

## FIRG SERIES

[stucchiusa.com/products/flat-face-couplers/firg/](https://stucchiusa.com/products/flat-face-couplers/firg/)

**The FIRG Flat Face Series**, the original ISO 16028 interchangeable coupling, continues to offer good performance, long life and competitive pricing. The integrated sealing mechanism greatly reduces premature wear caused by movement between coupler and nipple parts affected by impulse pressure and the weight of the hoses and tubing when the coupling is in horizontal position.

Category: [Flat Face Couplers](#) Tags: [Industry: Agricultural](#), [Industry: Industrial](#), [Industry: Mobile](#), [Industry: Oil & Gas](#)



## Description

### Features

- Size range: 1/4" thru 2"
- Port options: NPT, BSP
- Interchanges with ISO 16028
- Working pressure: 20-30 MPa/2900-4350 psi range
- Non-spill design avoids fluid loss during connection/disconnection
- Minimal air inclusion during connection
- Tight tolerances ensure equal loading of couplers

### Applications

- Anywhere fluid loss and hydraulic circuit contamination need to be reduced or eliminated
- Mobile construction, agriculture, and mining operations
- General industrial plants



Mobile



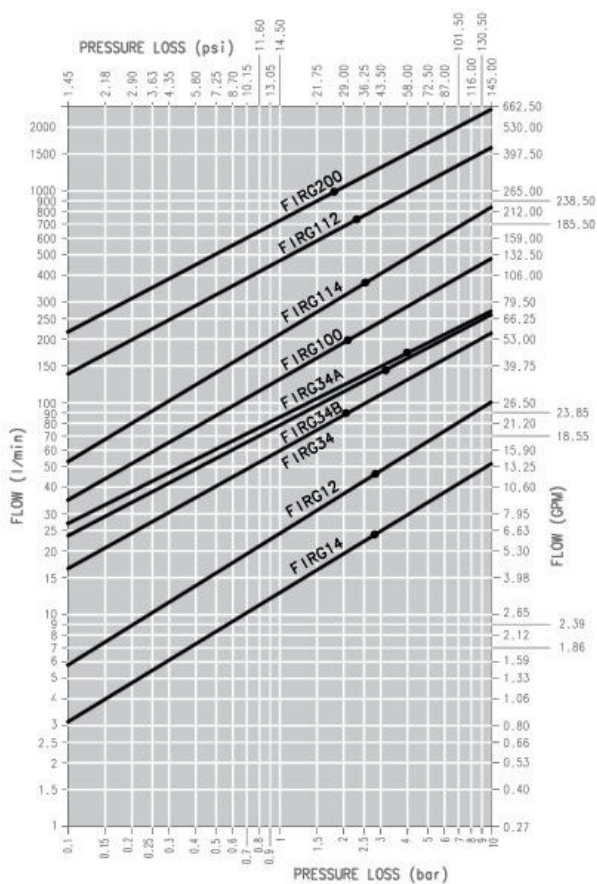
Oil &  
Gas



Industrial

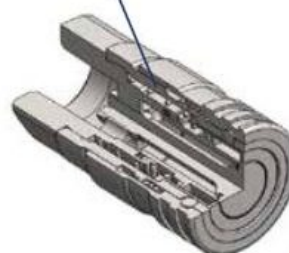


## Pressure Drop

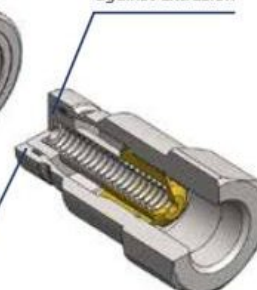


OIL = ISO VG32, TEMP = 40C, VISCOSITY = 28.8-35.2 MM<sup>2</sup>/S

Flat face valves w/ safety lock to prevent accidental disconnection



Swaged and PTFE U seals for high resistance against extrusion



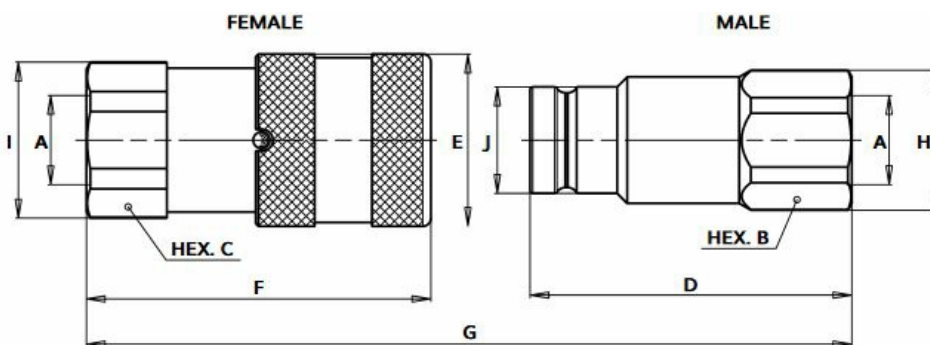
Hardened surface area and locking balls reduce brinelling

## Burst Pressure

Description	Size	ISO Size	Max Operating Pressure Coupled		COUPLED		MALE		FEMALE		Spillage *
			MPa	psi	MPa	psi	MPa	psi	MPa	psi	
FIRG14	1/4	6.3	30	4350	120	17400	126	18270	48	6960	0.006
FIRG38-12	3/8	10.0	30	4350	120	17400	120	17400	48	6960	0.012
FIRG12A-34	1/2	12.5	25	3625	100	14500	100	14500	40	5800	0.020
FIRG34B	5/8	16.0	25	3625	100	14500	88	12760	40	5800	0.026
FIRG34A	3/4	19.0	33	4785	100	14500	100	14500	100	14500	0.032
FIRG100	3/4	19.0	25	3625	100	14500	80	11600	40	5800	0.032
FIRG114	1/2	25.0	25	3625	100	14500	80	11600	40	5800	0.035
FIRG112	1 1/2	-	20	2900	80	11600	80	11600	32	4640	0.050
FIRG200	2	-	20	2900	80	11600	64	9280	32	4640	0.100

\* Spillage is an indicative value of the fluid loss per couple-uncouple cycle.

## Size Diagram



### WEIGHT

DESC.	BODY SIZE	A	UNIT	B	C	D	E	F	G	H	I	J	UNIT	MALE	FEMALE
FIRG14	1/4	1/4	mm	22.0	22.0	47.9	28.0	48.1	85.2	23.8	23.8	16.1	kg	0.086	0.140
			inch	0.87	0.87	1.89	1.10	1.89	3.35	0.94	0.94	0.63	lb	0.19	0.31
FIRG38	3/8	3/8	mm	24.0	27.0	60.0	32.0	64.2	108.7	26.0	29.0	19.7	kg	0.121	0.235
			inch	0.94	1.06	2.36	1.26	2.53	4.28	1.02	1.14	0.78	lb	0.27	0.52
FIRG12	3/8	1/2	mm	27.0	27.0	62.5	32.0	69.2	116.2	29.0	29.0	19.7	kg	0.128	0.237
			inch	1.06	1.06	2.46	1.26	2.72	4.57	1.14	1.14	0.78	lb	0.28	0.52
FIRG12A	1/2	1/2	mm	32.0	32.0	68.0	38.0	73.8	124.5	33.8	33.8	24.5	kg	0.233	0.375
			inch	1.26	1.26	2.68	1.50	2.91	4.90	1.33	1.33	0.96	lb	0.51	0.83
FIRG34	1/2	3/4	mm	36.0	36.0	70.5	38.0	80.8	134.0	38.5	38.5	24.5	kg	0.227	0.413
			inch	1.42	1.42	2.78	1.50	3.18	5.28	1.52	1.52	0.96	lb	0.50	0.91
FIRG34B	5/8	3/4	mm	36.0	36.0	70.5	42.0	78.5	131.4	38.5	38.5	27.0	kg	0.268	0.479
			inch	1.42	1.42	2.78	1.65	3.09	5.17	1.52	1.52	1.06	lb	0.59	1.06
FIRG34A	3/4	3/4	mm	41.0	41.0	82.3	48.0	88.7	149.0	44.8	44.8	30.0	kg	0.445	0.750
			inch	1.61	1.61	3.24	1.89	3.49	5.87	1.76	1.76	1.18	lb	0.98	1.65
FIRG100	3/4	1	mm	45.0	45.0	82.3	48.0	93.2	153.5	47.8	47.8	30.0	kg	0.394	0.767
			inch	1.77	1.77	3.24	1.89	3.67	6.04	1.88	1.88	1.18	lb	0.87	1.69
FIRG114	1	1	mm	55.0	55.0	89.8	55.0	106.0	172.8	59.8	59.8	36.0	kg	0.641	1.215
		1/4	inch	2.17	2.17	3.54	2.17	4.17	6.80	2.35	2.35	1.42	lb	1.41	2.68
FIRG112	1 1/2	1	mm	65.0	65.0	111.1	80.0	132.4	214.9	69.8	72.0	57.0	kg	1.665	2.820
		1/2	inch	2.56	2.56	4.37	3.15	5.21	8.46	2.75	2.83	2.24	lb	3.67	6.22
FIRG200	2	2	mm	75.0	80.0	123.8	100.0	156.6	241.5	83.5	88.5	73.0	kg	2.259	5.100
			inch	2.95	3.15	4.87	3.94	6.17	9.51	3.29	3.48	2.87	lb	4.98	11.24

Body Size	Port Size	Order Code	Description	Order Code	Description
			Coupler/Female Dust Cap		Nipple/Male Dust Cap

Body Size	Port Size	Order Code	Description	Order Code	Description
1/4	1/4	815100000	CAP F. FIRG14/A7	815100001	CAP M. FIRG14/A7
3/8	3/8	-----	-----	815100003	CAP M. FIRG38/A9
3/8	3/8 & 1/2	815100002	CAP F. FIRG38/A9/FIRG12	815100005	CAP M. FIRG12/A9
1/2	1/2	815100004	CAP F. FIRG12A/A13	815100007	CAP M. FIRG12A/A13
1/2	1/2 & 3/4	815100006	CAP F. FIRG34/A13	815100009	CAP M. FIRG34/A13
5/8	3/4	815100008	CAP F. FIRG34B/A15	815100011	CAP M. FIRG34B/A15
3/4	3/4	815100010	CAP F. FIRG100/A17	815100013	CAP M. FIRG100/A17
1	1	815100012	CAP F. FIRG114/A21	815100015	CAP M. FIRG114/A21
1 1/4	1 1/4	815205020	CAP F. A25	815205021	CAP M. A25
1 1/2	1 1/2	815100014	CAP F. FIRG112/A30	815100017	CAP M. FIRG 112/A30
2	2	815100016	CAP F. FIRG 200	815100019	CAP M. FIRG 200

## FIRG NPT and SAE Thread ISO 16028

PART	BODY SIZE	PORT SIZE	THREAD TYPE	ORDER CODE	PART DESCRIPTION
FIRG NPT THREAD					
COUPLER	1/4	1/4	NPT	800801000	F. FIRG 14 NPT
NIPPLE	1/4	1/4	NPT	800801001	M. FIRG 14 NPT
COUPLER	3/8	1/2	NPT	800801002	F. FIRG 12 NPT
NIPPLE	3/8	1/2	NPT	800801003	M. FIRG 12 NPT
COUPLER	3/8	3/8	NPT	800801004	F. FIRG 38 NPT
NIPPLE	3/8	3/8	NPT	800801005	M. FIRG 38 NPT
COUPLER	1/2	1/2	NPT	800801006	F. FIRG 12AD NPT
NIPPLE	1/2	1/2	NPT	800801007	M. FIRG 12A NPT
COUPLER	1/2	3/4	NPT	800801008	F. FIRG 34D NPT
NIPPLE	1/2	3/4	NPT	800801009	M. FIRG 34 NPT
COUPLER	5/8	3/4	NPT	800801010	F. FIRG 34BD NPT
NIPPLE	5/8	3/4	NPT	800801011	M. FIRG 34B NPT
COUPLER	3/4	3/4	NPT	800801020	F. FIRG 34A NPT
NIPPLE	3/4	3/4	NPT	800801021	M. FIRG 34A NPT
COUPLER	3/4	1	NPT	800801012	F. FIRG 100 NPT
NIPPLE	3/4	1	NPT	800801013	M. FIRG 100 NPT
COUPLER	1	1 1/4	NPT	800801014	F. FIRG 1 1/4 NPT
NIPPLE	1	1 1/4	NPT	800801015	M. FIRG 1 1/4 NPT
COUPLER	1 1/2	1 1/2	NPT	800801016	F. FIRG 1 1/2 NPT

<b>PART</b>	<b>BODY SIZE</b>	<b>PORT SIZE</b>	<b>THREAD TYPE</b>	<b>ORDER CODE</b>	<b>PART DESCRIPTION</b>
<del>COUPLER</del>	<del>1 1/2</del>	<del>2</del>	<del>NPT</del>	<del>800801018</del>	<del>F. FIRG 200 NPT</del>
<del>NIPPLE</del>	<del>1/4</del>	<del>1/4</del>	<del>NPT</del>	<del>800801009</del>	<del>M. FIRG 120 NPT</del>
<del>NIPPLE</del>	<del>1/4</del>	<del>1/4</del>	<del>NPT</del>	<del>800801001</del>	<del>M. FIRG 14 NPT</del>
<del>COUPLER</del>	<del>3/8</del>	<del>3/8</del>	<del>SAE</del>	<del>800804000</del>	<del>F. FIRG 12 B/8 SAE</del>
<del>NIPPLE</del>	<del>3/8</del>	<del>3/8</del>	<del>SAE</del>	<del>800804003</del>	<del>M. FIRG 12 B/8 SAE</del>
<del>COUPLER</del>	<del>3/8</del>	<del>3/8</del>	<del>SAE</del>	<del>800804002</del>	<del>F. FIRG 38 M/2 SAE</del>
<del>NIPPLE</del>	<del>3/8</del>	<del>3/8</del>	<del>SAE</del>	<del>800804005</del>	<del>M. FIRG 38 M/2 SAE</del>
<del>COUPLER</del>	<del>3/8</del>	<del>5/8</del>	<del>SAE</del>	<del>800804004</del>	<del>F. FIRG 12A/8 SAE</del>
<del>NIPPLE</del>	<del>3/8</del>	<del>5/8</del>	<del>SAE</del>	<del>800804007</del>	<del>M. FIRG 12A/8 SAE</del>
<del>COUPLER</del>	<del>1/2</del>	<del>3/8</del>	<del>SAE</del>	<del>800804008</del>	<del>F. FIRG 32A/8 SAE</del>
<del>NIPPLE</del>	<del>1/2</del>	<del>3/8</del>	<del>SAE</del>	<del>800804009</del>	<del>M. FIRG 32A/8 SAE</del>
<del>COUPLER</del>	<del>5/8</del>	<del>3/4</del>	<del>SAE</del>	<del>800804008</del>	<del>F. FIRG 34B SAE</del>
<del>NIPPLE</del>	<del>5/8</del>	<del>3/4</del>	<del>SAE</del>	<del>800804009</del>	<del>M. FIRG 34B SAE</del>
<del>COUPLER</del>	<del>3/8</del>	<del>3/4</del>	<del>SAE</del>	<del>800804020</del>	<del>F. FIRG 34B D/B AE</del>
<del>NIPPLE</del>	<del>3/8</del>	<del>3/4</del>	<del>SAE</del>	<del>800804021</del>	<del>M. FIRG 34B SAE</del>
<del>COUPLER</del>	<del>3/4</del>	<del>3/4</del>	<del>SAE</del>	<del>800804020</del>	<del>F. FIRG 30A SAE</del>
<del>NIPPLE</del>	<del>3/4</del>	<del>3/4</del>	<del>SAE</del>	<del>800804023</del>	<del>M. FIRG 30A SAE</del>
<del>COUPLER</del>	<del>3/4</del>	<del>1 1/4</del>	<del>SAE</del>	<del>800804012</del>	<del>F. FIRG 100/4 SAE</del>
<del>NIPPLE</del>	<del>3/4</del>	<del>1 1/4</del>	<del>SAE</del>	<del>800804015</del>	<del>M. FIRG 100/4 SAE</del>
<del>COUPLER</del>	<del>1 1/2</del>	<del>1 1/2</del>	<del>SAE</del>	<del>800804014</del>	<del>F. FIRG 1 1/2 SAE</del>
<del>NIPPLE</del>	<del>1 1/2</del>	<del>1 1/4</del>	<del>NPT</del>	<del>800804015</del>	<del>M. FIRG 1 1/2 SAE</del>
<del>COUPLER</del>	<del>1 1/2</del>	<del>1 1/2</del>	<del>NPT</del>	<del>800804016</del>	<del>F. FIRG 200 NPT</del>
<del>NIPPLE</del>	<del>1 1/2</del>	<del>1 1/2</del>	<del>NPT</del>	<del>800804017</del>	<del>M. FIRG 200 NPT</del>
<del>COUPLER</del>	<del>2</del>	<del>2</del>	<del>SAE</del>	<del>800804018</del>	<del>F. FIRG 200 SAE</del>
<del>NIPPLE</del>	<del>1/4</del>	<del>3/8</del>	<del>SAE</del>	<del>800804000</del>	<del>M. FIRG 14 3/8 SAE</del>

## Repair Kits

<b>ORDER CODE</b>	<b>DESCRIPTION</b>
FIRG SERIES	
815700001	KIT M. FIRG 14
815700003	KIT M. FIRG 38/12
815700005	KIT M. FIRG 12A/34
815700007	KIT M. FIRG 34B
815700009	KIT M. FIRG 100

ORDER CODE	DESCRIPTION
815700011	KIT M. FIRG 114
815700013	KIT M. FIRG 112
815700015	KIT M. FIRG 200

## Additional information

<b>Body Size</b>	<u>1/4", 3/8", 1/2", 5/8", 3/4", 1", 1 1/4", 1 1/2", 2"</u>
<b>Material</b>	<u>Carbon</u>
<b>Port Options</b>	<u>BSP, NPT</u>
<b>Port Size</b>	<u>1/4", 3/8", 1/2", 5/8", 3/4", 1", 1 1/4", 1 1/2", 2"</u>
<b>Valve Style</b>	<u>Flat Face</u>
<b>Working Pressure</b>	<u>Up to 5000</u>

## Specifications

Download: [ISO 16028 ID Chart](#)

**FIRG SERIES**  
FLAT FACE COUPLERS (ISO 16028 In-Stock)

The FIRG Flat Face Series, the original ISO 16028 in-stock design, continues to offer good performance, long life and consistent pricing. The integral sealing mechanism greatly reduces pressure wear caused by movement between angles and flange ends, offsetting the impact pressure and the weight of the hydraulic tubing when the coupling is in the horizontal position.

Pressure Class B, High - Design D3  
Paper Size: Large 11



**FEATURES**

- Size range: 1/4" - 2" (6.35 - 50.8 mm)
- Port options: NPT, BSP
- Interchangeable with ISO 16028
- Working pressure: 10-20 MPa (1450-3000 PSI)
- 45° angle
- Integral design to reduce fluid loss during connection/disconnection
- Minimal air inclusion during connection
- High resistance to air leak during off coupling

**APPLICATIONS**

Applications include: ISO 16028, ISO 16029 and alternatives need to be realized or determined

- Mobile construction equipment and mining equipment
- General industrial plants

