

# MLFF Series

## ISO 16028 Stainless Steel Flat Face/Dry Break



The Eaton MLFF Series stainless steel coupling is a flat face dry break coupling used for hydraulic applications. The MLFF series interchanges with all ISO 16028 profiles. Due to its stainless steel design, it is corrosion resistant and can handle aggressive environments.

### Product Features

- Designed and manufactured under Article 3.3 of the European Pressure Equipment Directive (PED) 97/23 EC
- Safety sleeve lock prevents accidental disconnections
- Push to connect with double shut-off valving
- Shock resistant color coding ring option available in sizes 10FF, 12FF, 16FF and 25FF to prevent accidental crossing of lines
- Resistant to aggressive environments and corrosion
- Utilize FF Series dust caps
- Standard body material—316L Stainless steel corrosion resistant
- Alternative end connections available upon request
- Standard seal material: FKM, EPDM, NBR+AU

### Physical Characteristics

ISO Size* (mm)	Coupling Size (in)	Maximum Operating Pressure						Minimum Burst Pressure						Rated Flow**		Fluid Loss	Air Inclusion	Force to Connect	
		Connected		Plug/ Male Half		Socket/ Female Half		Connected		Plug/ Male Half		Socket/ Female Half		L/min.	(gpm)	ml-cc.	ml-cc.	N	Lbs
6.3	¼	250	3625	250	3625	250	3625	2335	33858	1640	23780	1330	19285	17	4.49	0.004	0.007	80	18.0
10	¾	250	3625	250	3625	250	3625	1672	24244	1664	24128	845	12253	29	7.66	0.006	0.010	140	31.5
12	½	250	3625	250	3625	250	3625	1679	24346	997	14457	993	14399	55	14.53	0.012	0.013	195	43.8
16	¾	250	3625	250	3625	250	3625	1190	17255	950	13775	880	12760	67	17.70	0.016	0.030	205	46.1
19	¾	250	3625	250	3625	250	3625	1370	19865	882	12789	845	12253	105	27.74	0.034	0.015	215	48.3
25	1	250	3625	250	3625	250	3625	1690	24505	1000	14500	850	12325	177	46.76	0.032	0.033	260	58.5
-	1½	230	3335	230	3335	80	1160	800	11600	700	10150	320	4640	270	71.32	0.050	-	580	130.4
-	2	150	2175	150	2175	70	1015	600	8700	600	8700	280	4060	420	110.96	0.100	-	490	110.2

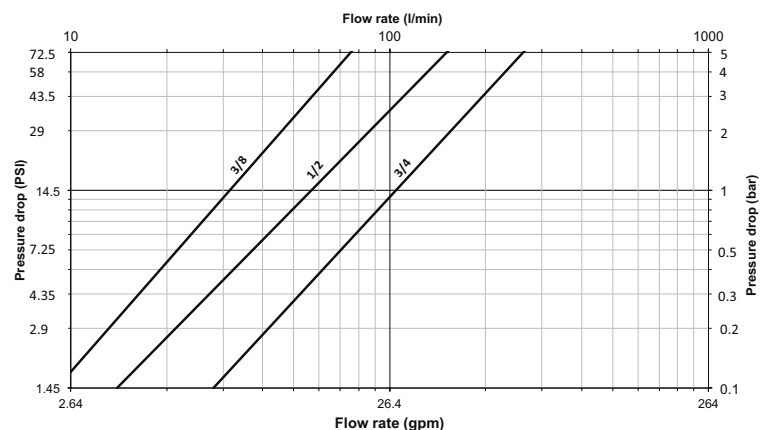
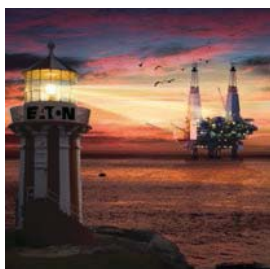
\* The ISO size corresponds to the internal diameter of the hose or the external diameter of the rigid tube (as defined in ISO 4397 Standard)

\*\* Indicated values refer to a 1 bar/14.5 psi pressure drop

### Applications & Markets



- Construction
- Agriculture
- Iron and Steel Industry
- Railway
- Oil and Gas
- Marine
- Material Handling
- General Hydraulic applications



Test Fluid: Oil viscosity 30 cSt at 40°C/104°F

### Seal Elastomer Data\*

Seal Elastomer	P/N Code	ISO Size (6FF to 25FF) Maximum Operation Temperature Range	Non-ISO Size (40FF and 50FF) Maximum Operation Temperature Range
NBR (Nitrile) + AU (Polyurethane)	-	-25°C +100°C/-13°F +212°F	on request
FKM (Fluorocarbon)	-143	-20°C +200°C/-4°F +392°F	-15°C +180°C/+5°F +356°F
EPDM (Ethylene-Propylene)	-192	-40°C +150°C/-40°F +302°F	on request

\*For reference only, based on Eaton recommended temperatures.

Contact Eaton technical support for further information on fluid compatibility.

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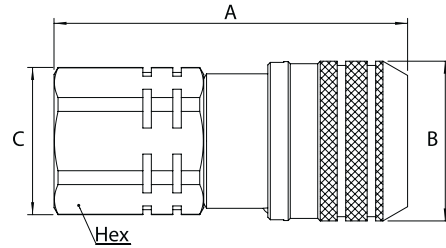


Fig. 1

### Sockets(Female)

Part Number	Body Size (in)	ISO Size (mm)	Nominal Flow Diameter (mm)	Thread Size*(Female)	Dimensions								Weight					
					Fig.	A (in)	B (in)	C (in)	Hex (in)	A (mm)	B (mm)	C (mm)	Hex (mm)	lbs	grams			
ML6FFS25	ML6FFS25143	ML6FFS25192	¼	6.3	6	¼-18	-	1	2.13	1.06	0.94	0.87	54	27	24	22	0.30	135
ML6FFS25BS	ML6FFS25BS143	ML6FFS25BS192	¼	6.3	6	¼-19	-	1	2.13	1.06	0.94	0.87	54	27	24	22	0.30	135
ML10FFS37	ML10FFS37143	ML10FFS37192	⅜	10	8.6	⅜-18	-	1	2.68	1.26	1.16	1.06	68	32	29.5	27	0.54	245
ML10FFS37BS	ML10FFS37BS143	ML10FFS37BS192	⅜	10	8.6	⅜-19	-	1	2.68	1.26	1.16	1.06	68	32	29.5	27	0.54	245
ML10FFS50BS	ML10FFS50BS143	ML10FFS50BS192	⅝	10	8.6	⅝-14	-	1	2.80	1.26	1.16	1.06	71	32	29.5	27	0.53	240
ML12FFS50	ML12FFS50143	ML12FFS50192	½	12.5	11	½-14	-	1	3.27	1.50	1.56	1.42	83	38	39.5	36	1.03	470
ML12FFS50BS	ML12FFS50BS143	ML12FFS50BS192	½	12.5	11	½-14	-	1	3.27	1.50	1.56	1.42	83	38	39.5	36	1.03	470
ML12FFS75BS	ML12FFS75BS143	ML12FFS75BS192	½	12.5	11	¾-14	-	1	3.39	1.50	1.56	1.42	86	38	39.5	36	1.01	460
ML16FFS75	ML16FFS75143	ML16FFS75192	¾	16	13	¾-14	-	1	3.39	1.66	1.56	1.42	86	42	39.5	36	1.21	550
ML16FFS75BS	ML16FFS75BS143	ML16FFS75BS192	¾	16	13	¾-14	-	1	3.39	1.66	1.56	1.42	86	42	39.5	36	1.21	550
ML19FFS75	ML19FFS75143	ML19FFS75192	¾	19	15	¾-14	-	1	3.82	1.81	1.77	1.61	97	46	45	41	1.69	770
ML19FFS75BS	ML19FFS75BS143	ML19FFS75BS192	¾	19	15	¾-14	-	1	3.82	1.81	1.77	1.61	97	46	45	41	1.69	770
ML19FFS100	ML19FFS100143	ML19FFS100192	¾	19	15	1-11.5	-	1	3.80	1.82	1.77	1.61	97	46	45	41	1.56	710
ML19FFS100BS	ML19FFS100BS143	ML19FFS100BS192	¾	19	15	1-11	-	1	3.82	1.81	1.77	1.61	97	46	45	41	1.56	710
ML25FFS100BS	ML25FFS100BS143	ML25FFS100BS192	1	25	18	1-11	-	1	4.07	2.36	2.36	2.17	104	60	60	55	2.83	1290
ML25FFS125	ML25FFS125143	ML25FFS125192	1	25	18	1¼-11.5	-	1	4.07	2.36	2.36	2.17	104	60	60	55	2.83	1290
-	ML40FFS150143	-	1½	-	-	1½-11.5	-	1	5.21	3.15	2.83	2.56	132	80	72	65	6.39	2910
-	ML50FFS200143	-	2	-	-	2-11	-	1	6.17	3.94	3.48	3.15	157	100	88.5	80	11.49	5230

\* Alternative end connections available upon request.

To obtain connected length of coupling, add dimensions A (Fig. 1) and G (Fig. 2) together.

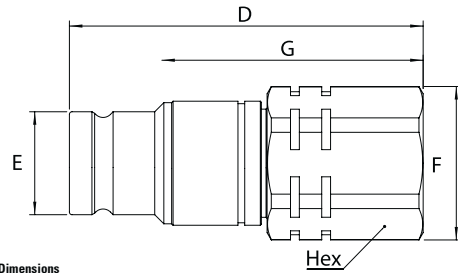


Fig. 2

### Plugs(Male)

Part Number	Body Size (in)	ISO Size (mm)	Nominal Flow Diameter (mm)	Thread Size*(Female)	Dimensions								Weight							
					Fig.	D (in)	E (in)	F (in)	G (in)	Hex (in)	D (mm)	E (mm)	F (mm)	G (mm)	Hex (mm)	lbs	grams			
ML6FFP25	ML6FFP25143	ML6FFP25192	¼	6.3	6	¼-18	-	2	2.01	0.46	0.94	1.58	0.87	51	11.6	24	40.1	22	0.20	90
ML6FFP25BS	ML6FFP25BS143	ML6FFP25BS192	¼	6.3	6	¼-19	-	2	2.01	0.46	0.94	1.58	0.87	51	11.6	24	40.1	22	0.20	90
ML10FFP37	ML10FFP37143	ML10FFP37192	⅜	10	8.6	⅜-18	-	2	2.56	0.78	1.16	1.97	1.06	65	19.7	29.5	50	27	0.33	150
ML10FFP37BS	ML10FFP37BS143	ML10FFP37BS192	⅜	10	8.6	⅜-19	-	2	2.56	0.78	1.16	1.97	1.06	65	19.7	29.5	50	27	0.33	150
ML10FFP50BS	ML10FFP50BS143	ML10FFP50BS192	⅝	10	8.6	⅝-14	-	2	2.68	0.78	1.16	2.09	1.06	68	19.7	29.5	53	27	0.33	150
ML12FFP50	ML12FFP50143	ML12FFP50192	½	12.5	11	½-14	-	2	2.72	0.96	1.56	2.05	1.42	69	24.5	39.5	52	36	0.61	275
ML12FFP50BS	ML12FFP50BS143	ML12FFP50BS192	½	12.5	11	½-14	-	2	2.72	0.96	1.56	2.05	1.42	69	24.5	39.5	52	36	0.64	290
ML12FFP75BS	ML12FFP75BS143	ML12FFP75BS192	½	12.5	11	¾-14	-	2	2.83	0.96	1.56	2.17	1.42	72	24.5	39.5	55	36	0.61	275
ML16FFP75	ML16FFP75143	ML16FFP75192	¾	16	13	¾-14	-	2	2.83	1.06	1.56	1.42	1.42	72	27	39.5	36	36	0.69	315
ML16FFP75BS	ML16FFP75BS143	ML16FFP75BS192	¾	16	13	¾-14	-	2	2.83	1.06	1.56	1.42	1.42	72	27	39.5	36	36	0.69	315
ML19FFP75	ML19FFP75143	ML19FFP75192	¾	19	15	¾-14	-	2	3.70	1.18	1.77	2.83	1.61	94	29.9	45	72	41	1.28	580
ML19FFP75BS	ML19FFP75BS143	ML19FFP75BS192	¾	19	15	¾-14	-	2	3.70	1.18	1.77	2.83	1.61	94	29.9	45	72	41	1.28	580
ML19FFP100	ML19FFP100143	ML19FFP100192	¾	19	15	1-11.5	-	2	3.70	1.18	1.77	2.83	1.61	94	29.9	45	72	41	1.13	515
ML19FFP100BS	ML19FFP100BS143	ML19FFP100BS192	¾	19	15	1-11	-	2	3.70	1.18	1.77	2.83	1.61	94	29.9	45	72	41	1.12	510
ML25FFP100BS	ML25FFP100BS143	ML25FFP100BS192	1	25	18	1-11	-	2	4.12	1.42	2.36	2.17	2.17	104.6	36	60	55	55	2.37	1080
ML25FFP125	ML25FFP125143	ML25FFP125192	1	25	18	1¼-11.5	-	2	4.12	1.42	2.36	2.17	2.17	104.6	36	60	55	55	2.37	1080
-	ML40FFP150143	-	1½	-	-	1½-11.5	-	2	4.37	2.25	2.99	2.76	2.76	111	57.1	76	70	70	4.15	1890
-	ML50FFP200143	-	2	-	-	2-11	-	2	4.87	2.87	3.29	2.95	2.95	123.8	72.9	83.5	75	75	5.03	2290

\* Alternative end connections available upon request.

To obtain connected length of coupling, add dimensions A (Fig. 1) and G (Fig. 2) together.

### Color Coding Ring Option\*

Body Size (in)	ISO Size (mm)	Size	Socket/Female Ring Part Number**				Plug/Male Ring Part Number**				Tool Part Number	Tool & Rings Kit Part Number***
			Blue	Red	Yellow	Green	Blue	Red	Yellow	Green		
¾	10	ML10FF	CR10FFSLB	CR10FFSRD	CR10FFSYL	CR10FFSDG	CR10FFPLB	CR10FFPRD	CR10FFPYL	CR10FFPDG	CR10FFSP93	CRKIT10FF
½	12.5	ML12FF	CR12FFSLB	CR12FFSRD	CR12FFSYL	CR12FFSDG	CR12FFPLB	CR12FFPRD	CR12FFPYL	CR12FFPDG	CR12FFSP93	CRKIT12FF
⅜	16	ML16FF	CR16FFSLB	CR16FFSRD	CR16FFSYL	CR16FFSDG	CR16FFPLB	CR16FFPRD	CR16FFPYL	CR16FFPDG	CR16FFSP93	CRKIT16FF
¼	19	ML19FF	CR19FFSLB	CR19FFSRD	CR19FFSYL	CR19FFSDG	CR19FFPLB	CR19FFPRD	CR19FFPYL	CR19FFPDG	CR19FFSP93	CRKIT19FF

\* For requests on alternative colors or installation instructions, please contact your Eaton sales representative.

\*\* Orders must be in multiples of 10 pcs.

\*\*\* The kit consists of a tool plus 10 socket rings and 10 plug rings of each color.

Eaton Quick Disconnect Couplings代理商

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