

# REDI-FLANGE

ALL THE STRENGTH OF WELDED, GROOVED, AND SCREWED SYSTEMS—WITHOUT PIPE END PREPARATION.

## INSTALLATION INSTRUCTIONS

1. **Clean plain end of pipe.** Be sure that plain end of pipe is cut square and free of burrs.
2. **Thoroughly lubricate** plain end of pipe and gasket with a soap based pipe-gasket lubricant. This allows gasket to slip easily into position, making sure it seats evenly.
3. **Slide flange** over plain end of pipe.
4. **Slide lubricated gasket** over pipe end. No other gasket is necessary or should be used to seal flange faces. Slide flange forward until gasket is evenly seated in flange cavity. Hand tighten set screws against pipe surface.
5. Using conventional flange bolts, **mate the Redi-Flange to the standard flange.** Be sure to evenly tighten bolts alternately on opposite sides. Maintain roughly the same distance between the flange faces at all points around the joint. Tighten bolts to specified torque values.
6. **Snug down all set screws evenly.** Tighten with wrench to torque values shown on instruction sheet provided with each flange.



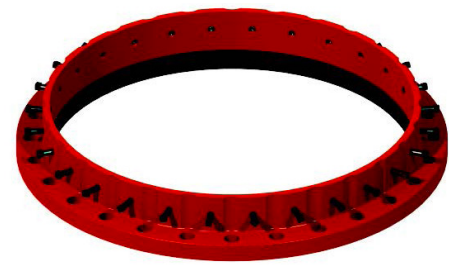
### NOTES:

These instructions apply to standard wall steel (schedule 40+) and ductile iron (class 52+) pipes only. For other piping materials and special pressure or media applications, please consult us.

The design and dimensions of products and component parts are subject to change without notice.

# REDI-FLANGE

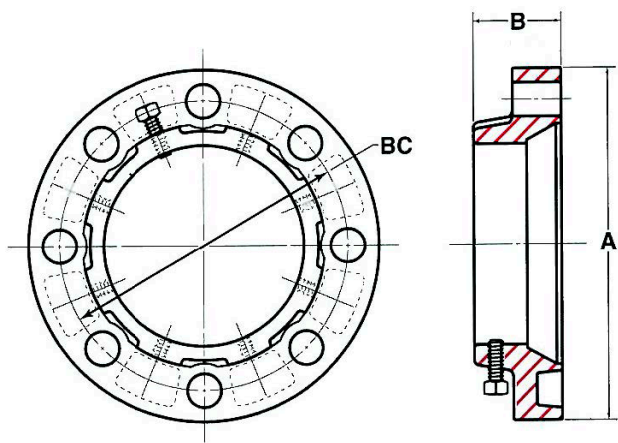
## TECHNICAL DATA



### DESCRIPTION

- Ductile Iron in compliance with ASTM A536, Grade 65-45-12.
- Drilling in compliance with ANSI B16.1 – 125 lb. and ANSI B16.5 – 150 lb.

**⚠ 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).



Material	
SET SCREW	AISI 4140 steel (Tensile 160,000 psi minimum)
GASKET	SBR (BUNA-N)

Design, dimensions, and materials are subject to change without notice.

Model RFC-2											
NOM. PIPE SIZE	D.I. PART NUMBER*	STEEL PART NUMBER*	D.I. PIPE O.D.	STEEL PIPE O.D.	FLANGE O.D.	BOLT CIRCLE	BOLT HOLE DIAMETER	SET SCREWS		PSI	APPROX. WEIGHT
								COUNT	SIZE		
2"	RFC-201-D	RFS-201-D	2.50	2.375	6	4 3/4	3/4	2	1/2 x 1	600	3.5
2 1/2"	RFC-202-D	RFS-202-D	—	2.875	7	5 1/2	3/4	4	1/2 x 1	600	4
3"	RFC-203-D	RFS-203-D	3.96	3.500	7 1/2	6	3/4	4	1/2 x 1	600	5
4"	RFC-204-D	RFS-204-D	4.80	4.500	9	7 1/2	3/4	4	1/2 x 1	600	8
5"	RFC-205-D	RFS-205-D	—	5.560	10	8 1/2	7/8	8	1/2 x 1	600	9
6"	RFC-206-D	RFS-206-D	6.90	6.625	11	9 1/2	7/8	8	1/2 x 1	600	10
8"	RFC-208-D	RFS-208-D	9.05	8.625	13 1/2	11 3/4	7/8	8	5/8 x 1 1/4	600	17
10"	RFC-210-D	RFS-210-D	11.10	10.750	16	14 3/4	1	12	5/8 x 1 1/4	525	22
12"	RFC-212-D	RFS-212-D	13.20	12.750	19	17	1	12	5/8 x 1 1/4	525	31

Model RFC-4									
NOMINAL PIPE SIZE	PART NUMBER	D.I. PIPE O.D. RFC-2-D	FLANGE O.D.	BOLT CIRCLE	BOLT HOLE DIAMETER	SET SCREWS		PSI	APPROX. WEIGHT
						COUNT	SIZE		
14"	RFC-414	15.30	21	18 3/4	1 1/8	12	5/8 x 1 1/4	450	70
16"	RFC-416	17.40	23 1/2	21 1/4	1 1/8	16	5/8 x 1 1/4	450	79
18"	RFC-418	19.50	25	22 3/4	1 1/4	16	3/4 x 2	450	90
20"	RFC-420	21.60	27 1/2	25	1 1/4	20	3/4 x 2	450	145
24"	RFC-424	25.80	32	29 1/2	1 3/8	20	3/4 x 2	450	175
30"	RFC-430	32.00	38 3/4	36	1 3/8	28	1 x 2 1/4	300	270
36"	RFC-436	38.30	46	42 3/4	1 5/8	32	1 x 2 1/4	300	400

Deflection				
NOM. PIPE SIZE	D.I. PIPE O.D.	STEEL PIPE O.D.	MAXIMUM ANGLE DEFLECTION	DEFLECTION (IN/18FT LENGTH)
2"	2.50	2.375	4° ~ 2'	15.23
2 1/2"	—	2.875	3° ~ 56'	14.85
3"	3.96	3.500	3° ~ 50'	14.47
4"	4.80	4.500	3° ~ 44'	14.09
6"	6.90	6.625	3° ~ 36'	13.59
8"	9.06	8.625	3° ~ 20'	12.58
10"	11.10	10.750	3° ~ 13'	12.14
12"	13.20	12.750	2° ~ 35'	9.12
14"	15.30	14.000	2° ~ 20'	8.80
16"	17.40	16.000	2° ~ 5'	7.86
18"	19.50	18.000	2° ~ 0'	7.54
20"	21.60	20.000	1° ~ 56'	7.29
24"	25.80	24.000	1° ~ 37'	6.10

Thrust Restraint			
NOM. PIPE SIZE	WWP RATING (PSI)	THRUST AT RATED PRESSURE (LBS)	THRUST RESTRAINT (LBS)
2"	200	628	11,400
2 1/2"	200	707	11,400
3"	200	1,414	22,800
4"	200	2,513	22,800
6"	200	5,655	45,600
8"	200	10,053	50,600
10"	175	13,744	75,900
12"	175	19,792	75,900
14"	150	23,091	75,900
16"	150	30,159	101,200
18"	150	38,170	110,400
20"	150	47,124	138,000
24"	150	67,858	138,000

# FREQUENTLY ASKED QUESTIONS

## Will the set screws damage the pipe?

No. The Redi-Flange Series is designed for ductile or steel pipe, which has high tensile strength and is not at risk of damage. The cup-point set screws distribute stress evenly around the pipe's outer diameter, minimizing any possibility of damage. This pipe-restraint method has been successfully used for decades in mechanical joint retainer glands worldwide.

## Will the set screws "back-out" or loosen with continual use?

When the set screw is first tightened, it creates a 'pocket' in the pipe. Even if the screw loosens, it will remain inside this pocket and continue to restrain the flange.

## Will the set screws hold on a high vibration connection like a pump?

In practice no problems have been reported under these conditions, but for added security we recommend either:

- A. Wiring of set screws to prevent loosening.
- B. Using lock-nuts, or a product like "Loc-Tite".

## Will the Redi-Flange work on PVC pipe?

Yes, it will but it is not recommended. Over a period of time set screws can cause disfiguring of the pipe, affecting the seal.

## How far off can the length of pipe be? How exact is the cutting tolerance?

The pipe should not exceed  $\frac{1}{4}$ " back from the mating flange thereby giving an improved cutting tolerance over rigid, screwed or welded flanges.

## Can Redi-Flange be used on steam or gas?

It is excellent for gas because of its superior seal. It is not recommended for prolonged use on steam.

## What about expansion/contraction?

In common with other rigid systems, Redi-Flange does not allow for pipe expansion/contraction.

