

Nom. Pipe Size (In.)	125 lb & 150 lb					250 lb & 300 lb					400 lb				600 lb			
	No Req'	Dia (In)	Lenght (In.)			No Req'	Dia (In)	Length (In.)			No Req'	Dia (In)	Length (In)		No Req'	Dia (In)	Lenght	
			FF & RF		RJ			RF		RJ			RF	RJ			RF	R
			MB	SB	SB			MB	SB	SB			SB	SB			SB	S
1/2	4	1/2	1 3/4	2 1/4	-	4	1/2	2	2 1/2	3	4	1/2	2 1/2	3	4	1/2	3	3
3/4	4	1/2	2	2 1/4	-	4	5/8	2 1/2	2 3/4	3 1/4	4	5/8	2 3/4	3 1/4	4	5/8	3 1/4	3 1/2
1	4	1/2	2	2 1/2	3	4	5/8	2 1/2	3	3 1/2	4	5/8	3 1/2	3 1/2	4	5/8	3 1/2	3 1/2
1 1/2	4	1/2	2 1/2	2 1/2	3 1/4	4	5/8	2 3/4	3 1/4	3 1/2	4	5/8	3 3/4	3 3/4	4	5/8	3 3/4	3 3/4
1 1/2	4	1/2	2 1/2	2 3/4	3 1/4	4	3/4	2 3/4	3 1/2	4 1/4	4	3/4	4 1/4	4 1/4	4	3/4	4 1/4	4 1/4
2	4	5/8	2 1/2	3 1/4	3 3/4	8	5/8	3	3 1/2	4 1/4	8	5/8	4 1/4	4 1/4	8	5/8	4 1/4	4 1/4
2 1/2	4	5/8	2 3/4	3 1/2	4	8	3/4	3 1/2	4	4 3/4	8	3/4	4 3/4	4 3/4	8	3/4	4 3/4	4 3/4
3	4	5/8	3	3 1/2	4	8	3/4	3 1/2	4 1/4	5	8	3/4	5	5	8	3/4	5	5
4	8	5/8	3	3 1/2	4	8	3/4	3 3/4	4 1/2	5 1/4	8	7/8	5 1/2	5 1/2	8	7/8	5 1/4	5 3/4
5	8	3/4	3 1/4	3 3/4	4 1/4	8	3/4	4	4 1/2	5 1/4	8	7/8	5 1/2	5 3/4	8	1	6 1/4	6 1/2
6	8	3/4	3 1/4	4	4 1/2	12	3/4	4 1/4	4 3/4	5 1/2	12	7/8	6	6	12	1	6 3/4	6 3/4
8	8	3/4	3 1/2	4 1/4	4 1/2	12	7/8	4 3/4	5 1/2	6 1/4	12	1	6 3/4	6 3/4	12	1.1/8	7 1/2	7 3/4
10	12	7/8	3 3/4	4 1/2	5	16	1	5 1/4	6 1/4	7	16	1.1/8	7 1/2	7 1/2	16	1 1/4	8 1/2	8 1/2
12	12	7/8	4	4 3/4	5 1/2	16	1.1/8	5 1/2	6 3/4	7 1/2	16	1 1/4	8	8	20	1 1/4	8 3/4	8 3/4
14	12	1	4 1/4	5 1/4	5 3/4	20	1.1/8	6	7	7 3/4	20	1 1/4	8	8 1/4	20	1.3/8	9	9 1/4
16	16	1	4 1/2	5 1/2	5 3/4	20	1 1/4	6 1/4	7 1/2	8 1/4	20	1.3/8	8 1/2	8 3/4	20	1 1/2	9 3/4	10
18	16	1.1/8	4 3/4	5 3/4	6 1/4	24	1 1/4	6 1/2	7 3/4	8 1/2	24	1.3/8	8 3/4	9	20	1.5/8	10 1/2	10
20	20	1.1/8	5 1/4	6 1/4	6 1/2	24	1 1/4	7	8 1/4	9	24	1 1/2	9 1/2	9 3/4	24	1.5/8	11 1/4	11
22	20	1 1/4	5 3/4	6 1/2	7	24	1 1/2	7 1/2	8 3/4	9 3/4	24	1.5/8	10	10 1/2	24	1 3/4	12	12
24	20	1 1/4	5 1/2	6 3/4	7 1/2	24	1 1/2	7 3/4	9 1/4	10	24	1 3/4	10	11	24	1.7/8	12 3/4	13
26	24	1 1/2	6	7	-	28	1.5/8	8 3/4	10	11	28	1 3/4	11 1/2	12	28	1.7/8	13 1/4	13
28	28	1 1/2	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
30	28	1 1/2	x	x	x	x	x	x	x	x	28	2	13	13 1/2	x	x	x	x
34"	x	x	x	x	x	x	x	x	x	x	28	2	13 3/4	14 1/2	x	x	x	x
36	32	1 1/2	x	x	x	x	x	x	x	x	32	2	14	14 1/4	x	x	x	x

FF = flat face, RF = raised face, RJ = ring joint, MB = machine bolt, SB = stud bolt

Bolt tensioning : stud bolts voor boutspanners moeten één boutdiameter langer zijn (t.b.v. hydr. vijzel)

Rev: 1 AvdL 3-2-88

SCALE:	NAME	DATE	APPROVED FOR REVIEW	NAME	DATE	ESSO NEDERLAND B.V. REFINERY DEPARTMENT
DRAWN BY	F.M.	1/-78	APPROVED FOR CONSTRUCTION			
DESIGN BY	F.M.	1/-78				
CHECKED BY		24/1-78				
SUBJECT:			ANSI-B.16.5		DRAWING NUMBER	REV
					STD EN-1-4-C-047 SH.1	1

Nom. Pipe Size (In.)	900 lb				1500 lb									
	No Req.	Dia (In)	Lenght. (In)		No Req	Dia (In)	Lenght (In)							
			RF	RJ			RF	RJ						
			SB	SB			SB	SB						
1/2	4	3/4	4 1/4	4 1/4	4	3/4	4 1/4	4 1/4						
3/4	4	3/4	4 1/2	4 1/2	4	3/4	4 1/2	4 1/2						
1	4	7/8	5	5	4	7/8	5	5						
1 1/4	4	7/8	5	5	4	7/8	5	5						
1 1/2	4	1	5 1/2	5 1/2	4	1	5 1/2	5 1/2						
2	8	7/8	5 3/4	6	8	7/8	5 3/4	6						
2 1/2	8	7/8	5 3/4	6	8	1	6 1/4	6 1/2						
3	8	7/8	6	6	8	1 1/8	7	7 1/4						
3 1/2	-	7/8	-	-	-	-	-	-						
4	8	1 1/8	6 3/4	7	8	1 1/4	7 3/4	8						
5	8	1 1/4	7 1/2	7 3/4	8	1 1/2	9 1/2	10						
6	12	1 1/8	7 3/4	7 3/4	12	1 3/8	10 1/4	10 1/2						
8	12	1 3/8	8 3/4	9	12	1 5/8	11 1/2	12						
10	16	1 3/8	9 1/4	9 1/2	12	1 7/8	13 1/2	13 3/4						
12	20	1 3/8	10	10 1/4	16	2	15	15 1/2						
14	20	1 1/2	10 3/4	11 1/4	16	2 1/4	16 1/4	17						
16	20	1 5/8	11 1/4	11 3/4	16	2 1/2	17 3/4	18 3/4						
18	20	1 7/8	13	13 1/2	16	2 3/4	19 1/2	20 1/2						
20	20	2	13 3/4	14 1/4	16	3	21 1/4	22 1/2						
24	20	2 1/2	17 1/4	18	16	3 1/2	24 1/4	25 3/4						
26	20	2 3/4	17 3/4	19										
28	20	3	18 1/2	19 3/4										
30	20	3	19	20 1/4										
32	20	3 1/4	20 1/4	21 1/2										
34	20	3 1/2	21 1/4	22 3/4										
36	20	3 1/2	21 3/4	23 1/4										

RF = raised face, RJ = ring joint, SB = stud bolt

Bolt tensioning : stud bolts voor boutspanners moeten één boutediameter langer zijn (f.b.v. hydr. vijzel)

SCALE:	NAME	DATE	APPROVED FOR REVIEW	NAME	DATE
DRAWN BY:	R.T.				
DESIGN BY:	R.T.		APPROVED FOR CONSTRUCTION		
CHECKED BY:	AvdL	3-2-88			

ESSO NEDERLAND B.V.
REFINERY DEPARTMENT

SUBJECT:

FLANGE BOLTING LIST

DRAWING NUMBER:

STD EN 4 1 6 0 1 2 5 1 2