

BLCF & BLCFR SERIES - CAST IRON COMPANION FLANGES

Companion flanges are a coupling device designed to join IPS (iron pipe size) piping systems where disassembly takes place often. They are also used as a transitional fitting for joining dissimilar metals and plastic to metal piping. Companion flanges are available as standard flanges (BLCF series) and reducing flanges (BLCFR series). Companion flange gaskets (BLCFG series) and companion flange bolt/gasket kits (BLCFGK series) are also available.



SPECIFICATIONS:

- Made from Class 125 gray cast iron (ASTM A126)
- Dimensions conform to ANSI/AWWA C110 and ANSI B16.1
- Drilling conforms to ANSI B16.1 Class 125/150 Flanges
- Threads conform to ANSI/ASME B1.20.1
- If the temperature exceeds 150 °F (65 °C), the allowable working pressure drops
- Not for use at temperatures below -20 °F (-29 °C)

MATERIAL LIST	
Gray Iron	
Element	Percent of Composition
Carbon (C)	3.30%
Silicon (Si)	1.93%
Manganese (Mn)	0.62%
Phosphorus (P)	0.10%
Sulphur (S)	0.08%
Iron (Fe)	Remainder

ASME B16.1 Nonshock Gage Pressure - Temperature Ratings			
Temperature (°F)	Class 125 (ASTM A126)		
	Class B		
	NPS (1-12)	NPS (14-24)	NPS (30-48)
-20 to 150	200	150	150
200	190	135	115
225	180	130	100
250	175	125	85
275	170	120	65
300	165	110	50
325	155	105	-
353 [Note 1]	150	100	-
375	145	-	-
406 [Note 2]	140	-	-
425	130	-	-
450	125	-	-
Hydrostatic Shell Test Pressures [Note 3]			
100	300	230	230

General Notes:

- a) Pressure is in lb/sq in. gage.
b) NPS is nominal pipe size

Notes:

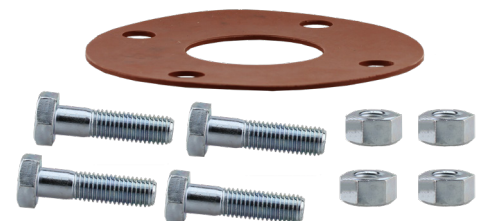
- (1) 353 °F (max.) to reflect the temperature of saturated steam at 125 psig.
(2) 406 °F (max.) to reflect the temperature of saturated steam at 250 psig.
(3) Hydrostatic tests are not required unless specified by the user.



BLCFR-1570



BLCF-30



BLCFGK-30

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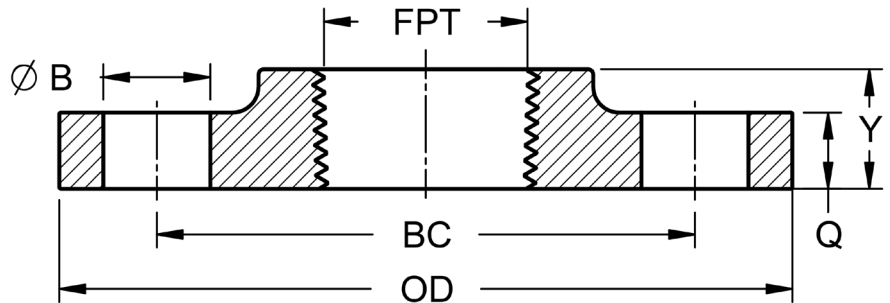
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Tel: 800-561-3164

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BLCF SERIES CAST IRON COMPANION FLANGES:



DIMENSIONS												
Part No.	Pipe Connection	OD		Q		Y		BC		B		No. of Bolt Holes
		in	mm	in	mm	in	mm	in	mm	in	mm	
BLCF-10	1"	4.25	107.95	0.44	11.18	0.69	17.53	3.12	79.25	0.62	15.75	4
BLCF-12	1-1/4"	4.62	117.35	0.50	12.70	0.81	20.57	3.50	88.90	0.62	15.75	4
BLCF-15	1-1/2"	5.00	127.00	0.56	14.22	0.88	22.35	3.88	98.55	0.62	15.75	4
BLCF-20	2"	6.00	152.40	0.62	15.75	1.00	25.40	4.75	120.65	0.75	19.05	4
BLCF-25	2-1/2"	7.00	177.80	0.69	17.53	1.12	28.45	5.50	139.70	0.75	19.05	4
BLCF-30	3"	7.50	190.50	0.75	19.05	1.19	30.23	6.00	152.40	0.75	19.05	4
BLCF-40	4"	9.00	228.60	0.94	23.88	1.31	33.27	7.50	190.50	0.75	19.05	8
BLCF-50	5"	10.00	254.00	0.94	23.88	1.44	36.58	8.50	215.90	0.88	22.35	8
BLCF-60	6"	11.00	279.40	1.00	25.40	1.56	39.62	9.50	241.30	0.88	22.35	8
BLCF-80	8"	13.50	342.90	1.12	28.45	1.75	44.45	11.75	298.45	0.88	22.35	8
BLCF-100	10"	16.00	406.40	1.19	30.23	1.94	49.28	14.25	361.95	1.00	25.40	12
BLCF-120	12"	19.00	482.60	1.25	31.75	2.19	55.63	17.00	431.80	1.00	25.40	12
BLCFR-1050	1"	5.00	127.00	0.56	14.22	0.69	17.53	3.88	98.55	0.62	15.75	4
BLCFR-1060	1"	6.00	152.40	0.62	15.75	0.69	17.53	4.75	120.65	0.75	19.05	4
BLCFR-1075	1"	7.50	190.50	0.75	19.05	0.69	17.53	6.00	152.40	0.75	19.05	4
BLCFR-1250	1-1/4"	5.00	127.00	0.56	14.22	0.81	20.57	3.88	98.55	0.62	15.75	4
BLCFR-1260	1-1/4"	6.00	152.40	0.62	15.75	0.81	20.57	4.75	120.65	0.75	19.05	4
BLCFR-1560	1-1/2"	6.00	152.40	0.62	15.75	0.88	22.35	4.75	120.65	0.75	19.05	4
BLCFR-1570	1-1/2"	7.00	177.80	0.69	17.53	0.88	22.35	5.50	139.70	0.75	19.05	4
BLCFR-1575	1-1/2"	7.50	190.50	0.75	19.05	0.88	22.35	6.00	152.40	0.75	19.05	4

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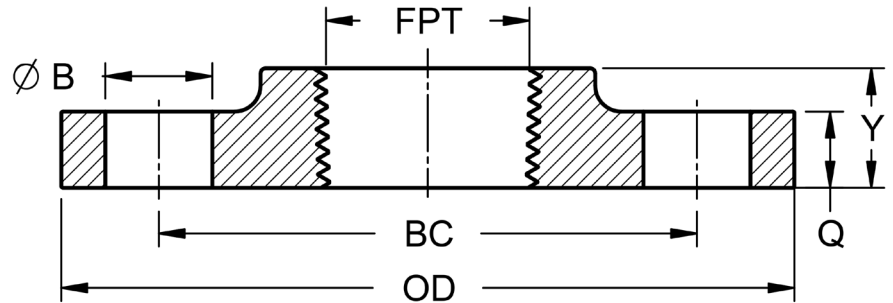
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BLCFR SERIES CAST IRON COMPANION FLANGES:



DIMENSIONS												
Part No.	Pipe Connection	OD		Q		Y		BC		B		No. of Bolt Holes
		in	mm	in	mm	in	mm	in	mm	in	mm	
BLCFR-1590	1-1/2"	9.00	228.6	0.94	23.88	0.88	22.35	7.50	190.5	0.75	19.05	8
BLCFR-15110	1-1/2"	11.00	279.4	1.00	25.40	0.88	22.35	9.50	241.3	0.88	22.35	8
BLCFR-2070	2"	7.00	177.80	0.69	17.53	1.00	25.40	5.50	139.7	0.75	19.05	4
BLCFR-2075	2"	7.50	190.5	0.75	19.05	1.00	25.40	6.00	152.4	0.75	19.05	4
BLCFR-2090	2"	9.00	228.6	0.94	23.88	1.00	25.40	7.50	190.5	0.75	19.05	8
BLCFR-20110	2"	11.00	279.4	1.00	25.40	1.00	25.40	9.50	241.3	0.88	22.35	8
BLCFR-201350	2"	13.50	342.9	1.12	28.45	1.00	25.40	11.75	298.45	0.88	22.35	8
BLCFR-2575	2-1/2"	7.50	190.5	0.75	19.05	1.12	28.45	6.00	152.4	0.75	19.05	4
BLCFR-2590	2-1/2"	9.00	228.6	0.94	23.88	1.12	28.45	7.50	190.5	0.75	19.05	8
BLCFR-25110	2-1/2"	11.00	279.4	1.00	25.40	1.12	28.45	9.50	241.3	0.88	22.35	8
BLCFR-3090	3"	9.00	228.6	0.94	23.88	1.19	30.23	7.50	190.5	0.75	19.05	8
BLCFR-30100	3"	10.00	254.0	0.94	23.88	1.19	30.23	8.50	215.9	0.88	22.35	8
BLCFR-30110	3"	11.00	279.4	1.00	25.40	1.19	30.23	9.50	241.3	0.88	22.35	8
BLCFR-301350	3"	13.50	342.9	1.12	28.45	1.19	30.23	11.75	298.45	0.88	22.35	8
BLCFR-40100	4"	10.00	254.0	0.94	23.88	1.31	33.27	8.50	215.9	0.88	22.35	8
BLCFR-40110	4"	11.00	279.4	1.00	25.40	1.31	33.27	9.50	241.3	0.88	22.35	8
BLCFR-401350	4"	13.50	342.9	1.12	28.45	1.31	33.27	11.75	298.45	0.88	22.35	8
BLCFR-50110	5"	11.00	279.4	1.00	25.40	1.44	36.58	9.50	241.3	0.88	22.35	8
BLCFR-601350	6"	13.50	342.9	1.12	28.45	1.56	39.62	11.75	298.45	0.88	22.35	8

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BLCFG SERIES CAST IRON COMPANION FLANGE GASKETS:

SPECIFICATIONS:

- Made from 1/8" thick, full faced, styrene butadiene rubber (SBR) (ASTM D1330)
- Dimensions conform to ASME B16.1
- Maximum temperature rating: -20 to 170 °F (-29 to 76 °C)

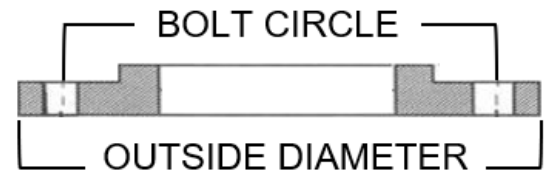


DIMENSIONS									
Part No.	Pipe Connection	Gasket I.D.		Gasket O.D.		BC		No. of Bolt Holes	Weight grams
		in	mm	in	mm	in	mm		
BLCFG-15	1-1/2"	1.91	48.51	5.00	127.0	3.88	98.55	4	61.84
BLCFG-20	2"	2.38	60.45	6.00	152.4	4.75	120.65	4	74.84
BLCFG-25	2-1/2"	2.88	73.15	7.00	177.8	5.50	139.70	4	102.06
BLCFG-30	3"	3.50	88.90	7.50	190.5	6.00	152.40	4	115.67
BLCFG-40	4"	4.50	114.30	9.00	228.6	7.50	190.50	8	161.03
BLCFG-50	5"	5.56	141.22	10.0	254.0	8.50	215.90	8	172.37
BLCFG-60	6"	6.62	168.15	11.0	279.4	9.50	241.30	8	183.70
BLCFG-80	8"	8.62	218.95	13.5	342.9	11.75	298.45	8	233.60
BLCFG-100	10"	10.75	273.05	16.0	406.4	14.25	361.95	12	308.44
BLCFG-120	12"	12.75	323.85	19.0	482.6	17.00	431.80	12	508.02

Choosing the correct gasket/gasket kit for a companion flange:

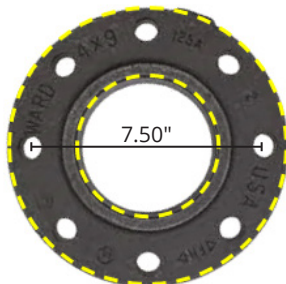
Standard Flanges:

Match the size code in the companion flange part number to the size code in the gasket part number. The size code is the two or three digit number at the end of the part number. For example, for the companion flange BLCF-40, the correct gasket is BLCFG-40.

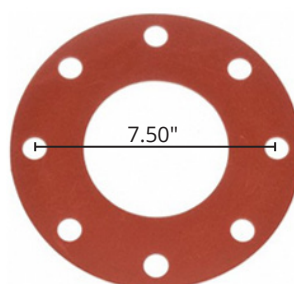


Reducing Flanges:

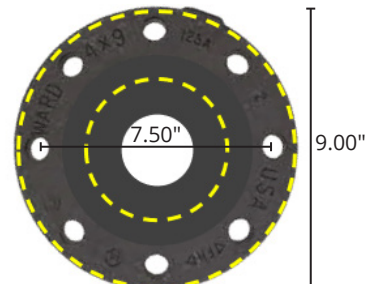
Match the number of bolt holes and bolt circle (BC) diameter in the gasket to the number of bolt holes and BC diameter in the reducing flange. Alternatively, match the reducing flange O.D. to the gasket O.D. The last two to 4 digits of the reducing flange part number indicate the O.D. For example, the reducing flange BLCFR-2090 has 8 bolt holes and 7.50" BC. The corresponding gasket is BLCFG-40 which also has 8 bolt holes and 7.50" BC. The O.D. of the gasket and reducing flange also match (9.00").



BLCF-40



BLCFG-40



BLCFR-2090

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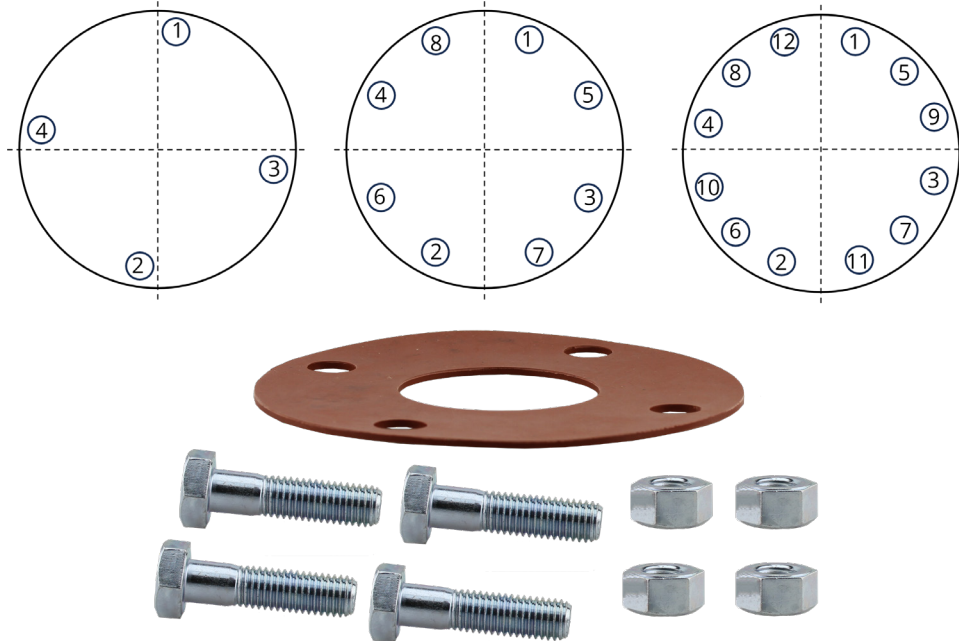
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BLCFGK SERIES CAST IRON COMPANION FLANGE BOLT & GASKET KIT:

SPECIFICATIONS:

- For use with ANSI B16.1 - Class 125 Cast Iron Flanges (Dimensions). Bolts are not graded and are suitable for cast iron flanges only. Not for use with forged or Stainless steel flanges which require Grade 5 or higher bolts.
- Each kit comes packaged in a sealed poly bag with one gasket and 4, 8, or 12 bolts & nuts depending on flange size/ bolt pattern.
- Bolts: Hex head steel bolts comply with ANSI B18.2.1, threaded to ANSI B1.1 unified inch screw threads, Class 2A external & Class 2B internal. Material conforms to ASTM A307 Zinc plated carbon steel, Grade B.
- Nuts: Hex steel nuts to ANSI B18.2.2. Zinc plated carbon steel (ASTM A563)
- Install bolts according to the numbered pattern in the diagram below:



DIMENSIONS												
Part No.	Pipe Connection	Gasket Included	Gasket O.D.		Gasket BC		Bolt Diameter		Bolt Length		No. of Bolts & Nuts	Weight grams
			in	mm	in	mm	in	mm	in	mm		
BLCFGK-20	2"	BLCFG-20	6.00	152.4	4.75	120.65	0.63	16.00	2.50	63.50	4	807.4
BLCFGK-25	2-1/2"	BLCFG-25	7.00	177.8	5.50	139.70	0.63	16.00	2.50	63.50	4	859.6
BLCFGK-30	3"	BLCFG-30	7.50	190.5	6.00	152.40	0.63	16.00	2.50	63.50	4	859.6
BLCFGK-40	4"	BLCFG-40	9.00	228.6	7.50	190.50	0.63	16.00	3.00	76.20	8	1791
BLCFGK-50	5"	BLCFG-50	10.00	254.0	8.50	215.90	0.75	19.05	3.50	88.90	8	2898
BLCFGK-60	6"	BLCFG-60	11.00	279.4	9.50	241.30	0.75	19.05	3.50	88.90	8	2905
BLCFGK-80	8"	BLCFG-80	13.50	342.9	11.75	298.45	0.75	19.05	3.50	88.90	8	3003
BLCFGK-100	10"	BLCFG-100	16.00	406.4	14.25	361.95	0.88	22.35	4.00	101.60	12	6833
BLCFGK-120	12"	BLCFG-120	19.00	482.6	17.00	431.80	0.88	22.35	4.00	101.60	12	6997

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