



## FIRG SERIES

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**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: Aerospace](#), [Industry: Agricultural](#), [Industry: Industrial](#), [Industry: Mobile](#), [Industry: Oil & Gas](#)

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## DESCRIPTION

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### 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

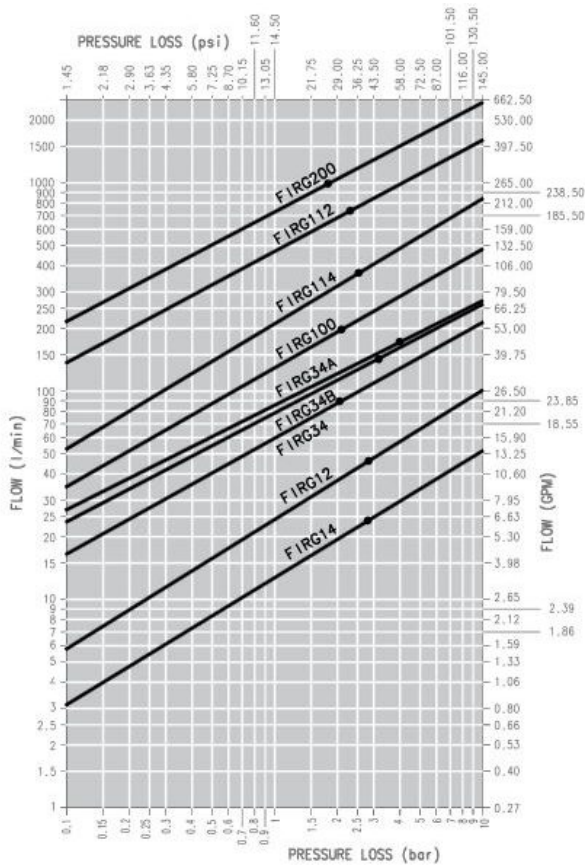
- Tight tolerances ensure equal loading of couplers

### Applications

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



### 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



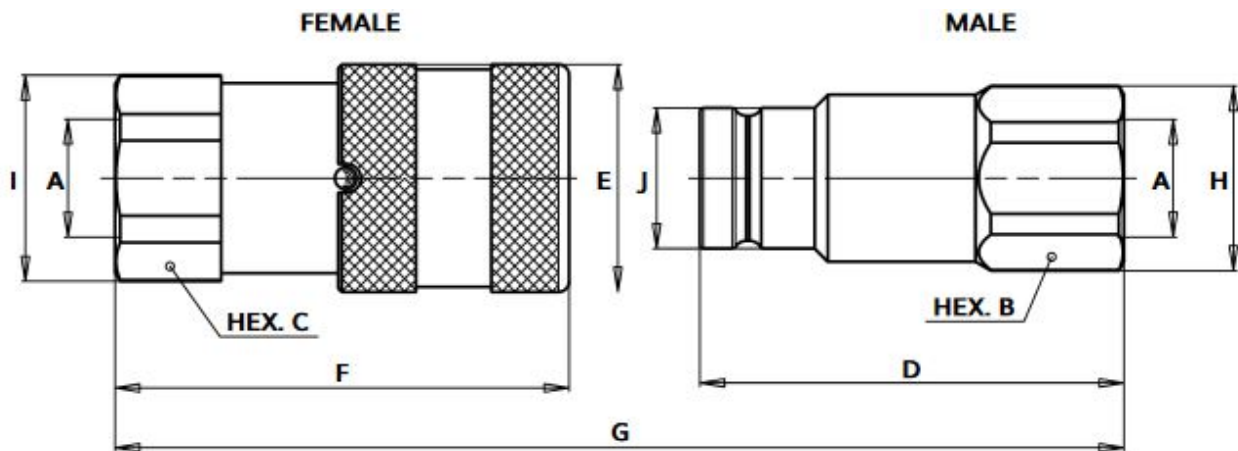
Burst Pressure				
Max Operating Pressure Coupled	COUPLED	MALE	FEMALE	

Description	Size	ISO Size	Burst Pressure							
			MPa	psi	MPa	psi	MPa	psi	MPa	psi
			Max Operating Pressure Coupled		COUPLED		MALE		FEMALE	

Description	Size	ISO Size	MPa	psi	MPa	psi	MPa	psi	MPa	psi
FIRG14	1/4	6.3	30	4350	120	17400	126	18270	48	6960
FIRG38-12	3/8	10.0	30	4350	120	17400	120	17400	48	6960
FIRG12A-34	1/2	12.5	25	3625	100	14500	100	14500	40	5800
FIRG34B	5/8	16.0	25	3625	100	14500	88	12760	40	5800
FIRG34A	3/4	19.0	33	4785	100	14500	100	14500	100	14500
FIRG100	3/4	19.0	25	3625	100	14500	80	11600	40	5800
FIRG114	1/2	25.0	25	3625	100	14500	80	11600	40	5800
FIRG112	1 1/2	–	20	2900	80	11600	80	11600	32	4640
FIRG200	2	–	20	2900	80	11600	64	9280	32	4640

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

### Size Diagram



DESC.	BODY SIZE	A	UNIT	B	C	D	E	F	G	H	I
FIRG14	1/4	1/4	mm	22.0	22.0	47.9	28.0	48.1	85.2	23.8	23.8
			inch	0.87	0.87	1.89	1.10	1.89	3.35	0.94	0.94
FIRG38	3/8	3/8	mm	24.0	27.0	60.0	32.0	64.2	108.7	26.0	29.0
			inch	0.94	1.06	2.36	1.26	2.53	4.28	1.02	1.14
FIRG12	3/8	1/2	mm	27.0	27.0	62.5	32.0	69.2	116.2	29.0	29.0
			inch	1.06	1.06	2.46	1.26	2.72	4.57	1.14	1.14
FIRG12A	1/2	1/2	mm	32.0	32.0	68.0	38.0	73.8	124.5	33.8	33.8
			inch	1.26	1.26	2.68	1.50	2.91	4.90	1.33	1.33
FIRG34	1/2	3/4	mm	36.0	36.0	70.5	38.0	80.8	134.0	38.5	38.5
			inch	1.42	1.42	2.78	1.50	3.18	5.28	1.52	1.52
FIRG34B	5/8	3/4	mm	36.0	36.0	70.5	42.0	78.5	131.4	38.5	38.5
			inch	1.42	1.42	2.78	1.65	3.09	5.17	1.52	1.52
FIRG34A	3/4	3/4	mm	41.0	41.0	82.3	48.0	88.7	149.0	44.8	44.8
			inch	1.61	1.61	3.24	1.89	3.49	5.87	1.76	1.76
FIRG100	3/4	1	mm	45.0	45.0	82.3	48.0	93.2	153.5	47.8	47.8
			inch	1.77	1.77	3.24	1.89	3.67	6.04	1.88	1.88
FIRG114	1	1 1/4	mm	55.0	55.0	89.8	55.0	106.0	172.8	59.8	59.8
			inch	2.17	2.17	3.54	2.17	4.17	6.80	2.35	2.35
FIRG112	1 1/2	1 1/2	mm	65.0	65.0	111.1	80.0	132.4	214.9	69.8	72.0
			inch	2.56	2.56	4.37	3.15	5.21	8.46	2.75	2.83
FIRG200	2	2	mm	75.0	80.0	123.8	100.0	156.6	241.5	83.5	88.0
			inch	2.95	3.15	4.87	3.94	6.17	9.51	3.29	3.46

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
<b>FIRG NPT THREAD</b>					
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
NIPPLE	1 1/2	1 1/2	NPT	800801017	M. FIRG 1 1/2 NPT
COUPLER	2	2	NPT	800801018	F. FIRG 200 NPT
NIPPLE	2	2	NPT	800801019	M. FIRG 200 NPT
<b>FIRG SAE THREAD</b>					
COUPLER	1/4	3/8	SAE	800804000	F. FIRG 14 3/8 SAE
NIPPLE	1/4	3/8	SAE	800804001	M. FIRG 14 3/8 SAE
COUPLER	3/8	1/2	SAE	800804002	F. FIRG 38 1/2 SAE
NIPPLE	3/8	1/2	SAE	800804003	M. FIRG 38 1/2 SAE
COUPLER	3/8	5/8	SAE	800804004	F. FIRG 12 5/8 SAE

NIPPLE	3/8	5/8	SAE	800804005	M. FIRG 12 5/8 SAE
COUPLER	1/2	5/8	SAE	800804006	F. FIRG 12A 5/8 SAE
NIPPLE	1/2	5/8	SAE	800804007	M. FIRG 12A 5/8 SAE
COUPLER	1/2	3/4	SAE	800804008	F. FIRG 34D SAE
NIPPLE	1/2	3/4	SAE	800804009	M. FIRG 34 SAE
COUPLER	5/8	3/4	SAE	800804010	F. FIRG 34BD SAE
NIPPLE	5/8	3/4	SAE	800804011	M. FIRG 34B SAE
COUPLER	3/4	3/4	SAE	800804020	F. FIRG 34A SAE
NIPPLE	3/4	3/4	SAE	800804021	M. FIRG 34A SAE
COUPLER	3/4	1	SAE	800804012	F. FIRG 100 SAE
NIPPLE	3/4	1	SAE	800804013	M. FIRG 100 SAE
COUPLER	1	1 1/4	SAE	800804014	F. FIRG 1 1/4 SAE
NIPPLE	1	1 1/4	SAE	800804015	M. FIRG 1 1/4 SAE
COUPLER	1 1/2	1 1/2	SAE	800804016	F. FIRG 1 1/2 SAE
NIPPLE	1 1/2	1 1/2	SAE	800804017	M. FIRG 1 1/2 SAE
COUPLER	2	2	SAE	800804018	F. FIRG 200 SAE
NIPPLE	2	2	SAE	800804019	M. FIRG 200 SAE

## Repair Kits

ORDER CODE	DESCRIPTION
FIRG SERIES	
815700001	KIT M. FIRG 14
815700003	KIT M. FIRG 38/12
815700005	KIT M. FIRG 12A/34
815700007	KIT M. FIRG 34B

ORDER CODE	DESCRIPTION
815700009	KIT M. FIRG 100
815700011	KIT M. FIRG 114
815700013	KIT M. FIRG 112
815700015	KIT M. FIRG 200

## ADDITIONAL INFORMATION

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<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>

## Related products

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## **SH SERIES**

**The SH Series H-IH Interchange Coupling** features a simple-to-use, compact design constructed in carbon steel with zinc plating. The poppet valve with elastomer seal provides maximum sealing of the couplings when disconnected, to meet a variety of general purpose needs across various applications.

[Read more](#)

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## **APM SERIES**

**The APM Series Flat Face Couplings** are state-of-the-art solutions for high residual pressure. They address residual pressure in a circuit anywhere thermal expansion of trapped fluid causes pressure to develop, and connect by hand with residual pressure, without releasing any fluid into the environment. The APM is intended to relieve pressure within itself only.

[Stucchi APM Series](#) from [Stucchi USA](#) on [Vimeo](#).

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## **IRC SERIES**

**The IRC Series Interchange Coupler**, commonly referred to as a Nordic interchange, offers a safety sleeve to prevent accidental disconnection and a poppet valve with elastomer seal to provide maximum sealing of the couplings once disconnected. Standard poppet and pressure eliminator poppet available. Connection under residual pressure is allowed in male or female; counterpart side should be without pressure.

[Read more](#)



## **VEPHDL SERIES**

**The VEPHDL Series Heavy-Duty Locking Flat Face Coupler** is the ultimate failsafe solution for the most demanding hydraulic applications. This locking female version is interchangeable with standard VEPHD series flat face thread-to-connect heavy duty couplers and features a visual connection indicator for foolproof connection, every time.

[Read more](#)