

# 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

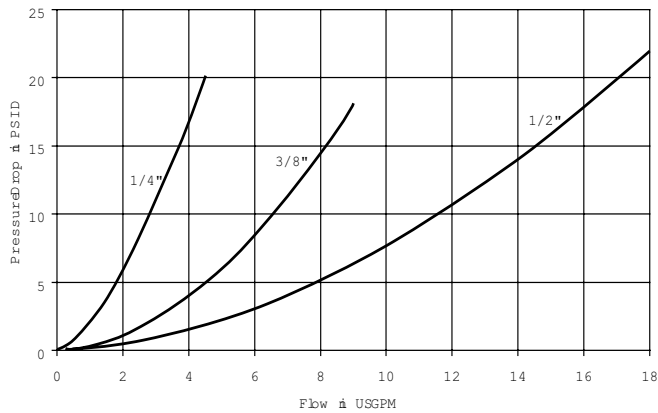
- Flush, non-spill valving
- Hardened steel sleeves and nipple bodies
- Locking sleeve
- Blow-out resistant seal
- Connect-under-pressure FC nipple option
- Protective zinc plating with clear trivalent chromate finish

### Applications include:

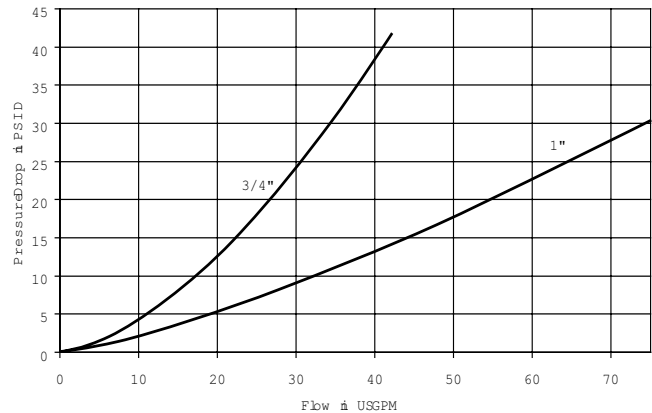
- Hydraulic tools
- Mobile equipment
- Industrial hydraulics

### Performance

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

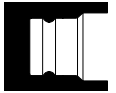


FF Series (3/4" & 1")  
Test Fluid: Oil - 200 SUS



### 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	3000	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	Largest Diameter	Wrench Flats	Weight (lbs.)
1/4	FF-251-4FP	1/4-18 NPSF	1.79	1.06	1.00	0.23
1/4	FF-251-4MP	1/4-18 NPTF	1.84	1.06	1.00	0.24
1/4	FF-251-6FO	9/16-18 UNF	1.91	1.06	1.00	0.23
3/8	FF-371-6FP	3/8-18 NPSF	2.39	1.20	1.06	0.44
3/8	FF-371-8FP	1/2-14 NPSF	2.80	1.20	1.06	0.50
3/8	FF-371-6FB	G3/8 BSPP	2.45	1.20	1.06	0.45
3/8	FF-371-8FB	G1/2 BSPP	2.80	1.20	1.06	0.48
3/8	FF-371-8FO	3/4-16 UNF	2.82	1.20	1.06	0.52
1/2	FF-501-8FP	1/2-14 NPSF	3.00	1.54	1.25	0.88
1/2	FF-501-10FO	7/8-14 UNF	3.00	1.54	1.25	1.05
3/4	FF-751-12FP	3/4-14 NPSF	3.50	1.94	1.75	1.84
3/4	FF-751-12FO	1 1/16-12 UNF	3.75	1.94	1.75	1.93
1	FF-1001-16FP	1-11 1/2NPSF	4.14	2.25	1.87	2.64
1	FF-1001-16FO	1 5/16-12UNF	4.24	2.25	1.87	2.68

### FF Series Nipples



Body Size	Nipple Part Number	Port End	Length	Exposed Length*	Largest Diameter	Wrench Flats	Weight (lbs.)
1/4	FF-252-4FP	1/4-18 NPSF	1.66	1.15	1.06	1.00	0.16
1/4	FF-252-4MP	1/4-18 NPTF	1.72	1.18	1.06	1.00	0.26
1/4	FF-252-6FO	9/16-18 UNF	1.66	1.15	1.06	1.00	0.16
3/8	FF-372-6FP	3/8-18 NPSF	2.31	1.71	1.08	0.94	0.26
3/8	FF-372-8FP	1/2-14 NPSF	2.64	2.04	1.19	1.06	0.32
3/8	FF-372-6FB	G3/8 BSPP	2.45	1.86	1.08	0.94	0.28
3/8	FF-372-8FB	G1/2 BSPP	2.70	2.16	1.19	1.06	0.32
3/8	FF-372-8FO	3/4-16 UNF	2.70	2.16	1.19	1.06	0.3
1/2	FF-502-8FP	1/2-14 NPSF	2.75	2.11	1.38	1.25	0.42
1/2	FF-502-10FO	7/8-14 UNF	2.75	2.07	1.38	1.25	0.44
3/4	FF-752-12FP	3/4-14 NPSF	3.38	2.47	1.73	1.50	1.00
3/4	FF-752-12FO	1 1/16-12 UNF	3.58	2.47	1.73	1.50	1.02
1	FF-1002-16FP	1-11 1/2 NPSF	3.85	2.60	2.17	1.87	1.60
1	FF-1002-16FO	1 5/16-12UNF	3.85	2.60	2.17	1.87	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.




### 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	-
3/8" Coupler	FF-371-KIT	FF-371-KIT-E4	FF-371-KIT-E5	FF/FS-371-TOOL
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	Dust Plug Part No. Rubber	Dust Cap Part No. 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

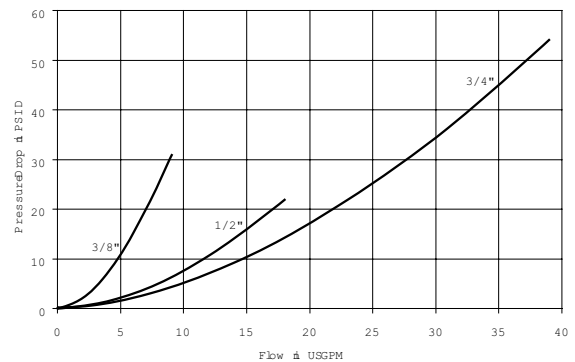
### Applications include:

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



## 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	FF-371	3/8-18 NPSF	3.30	2.58	1.16	1.062	0.45
3/8	FC-372-8FO	FF-371	3/4-16 UNF	3.30	2.58	1.16	1.062	0.42
3/8	FC-372-8FP	FF-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.