

# FIRG SERIES

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



## TECHNICAL FEATURES AND OPTIONS

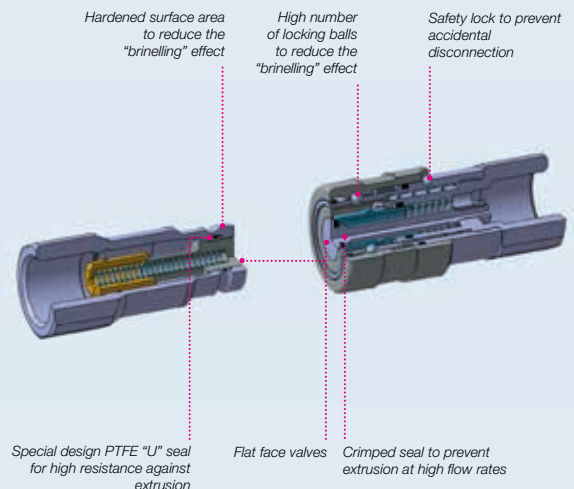
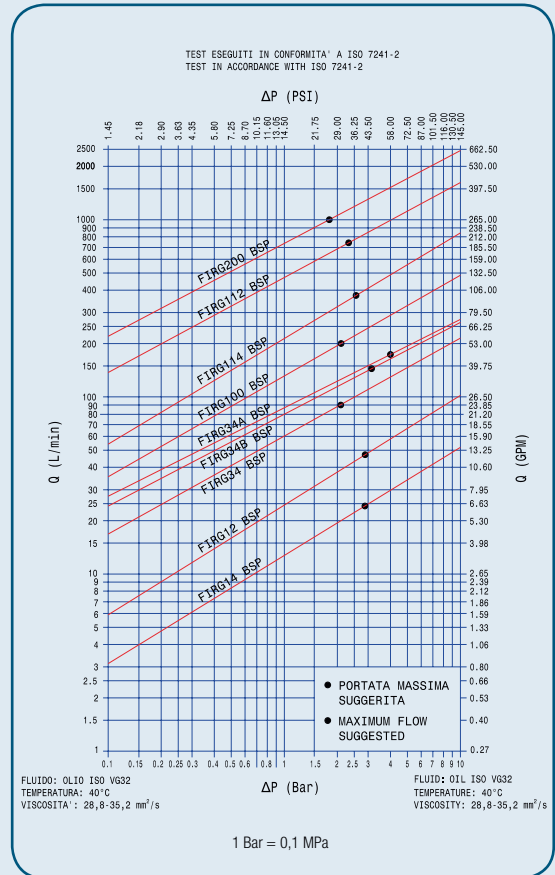
<b>Interchange</b> ISO 16028 NFPA T3.20.15 HTMA (size 3/8")	<b>Sealing description</b> Nitrile NBR	<b>Connection system</b> Push
<b>Available sizes</b> from 1/4" to 2"	<b>Material</b> High strength carbon steel	<b>Available threads</b> BSP - NPT - SAE
<b>Operating pressure</b> Up to 300 bar	<b>Locking mechanism</b> Locking ball + Safety Lock	<b>Flow rate</b> Up to 1000 L/Min
<b>Temperature (°C)</b> -20° / +100°	<b>Valving style</b> Flat face	<b>Connection under pressure</b> 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, enhancing correct function of the circuit.
- Linear flow reduces internal turbulence and pressure drop maintaining circuit efficiency.
- Good resistance to pressure impulses when the couplings are connected.
- 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



ISO 16028

## 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	FIRG14	24	6,36	140	31,50	40	9,00	0,01
3/8	10,0	FIRG38-12	46	12,19	150	33,75	40	9,00	0,01
1/2	12,5	FIRG12A-34	90	23,85	160	36,00	60	13,50	0,02
5/8	16,0	FIRG34B	148	39,22	180	40,50	55	12,38	0,02
3/4	19,0	FIRG34A	170	45,05	270	60,75	90	20,25	0,03
3/4	19,0	FIRG100	200	53,00	240	54,00	65	14,63	0,03
1	25,0	FIRG114	378	100,17	310	69,75	100	22,50	0,03
1-1/2		FIRG112	750	198,75	390	87,75	90	20,25	0,05
2		FIRG200	1000	265,00	470	105,75	100	22,50	0,1

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	FIRG14	30	4350	42	6090	12	1740	120	17400	126	18270	48	6960
3/8	FIRG38-12	30	4350	30	4350	12	1740	120	17400	120	17400	48	6960
1/2	FIRG12A-34	25	3625	25	3625	10	1450	100	14500	100	14500	40	5800
5/8	FIRG34B	25	3625	22	3190	10	1450	100	14500	88	12760	40	5800
3/4	FIRG34A	33	4785	33	4785	33	4785	100	14500	100	14500	100	14500
3/4	FIRG100	25	3625	20	2900	10	1450	100	14500	80	11600	40	5800
1	FIRG114	25	3625	20	2900	10	1450	100	14500	80	11600	40	5800
1-1/2	FIRG112	20	2900	27	3915	8	1160	80	11600	80	11600	32	4640
2	FIRG200	20	2900	16	2320	8	1160	80	11600	64	9280	32	4640

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

### Temperature range:

- Standard seals NBR (Nitrile): from -20 °C to +100 °C ( from -4 °F to +212 °F).  
 - VITON® seals: from -15°C to +180°C ( from +5 °F to +356 °F).  
 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.

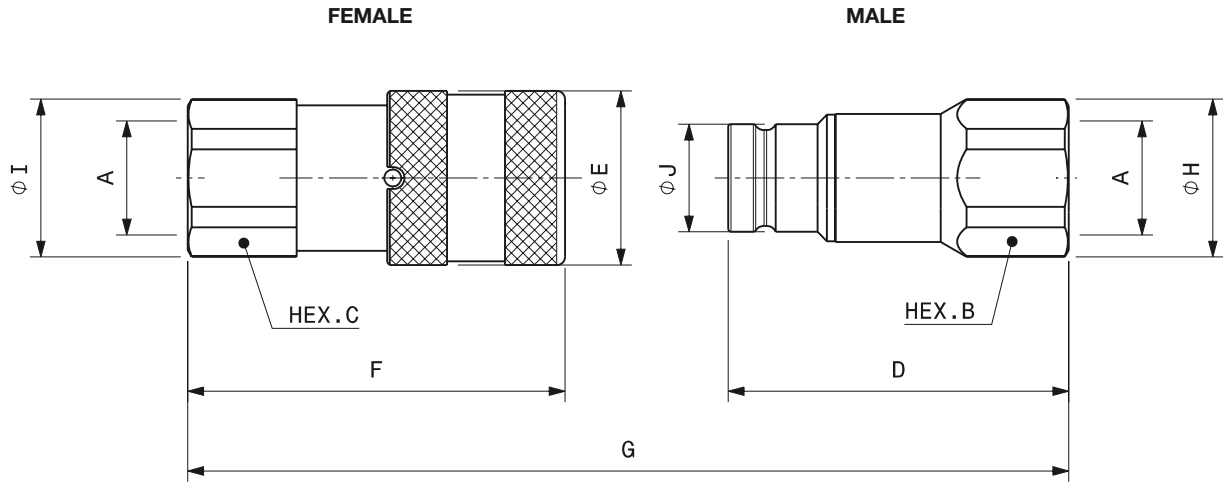


## WARNING

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.

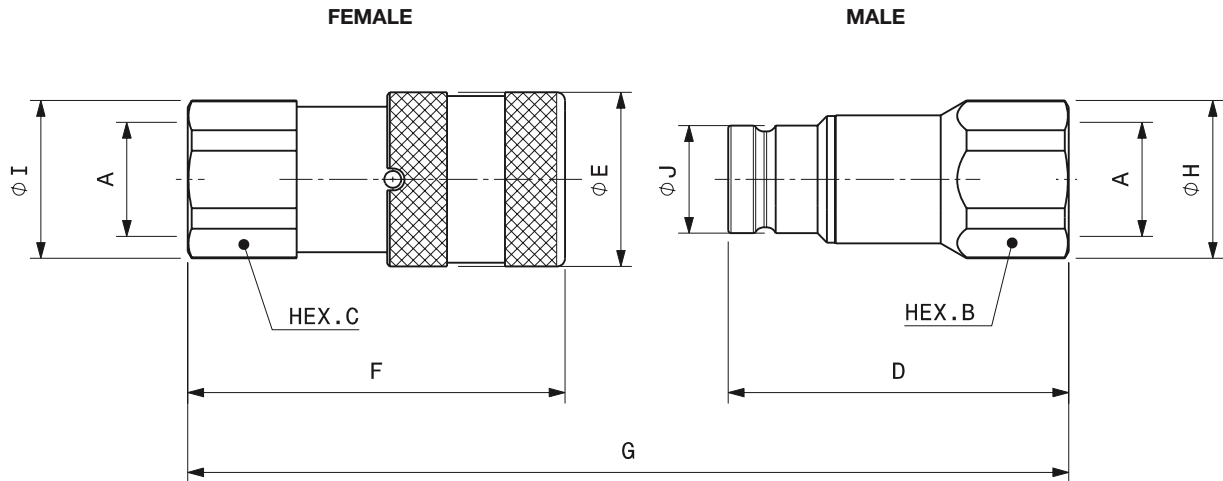
The interchangeability is mentioned under the assumption that the manufacturer of the considered products has not changed any dimension.  
**It is MANDATORY to read and closely follow the instructions. Last updated version always apply at time of installation, see latest written Instructions on Stucchi website ([www.stucchi.it](http://www.stucchi.it)) before selecting or using Stucchi products.**

## OVERALL DIMENSIONS



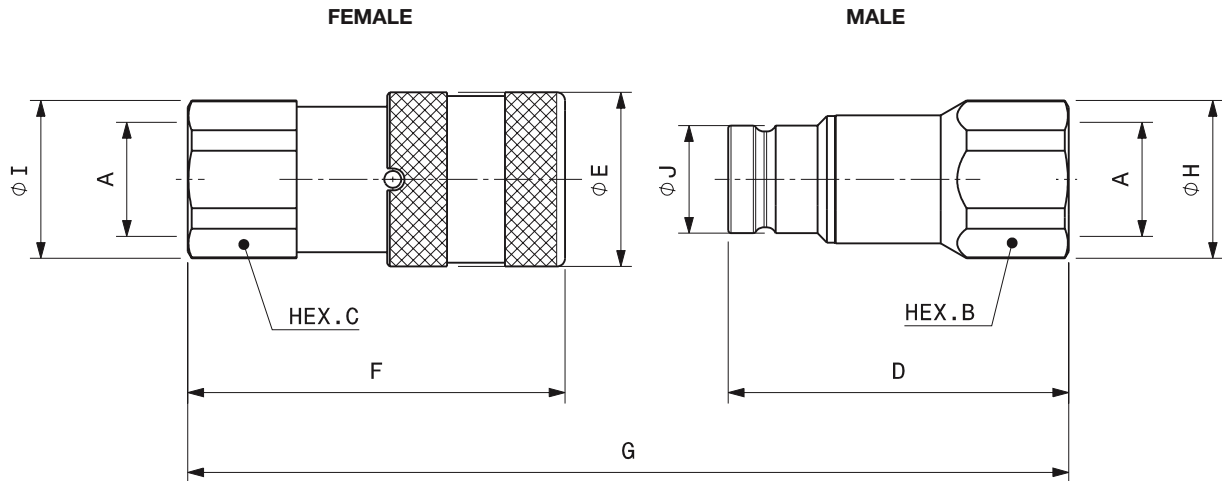
### Port description: FEMALE THREAD BSPP (ISO1179-1)

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 FIRG 14 BSP	Female 80080000	6,3	1/4"	G	85,2	3,35	F	48,1	1,89	C	22,0	0,87	I	23,8	0,94	E	28,0	1,10	0,14	0,31
	M FIRG 14 BSP	Male 80080001						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 FIRG 38 BSP	Female 80080004	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	0,52
	M FIRG 38 BSP	Male 80080005						D	60,0	2,36	B	24,0	0,94	H	26,0	1,02	J	19,7	0,78	0,12	0,27
3/8"	F FIRG 12 BSP	Female 80080002	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 FIRG 12 BSP	Male 80080003						D	62,5	2,46	B	27,0	1,06	H	29,0	1,14	J	19,7	0,78	0,13	0,28
1/2"	F FIRG 12A BSP	Female 80080006	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	0,83
	M FIRG 12A BSP	Male 80080007						D	68,0	2,68	B	32,0	1,26	H	33,8	1,33	J	24,5	0,96	0,23	0,51
1/2"	F FIRG 34 BSP	Female 80080008	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	0,41	0,91
	M FIRG 34 BSP	Male 80080009						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 FIRG 34B BSP	Female 80080010	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	0,48	1,06
	M FIRG 34B BSP	Male 80080011						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 FIRG 34A BSP	Female 80080020	19	3/4"	G	149,0	5,87	F	88,7	3,49	C	41,0	1,61	I	44,8	1,76	E	48,0	1,89	0,75	1,65
	M FIRG 34A BSP	Male 80080021						D	82,3	3,24	B	41,0	1,61	H	44,8	1,76	J	30,0	1,18	0,45	0,98
3/4"	F FIRG 100 BSP	Female 80080012	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 FIRG 100 BSP	Male 80080013						D	82,3	3,24	B	45,0	1,77	H	47,8	1,88	J	30,0	1,18	0,39	0,87
1"	F FIRG 114 BSP	Female 80080014	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	1,22	2,68
	M FIRG 114 BSP	Male 80080015						D	89,8	3,54	B	55,0	2,17	H	59,8	2,35	J	36,0	1,42	0,64	1,41
1-1/2"	F FIRG 112 BSP	Female 80080016	-	1-1/2"	G	214,9	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 FIRG 112 BSP	Male 80080017						D	111,1	4,37	B	65,0	2,56	H	69,8	2,75	J	57,0	2,24	1,67	3,67
2"	F FIRG 200 BSP	Female 80080018	-	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	5,10	11,24
	M FIRG 200 BSP	Male 80080019						D	123,8	4,87	B	75,0	2,95	H	83,5	3,29	J	73,0	2,87	2,26	4,98



### 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	Kg	Lbs						
1/4"	F FIRG 14 NPT	Female 800801000	6,3	1/4"	G	85,2	3,35	F	48,1	1,89	C	22,0	0,87	I	23,8	0,94	E	28,0	1,10	0,14	0,31
	M FIRG 14 NPT	Male 800801001						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 FIRG 38 NPT	Female 800801004	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	0,52
	M FIRG 38 NPT	Male 800801005						D	60,0	2,36	B	24,0	0,94	H	26,0	1,02	J	19,7	0,78	0,12	0,27
3/8"	F FIRG 12 NPT	Female 800801002	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	0,53
	M FIRG 12 NPT	Male 800801003						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 FIRG 12A NPT	Female 800801006	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	0,83
	M FIRG 12A NPT	Male 800801007						D	68,0	2,68	B	32,0	1,26	H	33,8	1,33	J	24,5	0,96	0,24	0,52
1/2"	F FIRG 34 NPT	Female 800801008	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	0,42	0,93
	M FIRG 34 NPT	Male 800801009						D	70,5	2,78	B	36,0	1,42	H	38,5	1,52	J	24,5	0,96	0,23	0,52
5/8"	F FIRG 34B NPT	Female 800801010	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	0,49	1,08
	M FIRG 34B NPT	Male 800801011						D	70,5	2,78	B	36,0	1,42	H	38,5	1,52	J	27,0	1,06	0,27	0,60
3/4"	F FIRG 34A NPT	Female 800801020	19	3/4"	G	149,0	5,87	F	88,7	3,49	C	41,0	1,61	I	44,8	1,76	E	48,0	1,89	0,76	1,66
	M FIRG 34A NPT	Male 800801021						D	82,3	3,24	B	41,0	1,61	H	44,8	1,76	J	30,0	1,18	0,45	0,99
3/4"	F FIRG 100 NPT	Female 800801012	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	0,78	1,72
	M FIRG 100 NPT	Male 800801013						D	82,3	3,24	B	45,0	1,77	H	47,8	1,88	J	30,0	1,18	0,41	0,89
1"	F FIRG 114 NPT	Female 800801014	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	1,22	2,68
	M FIRG 114 NPT	Male 800801015						D	89,8	3,54	B	55,0	2,17	H	59,8	2,35	J	36,0	1,42	0,66	1,46
1-1/2"	F FIRG 112 NPT	Female 800801016	-	1 1/2"	G	214,9	8,46	F	132,4	5,21	C	65,0	2,56	I	72,0	2,83	E	80,0	3,15	2,85	6,28
	M FIRG 112 NPT	Male 800801017						D	111,1	4,37	B	65,0	2,56	H	69,8	2,75	J	57,0	2,24	1,67	3,68
2"	F FIRG 200 NPT	Female 800801018	-	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	5,10	11,24
	M FIRG 200 NPT	Male 800801019						D	123,8	4,87	B	75,0	2,95	H	83,5	3,29	J	73,0	2,87	2,26	4,98



### Port description: FEMALE THREAD SAE (ISO 11926-1 & SAE J1926-1)

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	Kg	Lbs						
1/4"	F FIRG 14 3/8 SAE	Female 800804000	6,3	9/16-18UNF	G	93,2	3,67	F	53,1	2,09	C	22,0	0,87	I	23,8	0,94	E	28,0	1,10	0,15	0,33
	M FIRG 14 3/8 SAE	Male 800804001						D	50,9	2,00	B	22,0	0,87	H	23,8	0,94	J	16,1	0,63	0,09	0,20
3/8"	F FIRG 38 1/2 SAE	Female 800804002	10	3/4-16UNF	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	0,54
	M FIRG 38 1/2 SAE	Male 800804003						D	62,5	2,46	B	27,0	1,06	H	29,0	1,14	J	19,7	0,78	0,14	0,31
3/8"	F FIRG 12 5/8 SAE	Female 800804004	10	7/8-14UNF	G	119,7	4,71	F	71,2	2,80	C	30,0	1,18	I	32,0	1,26	E	32,0	1,26	0,26	0,57
	M FIRG 12 5/8 SAE	Male 800804005						D	64,0	2,52	B	30,0	1,18	H	32,0	1,26	J	19,7	0,78	0,15	0,32
1/2"	F FIRG 12A 5/8 SAE	Female 800804006	12,5	7/8-14UNF	G	129,0	5,08	F	76,3	3,00	C	32,0	1,26	I	33,8	1,33	E	38,0	1,50	0,38	0,83
	M FIRG 12A 5/8 SAE	Male 800804007						D	70,0	2,76	B	32,0	1,26	H	33,8	1,33	J	24,5	0,96	0,23	0,51
1/2"	F FIRG 34 SAE	Female 800804008	12,5	1-1/16-12UN	G	138,0	5,43	F	83,3	3,28	C	36,0	1,42	I	38,5	1,52	E	38,0	1,50	0,42	0,93
	M FIRG 34 SAE	Male 800804009						D	72,0	2,83	B	36,0	1,42	H	38,5	1,52	J	24,5	0,96	0,23	0,51
5/8"	F FIRG 34B SAE	Female 800804010	16	1-1/16-12UN	G	137,9	5,43	F	83,5	3,29	C	36,0	1,42	I	38,5	1,52	E	42,0	1,65	0,50	1,10
	M FIRG 34B SAE	Male 800804011						D	72,0	2,83	B	36,0	1,42	H	38,5	1,52	J	27,0	1,06	0,27	0,59
3/4"	F FIRG 34A SAE	Female 800804020	19	1-1/16-12UN	G	149,0	5,87	F	88,7	3,49	C	41,0	1,61	I	44,8	1,76	E	48,0	1,89	0,75	1,64
	M FIRG 34A SAE	Male 800804021						D	82,3	3,24	B	41,0	1,61	H	44,8	1,76	J	30,0	1,18	0,44	0,97
3/4"	F FIRG 100 SAE	Female 800804012	19	1-5/16-12UN	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 FIRG 100 SAE	Male 800804013						D	82,3	3,24	B	45,0	1,77	H	47,8	1,88	J	30,0	1,18	0,39	0,87
1"	F FIRG 114 SAE	Female 800804014	25	1-5/8-12UN	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	1,22	2,68
	M FIRG 114 SAE	Male 800804015						D	89,8	3,54	B	55,0	2,17	H	59,8	2,35	J	36,0	1,42	0,64	1,41
1-1/2"	F FIRG 112 SAE	Female 800804016	-	1-7/8-12UN	G	214,9	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 FIRG 112 SAE	Male 800804017						D	111,1	4,37	B	65,0	2,56	H	69,8	2,75	J	57,0	2,24	1,66	3,65
2"	F FIRG 200 SAE	Female 800804018	-	2-1/2-12UN	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	5,10	11,24
	M FIRG 200 SAE	Male 800804019						D	123,8	4,87	B	75,0	2,95	H	83,5	3,29	J	73,0	2,87	2,26	4,98