

# IRCSERIES

INTERCHANGE > with similar product (Nordic interface)



Stucchi®



## TECHNICAL FEATURES AND OPTIONS

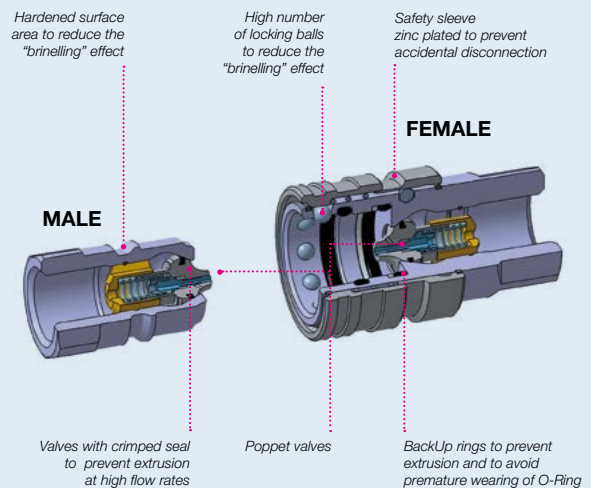
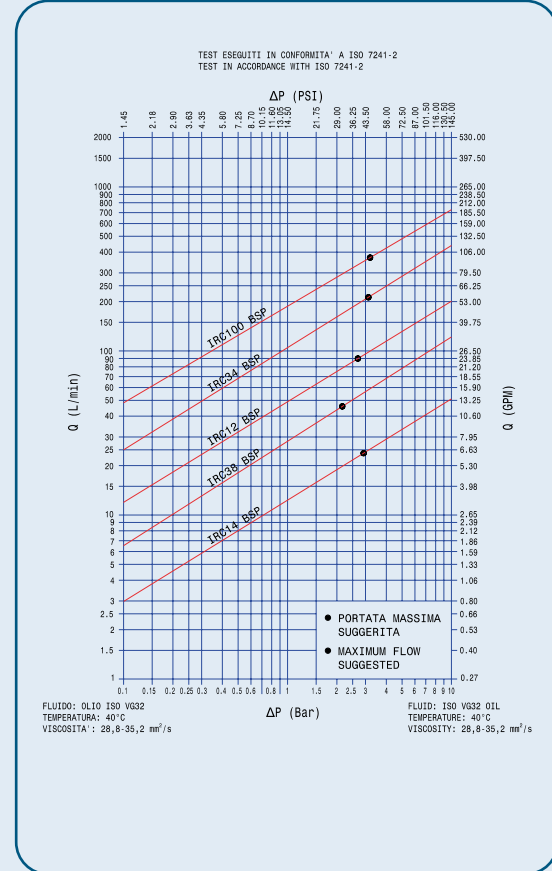
<b>Interchange</b> With similar product (Nordic interface)	<b>Sealing description</b> Nitrile NBR	<b>Connection system</b> Single acting sleeve
<b>Available sizes</b> From 1/4" to 1"	<b>Material/treatment</b> Carbon steel ZnNi	<b>Available threads</b> BSP - NPT - SAE
<b>Operating pressure</b> Up to 450 bar	<b>Locking mechanism</b> Ball locking + safety sleeve	<b>Flow rate</b> Up to 378 l/min
<b>Temperature (°C)</b> -20°C / +100°C	<b>Valving style</b> Poppet	<b>Connection under pressure</b> Only PC version Connection: one side Disconnection: not allowed

## BENEFITS

- Connection under residual pressure is allowed in the male or in the female (PC version). Please notice that the counterpart side should be drained and should use a standard poppet half.
- The poppet valve with elastomer seal provides maximum sealing of the couplings once disconnected.
- O-Ring + BackUp ring for optimum protection sealing.
- The Zinc Nickel plating ensures high resistance to corrosion and it is ideal for hydraulic equipment applications where an improved corrosion resistance is necessary.
- Additional O-Ring for extra sealing capacity and to contain spray effect to avoid soil contamination.
- High durability.
- Reference products for tough applications, typically used in Nordic countries.
- Safety sleeve to prevent accidental disconnection.
- Shape of internal parts is optimized to reduce turbulence and pressure drop.
- High resistance to pressure impulses.
- 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: 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 avoid accidental disconnection rotate safety sleeve.
- To disconnect: unlock the safety sleeve and pull back the sleeve of the female coupling, pull out the mating half.



This image represents PC version (release pressure device system)

## MAIN APPLICATIONS



## PERFORMANCES

Size		Series/Size	Max. flow suggested		Connect force		Disconnect force		Spillage*
in	mm		l/min	gpm	N	lbf	N	lbf	ml
1/4	6,3	IRC14	24	6,36	60	13,49	30	6,74	1,1
3/8	10	IRC38	46	12,19	90	20,23	35	7,87	2,5
1/2	12,5	IRC12	90	23,85	120	26,98	35	7,87	3,5
3/4	20	IRC34	212	56,18	170	38,22	45	10,12	15
1	25	IRC100**	378	100,17	210	47,21	45	10,12	18

Size	Series/Size	Max. operating pressure						Burst pressure					
		Coupled		Male		Female		Coupled		Male		Female	
in	Steel	MPa	psi	MPa	psi	MPa	psi	MPa	psi	MPa	psi	MPa	psi
1/4	IRC14	45	6525	30	4350	30	4350	180	26100	120	17400	120	17400
3/8	IRC38	35	5075	28	4060	28	4060	130	18850	110	15950	110	15950
1/2	IRC12	33	4785	25	3625	25	3625	110	15950	100	14500	100	14500
3/4	IRC34	33	4785	25	3625	25	3625	100	14500	80	11600	80	11600
1	IRC100**	33	4785	25	3625	25	3625	100	14500	100	14500	100	14500

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

\*\* Specific dimensions of Stucchi IRC series are certified with Lloyd Type Approval in accordance with API 16D at specific rating pressure of 207 bar/3000 PSI. For complete technical information please contact Stucchi Technical Support.

### Different possible configurations:

**PC version**, connectable under residual pressure.

**PL version**, free flow.

SAE thread available upon request.

For complete technical information please contact Stucchi Technical Support.

### Temperature range:

Seals in NBR (Nitrile): from -20 °C to +100 °C (from -4 °F to +212 °F).

Upon request seals in FKM (VITON®): from -15°C to +180°C (from +5 °F to +356 °F).

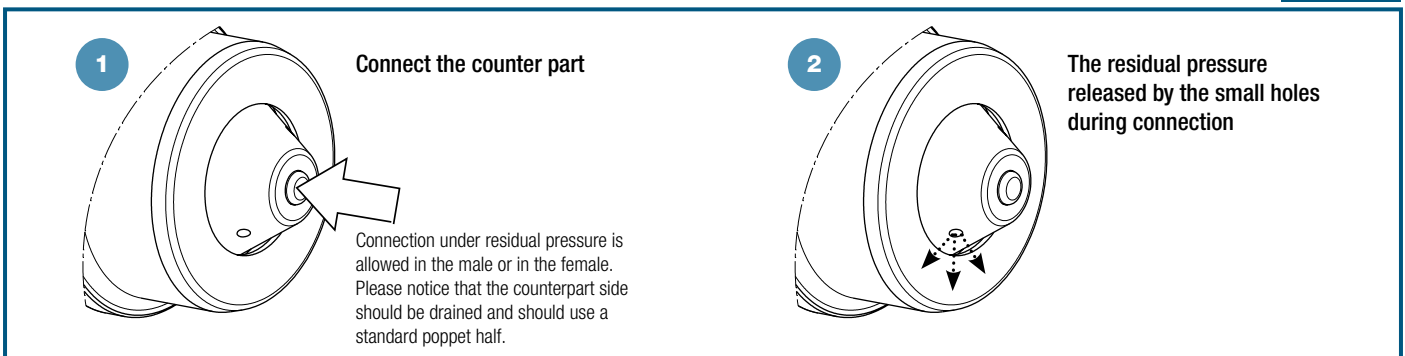
Please read carefully Instructions and warnings for proper selection of the products.

### Tests performed:

The couplings have been tested according to ISO norm.

The couplings have been tested at max. operating pressure for 200.000 impulses in coupled position and 100.000 impulses in uncoupled position.

### PC version



## ! WARNING

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

Connect under pressure products (PC version) are suitable to be connected under residual (static) pressure.

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

Do not couple-uncouple with flow and pressure in the circuit (except PC version).

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.

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.

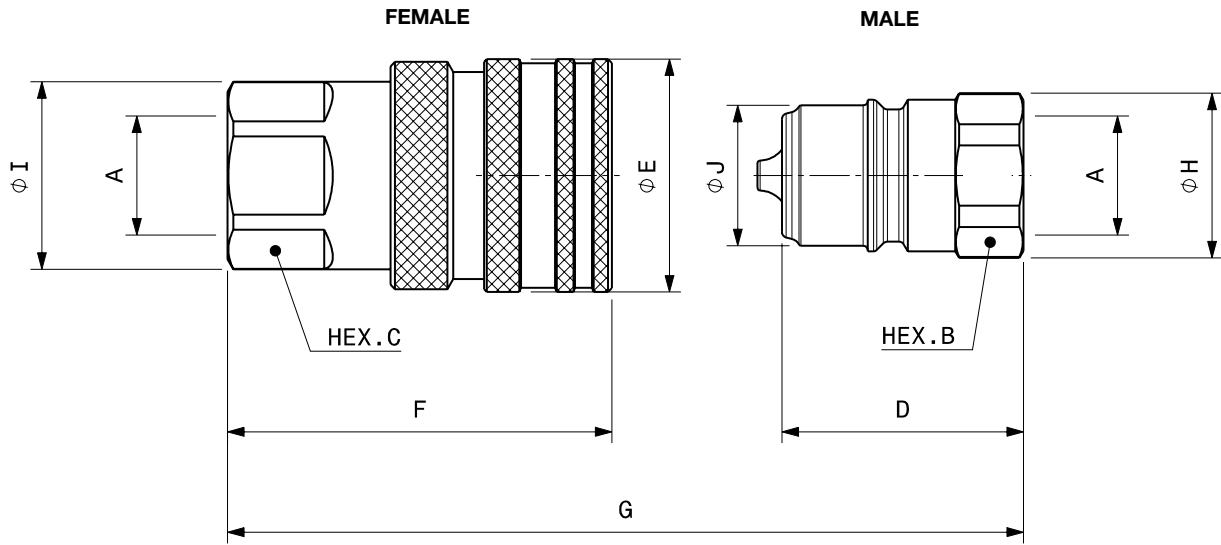
The interchangeability is mentioned under the assumption that the manufacturer of the considered products has not changed any dimension.

**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](http://stucchigroup.com) website for the latest release.**

**For specific, product-related, instructions, please contact Stucchi technical service.**

## OVERALL DIMENSIONS



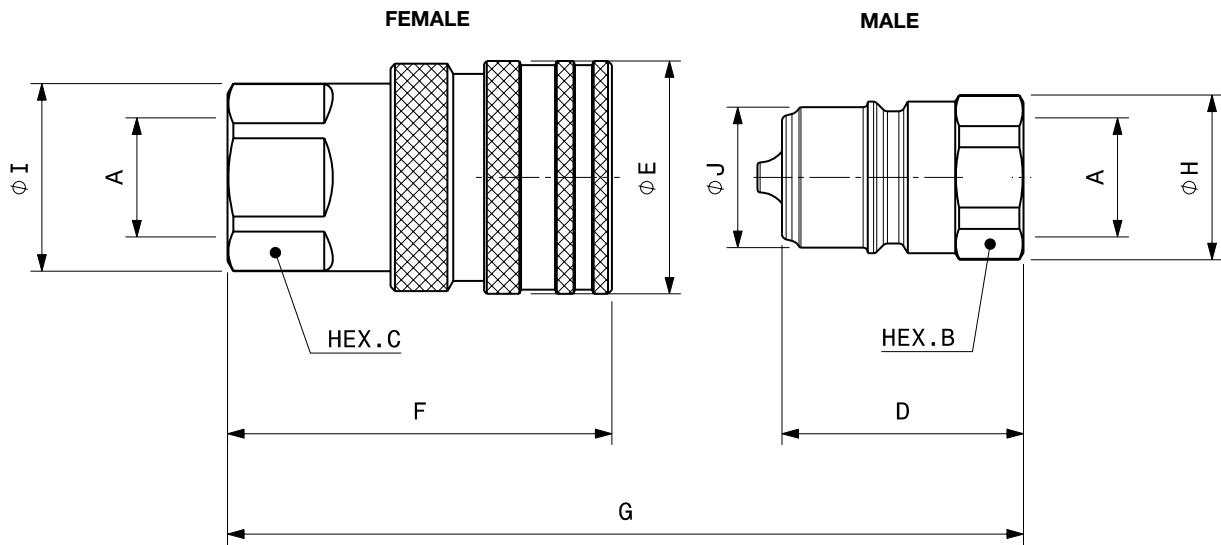
### Port description: FEMALE THREAD BSPP (ISO 1179-1)

BODY SIZE	Descriptive Code	Item Code	PORT (A)	Overall Length	Length		Hex		Diameter		Diameter		Weight							
					mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb				
1/4"	F IRC14 BSP	Female 812100000	1/4"	G	81,7	3,22	F	60,0	2,36	C	21,0	0,83	I	21,0	0,83	E	26,0	1,02	0,15	0,32
	M IRC14 BSP	Male 812100001					D	48,2	1,90	B	19,0	0,75	H	21,0	0,83	J	12,0	0,47	0,05	0,11
3/8"	F IRC38 BSP	Female 812100002	3/8"	G	76,4	3,01	F	61,6	2,43	C	24,0	0,94	I	26,0	1,02	E	35,0	1,38	0,22	0,48
	M IRC38 BSP	Male 812100003					D	38,0	1,50	B	22,0	0,87	H	24,0	0,94	J	19,9	0,78	0,06	0,12
1/2"	F IRC12 BSP	Female 812100004	1/2"	G	85,2	3,35	F	67,6	2,66	C	30,0	1,18	I	33,0	1,30	E	41,0	1,61	0,33	0,72
	M IRC12 BSP	Male 812100005					D	42,5	1,67	B	27,0	1,06	H	29,0	1,14	J	24,7	0,97	0,10	0,21
3/4"	F IRC34 BSP	Female 812100006	3/4"	G	94,6	3,72	F	76,2	3,00	C	38,0	1,50	I	41,6	1,64	E	52,0	2,05	0,58	1,27
	M IRC34 BSP	Male 812100007					D	47,0	1,85	B	36,0	1,42	H	39,0	1,54	J	32,7	1,29	0,19	0,41
1"	F IRC100 BSP	Female 812100008	1"	G	113,4	4,46	F	92,0	3,62	C	45,0	1,77	I	48,0	1,89	E	62,0	2,44	0,97	2,14
	M IRC100 BSP	Male 812100009					D	56,5	2,22	B	45,0	1,77	H	48,0	1,89	J	40,9	1,61	0,35	0,77

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

### PC version poppet sealing system connectable under pressure

BODY SIZE	Descriptive Code	Item Code	PORT (A)	Overall Length	Length		Hex		Diameter		Diameter		Weight							
					mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb				
3/8"	F IRC38PC BSP	Female 812100010	3/8"	G	76,4	3,01	F	61,6	2,43	C	24,0	0,94	I	26,0	1,02	E	35,0	1,38	0,22	0,48
	M IRC38PC BSP	Male 812100011					D	38,0	1,50	B	22,0	0,87	H	24,0	0,94	J	19,9	0,78	0,06	0,12
1/2"	F IRC12PC BSP	Female 812100012	1/2"	G	85,2	3,35	F	67,6	2,66	C	30,0	1,18	I	33,0	1,30	E	41,0	1,61	0,33	0,72
	M IRC12PC BSP	Male 812100013					D	42,5	1,67	B	27,0	1,06	H	29,0	1,14	J	24,7	0,97	0,10	0,21
3/4"	F IRC34PC BSP	Female 812100014	3/4"	G	94,6	3,72	F	76,2	3,00	C	38,0	1,50	I	41,6	1,64	E	52,0	2,05	0,58	1,27
	M IRC34PC BSP	Male 812100015					D	47,0	1,85	B	36,0	1,42	H	39,0	1,54	J	32,7	1,29	0,19	0,41
1"	F IRC100PC BSP	Female 812100016	1"	G	113,4	4,46	F	92,0	3,62	C	45,0	1,77	I	48,0	1,89	E	62,0	2,44	0,97	2,14
	M IRC100PC BSP	Male 812100017					D	56,5	2,22	B	45,0	1,77	H	48,0	1,89	J	40,9	1,61	0,35	0,77



**Port description: FEMALE THREAD NPTF (ANSI B.1.20.3)**

BODY SIZE	Descriptive Code	Item Code	PORT (A)	Overall Length	Length		Hex		Diameter		Diameter		Weight							
					mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb				
1/4"	F IRC14 NPTF	Female 812102000	1/4"	G	81,7	3,22	F	60,0	2,36	C	21,0	0,83	I	21,0	0,83	E	26,0	1,02	0,15	0,32
	M IRC14 NPTF	Male 812102001					D	48,2	1,90	B	19,0	0,75	H	21,0	0,83	J	12,0	0,47	0,05	0,11
3/8"	F IRC38 NPTF	Female 812102002	3/8"	G	76,4	3,01	F	61,6	2,43	C	24,0	0,94	I	26,0	1,02	E	35,0	1,38	0,22	0,49
	M IRC38 NPTF	Male 812102003					D	38,0	1,50	B	22,0	0,87	H	24,0	0,94	J	19,9	0,78	0,06	0,13
1/2"	F IRC12 NPTF	Female 812102004	1/2"	G	85,2	3,35	F	67,6	2,66	C	30,0	1,18	I	33,0	1,30	E	41,0	1,61	0,33	0,72
	M IRC12 NPTF	Male 812102005					D	42,5	1,67	B	27,0	1,06	H	29,0	1,14	J	24,7	0,97	0,10	0,22
3/4"	F IRC34 NPTF	Female 812102006	3/4"	G	94,6	3,72	F	76,2	3,00	C	38,0	1,50	I	41,6	1,64	E	52,0	2,05	0,58	1,27
	M IRC34 NPTF	Male 812102007					D	47,0	1,85	B	36,0	1,42	H	39,0	1,54	J	32,7	1,29	0,19	0,42
1"	F IRC100 NPTF	Female 812102008	1"	G	113,4	4,46	F	92,0	3,62	C	45,0	1,77	I	48,0	1,89	E	62,0	2,44	0,97	2,14
	M IRC100 NPTF	Male 812102009					D	56,5	2,22	B	45,0	1,77	H	48,0	1,89	J	40,9	1,61	0,35	0,78

**Port description: FEMALE THREAD NPTF (ANSI B.1.20.3)**

**PC version** poppet sealing system connectable under pressure

BODY SIZE	Descriptive Code	Item Code	PORT (A)	Overall Length	Length		Hex		Diameter		Diameter		Weight							
					mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb				
3/8"	F IRC38PC NPTF	Female 812102010*	3/8"	G	76,4	3,01	F	61,6	2,43	C	24,0	0,94	I	26,0	1,02	E	35,0	1,38	0,22	0,49
	M IRC38PC NPTF	Male 812102011*					D	38,0	1,50	B	22,0	0,87	H	24,0	0,94	J	19,9	0,78	0,06	0,13
1/2"	F IRC12PC NPTF	Female 812102012	1/2"	G	85,2	3,35	F	67,6	2,66	C	30,0	1,18	I	33,0	1,30	E	41,0	1,61	0,33	0,72
	M IRC12PC NPTF	Male 812102013					D	42,5	1,67	B	27,0	1,06	H	29,0	1,14	J	24,7	0,97	0,10	0,22
3/4"	F IRC34PC NPTF	Female 812102014	3/4"	G	94,6	3,72	F	76,2	3,00	C	38,0	1,50	I	41,6	1,64	E	52,0	2,05	0,58	1,27
	M IRC34PC NPTF	Male 812102015					D	47,0	1,85	B	36,0	1,42	H	39,0	1,54	J	32,7	1,29	0,19	0,42
1"	F IRC100PC NPTF	Female 812102016	1"	G	113,4	4,46	F	92,0	3,62	C	45,0	1,77	I	48,0	1,89	E	62,0	2,44	0,97	2,14
	M IRC100PC NPTF	Male 812102017					D	56,5	2,22	B	45,0	1,77	H	48,0	1,89	J	40,9	1,61	0,35	0,78

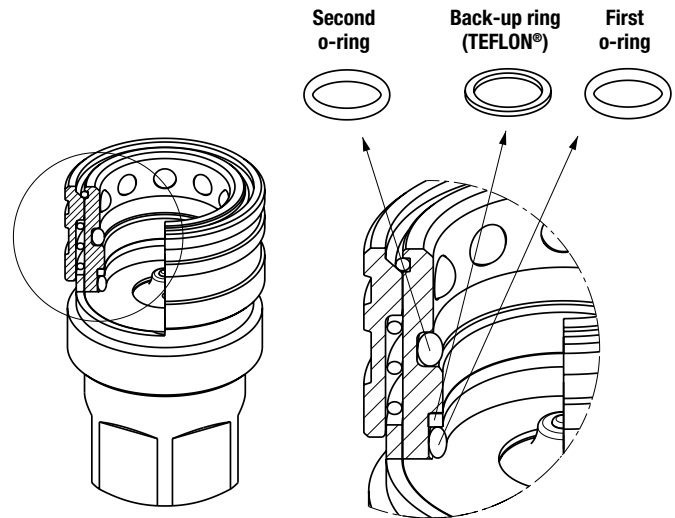
\* Available upon request.



## SPARE PARTS: SEAL KIT FOR FEMALE

Repair kit / OR+BK				
Body Size	NBR	Version Description	Part Number	
1/4"	.....	F IRC14	.....	815700700
3/8"	.....	F IRC38	.....	815700702
1/2"	.....	F IRC12	.....	815700704
3/4"	.....	F IRC34	.....	815700706
1"	.....	F IRC100	.....	815700708

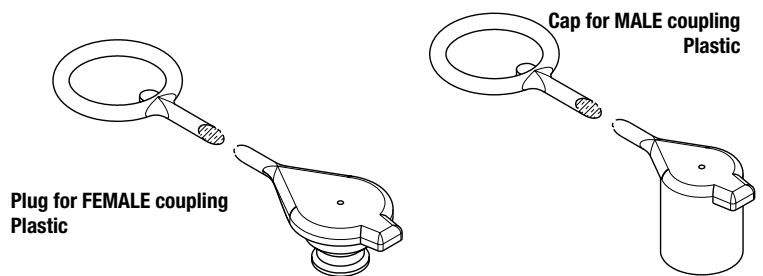
BackUp ring in Teflon®



## PROTECTIVE CAPS FOR IRC 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 mobile applications where exposure to weather and aggregate materials are common.

The protective caps for IRC couplings are manufactured in plastic with connection lanyard.



Body Size/Description		Protective Cap		Material/Color
		Plug for Female	Cap for Male	
1/4"	IRC14	815000042	815000043	Plastic/Red
3/8"	IRC38	815000044	815000045	Plastic/Red
1/2"	IRC12	815000046	815000047	Plastic/Red
3/4"	IRC34	815000048	815000049	Plastic/Red
1"	IRC100	815000050	815000051	Plastic/Red

Other colours available upon request.

POPPET