

FIRG-QSERIES

INTERCHANGE > ISO 16028 - NFPA T3.20.15 - HTMA (size 3/8")



Stucchi®



TECHNICAL FEATURES AND OPTIONS



Interchange

ISO 16028
NFPA T3.20.15
HTMA (size 3/8")



Sealing description

Nitrile NBR-FKM
(VITON®)-EPDM-
KALREZ®



Connection system

Push



Available sizes

from 1/4"
to 2"



Material

High strength
carbon steel.
Internal parts in
stainless steel.



Available threads

BSP - NPT



Operating pressure

Up to 300 bar



Locking mechanism

Locking ball +
Safety Lock



Flow rate

Up to 1000 L/Min



Temperature (°C)

different seals
with a range
of -40°/+300°



Valving style

Flat face



Connection under pressure

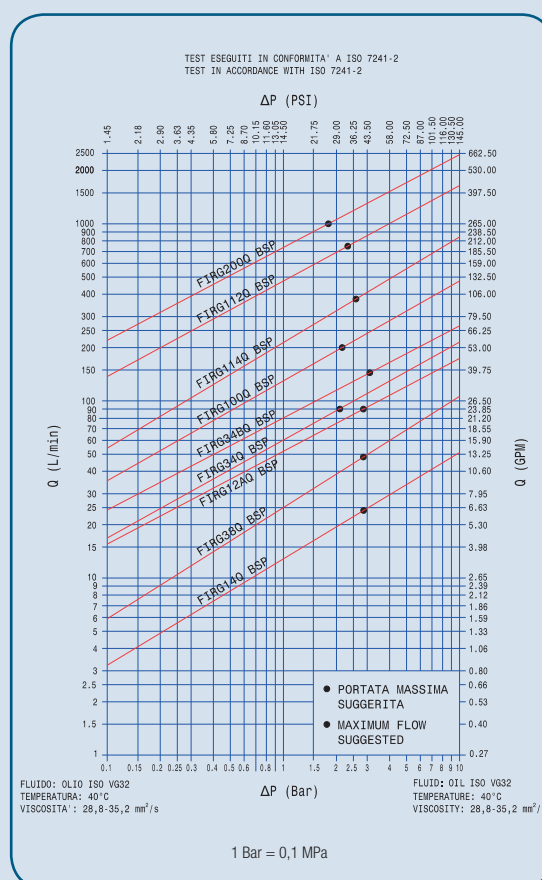
Connection: not allowed
Disconnection: not allowed

BENEFITS

- Flat face is easy to clean, reducing the inclusion of contamination inside the hydraulic circuit.
- Minimal fluid spillage during disconnection, reducing fluid spillage to the environment.
- Minimal air inclusion during connection.
- Superior corrosion resistance compared to zinc plating in specific corrosive environments.
- External parts in carbon steel with QPQ, valving in AISI303.
- Good resistance to pressure impulses.
- Compact slim design.
- Safe and 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 push the male half towards the female half or vice versa.
- After connection turn the external sleeve to engage safety lock function, to prevent accidental disconnection.
- To disconnect turn the external sleeve until the sleeve lock notch match the safety lock ball and push back the sleeve.



MAIN APPLICATIONS



Agriculture



Oil & Gas



Industry



High Pressure



Cooling



Refrigeration



Earth Moving



Vehicle



Hydraulic Equipment



Chemical & Food Industry

PERFORMANCES

Size		Series/Size	Max. flow suggested		Connect force		Disconnect force		Spillage*
Inch	mm (ISO)		l/min	GPM	N	lbf	N	lbf	ml
1/4	6,3	FIRG14Q	24	6,36	130	29,25	45	10,13	0,01
3/8	10,0	FIRG38Q-12Q	46	12,19	160	36,00	35	7,88	0,01
1/2	12,5	FIRG12AQ-34Q	90	23,85	240	54,00	65	14,63	0,02
5/8	16,0	FIRG34BQ	148	39,22	190	42,75	60	13,50	0,02
3/4	19,0	FIRG100Q	200	53,00	220	49,50	70	15,75	0,03
1	25,0	FIRG114Q	378	100,17	310	69,75	100	22,50	0,03
1-1/2	-	FIRG112Q	750	198,75	400	90,00	100	22,50	0,05
2	-	FIRG200Q	1000	265,00	370	83,25	70	15,75	0,1

Data valid for couplings with NBR, VITON®, EPDM seals

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
1/4	FIRG14Q	30	4350	30	4350	12	1740	120	17400	120	17400	48	6960
3/8	FIRG38Q-12Q	30	4350	30	4350	15	2175	120	17400	120	17400	60	8700
1/2	FIRG12AQ-34Q	25	3625	25	3625	12	1740	100	14500	100	14500	48	6960
5/8	FIRG34BQ	25	3625	25	3625	12	1740	100	14500	100	14500	48	6960
3/4	FIRG100Q	25	3625	25	3625	10	1450	100	14500	90	13050	40	5800
1	FIRG114Q	25	3625	25	3625	10	1450	100	14500	90	13050	40	5800
1-1/2	FIRG112Q	20	2900	20	2900	8	1160	60	8700	60	8700	32	4640
2	FIRG200Q	20	2900	20	2900	8	1160	60	8700	60	8700	32	4640

Data valid for couplings with KALREZ® - SEALS FOR HIGH TEMPERATURE

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
1/4	FIRG14QK	5	725	5	725	5	725	120	17400	120	17400	40	5800
3/8	FIRG38Q-12QK	5	725	5	725	5	725	120	17400	120	17400	48	6960
1/2	FIRG12AQ-34QK	5	725	5	725	5	725	100	14500	100	14500	48	6960
5/8	FIRG34BQK	5	725	5	725	5	725	100	14500	100	14500	40	5800
3/4	FIRG100QK	5	725	5	725	5	725	100	14500	90	13050	60	8700
1	FIRG114QK	5	725	5	725	5	725	100	14500	90	13050	60	8700
1-1/2	FIRG112QK	5	725	5	725	5	725	40	5800	40	5800	32	4640
2	FIRG200QK	5	725	5	725	5	725	40	5800	40	5800	32	4640

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

Temperature range:

FIRG QN - NBR (Nitrile) seals: from -20 °C to +100 °C (from -4 °F to +212 °F).

FIRG QV - VITON® seals: from -15°C to +180°C (from +5 °F to +356 °F).

FIRG QE - EPDM (Ethylene Propylene) seals: from -40°C to +150°C (from -40 °F to +302 °F).

FIRG QK - KALREZ® seals: from -25°C to +300°C (from -13 °F to +572 °F).

The couplings with KALREZ® seals for high temperature use can be used at max. operating pressure of 5 Mpa (725 psi).

Please read carefully "instruction and warning" for proper selection of the products.

Tests:

The couplings have been tested at max. operating pressure for 100.000 impulses according to ISO 7241-2 test method.



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 use the female 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.

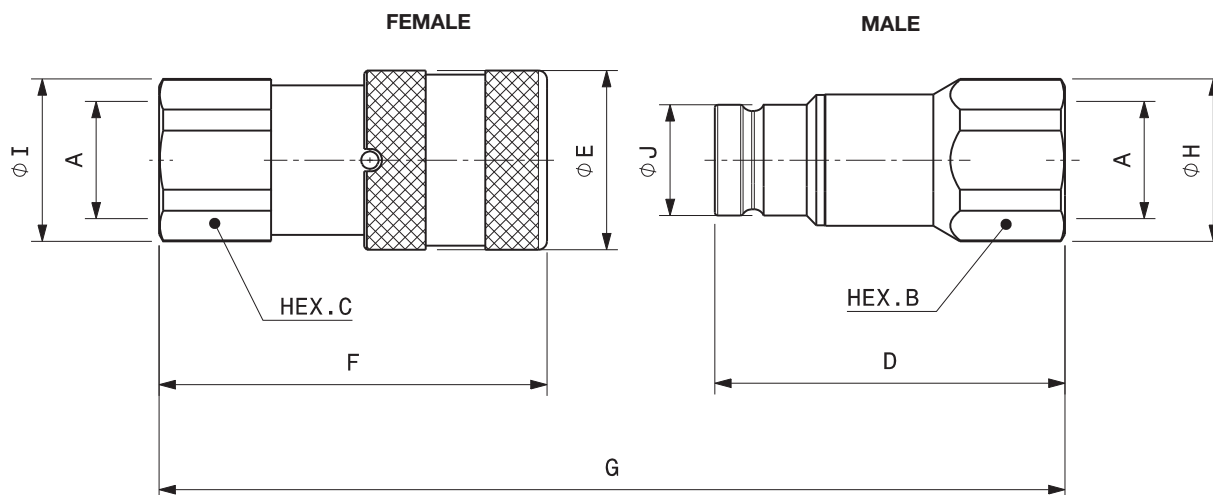
Make sure that the medium used is compatible with seal and material as indicated for each series.

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.

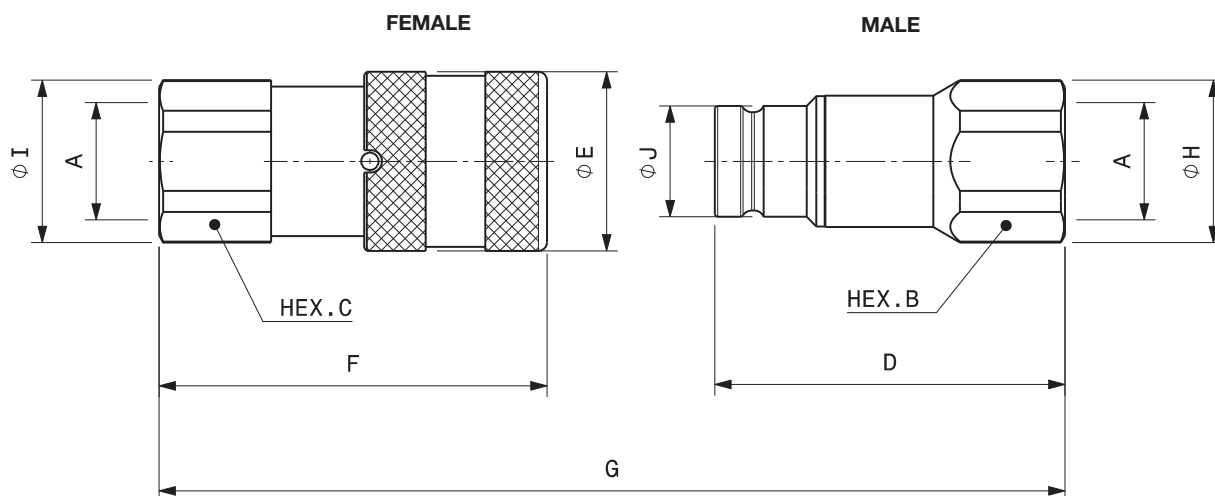
OVERALL DIMENSIONS



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

BODY SIZE	Descriptive Code	Item Code *	ISO DN	PORT (A)	Overall Length		Length		Hex		Diameter		Diameter		Weight						
					mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	Kg	Lbs					
1/4"	F FIRG14Q BSP	Female	6,3	1/4"	G	85,2	3,35	F	48,1	1,89	C	22,0	0,87	I	24,0	0,94	E	28,0	1,10	0,14	0,31
	M FIRG14Q BSP	Male						D	47,9	1,89	B	22,0	0,87	H	23,8	0,94	J	16,0	0,63	0,09	0,19
3/8"	F FIRG38Q BSP	Female	10	3/8"	G	108,7	4,28	F	64,2	2,53	C	27,0	1,06	I	29,0	1,14	E	32,0	1,26	0,23	0,51
	M FIRG38Q BSP	Male						D	60,0	2,36	B	24,0	0,94	H	26,0	1,02	J	19,8	0,78	0,12	0,27
3/8"	F FIRG12Q BSP	Female	10	1/2"	G	116,2	4,57	F	69,2	2,72	C	27,0	1,06	I	29,0	1,14	E	32,0	1,26	0,23	0,51
	M FIRG12Q BSP	Male						D	62,5	2,46	B	27,0	1,06	H	29,0	1,14	J	19,8	0,78	0,12	0,26
1/2"	F FIRG12AQ BSP	Female	12,5	1/2"	G	124,5	4,90	F	73,8	2,91	C	32,0	1,26	I	33,8	1,33	E	38,0	1,50	0,37	0,82
	M FIRG12AQ BSP	Male						D	68,0	2,68	B	32,0	1,26	H	33,8	1,33	J	24,4	0,96	0,23	0,51
1/2"	F FIRG34Q BSP	Female	12,5	3/4"	G	134,0	5,28	F	80,8	3,18	C	36,0	1,42	I	38,5	1,52	E	38,0	1,50	0,37	0,82
	M FIRG34Q BSP	Male						D	70,5	2,78	B	36,0	1,42	H	38,5	1,52	J	24,5	0,96	0,23	0,51
5/8"	F FIRG34BQ BSP	Female	16	3/4"	G	131,4	5,17	F	78,5	3,09	C	36,0	1,42	I	38,5	1,52	E	42,0	1,65	0,47	1,04
	M FIRG34BQ BSP	Male						D	70,5	2,78	B	36,0	1,42	H	38,5	1,52	J	27,0	1,06	0,27	0,59
3/4"	F FIRG100Q BSP	Female	19	1"	G	153,5	6,04	F	93,2	3,67	C	45,0	1,77	I	47,8	1,88	E	48,0	1,89	0,77	1,69
	M FIRG100Q BSP	Male						D	82,3	3,24	B	45,0	1,77	H	47,8	1,88	J	30,0	1,18	0,40	0,87
1"	F FIRG114Q BSP	Female	25	1 1/4"	G	172,8	6,80	F	106,0	4,17	C	55,0	2,17	I	59,8	2,35	E	55,0	2,17	1,20	2,65
	M FIRG114Q BSP	Male						D	89,8	3,54	B	55,0	2,17	H	59,8	2,35	J	36,0	1,42	0,64	1,42
1-1/2"	F FIRG112Q BSP	Female	-	1 1/2"	G	214,8	8,46	F	132,4	5,21	C	65,0	2,56	I	72,0	2,83	E	80,0	3,15	2,82	6,22
	M FIRG112Q BSP	Male						D	111,0	4,37	B	70,0	2,76	H	76,0	2,99	J	57,0	2,24	1,86	4,10
2"	F FIRG200Q BSP	Female	-	2"	G	241,5	9,51	F	156,6	6,17	C	80,0	3,15	I	88,5	3,48	E	100,0	3,94	-	-
	M FIRG200Q BSP	Male						D	123,8	4,87	B	75,0	2,95	H	83,5	3,29	J	73,0	2,87	-	-

* For specific item code see "different seals configurations" page at the end of this section.



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

BODY SIZE	Descriptive Code	Item Code *	ISO DN	PORT (A)	Overall Length		Length		Hex		Diameter		Diameter		Weight						
					mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	Kg	Lbs					
1/4"	F FIRG14Q NPT	Female	6,3	1/4"	G	85,2	3,35	F	48,1	1,89	C	22,0	0,87	I	24,0	0,94	E	28,0	1,10	0,14	0,30
	M FIRG14Q NPT	Male						D	47,9	1,89	B	22,0	0,87	H	23,8	0,94	J	16,1	0,63	0,09	0,19
3/8"	F FIRG38Q NPT	Female	10	3/8"	G	108,7	4,28	F	64,2	2,53	C	27,0	1,06	I	29,0	1,14	E	32,0	1,26	0,24	0,53
	M FIRG38Q NPT	Male						D	60,0	2,36	B	24,0	0,94	H	26,0	1,02	J	19,7	0,78	0,12	0,26
3/8"	F FIRG12Q NPT	Female	10	1/2"	G	116,2	4,57	F	69,2	2,72	C	27,0	1,06	I	29,0	1,14	E	32,0	1,26	0,24	0,52
	M FIRG12Q NPT	Male						D	62,5	2,46	B	27,0	1,06	H	29,0	1,14	J	19,7	0,78	0,13	0,29
1/2"	F FIRG12AQ NPT	Female	12,5	1/2"	G	124,5	4,90	F	73,8	2,91	C	32,0	1,26	I	33,8	1,33	E	38,0	1,50	0,38	0,85
	M FIRG12AQ NPT	Male						D	68,0	2,68	B	32,0	1,26	H	33,8	1,33	J	24,5	0,96	0,24	0,53
1/2"	F FIRG34Q NPT	Female	12,5	3/4"	G	134,0	5,28	F	80,8	3,18	C	36,0	1,42	I	38,5	1,52	E	38,0	1,50	0,43	0,95
	M FIRG34Q NPT	Male						D	70,5	2,78	B	36,0	1,42	H	38,5	1,52	J	24,5	0,96	0,23	0,50
5/8"	F FIRG34BQ NPT	Female	16	3/4"	G	131,4	5,17	F	78,5	3,09	C	36,0	1,42	I	38,5	1,52	E	42,0	1,65	0,47	1,04
	M FIRG34BQ NPT	Male						D	70,5	2,78	B	36,0	1,42	H	38,5	1,52	J	27,0	1,06	0,27	0,59
3/4"	F FIRG100Q NPT	Female	19	1"	G	153,5	6,04	F	93,2	3,67	C	45,0	1,77	I	47,8	1,88	E	48,0	1,89	0,77	1,69
	M FIRG100Q NPT	Male						D	82,3	3,24	B	45,0	1,77	H	47,8	1,88	J	30,0	1,18	0,41	0,90
1"	F FIRG114Q NPT	Female	25	1 1/4"	G	172,8	6,80	F	106,0	4,17	C	55,0	2,17	I	59,8	2,35	E	55,0	2,17	1,24	2,73
	M FIRG114Q NPT	Male						D	89,8	3,54	B	55,0	2,17	H	59,8	2,35	J	36,0	1,42	0,65	1,42
1-1/2"	F FIRG112Q NPT	Female	-	1 1/2"	G	214,8	8,46	F	132,4	5,21	C	65,0	2,56	I	72,0	2,83	E	80,0	3,15	2,82	6,22
	M FIRG112Q NPT	Male						D	111,0	4,37	B	70,0	2,76	H	76,0	2,99	J	57,0	2,24	1,87	4,11
2"	F FIRG200Q NPT	Female	-	2"	G	241,5	9,51	F	156,6	6,17	C	80,0	3,15	I	88,5	3,48	E	100,0	3,94	-	-
	M FIRG200Q NPT	Male						D	123,8	4,87	B	75,0	2,95	H	83,5	3,29	J	73,0	2,87	-	-

* For specific item code see "different seals configurations" page at the end of this section.

Port description: FEMALE THREAD
Different seals configurations

BODY	ISO	PORT (A)	NITRIL SEALS		VITON® SEALS		EPDM SEALS		KALREZ® SEALS	
SIZE	DN		BSP THREAD		BSP THREAD		BSP THREAD		BSP THREAD	
1/4"	6,3	1/4"	800900000	F FIRG14QN BSP	800900100	F FIRG14QV BSP	800900200	F FIRG14QE BSP	800900704	F FIRG14QK BSP
			800900001	M FIRG14QN BSP	800900101	M FIRG14QV BSP	800900201	M FIRG14QE BSP	800900705	M FIRG14QK BSP
3/8"	10	3/8"	800900002	F FIRG38QN BSP	800900102	F FIRG38QV BSP	800900202	F FIRG38QE BSP	800900708	F FIRG38QK BSP
			800900003	M FIRG38QN BSP	800900103	M FIRG38QV BSP	800900203	M FIRG38QE BSP	800900709	M FIRG38QK BSP
3/8"	10	1/2"	800900004	F FIRG12QN BSP	800900104	F FIRG12QV BSP	800900204	F FIRG12QE BSP	800900710	F FIRG12QK BSP
			8009000a05	M FIRG12QN BSP	800900105	M FIRG12QV BSP	800900205	M FIRG12QE BSP	800900711	M FIRG12QK BSP
1/2"	12,5	1/2"	800900006	F FIRG12AQN BSP	800900106	F FIRG12AQV BSP	800900206	F FIRG12AQE BSP	800900700	F FIRG12AQK BSP
			800900007	M FIRG12AQN BSP	800900107	M FIRG12AQV BSP	800900207	M FIRG12AQE BSP	800900701	M FIRG12AQK BSP
1/2"	12,5	3/4"	800900008	F FIRG34QN BSP	800900108	F FIRG34QV BSP	800900208	F FIRG34QE BSP	800900712	F FIRG34QK BSP
			800900009	M FIRG34QN BSP	800900109	M FIRG34QV BSP	800900209	M FIRG34QE BSP	800900713	M FIRG34QK BSP
5/8"	16	3/4"	800900010	F FIRG34BQN BSP	800900110	F FIRG34BQV BSP	800900210	F FIRG34BQE BSP	800900716	F FIRG34BQK BSP
			800900011	M FIRG34BQN BSP	800900111	M FIRG34BQV BSP	800900211	M FIRG34BQE BSP	800900717	M FIRG34BQK BSP
3/4"	19	1"	800900012	F FIRG100QN BSP	800900112	F FIRG100QV BSP	800900212	F FIRG100QE BSP	800900702	F FIRG100QK BSP
			800900013	M FIRG100QN BSP	800900113	M FIRG100QV BSP	800900213	M FIRG100QE BSP	800900703	M FIRG100QK BSP
1"	25	1-1/4"	800900014	F FIRG114QN BSP	800900114	F FIRG114QV BSP	800900214	F FIRG114QE BSP	800900706	F FIRG114QK BSP
			800900015	M FIRG114QN BSP	800900115	M FIRG114QV BSP	800900215	M FIRG114QE BSP	800900707	M FIRG114QK BSP
1-1/2"	-	1-1/2"	800900016	F FIRG112QN BSP	800900116	F FIRG112QV BSP	800900216	F FIRG112QE BSP	800900718	F FIRG112QK BSP
			800900017	M FIRG112QN BSP	800900117	M FIRG112QV BSP	800900217	M FIRG112QE BSP	800900719	M FIRG112QK BSP
2"	-	2"	800900022	F FIRG200QN BSP	800900120	F FIRG200QV BSP	800900218	F FIRG200QE BSP	800900722	F FIRG200QK BSP
			800900023	M FIRG200QN BSP	800900121	M FIRG200QV BSP	800900219	M FIRG200QE BSP	800900723	M FIRG200QK BSP

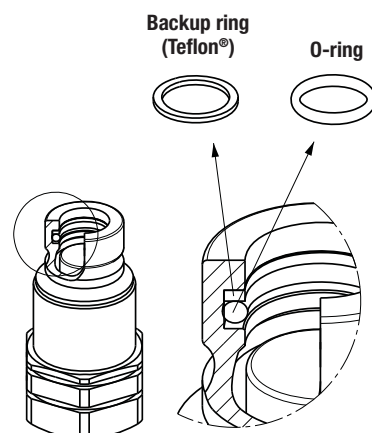
BODY	ISO	PORT (A)	NITRIL SEALS		VITON® SEALS		EPDM SEALS	
SIZE	DN		NPT THREAD		NPT THREAD		NPT THREAD	
1/4"	6,3	1/4"	800901000	F FIRG14QN NPT	800901100	F FIRG14QV NPT	800901200	F FIRG14QE NPT
			800901001	M FIRG14QN NPT	800901101	M FIRG14QV NPT	800901201	M FIRG14QE NPT
3/8"	10	3/8"	800901002	F FIRG38QN NPT	800901102	F FIRG38QV NPT	800901202	F FIRG38QE NPT
			800901003	M FIRG38QN NPT	800901103	M FIRG38QV NPT	800901203	M FIRG38QE NPT
3/8"	10	1/2"	800901004	F FIRG12QN NPT	800901104	F FIRG12QV NPT	800901204	F FIRG12QE NPT
			800901005	M FIRG12QN NPT	800901105	M FIRG12QV NPT	800901205	M FIRG12QE NPT
1/2"	12,5	1/2"	800901006	F FIRG12AQN NPT	800901106	F FIRG12AQV NPT	800901206	F FIRG12AQE NPT
			800901007	M FIRG12AQN NPT	800901107	M FIRG12AQV NPT	800901207	M FIRG12AQE NPT
1/2"	12,5	3/4"	800901008	F FIRG34QN NPT	800901108	F FIRG34QV NPT	800901208	F FIRG34QE NPT
			800901009	M FIRG34QN NPT	800901109	M FIRG34QV NPT	800901209	M FIRG34QE NPT
5/8"	16	3/4"	800901010	F FIRG34BQN NPT	800901110	F FIRG34BQV NPT	800901210	F FIRG34BQE NPT
			800901011	M FIRG34BQN NPT	800901111	M FIRG34BQV NPT	800901211	M FIRG34BQE NPT
3/4"	19	1"	800901012	F FIRG100QN NPT	800901112	F FIRG100QV NPT	800901212	F FIRG100QE NPT
			800901013	M FIRG100QN NPT	800901113	M FIRG100QV NPT	800901213	M FIRG100QE NPT
1"	25	1-1/4"	800901014	F FIRG114QN NPT	800901114	F FIRG114QV NPT	800901214	F FIRG114QE NPT
			800901015	M FIRG114QN NPT	800901115	M FIRG114QV NPT	800901215	M FIRG114QE NPT
1-1/2"	-	1-1/2"	800901016	F FIRG112QN NPT	800901116	F FIRG112QV NPT	800901216	F FIRG112QE NPT
			800901017	M FIRG112QN NPT	800901117	M FIRG112QV NPT	800901217	M FIRG112QE NPT
2"	-	2"	800901018	F FIRG200QN NPT	800901119	M FIRG200QV NPT		
			800901019	M FIRG200QN NPT				



SPARE KIT SEAL FOR MALE

Repair kit / OR+BK		
Body Size	Description	Part Number
1/4"	M FIRG14Q	815700519
3/8"	M FIRG38Q-12Q	815700337
1/2"	M FIRG12AQ-34Q	815700339
5/8"	M FIRG34BQ	815700341
3/4"	M FIRG100Q	815700343
1"	M FIRG114Q	815700345
1 1/2"	M FIRG112Q	815700521

O-Ring in Nitrile
BackUp in Teflon®

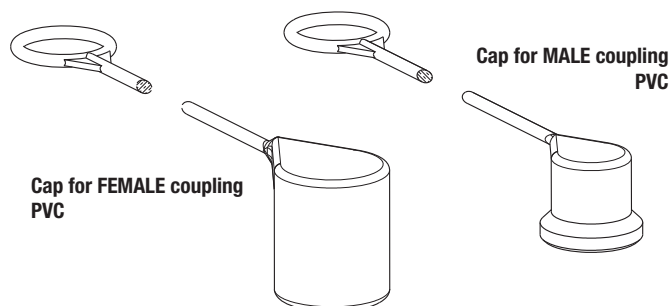


PROTECTIVE CAPS FOR FIRG-Q SERIES

Protective caps are always recommended to protect the couplings from damage, dirt inclusion, and will increase the product life.

For the FIRG-Q series are available two kind of materials:

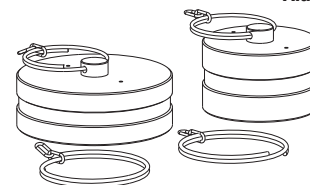
- PVC caps with lanyard (standard color black)
- aluminum screw caps with lanyard (standard colors: natural aluminum, other colors available upon request)



Body Size/Description:		Protective Cap		Material/Color
		Cap for Female	Cap for Male	
1/4"	FIRG14Q	815100000	815100023	PVC/Red
3/8"	FIRG38Q-12Q	815100002	815100027	PVC/Red
1/2"	FIRG12AQ-34Q	815100006	815100031	PVC/Red
5/8"	FIRG34BQ	815100008	815100011	PVC/Red
3/4"	FIRG100Q	815100010	815100013	PVC/Red
1"	FIRG114Q	815100012	815100015	PVC/Red

Cap for MALE coupling Aluminium

Cap for FEMALE coupling Aluminium



Body Size/Description:		Protective Cap		Material/Color
		Cap for Female	Cap for Male	
1/4"	FIRG14Q	816005002	816005003	Aluminum/Natural
3/8"	FIRG38Q-12Q	816005004	816005005	Aluminum/Natural
1/2"	FIRG12AQ-34Q	816005006	816005007	Aluminum/Natural
5/8"	FIRG34BQ	816005008	816005009	Aluminum/Natural
3/4"	FIRG100Q	816005010	816005011	Aluminum/Natural
1"	FIRG114Q	816005012	816005013	Aluminum/Natural