screw system that guarantees greater strength, to withstand heavy situations or with frequent pressure pulses, as well as improved handling during connection and disconnection.



## VD



Valving style: Poppet  
 Interchange: ISO 14541  
 Sealing: Nitrile NBR  
 Sizes: From 1/4" to 1-1/4"  
 Operating pressure: Up to 450 bar  
 Flow rate: Up to 378 l/min  
 Material / Treatment: Carbon steel / Cr3  
 Connection under pressure: One side

## VLS



Valving style: Poppet  
 Interchange: With similar couplings  
 Sealing: Nitrile NBR  
 Sizes: From 1/2" to 1"  
 Operating pressure: Up to 465 bar  
 Flow rate: Up to 200 l/min  
 Material / Treatment: Carbon steel / Cr3  
 Connection under pressure: One side

## VOF



Valving style: Poppet  
 Interchange: "Oil&Gas" couplings  
 Sealing: Nitrile NBR  
 Sizes: From 3/4" to 2"  
 Operating pressure: Up to 345 bar  
 Flow rate: Up to 1100 l/min  
 Material / Treatment: Carbon steel / Cr3  
 Connection under pressure: One side

## VOFX



Valving style: Poppet  
 Interchange: "Oil&Gas" couplings  
 Sealing: Nitrile NBR  
 Sizes: From 3/4" to 2"  
 Operating pressure: Up to 207 bar  
 Flow rate: Up to 1100 l/min  
 Material / Treatment: Stainless steel (AISI 316L)  
 Connection under pressure: One side

## VR



Valving style: Non spill flat face  
 Interchange: "Rohrleitung" couplings  
 Sealing: Nitrile NBR  
 Sizes: From 3/8" to 1-1/4"  
 Operating pressure: Up to 420 bar  
 Flow rate: Up to 576 l/min  
 Material / Treatment: Carbon steel / Cr3  
 Connection under pressure: One side

# POPPET

Designed according to the ISO 7241-A and ISO 7241-B international standards, the Stucchi poppet couplings have been used for decades all over the world for their construction quality, durability and ease of use.

They are available with different materials, gaskets and seals, to meet the multiple needs of the sectors in which they are used.



## BIR

Valving style: Poppet  
Interchange: ISO 7241 A  
Sealing: Nitrile NBR  
Sizes: From 1/4" to 2"  
Operating pressure: Up to 350 bar  
Flow rate: Up to 1000 l/min  
Material / Treatment:  
Carbon steel / Cr3  
Connection under pressure:  
Only BIR-PC version



## I/IP

Valving style: Poppet  
Interchange: ISO 7241 A  
Sealing: Nitrile NBR  
Sizes: From 1/4" to 1"  
Operating pressure: Up to 350 bar  
Flow rate: Up to 200 l/min  
Material / Treatment:  
Carbon steel / Cr3



## IR

Valving style: Ball  
Interchange: With similar couplings  
Sealing: Nitrile NBR  
Sizes: From 1/4" to 1"  
Operating pressure: Up to 300 bar  
Flow rate: Up to 150 l/min  
Material / Treatment:  
Carbon steel / Cr3



## IR-V

Valving style: Poppet  
Interchange: With similar couplings  
Sealing: Nitrile NBR  
Sizes: From 1/4" to 1"  
Operating pressure: Up to 300 bar  
Flow rate: Up to 200 l/min  
Material / Treatment: Carbon steel / Cr3



## IFR

Valving style: Non spill flat face  
Interchange: ISO 5676  
Sealing: Nitrile NBR  
Sizes: 3/8"  
Operating pressure: Up to 150 bar  
Flow rate: Up to 46 l/min  
Material / Treatment:  
Carbon steel / Cr3



## IRC

**Valving style:** Poppet  
**Interchange:** "Nordic" couplings  
**Sealing:** Nitrile NBR  
**Sizes:** From 1/4" to 1"  
**Operating pressure:** Up to 450 bar  
**Flow rate:** Up to 378 l/min  
**Material / Treatment:**  
 Carbon steel / ZnNi  
**Connection under pressure:**  
 Only IRC-PC version



## IRCX

**Valving style:** Poppet  
**Interchange:** "Nordic" couplings  
**Sealing:** FKM (Viton®)  
**Sizes:** From 1/4" to 1"  
**Operating pressure:** Up to 300 bar  
**Flow rate:** Up to 378 l/min  
**Material / Treatment:**  
 Stainless steel (AISI 316L)



## IRB

**Valving style:** Poppet  
**Interchange:** ISO 7241 B  
**Sealing:** Nitrile NBR  
**Sizes:** From 1/8" to 1"  
**Operating pressure:** Up to 350 bar  
**Flow rate:** Up to 200 l/min  
**Material / Treatment:**  
 Carbon steel / Cr3



## IRBO

**Valving style:** Poppet  
**Interchange:** ISO 7241 B  
**Sealing:** FKM (Viton®)  
**Sizes:** From 1/8" to 1"  
**Operating pressure:** Up to 200 bar  
**Flow rate:** Up to 200 l/min  
**Material / Treatment:** Brass



## IRBX

**Valving style:** Poppet  
**Interchange:** ISO 7241 B  
**Sealing:** FKM (Viton®)  
**Sizes:** From 1/8" to 1"  
**Operating pressure:** Up to 250 bar  
**Flow rate:** Up to 200 l/min  
**Material / Treatment:**  
 Stainless steel (AISI 316L), Brass



## HIGH PRESSURE

Stucchi products dedicated to hydraulic applications that operate with pressures up to 700 bar are built with very high resistance carbon steel, to guarantee connections in total safety.



### A-HP



Valving style: Flat face  
Interchange: Stucchi profile  
Sealing: Nitrile NBR  
Sizes: From 1/8" to 3/8"  
Operating pressure: Up to 700 bar  
Flow rate: Up to 46 l/min  
Material / Treatment: Carbon steel / Cr3

### IV-HP



Valving style: Ball  
Interchange: With similar couplings  
Sealing: Nitrile NBR  
Sizes: From 1/4" to 3/8"  
Operating pressure: Up to 700 bar  
Flow rate: Up to 23 l/min  
Material / Treatment: Carbon steel / Cr3

## CHECK VALVE

VUZ galvanized check valves are safe, compact, suitable for any hydraulic system that uses non-corrosive fluids. They are also available in the VU version with dark phosphating treatment.



### VUZ

Sizes: From 1/8" to 2"  
 Operating pressure: Up to 400 bar  
 Flow rate: Up to 1000 l/min  
 Material / Treatment: Carbon steel / Cr3

## VEHICLE A/C

Thanks to its long experience in the sector, the ACR-ACB series is the Stucchi solution for recharging air conditioning used in the automotive sector. It is made of anodized aluminum with special HNBR seals.



### ACR-ACB

Valving style: Poppet  
 Interchange: SAE J639  
 Sealing: HNBR  
 Sizes: 1/4"  
 Operating pressure: Up to 10 bar  
 Material / Treatment: Aluminium, Brass

| Family   |                              | Flat face   |  |  |   |   |   |   |
|--|------------------------------|---|--|--|---|---|---|---|
| SERIES   | TECHNICAL FEATURES           | FIRG<br> | A<br> | APM<br> | A-HD<br> | AX<br> | FIRG-Q<br> | FL<br> |
| <b>Interchange</b>                             | ISO and/or reference markets | ISO 16028   | ISO 16028  | ISO 16028  | ISO 16028   | ISO 16028   | ISO 16028   | ISO 16028   |
| <b>Valve Style</b>                             | Flat face                    | ✓   | ✓  | ✓  | ✓   | ✓   | ✓   | ✓   |
|  | Non spill flat face          |   |  |  |   |   |   |   |
|  | Ball                         |   |  |  |   |   |   |   |
|  | Poppet                       |   |  |  |   |   |   |   |
| <b>Connection / Disconnection system</b>       | Pushing/Pulling the sleeve   | ✓   | ✓  | ✓  | ✓   | ✓   | ✓   | ✓   |
|  | Single active sleeve         |   |  |  |   |   |   |   |
|  | Push-Pull*                   |   |  |  |   |   |   |   |
|  | Screw                        |   |  |  |   |   |   |   |
|  | Lever/Knob                   |   |  |  |   |   |   |   |
| <b>Locking mechanism</b>                       | By Multicoupling             |   |  |  |   |   |   |   |
|  | Locking ball                 | ✓   | ✓  | ✓  | ✓   | ✓   | ✓   | ✓   |
|  | Screw                        |   |  |  |   |   |   |   |
|  | Pin/Cam                      |   |  |  |   |   |   |   |
| <b>Connection Under residual Pressure</b>      | Safety lock                  | ✓   | ✓  |  | ✓   | ✓   | ✓   | ✓   |
|  | One side                     |   |  | ✓  | ✓   |   |   |   |
|  | Both sides                   |   |  |  |   |   |   |   |
|  | With Easy CUP**              |   |  | ✓  |   |   |   |   |
| <b>Material</b>                                | Disconnection                |   |  |  |   |   |   |   |
|  | Carbon steel                 | ✓   | ✓  | ✓  | ✓   |   | ✓   |   |
|  | Stainless steel              |   |  |  |   | ✓   | ✓   | ✓   |
|  | Aluminium                    |   |  |  |   |   |   |   |
| <b>Treatment</b>                               | Brass                        |   |  |  |   |   |   |   |
|  | Zn-Ni                        |   | (✓)  |  |   |   |   |   |
|  | Cr3                          | ✓   | ✓  | ✓  | ✓   |   |   |   |
|  | QPQ                          |   |  |  |   |   | ✓   |   |
| <b>Standard seal (others upon request)</b>     | Other                        |   |  |  |   |   |   |   |
|  | Nitrile NBR                  | ✓   | ✓  | ✓  | ✓   |   | ✓   |   |
|  | FKM (Viton®)                 |   |  |  |   | ✓   | ✓   | ✓   |
|  | EPDM                         |   |  |  |   |   | ✓   |   |
|  | HNBR                         |   |  |  |   |   | ✓   |   |
| <b>Fluid type (with standard seal)</b>         | Kalrez®                      |   |  |  |   |   | ✓   |   |
|  | Hydraulic oil                | ✓   | ✓  | ✓  | ✓   | ✓   | ✓   | ✓   |
|  | Water, Water&Glycol          |   |  |  |   |   | ✓   |   |
|  | Freon gas                    |   |  |  |   |   |   |   |
| <b>Threads available (others upon request)</b> | BSP                          | ✓   | ✓  | ✓  | ✓   | ✓   | ✓   | ✓   |
|  | NPT                          | ✓   | ✓  | ✓  | ✓   | ✓   | ✓   | ✓   |
|  | SAE                          | ✓   | ✓  | ✓  | ✓   |   |   | ✓   |
|  | METRIC                       |   | ✓  |  |   | ✓   |   |   |
|  | Other                        | ✓   | ✓  |  |   |   |   |   |
|  |                              |   |  |  |   |   |   |   |
| <b>Sizes / Performances</b>                    | 1/8"                         |   | <u>420</u><br>6  |  |   |   |   | <u>350</u><br>6   |
|  | 1/4"                         | <u>300</u><br>24  | <u>420</u><br>24   |  |   |   | <u>300</u><br>24  | <u>350</u><br>24  |
|  | 3/8"                         | <u>300</u><br>46  | <u>350</u><br>46   | <u>350</u><br>46   | <u>350</u><br>46  | <u>350</u><br>46  | <u>300</u><br>46  | <u>350</u><br>46  |
|  | 1/2"                         | <u>250</u><br>90  | <u>330</u><br>90   | <u>330</u><br>90   | <u>330</u><br>90  | <u>330</u><br>90  | <u>250</u><br>90  | <u>350</u><br>90  |
|  | 5/8"                         | <u>250</u><br>148   | <u>330</u><br>148  | <u>330</u><br>148  |   |   | <u>250</u><br>148   | <u>350</u><br>148   |
|  | 3/4"                         | <u>330</u><br>200   | <u>330</u><br>200  | <u>330</u><br>200  |   | <u>330</u><br>200   | <u>250</u><br>200   | <u>330</u><br>200   |
|  | 1"                           | <u>250</u><br>378   | <u>300</u><br>378  | <u>300</u><br>378  |   | <u>300</u><br>378   | <u>250</u><br>378   | <u>280</u><br>378   |
|  | 1-1/4"                       |   | <u>300</u><br>450  |  |   |   |   |   |
|  | 1-1/2"                       | <u>200</u><br>750   | <u>270</u><br>750  | <u>270</u><br>750  |   |   | <u>200</u><br>750   | <u>230</u><br>750   |
|  | 2"                           | <u>200</u><br>1000  |  |  |   |   | <u>200</u><br>1000  | <u>150</u><br>1000  |
| <b>Typical applications</b>                    | Earth moving                 | ✓   | ✓  | ✓  | ✓   |   |   |   |
|  | Oil&Gas                      | ✓   | ✓  | ✓  | ✓   | ✓   | ✓   | ✓   |
|  | Vehicles                     | ✓   | ✓  | ✓  | ✓   |   |   |   |
|  | Agriculture                  | ✓   | ✓  | ✓  | ✓   |   |   |   |
|  | Industry                     | ✓   | ✓  | ✓  | ✓   | ✓   | ✓   | ✓   |
|  | Hydraulic tools              | ✓   | ✓  | ✓  | ✓   |   |   |   |
|  | High pressure                |   |  |  |   |   |   |   |
|  | Refrigeration                |   |  |  |   | ✓   |   | ✓   |
|  | Cooling                      |   |  |  |   |   | ✓   |   |
| Chemical&Food industry                         |                              |   |  |  | ✓   | ✓   | ✓   |   |





| Poppet  |   |   |   |   |   |   |   | High pressure   | Check valve   | Vehicle A/C   |  |
|---|---|---|---|---|---|---|---|---|---|---|--|
| IR  | IR-V  | IFR   | IRB   | IRBO  | IRBX  | IRC   | IRCX  | A-HP  | IV-HP   | VUZ   | ACR-ACB  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Similar couplings   | Similar couplings   | ISO 5676  | ISO 7241 B  | ISO 7241 B  | ISO 7241 B  | Nordic couplings  | Nordic couplings  | Stucchi profile   | Similar couplings   | -   | SAE J639   |
|   |   |   |   |   |   |   |   | ✓   |   |   |  |
| ✓   |   | ✓   |   |   |   |   |   |   | ✓   |   |  |
|   | ✓   |   | ✓   | ✓   | ✓   | ✓   | ✓   |   |   |   | ✓  |
| ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |   |   | ✓  |
|   |   |   |   |   |   |   |   |   | ✓   |   | ✓  |
| ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |   |   | ✓  |
|   |   |   |   |   |   |   |   |   | ✓   |   |  |
|   |   |   |   |   |   | ✓   | ✓   | ✓   |   |   |  |
|   |   |   |   |   |   | IRC-PC  |   |   |   |   |  |
| ✓   | ✓   | ✓   | ✓   |   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |  |
|   |   |   |   | ✓   | ✓   |   | ✓   |   |   |   | ✓  |
|   |   |   |   | ✓   | ✓   |   |   |   |   |   | ✓  |
| ✓   | ✓   | ✓   | ✓   |   |   | ✓   |   | ✓   | ✓   | ✓   |  |
|   |   |   |   |   |   |   |   |   |   | (VU)  | ✓  |
| ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |   |  |
|   |   |   |   |   |   |   |   |   |   |   | ✓  |
| ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   |  |
| ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓   | ✓  |
|   | (✓)   |   | (✓)   | (✓)   | (✓)   | (✓)   | (✓)   |   |   | ✓   | ✓  |
|   |   | ✓   |   |   |   |   |   |   |   |   | ✓  |
|   |   |   | <u>350</u><br>6   | <u>200</u><br>6   | <u>250</u><br>6   |   |   | <u>700</u><br>6   |   | <u>400</u><br>6   |  |
| <u>300</u><br>20  | <u>300</u><br>24  |   | <u>350</u><br>24  | <u>200</u><br>24  | <u>250</u><br>24  | <u>450</u><br>24  | <u>300</u><br>24  | <u>700</u><br>24  | <u>700</u><br>12  | <u>350</u><br>24  |  |
| <u>300</u><br>46  | <u>300</u><br>46  | <u>150</u><br>46  | <u>300</u><br>46  | <u>160</u><br>46  | <u>200</u><br>46  | <u>350</u><br>46  | <u>300</u><br>46  | <u>700</u><br>46  | <u>700</u><br>23  | <u>350</u><br>46  | <u>41</u><br>-   |
| <u>250</u><br>90  | <u>250</u><br>90  |   | <u>280</u><br>90  | <u>160</u><br>90  | <u>200</u><br>90  | <u>330</u><br>90  | <u>300</u><br>90  |   |   | <u>300</u><br>90  |  |
|   |   |   |   |   |   |   |   |   |   |   |  |
| <u>250</u><br>148   | <u>250</u><br>148   |   | <u>230</u><br>148   | <u>125</u><br>148   | <u>160</u><br>148   | <u>330</u><br>212   | <u>200</u><br>212   |   |   | <u>300</u><br>148   |  |
| <u>200</u><br>150   | <u>200</u><br>200   |   | <u>180</u><br>200   | <u>100</u><br>200   | <u>125</u><br>200   | <u>330</u><br>378   | <u>200</u><br>378   |   |   | <u>300</u><br>200   |  |
|   |   |   |   |   |   |   |   |   |   | <u>250</u><br>378   |  |
|   |   |   |   |   |   |   |   |   |   | <u>250</u><br>600   |  |
|   |   |   |   |   |   |   |   |   |   | <u>150</u><br>1000  |  |
|   |   |   | ✓   | ✓   | ✓   | ✓   | ✓   |   |   | ✓   |  |
|   |   |   |   |   |   | ✓   | ✓   |   |   | ✓   |  |
| ✓   | ✓   | ✓   |   |   |   | ✓   | ✓   |   |   | ✓   |  |
| ✓   | ✓   |   | ✓   | ✓   | ✓   |   | ✓   | ✓   |   | ✓   |  |
|   |   |   |   |   |   | ✓   | ✓   | ✓   | ✓   | ✓   |  |
|   |   |   |   |   |   |   |   | ✓   | ✓   |   |  |
|   |   |   |   | ✓   | ✓   |   |   |   |   |   | ✓  |
|   |   |   | ✓   | ✓   | ✓   |   |   |   |   |   |  |

KEY:

**\* PUSH-PULL BREAKAWAY:**

Stucchi system that avoids breaking the circuit in case the operator does not disconnect properly the couplings.



**\*\* EASY CONNECTION UNDER PRESSURE:**

Stucchi solution for manual connection with residual pressure in the circuit, thanks to the triple valve system in the male.



**BLOW OUT PREVENTION:**

Specific dimensions are fire tested and Lloyd certified in accordance with API 16D and the EUB Directive #36.

(✓)

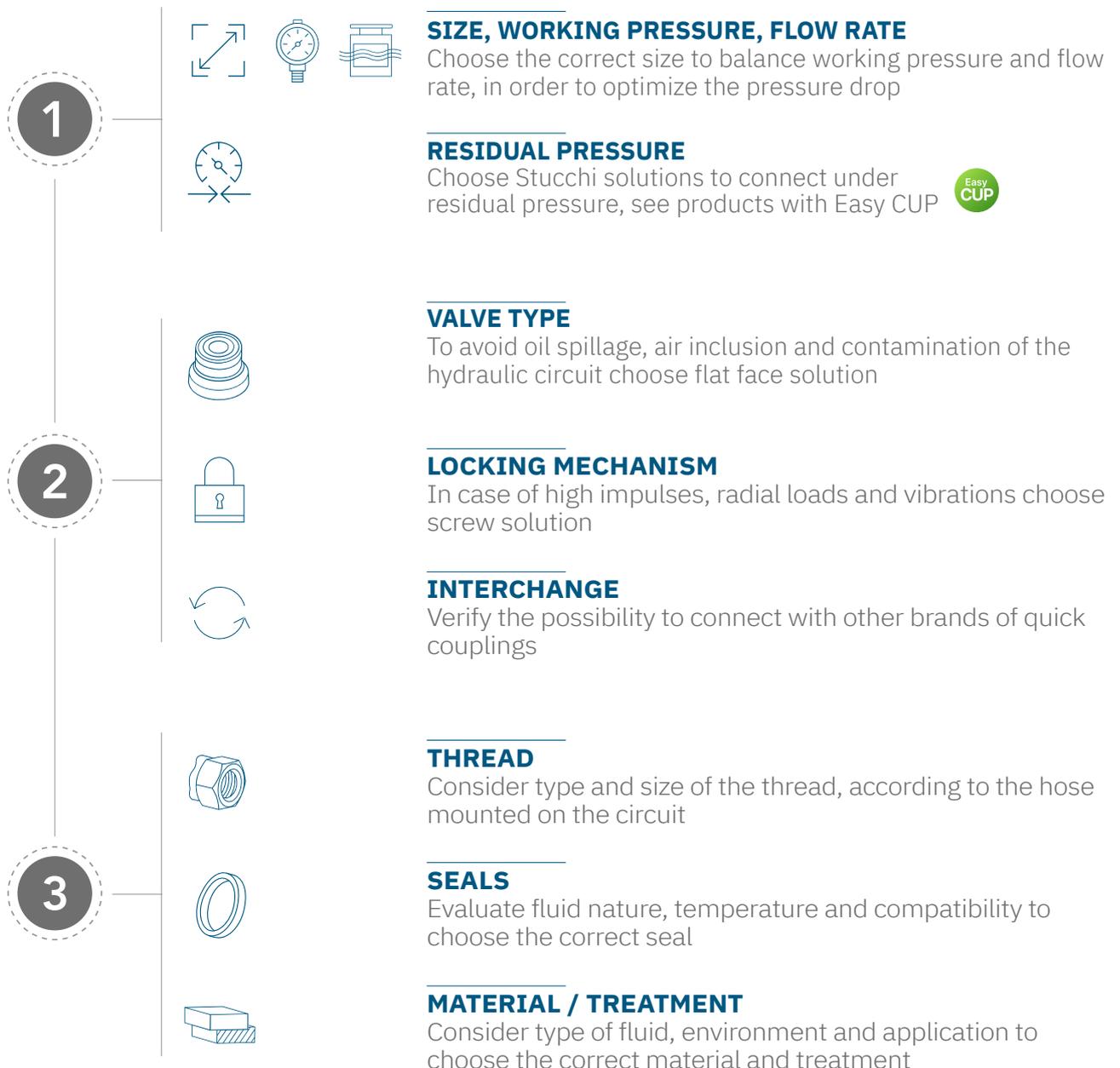
Option available upon request.

# How to choose a quick coupling?

Stucchi offers a complete selection of quick disconnect couplings ranging from 1/8" to 2", able to operate with working pressures up to 700 bar. Products are available in different materials and port configurations. This variety of quick couplings covers main international interchangeabilities and includes several Stucchi solutions.

It is important to select the correct quick coupling for the hydraulic system it has to be fitted on: here some guidelines to identify the proper Stucchi product.

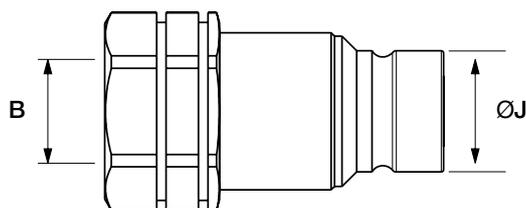
You can find all the explanatory tables in the catalog or on the [stucchigroup.com](http://stucchigroup.com) website.



## DIMENSION

Comparative table of the measures of the flat face couplings

| Body size | ISO size | Port size B | Diameter J (mm) | A series             | FIRG series OLD name | FIRG series NEW name |
|-----------|----------|-------------|-----------------|----------------------|----------------------|----------------------|
| 1/8"      | (4)      | 1/8"        | 11.6            | A4                   | use A4               | use A4               |
| 1/4"      | 6.3      | 1/4"        | 16.1            | A7                   | FIRG 14              | FIRG7                |
| 3/8"      | 10       | 3/8"        | 19.7            | A9                   | FIRG 38              | FIRG9                |
| 3/8"      | 10       | 1/2"        | 19.7            | A9                   | FIRG 12              | FIRG9                |
| 1/2"      | 12.5     | 1/2"        | 24.5            | A13                  | FIRG 12A             | FIRG13               |
| 1/2"      | 12.5     | 3/4"        | 24.5            | A13                  | FIRG 34              | FIRG13               |
| 5/8"      | 16       | 3/4"        | 27.0            | A15                  | FIRG 34B             | FIRG15               |
| 3/4"      | 19       | 3/4"        | 30.0            | A17                  | FIRG 34A             | FIRG17               |
| 3/4"      | 19       | 1"          | 30.0            | A17                  | FIRG 100             | FIRG17               |
| 1"        | 25       | 1"          | 36.0            | A21                  | use A21              | use A21              |
| 1"        | 25       | 1"-1/4"     | 36.0            | A21                  | FIRG 114             | FIRG21               |
| 1-1/4"    | (31.5)   | 1"          | 44.0            | A25                  | use A25              | use A25              |
| 1-1/4"    | (31.5)   | 1"-1/4"     | 44.0            | A25                  | use A25              | use A25              |
| 1-1/2"    | (40)     | 1"-1/2"     | 57.0            | A30                  | FIRG 112             | FIRG30               |
| 2"        | (50)     | 2"          | 73.0            | use FIRG200 / FIRG45 | FIRG 200             | FIRG45               |



## THREADS

These are the main international standards for hydraulic fittings



**BSP**  
British Standard Pipe



**NPT**  
National Pipe Thread



**SAE**  
Society Automotive Engineer



**ISO**  
International Organization for Standardization



**JIS**  
Japanese Industrial Standard



**ORFS**  
O-Ring Face Seal



**JIC, UN**  
Joint Industrial Council, Unified National



**DIN**  
Deutsches Institut für Normung

## SEALINGS

**Temperature:** in the chart the temperature range for each of the main sealings used

| Range in Celsius (°C) |                           | Range in Fahrenheit (°F) |
|-----------------------|---------------------------|--------------------------|
| -20 > +100            | NBR (Nitrile)             | -4 > +212                |
| -15 > +180            | FKM (Viton®)              | +5 > +356                |
| -40 > +150            | EPDM (Ethylene Propylene) | -40 > +302               |
| -25 > +300            | KALREZ                    | -13 > +572               |
| -30 > +130            | HNBR                      | -22 > +266               |
| -50 > +150            | FLUROSILICON              | -58 > +302               |
| -50 > +150            | SILICON                   | -58 > +302               |
| -40 > +100            | NEOPRENE                  | -40 > +212               |
| -50 > +180            | PTFE Teflon®              | -58 > +356               |

**Fluids:** in the chart you can see which fluids can be used with main sealings

| Material                  | Compatibility   |
|---------------------------|---|
| Nitrile NBR               | Mineral oils and grease<br><i>(ok for water/glycol max 60°C)</i>  |
| FKM (Viton®)              | Mineral oils and grease<br><i>(not compatible with water &amp; glycol)</i>  |
| EPDM (Ethylene Propylene) | Water<br><i>Water &amp; Glycol with no contamination<br/>This elastomer must not come in contact with mineral oils or grease!</i> |



Hydraulic oil



Water



Others

### ⚠ WARNING

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.stucchigroup.com](http://www.stucchigroup.com)) before selecting or using Stucchi products.  
Stucchi SpA reserves the right to modify the information and data contained in this document at any time and without notice.

**Stucchi S.p.A.**  
*Headquarters*

Via della Lira Italiana, 397  
24040 Pagazzano (BG) Italy

[stucchigroup.com](http://stucchigroup.com)



**Stucchi USA inc.**

1105 Windham Parkway,  
Romeoville  
IL 60446 USA  
[stucchiusa.com](http://stucchiusa.com)

**Stucchi (Shanghai)**

Fluid Power Technology Co., Ltd  
No. 5, Lane 3500, Xiupu Road  
Kangqiao Industrial Park  
Pudong New District  
201315 Pudong Shanghai, China  
[stucchichina.com](http://stucchichina.com)

**Stucchi FCP Pty Ltd.**

8/7-11 Rodeo Drive  
Dandenong South  
VIC 3175 Australia

Unit3, 22 Strathwyn Street  
Brendale,  
QLD 4500 Australia  
[stucchigroup.com/en-au](http://stucchigroup.com/en-au)

**Stucchi Engates Hidraulicos Ltda.**

Rua Júlio Ribeiro, 865  
Bairro Vila Santana  
CEP: 18080-690  
Sorocaba - SP, Brazil  
[stucchigroup.com/br-pt](http://stucchigroup.com/br-pt)

**Stucchi South Africa (Pty) Ltd.**

49, Mopedi Rd, Sebenza  
Edenvale Po Box 8253  
Edenglen 1613, South Africa  
[stucchigroup.com](http://stucchigroup.com)

