

FF SERIES

FLAT FACE COUPLERS MADE TO THE ISO 16028 STANDARD

The FF Series flat face couplers are AKJia's flagship products, known globally for their leak free performance in high pressure pulse, hammer circuits and many other applications. The flush valves eliminate spillage and air inclusion when connecting and disconnecting. Coupler and nipple bodies have a modular design with increased flexibility for end port options.



Series FF //Carbon Steel

Material	Carbon Steel
Surface Finishing	Zinc-Nickel, Zinc-Plating
Standard Seal Material(s)	NBR (Buna-N®), PTFE,2
Working Temperature	-25° C +100° C / -13° F +212° F
Valve Design	Flat Face
Connection	Push
Disconnection	Actuate Push Sleeve
Connect Under Pressure	not allowed
Application	Hammer circuits, High pressure pulse applications, Construction plant, mobile equipment, general industrial
ISO Interchange	ISO 16028

² Alternative seal materials are available on request.

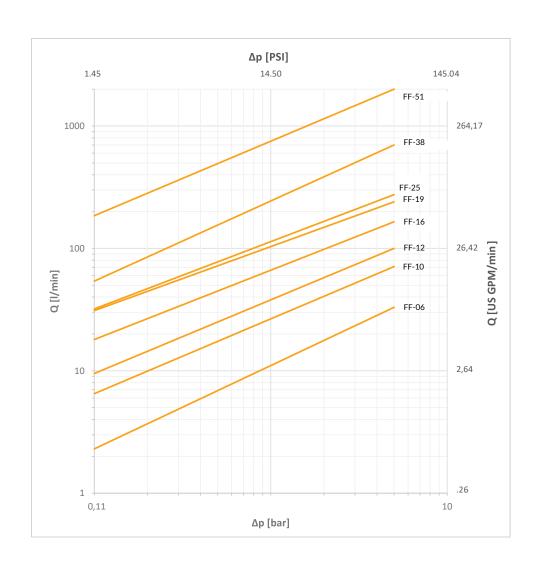
Features

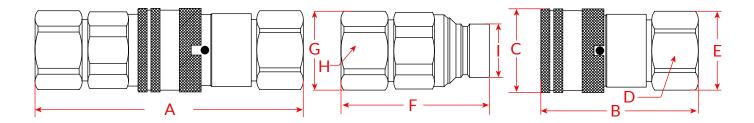
- Flush, non-spill valving
- Push to connect operation
- Global interchangeability with other ISO 16028 compliant couplings
- Standard sleeve lock guards against accidental disconnection
- Flat faces are easily wiped clean
- Flat face design prevents fluid loss during disconnection

- Hammer circuits
- High pressure pulse applications
- Leak free environments
- Construction plant
- mobile equipment
- general industrial
- nuclear
- mining
- agricultural industries
- oil and gas industries
- Skid loader attachments
- portable car lift
- hydraulic tools



Series	DN Inch	DN Metric	Q _n	nax		king ssure	pure	sting esure ipled	femal	e body	mal	e tip	spillage
			I/min	US GPM	bar	psi	bar	psi	bar	psi	bar	psi	ml
FF-06	1/4"	6,3	40	10.57	400	5801	1700	24656	1220	17695	1500	21756	0.01
FF-10	3/8"	10	80	21.13	350	5076	1500	21756	1050	15229	1100	15954	0.015
FF-12	1/2"	12,5	120	31.70	350	5076	1200	17404	1000	14504	1050	15229	0.02
FF-16	5/8″	16	140	36.98	350	5076	1200	17404	1100	15954	1100	15954	0.02
FF-19	3/4"	19	180	47.55	350	5076	1450	21030	1050	15229	1050	15229	0.032
FF-25	1″	25	260	68.68	260	3771	800	<u>11603</u>	800	11603	800	<u>11603</u>	0.03
FF-31	11/4"	31,5	600	158.50	300	4351	1000	14504	1000	14504	1000	14504	0.1
FF-38	11/2"	38	1000	264.17	150	2176	650	9427	650	9427	700	10153	0.1
FF-51	2"	51	2350	620.80	150	2176	650	9427					





Series	Size	Thread	Overall Length	F Length	O.D	Нех	O.D	M Length	O.D	Hex	O.D	Weigh	nt (g)
					С	D		F	G	Н	I	Female	Male
FF-06	1/4"	1/4"	95.2	58.2	28	22	24	48	24	22	16.1	181	96
FF-10	3/8"	3/8"	113.9	68.1	32	27	29	61.5	26	24	19.7	256	156
FF-10	3/8"	1/2"	120.9	73.3	32	27	29	61.5	29	27	19.7	259	159
FF-12	1/2"	1/2"	125.3	75.1	38	32	34	68	34	32	24.5	408	305
FF-12	1/2"	3/4"	136.3	81.1	38	36	38	73	38	36	24.5	451	314
FF-16	5/8"	3/4"	132.9	79.9	42	36	38	70.5	38	36	27	460	320
FF-19	3/4"	1"	163.1	99.2	48	41	44	85.5	44	41	30	850	478
FF-25	1"	11/4"	178	111.5	56	55	58	90	58	55	36	1139	648
FF-31	11/4"	1 1/2"	233.4	150	79.5	65	68	112	68	65	57	2370	1117
FF-38	11/2"	2"	251.7	167	98.5	85	88	123.9	78	75	73	2700	1800

Dimensions in mm, O.D(I) can help users identify the size of the quick connector. You can compare it with the ISO16028 standard document to help users identify.

Dimensions and weights are based on NPT internal threads. For data on other threads, please contact us. Or view data on specific products on our website.

- Series FF
- 2 Body Size, 06 = 1/4", 10= 3/8", 12 = 1/2", 16 = 5/8", 19 = 3/4", 25 = 1" 31 = 1 1/4", 38 = 1 1/2", 51 = 2"
- 3 Part, F = Female Coupler, M = Male Nipple, Blank = Set(Female+Male)
- 4 Thread Type and Size, NPT1/2, JIC3/8, G1/2...etc

Dust Caps



Size	Female Body	Male Tip	Size	Female Body	Male Tip
1/4"	DC-FF-06 F	DC-FF-06 M	1"	DC-FF-25 F	DC-FF-25 M
3/8"	DC-FF-10 F	DC-FF-10 M	11/4"	DC-FF-31 F	DC-FF-31 M
1/2"	DC-FF-12 F	DC-FF-12 M	1 1/2"	DC-FF-38 F	DC-FF-38 M
3/4"	DC-FF-19 F	DC-FF-19 M	2"	DC-FF-51 F	DC-FF-51 M

The male coupler dust cap of the flat face quick coupling can be applied to any brand of quick couplings with corresponding interchangeable sizes couplings. The dimensions are 100% compatible. However, the outer diameter of the female coupler dust cap of the flat quick connector may be slightly different. It is more reasonable to purchase a matching dust cap when purchasing a quick coupling. If you purchase a dust cap separately, you need to pay attention to the outer diameter.



FF90 SERIES

90 DEGREE FLAT FACE COUPLERS MADE TO THE ISO 16028 STANDARD

AKJia's FF90 Series is designed for use in applications that require a 90° elbow in the hydraulic circuit, such as digger booms. The right angle design allows for easy mounting without the need for additional fittings, reducing potential leakage paths and cost.

Series FF90 //Carbon Steel

Material	Carbon Steel
Surface Finishing	Zinc-Nickel, Zinc-Plating
Standard Seal Material(s)	NBR (Buna-N®), PTFE,²
Working Temperature	-25° C +100° C / -13° F +212° F
Valve Design	Flat Face
Connection	Push
Disconnection	Actuate Push Sleeve
Connect Under Pressure	not allowed
Application	Hammer circuits, High pressure pulse applications, Construction plant, mobile equipment, general industrial
ISO Interchange	ISO 16028

² Alternative seal materials are available on request.

Features

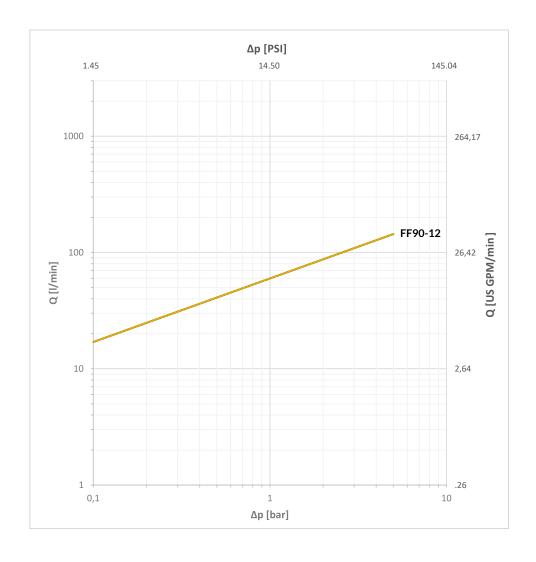
- Flush, non-spill valving
- 90 degree elbow incorporated into the coupler
- Push to connect operation
- Global interchangeability with other ISO 16028 compliant couplings
- Standard sleeve lock guards against accidental disconnection
- Flat faces are easily wiped clean
- Flat face design prevents fluid loss during disconnection
- The FF90 Series is designed to connect with FF Series flat face couplers
- 1/2" body size default, other size need to customized design.

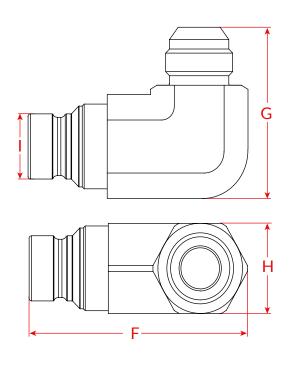
- Hammer circuits
- High pressure pulse applications
- Leak free environments
- Construction plant
- · mobile equipment
- general industrial
- nuclear
- mining
- agricultural industries
- oil and gas industries

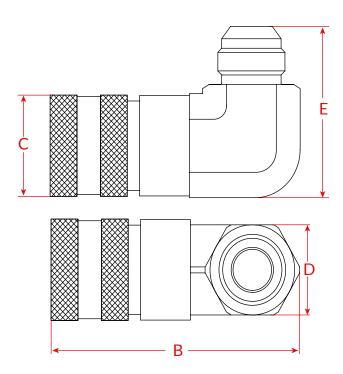


Technical Data

Series	DN	DN Metric	Q _n	nax	Working Pressure		pure	bursting puresure coupled		female body		e tip	spillage
			I/min	US GPM	bar	psi	bar	psi	bar	psi	bar	psi	ml
FF90-12	1/2"	12,5	120	31.70	350	5076	1400	20300	1000	14504	1300	18550	0.02







Series	Size	Thread	F Length	O.D	THK	W	M Length	W	THK	O.D	Weigh	nt (g)
				С	D		F	G	н	- 1	Female	Male
FF90-12	1/2"	3/8" JIC	100.5	38	34	44	88	44	34	24.5	640	480
FF90-12	1/2"	1/2" SAE	100.5	38	34	56	88	56	34	24.5	640	480
FF90-12	1/2"	3/4" JIC	100.5	38	34	64	88	64	34	24.5	650	490

Dimensions in mm

These quick connectors are commonly used on Bobcat equipment and can be purchased by OEM number. The OEM numbers for JIC 3/4" thread are FF90-12 F JIC3/4" = 7246781, FF90-12 M JIC3/4" = 7246795, and the OEM numbers for JIC 3/8" thread are FF90-12 F JIC3/8" = 7246782, FF90-12 M JIC3/8" = 7246796

- 1 Series FF90
- 2 Body Size, 12 = 1/2"
- 3 Part, F = Female Coupler, M = Male Nipple, Blank = Set(Female+Male)
- Thread Type and Size, JIC3/8, SAE1/2, JIC3/4...etc

Dust Caps



Size	Female Body	Male Tip
1/2"	DC-FF-12 F	DC-FF-12 M

The FF90 series also complies with the ISO 16028 standard, so the dust caps can be the same as the FF series. Because this series is only 1/2 size, it can be directly used with the corresponding DC-FF-12 F and DC-FF-12 M.



FFC SERIES

REPLACEMENT CARTRIDGE COUPLERS FOR THE FASTER 4BD4FH/4BD4FI

AKJia's FFC Series is a replacement flat face cartridge coupler for the Faster 4BD4FH and 4BD4FI blocks. The FFC Series is designed for the quick changeover of hydraulic attachments for skid steer loaders, compact loaders, backhoe loaders and compact utility vehicles. The female coupler features an internal decompression solution that enables the coupler to always be depressurized when disconnected, whilst the male coupler has built-in connect under pressure functionality.



Series FFC //Carbon Steel

Material	Carbon Steel
Surface Finishing	Zinc-Nickel, Zinc-Plating
Standard Seal Material(s)	NBR (Buna-N®), PTFE,²
Working Temperature	-25° C +100° C / -13° F +212° F
Valve Design	Flat Face
Connection	Push
Disconnection	Actuate Push Sleeve
Connect Under Pressure	not allowed
Application	Quick changeover of construction equipment attachments, Skid steer loaders, Track loaders, Excavators, Compact loaders, Utility vehicles
ISO Interchange	ISO 16028

² Alternative seal materials are available on request.

Features

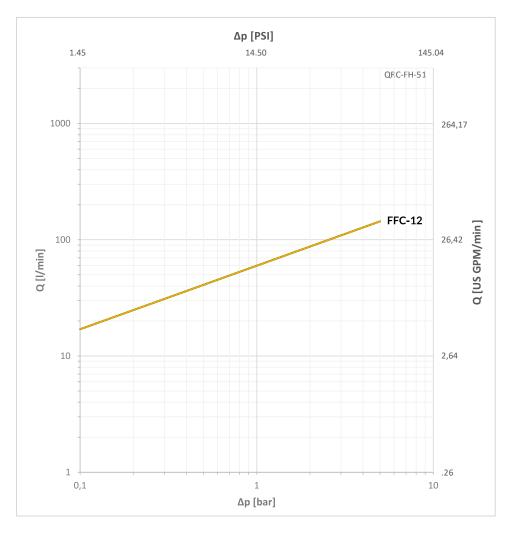
- Flush, non-spill valving
- · Internal design allows the female half to always be depressurized when disconnected
- Push to connect operation
- Global interchangeability with other ISO 16028 compliant couplings
- Standard sleeve lock guards against accidental disconnection
- Flat faces are easily wiped clean
- Flat face design prevents fluid loss during disconnection
- Male has built-in connect under pressure functionality
- 1/2" body size only
- Low profile coupler design minimizes side loading
- Low cost replacement couplers

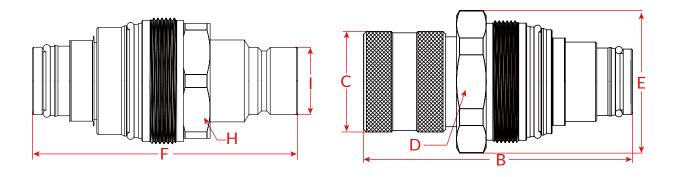
- Quick changeover of construction equipment attachments
- · Skid steer loaders
- Track loaders
- Excavators
- · Compact loaders
- Utility vehicles
- Jacking applications



Technical Data

Series	DN	DN Metric	Q _n	nax	Working Pressure			sting sure pled	ure female body		male tip		spillage
			I/min	US GPM	bar	psi	bar	psi	bar	psi	bar	psi	ml
FFC-12	1/2"	12,5	120	31.70	350	5076	1250	18125	1250	18125	1250	18125	0.02





Series	Size	Thread	F Length	O.D	Hex	O.D	M Length	Hex	O.D	Weigh	nt (g)
				С	D	Е	F	Н	- 1	Female	Male
FFC-12	1/2″	M46x1.5	101.8	38	50	52	48	22	16.1	181	96
FFC-12	1/2"	M48x1.5	110	38	50	52	61.5	24	19.7	256	156

Dimensions in mm

These quick couplers are usually used as replacement for Manifold block 4BD4FI and 4BD4FH from faster or some other manufacturers. They are widely used in bobcat equipment, and users can search with the OEM code, the M46x1.5 mm thread version, FFC-12 M M46x1.5 = 6679837 and FF-12 F M46x1.5 = 6680018, The 48x1.5 mm thread version, FFC-12 M M4.6x1.5 = 7246799 and FFC-12 F M48x1.5 = 7246802, for more information, please check the detail on our website.

- Series FFC
- 2 Body Size, 12 = 1/2"
- 3 Part, F = Female Coupler, M = Male Nipple, Blank = Set(Female+Male)
- 4 Thread Type and Size, M46x1.5, M48x1.5, These couplers are replacements for 4BDFI and 4BDFH Manifold blocks, so currently only this two type of threads.

Dust Caps



Size	Female Body	Male Tip
1/2"	DC-FF-12 F	DC-FF-12 M

The FFC series also complies with the ISO 16028 standard, so the dust caps can be the same as the FF series. Because this series is only 1/2 size, it can be directly used with the corresponding DC-FF-12 F and DC-FF-12 M.



FFS SERIES

STAINLESS STEEL FLAT FACE COUPLERS MADE TO THE ISO 16028 STANDARD

AKJia's FFS Series stainless steel flat face couplers incorporate all the benefits of the carbon steel FF Series couplers, while being perfectly suited for corrosive fluids and environments. The FFS Seires dry disconnect couplings are ideal for closed system transfer and dispensing of chemicals and other fluids. The flush valves eliminate spillage and air inclusion when connecting and disconnecting to result in minimal environmental contamination.



Series FFS //Stainless Steel

Material	Stainless Steel
Surface Finishing	No plating required
Standard Seal Material(s)	FKM 2
Working Temperature	-20° C +200° C / -4° F +392° F
Valve Design	Flat Face
Connection	Push
Disconnection	Actuate Push Sleeve
Connect Under Pressure	not allowed
Application	Corrosive fluids and environments, Marine, Oil and gas, Chemical, Pharmaceutical, Nuclear
ISO Interchange	ISO 16028

 $^{^{2}% \}left(1\right) =0$ Alternative seal materials are available on request.

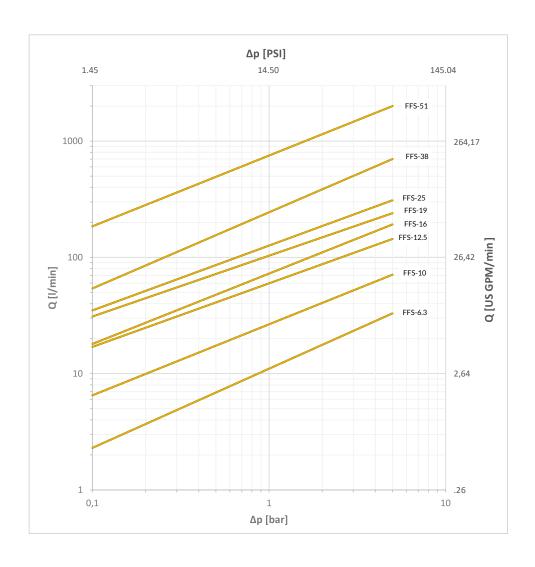
Features

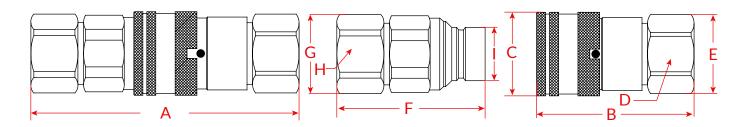
- Flush, non-spill valves enable ease of cleaning
- Corrosive fluids and environments
- 304 or 316 stainless steel material for chemical compatibility
- Push to connect operation
- Global interchangeability with other ISO 16028 compliant couplings
- Standard sleeve lock guards against accidental disconnection
- Flat faces are easily wiped clean
- Flat face design prevents fluid loss during disconnection

- Corrosive fluids and environments
- Marine
- Oil and gas
- Chemical
- Pharmaceutical
- Nuclear

Technical Data

Series	DN DN		Qn	Qmax		Working Pressure		bursting puresure coupled		female body		e tip	spillage
			I/min	US GPM	bar	psi	bar	psi	bar	psi	bar	psi	ml
FFS-06	1/4"	6,3	40	10.57	350	5076	1400	20305	1400	20305	1400	20305	0.01
FFS-10	3/8"	10	80	21.13	250	3625	1000	14503	1000	14503	1000	14503	0.015
FFS-12	1/2"	12,5	120	31.70	250	3625	1000	14503	1000	14503	1000	14503	0.02
FFS-16	5/8″	16	140	36.98	250	3625	1000	14503	1000	14503	1000	14503	0.02
FFS-19	3/4"	19	180	47.55	200	2900	900	13053	900	13053	900	13053	0.032
FFS-25	1″	25	260	68.68	200	2900	800	<u>11603</u>	800	11603	800	<u>11603</u>	0.03
FFS-31	11/4"	31,5	600	158.50	200	2900	800	<u>11603</u>	800	11603	800	<u>11603</u>	0.1
FFS-38	11/2"	38	1000	264.17	150	2176	650	9427	650	9427	650	9427	0.1
FFS-51	2″	51	2350	620.80	150	2176	650	9427	650	9427	650	9427	





Series	es Size Thread	Overall Length	F Length	O.D	Hex	O.D	M Length	O.D	Hex	O.D	Weigh	nt (g)	
				В	С	D		F	G	Н	I	Female	Male
FFS-06	1/4"	1/4"	95.2	58.2	28	22	24	48	24	22	16.1	181	121
FFS-10	3/8"	3/8"	113.9	68.1	32	27	29	61.5	26	24	19.7	298	172
FFS-10	3/8"	1/2"	120.9	73.3	32	27	29	61.5	29	27	19.7	286	156
FFS-12	1/2"	1/2"	125.3	75.1	38	32	34	68	34	32	24.5	544	351
FFS-12	1/2"	3/4"	136.3	81.1	38	36	38	73	38	36	24.5	510	336
FFS-16	5/8"	3/4"	132.9	79.9	42	36	38	70.5	38	36	27	557	346
FFS-19	3/4"	1"	163.1	99.2	48	41	44	85.5	44	41	30	820	451
FF-25	1"	1 1/4"	178	111.5	56	55	58	90	58	55	36	1164	744
FF-31	11/4"	11/2"	233.4	150	79.5	65	68	112	68	65	57	2844	2134
FF-38	1 1/2"	2"	251.7	167	98.5	85	88	123.9	78	75	73	2844	2134

Dimensions in mm, O.D(I) can help users identify the size of the quick connector. You can compare it with the ISO16028 standard document to help users identify.

Dimensions and weights are based on NPT internal threads. For data on other threads, please contact us. Or view data on specific products on our website.

- Series FFS
- 2 Body Size, 06 = 1/4", 10 = 3/8" ... 51=2"
- 3 Part, F = Female Coupler, M = Male Nipple, Blank = Set(Female+Male)
- 4 Thread Type and Size, for example, NPT1/2, G3/4, SAE 3/4, JIC3/8 etc. and if the thread is male thread, it will have a M after the thread, for example NPT1/2 M.



Dust Caps



Size	Female Body	Male Tip	Size	Female Body	Male Tip
1/4"	DC-FF-06 F	DC-FF-06 M	1"	DC-FF-25 F	DC-FF-25 M
3/8"	DC-FF-10 F	DC-FF-10 M	11/4"	DC-FF-31 F	DC-FF-31 M
1/2"	DC-FF-12 F	DC-FF-12 M	11/2"	DC-FF-38 F	DC-FF-38 M
3/4"	DC-FF-19 F	DC-FF-19 M	2"	DC-FF-51 F	DC-FF-51 M

The FFS series complies with the ISO16028 standard and is almost identical in size to the FF series, so the dust caps used in the FFS series are the same as those used in the FF series. Usually, the FFS series is used in corrosive liquid systems, so whether the material of the dust caps poses a risk needs to be considered.



FFHP SERIES

HIGH PRESSURE FLAT FACE COUPLERS FITTED WITH A SAFETY LOCKING SLEEVE

AKJia's FFHP Series flat face couplers provide a leak free solution for high pressure applications up to 720 bar. The safety locking sleeve prevents accidental disconnection and can only be disconnected when the release notch and locking ball align.

* It will not connect with lower pressure flush face couplings



Series FFHP //Carbon Steel

Material	Carbon Steel
Surface Finishing	Zinc-Nickel, Zinc-Plating
Standard Seal Material(s)	NBR (Buna-N®), PTFE,2
Working Temperature	-25° C +100° C / -13° F +212° F
Valve Design	Flat Face
Connection	Push
Disconnection	Actuate Push Sleeve
Connect Under Pressure	not allowed
Application	High pressure plant and equipment, High pressure pulse applications, Rail industries; especially on de-stressing kits, Bolt tensioning, Cutting tools, Jacking applications
ISO Interchange	ISO 16028

² Alternative seal materials are available on request.

Features

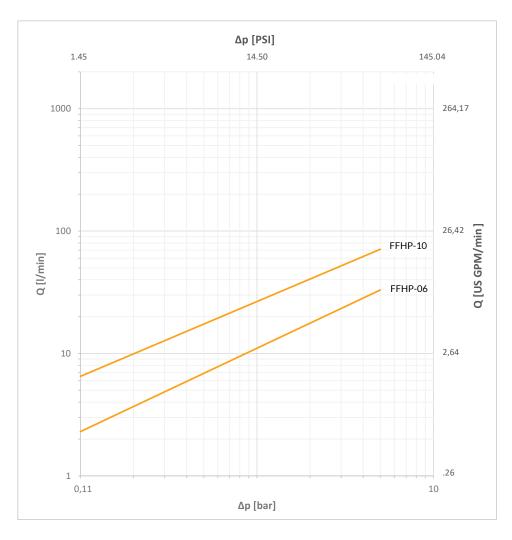
- Rated pressure up to 10,000 psi
- Push to connect operation
- Standard sleeve lock guards against accidental disconnection
- Flat faces are easily wiped clean
- Flat face design prevents fluid loss during disconnection
- Carbon steel with zinc nickel plating (500 hours with no red rust in salt spray tests)

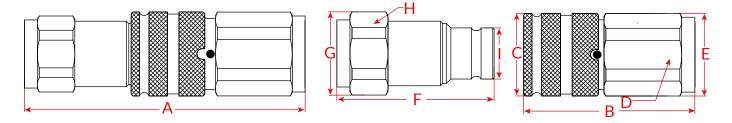
- Hydraulic crimpers, cutters, benders, clamps, wedges
- Rescue equipment
- High pressure test equipment• Flat faces are easily wiped clean



Technical Data

Series	DN Inch	DN Metric		Q _{max}		Working Pressure		bursting puresure coupled		female body		e tip	spillage
			I/min	US GPM	bar	psi	bar	psi	bar	psi	bar	psi	ml
FFHP-06	1/4"	6,3	24	6.34	720	10440	2000	29000	1500	21750	2000	29000	0.01
FFHP-10	3/8"	10	46	12.16	720	10440	2000	29000	1500	21750	2000	29000	0.015





Series	Size	Thread	Overall Length	F Length	O.D	Hex	O.D	M Length	O.D	Hex	O.D	Weigh	nt (g)
					С	D		F	G	н	- 1	Female	Male
FFS-06	1/4"	1/4"	100	58.5	28	22	24	52	24	22	16.2	181	95
FFS-10	3/8"	3/8"	113.9	73.5	32	30	32	63.5	32	30	19.7	309	200

Dimensions in mm

Dimensions and weights are based on NPT internal threads. For data on other threads, please contact us. Or view data on specific products on our website.

The FFHP series is specially reinforced with materials and can be used in hydraulic applications with a working pressure of 700 bar. It is often used in safety protection applications and high-pressure tool applications.

- 1 Series FFHP
- 2 Body Size, 06 = 1/4", 10 = 3/8"
- 3 Part, F = Female Coupler, M = Male Nipple, Blank = Set(Female+Male)
- 4 Thread Type and Size, NPT3/8, G3/8 etc.



FFP SERIES

CONNECT UNDER PRESSURE FLAT FACE MALE COUPLERS

AKJia's FFP Series male couplers are designed to connect under pressure by hand with up to 350 bar locked in the male half, making it an ideal choice for applications where the ability to connect under pressure is essential. The FFP Series also benefits from all the key features of the FF Series flat face couplers.



Series FFP //Carbon Steel

Material	Carbon Steel
Surface Finishing	Zinc-Nickel, Zinc-Plating
Standard Seal Material(s)	NBR (Buna-N®), PTFE,2
Working Temperature	-25° C +100° C / -13° F +212° F
Valve Design	Flat Face
Connection	Push
Disconnection	Actuate Push Sleeve
Connect Under Pressure	allowed
Application	Hot environments where thermal expansion of trapped oil may take place, Hammer circuits, High pressure pulse applications, Construction plant, mobile equipment, general industrial
ISO Interchange	ISO 16028

² Alternative seal materials are available on request.

Features

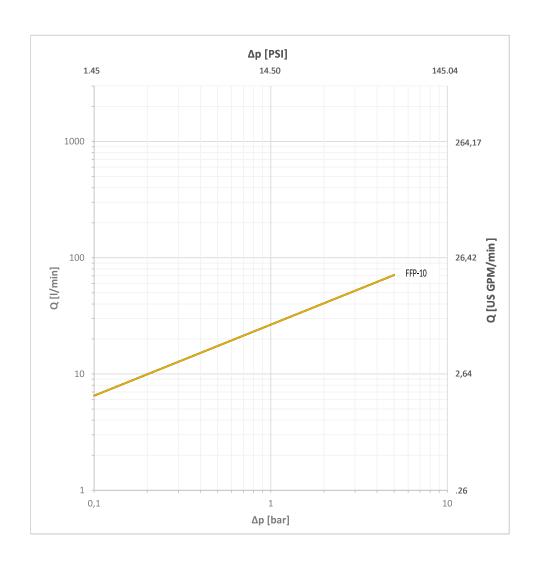
- Designed to connect with the FF Series female half
- Push to connect operation
- Standard sleeve lock guards against accidental disconnection
- Flat faces are easily wiped clean
- Flat face design prevents fluid loss during disconnection
- Allows for minimal inclusion of air and contaminents during connection
- Connect under pressure with up to 350 bar locked in the male half
- Female half (FF Series) must have zero pressure when connecting male half under pressure

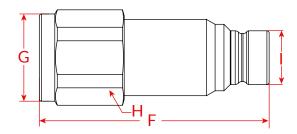
- Hot environments where thermal expansion of trapped oil may take place
- Hammer circuits
- High pressure pulse applications
- Leak free environments
- Construction plant
- · mobile equipment
- general industrial
- nuclear
- mining



Technical Data

Series	DN Inch	DN Metric	Q _{max}		Working Pressure		bursting puresure coupled		female body		male tip		spillage
			I/min	US GPM	bar	psi	bar	psi	bar	psi	bar	psi	ml
FF-10	3/8″	10	80	21.13	350	5076	1500	21756	1050	15229	1100	15954	0.015
FF-12	1/2"	12,5	120	31.70	350	5076	1200	17404	1000	14504	1050	15229	0.02
FF-19	3/4"	19	180	47.55	350	5076	1450	21030	1050	15229	1050	15229	0.032





Series	Size	Thread	Overall Length	M Length	O.D	Hex	O.D	Weight(g)
				F	G	Н	1	Male
FFP-06	1/4"	1/4"	95.2	48	24	22	16.1	96
FFP-10	3/8"	3/8"	113.9	61.5	26	24	19.7	156
FFP-12	3/8"	1/2"	120.9	61.5	29	27	19.7	159

Dimensions in mm

Dimensions and weights are based on NPT internal threads. For data on other threads, please contact us. Or view data on specific products on our website.

FFP Series connect under pressure flat face quick couplings can be found in some brand equipments, like bobcat. They are interchangeable with fast 3FFH series. They usually work with flat face female couplers, for example our FF Series. Some users will search the replacement by the OEM number like Bobcat 7246777, it is a 1/2" size 3/4" SAE thread FFP-12 Coupler. For information, pls contact us.

- 1 Series FFP
- 2 Body Size, 06 = 1/4", 10 = 3/8", 12 = 1/2"
- 3 Part, M = Male Nipple
- 4 Thread Type and Size, NPT3/8, G3/8, SAE3/4 etc.

Dust Caps



Size	Male Tip
1/4"	DC-FF-06 M
3/8"	DC-FF-10 M
1/2"	DC-FF-12 M

The FFP Series also complies with ISO 16028, so the dust caps are the same as the FF Series, and the FFP is the male coupler, you can find the male dust caps above.