

# Hydraulic Quick Couplings Non-Spill

## FF/FC Series HTMA (3/8 size)

Push to connect/sleeve lock



B Hydraulics



FF Series couplings eliminate spillage and air inclusion when connecting and disconnecting. The sleeve locking mechanism prevents accidental disconnection. 3/8" body size complies with Hydraulic Tool Manufacturers Association standards. FC nipples provide a connect-under-pressure option for trapped pressures up to 3000 psi on the nipple side.

### Features

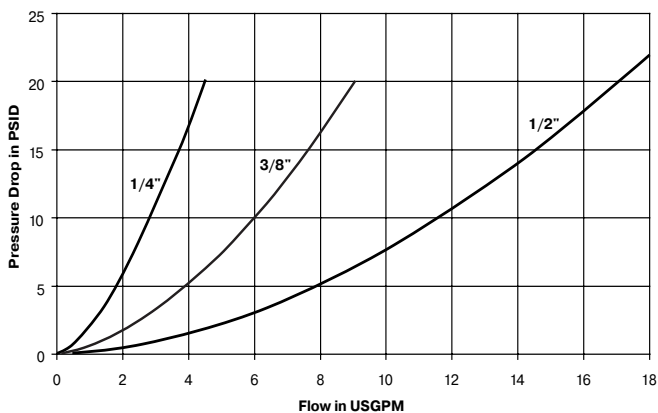
- Flush, non-spill valving
- Hardened steel sleeves and nipple bodies
- Locking sleeve
- Sleeve-Lok design now standard
- Blow-out resistant seal
- Connect-under-pressure FC nipple option
- Protective zinc nickel plating

### Applications include:

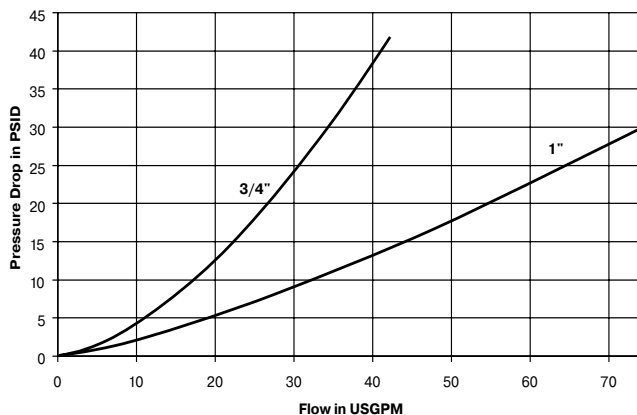
- Hydraulic tools
- Mobile equipment
- Industrial hydraulics

### Performance

FF Series (1/4", 3/8", 1/2")  
Test Fluid: Oil - 200 SUS



FF Series (3/4" & 1")  
Test Fluid: Oil - 200 SUS

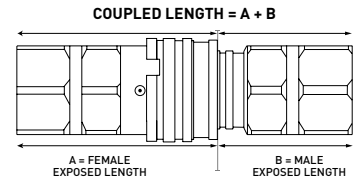


### FF Series Specifications

Body Size	Rated Pressure (psi)	Rated Flow (gpm)	Temperature Range	Spillage (ml) max. per disconnect	Air Inclusion (ml) max. per connect	Body Material	Sleeve Type	Seal Material
1/4	5000	3	-40° to +250°F	.015	.020	Steel	Push to Connect	Nitrile/ Polyurethane
3/8	5000	6		.015	.020			
1/2	3000	12		.080	.070			
3/4	3000	28		.150	.100			
1	3000	50		.200	.150			

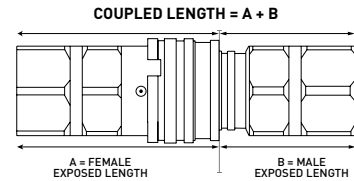


**FF Series Couplers**



Body Size	Coupler Part Number	Port End	Length	Coupled Length	Largest Diameter	Wrench Flats	Weight (lbs.)
1/4	FF-251-4FP	1/4-18 NPSF	1.79		1.06	25 mm	0.23
1/4	FF-251-4MP	1/4-18 NPTF	1.84		1.06	25 mm	0.24
1/4	FF-251-6FO	9/16-18 UNF	1.91		1.06	25 mm	0.23
3/8	FEM-371-6FP	3/8-18 NPTF	3.06	5.02	1.26	30 mm	0.77
3/8	FEM-371-8FP	1/2-14 NPTF	3.17	5.23	1.26	30 mm	0.75
3/8	FEM-371-6FB	3/8-19 BSPP	3.06	5.02	1.31	30 mm	0.75
3/8	FEM-371-8FB	G1/2 BSPP	3.17	5.23	1.31	30 mm	0.75
3/8	FEM-371-8FO	3/4-16 UNF	3.06	5.02	1.26	30 mm	0.74
1/2	FF-501-8FP	1/2-14 NPSF	3.00		1.54	32 mm	0.88
1/2	FF-501-10FO	7/8-14 UNF	3.00		1.54	32 mm	1.05
3/4	FF-751-12FP	3/4-14 NPSF	3.50		1.94	45 mm	1.84
3/4	FF-751-12FO	1 1/16-12 UNF	3.75		1.94	45 mm	1.93
1	FF-1001-16FP	1-11 1/2 NPSF	4.14		2.25	48 mm	2.64
1	FF-1001-16FO	1 5/16-12UNF	4.24		2.25	48 mm	2.68


**FF Series Nipples**



Body Size	Nipple Part Number	Port End	Length	Coupled Length	Exposed Length*	Largest Diameter	Wrench Flats	Weight (lbs.)
1/4	FF-252-4FP	1/4-18 NPSF	1.66		1.15	1.06	25 mm	0.16
1/4	FF-252-4MP	1/4-18 NPTF	1.72		1.18	1.06	25 mm	0.26
1/4	FF-252-6FO	9/16-18 UNF	1.66		1.15	1.06	25 mm	0.16
3/8	FEM-372-6FP	3/8-18 NPTF	2.59	5.02		1.26	30 mm	0.48
3/8	FEM-372-8FP	1/2-14 NPSF	2.69	5.23		1.26	30 mm	0.48
3/8	FEM-372-6FB	3/8-19 BSPP	2.59	5.02		1.26	30 mm	0.48
3/8	FEM-372-8FB	G1/2 BSPP	2.69	5.22		1.26	30 mm	0.47
3/8	FEM-372-8FO	3/4-16 UNF	2.59	5.02		1.26	30 mm	0.45
1/2	FF-502-8FP	1/2-14 NPSF	2.75		2.11	1.38	32 mm	0.42
1/2	FF-502-10FO	7/8-14 UNF	2.75		2.07	1.38	32 mm	0.44
3/4	FF-752-12FP	3/4-14 NPSF	3.38		2.47	1.73	45 mm	1.00
3/4	FF-752-12FO	1 1/16-12 UNF	3.58		2.47	1.73	45 mm	1.02
1	FF-1002-16FP	1-11 1/2 NPSF	3.85		2.60	2.17	48 mm	1.60
1	FF-1002-16FO	1 5/16-12UNF	3.85		2.60	2.17	48 mm	1.70

Standard Port Configurations: **FP** - Female Pipe Thread **FO** - Female Straight Thread  
**MP** - Male Pipe Thread **FB** - Female British Standard Pipe Parallel

\* This dimension represents the portion of the nipple that is exposed when the nipple and coupler are connected.

 **WARNING:** This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)




**Optional Seal Materials:**  
(add code to part number)

Code	Description	Part Number Example
suffix -E5	Ethylene Propylene seal material (EPR)	FF-501-8FP-E5
suffix -E4	Fluorocarbon seal material	FF-501-8FP-E4

Optional seals include O-ring & Back-Up Ring, not Anti-Blow Out bonded seal. Contact QCD for availability and additional options. To select proper seal materials, see Fluid Compatibility Chart or contact QCD.

FF Series Repair Kits				Spline Tool
1/4" Nipple	FF-252-KIT	FF-252-KIT-E4	FF-252-KIT-E5	-
1/4" Coupler	FF-251-KIT	FF-251-KIT-E4	FF-251-KIT-E5	FF/FS-251-TOOL
3/8" Nipple	FF-372-KIT	FF-372-KIT-E4	FF-372-KIT-E5	-
3/4" Nipple	FF-752-KIT	FF-752-KIT-E4	FF-752-KIT-E5	-
3/4" Coupler	FF-751-KIT	FF-751-KIT-E4	FF-751-KIT-E5	FF/FS-751-TOOL
1" Nipple	FF-1002-KIT	FF-1002-KIT-E4	FF-1002-KIT-E5	-
1" Coupler	FF-1001-KIT	FF-1001-KIT-E4	FF-1001-KIT-E5	FF/FS-1001-TOOL

**Dust Caps - FF Series**

	Body Size	Coupler Dust Cap - Rubber	Nipple Dust Cap - Rubber
	1/4	FR-25	FR-25
3/8	NR-50	NR-37	
1/2	FR-501	FR-502	
3/4	FR-751	FR-752	
1	FR-1001	FR-1002	



### Connect Under Pressure Operation

FC Series products operate slightly different from traditional non-spill couplings. With no pressure in the coupler and up to 3000 PSI of trapped pressure in the nipple, begin to couple the mating halves. Delay momentarily during connection to allow trapped pressure to equalize with the mating half before completing the connection.

FC Series nipples provide a connect-under-pressure option for trapped pressures up to 3000 psi on the nipple side.

### Features:

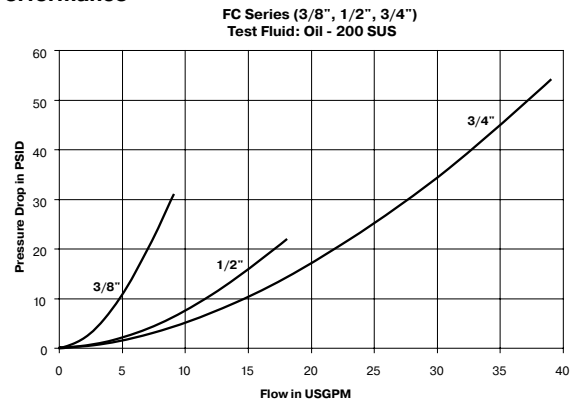
- Connect-under-pressure nipple
- Flush, non-spill valving
- Hardened locking surface
- Blow-out resistant seal
- Protective zinc plating with clear trivalent chromate finish

### Applications include:

- Hydraulic tools

FC Series Specifications					
Body Size	Rated Pressure (psi)	Rated Connect-Under-Pressure Capability	Rated Flow (gpm)	Spillage (ml) max. per disconnect	Air Inclusion (ml) max. per connect
3/8	3000	3000	6	.015	.020
1/2	3000	3000	12	.020	.070
3/4	3000	1500	26	.150	.100

### Performance



## FC Series Connect Under Pressure Nipples



Body Size	Part Number	Mating Half	Port End	Length	Exposed Length*	Largest Diameter	Wrench Flats	Weight (lbs.)
3/8	FC-372-6FP	FEM-371	3/8-18 NPSF	3.30	2.58	1.16	1.062	0.45
3/8	FC-372-8FO	FEM-371	3/4-16 UNF	3.30	2.58	1.16	1.062	0.42
3/8	FC-372-8FP	FEM-371	1/2-14 NPSF	3.30	2.58	1.16	1.062	0.42
1/2	FC-502-8FP	FF-501	1/2-14 NPSF	3.46	2.65	1.22	1.125	0.53
1/2	FC-502-10FO	FF-501	7/8-14 UNF	3.46	2.65	1.22	1.125	0.52
3/4	FC-752-12FO	FF-751	1 1/16-12 UNF	4.81	3.72	1.65	1.500	1.32
3/4	FC-752-12FP	FF-751	3/4-14 NPSF	4.81	3.72	1.65	1.500	1.34

**Standard Port Configurations:** **FP** - Female Pipe Thread **FO** - Female Straight Thread

\* This dimension represents the portion of the nipple that is exposed when the nipple and coupler are connected.



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