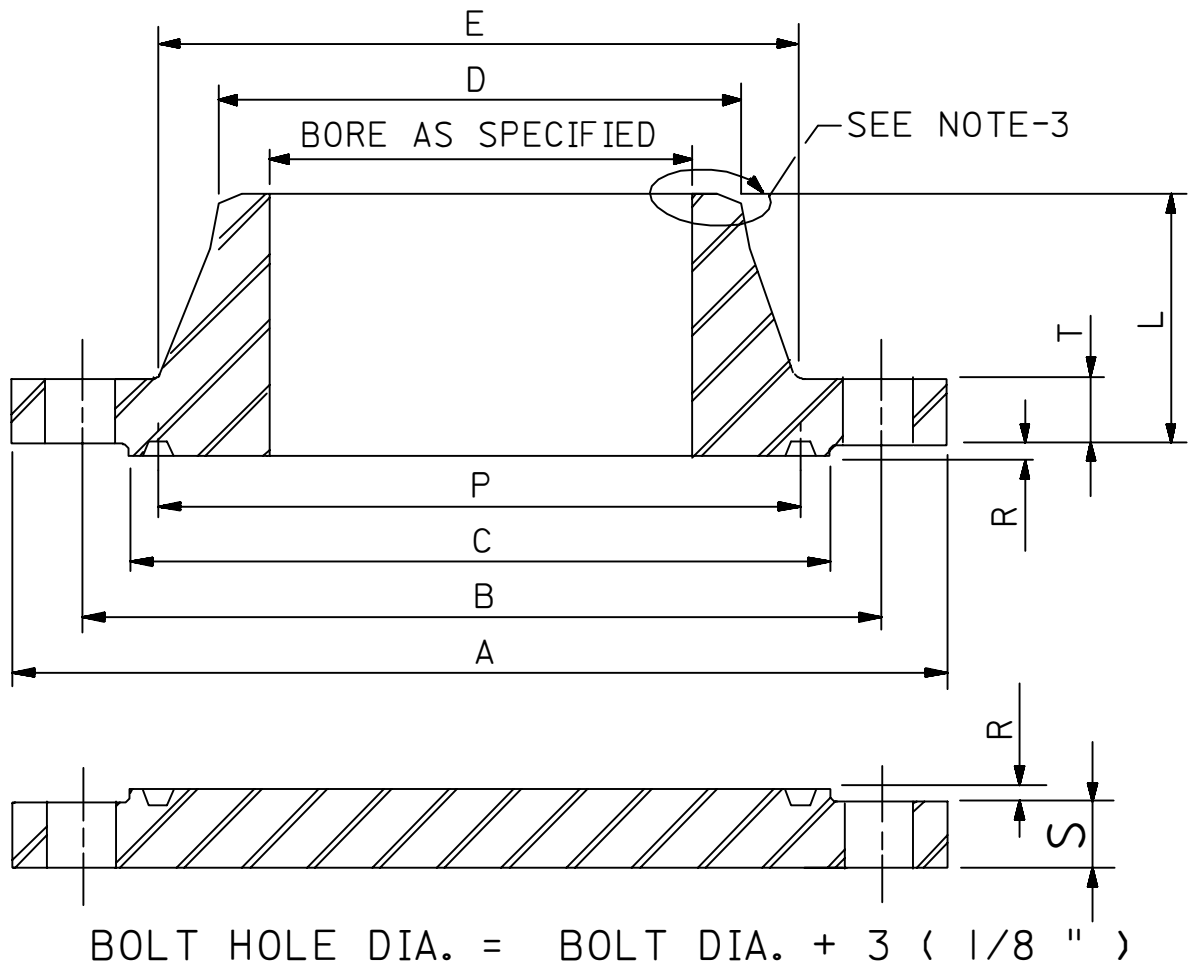
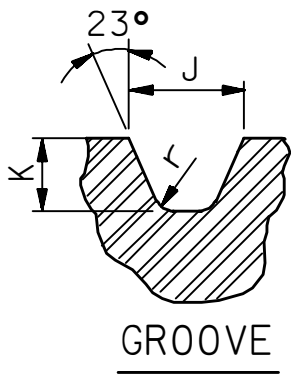
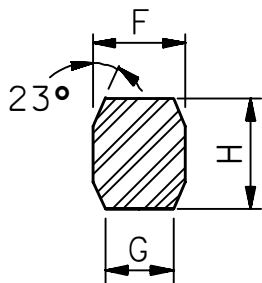
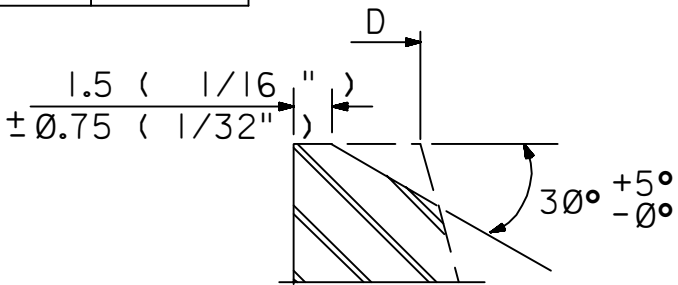
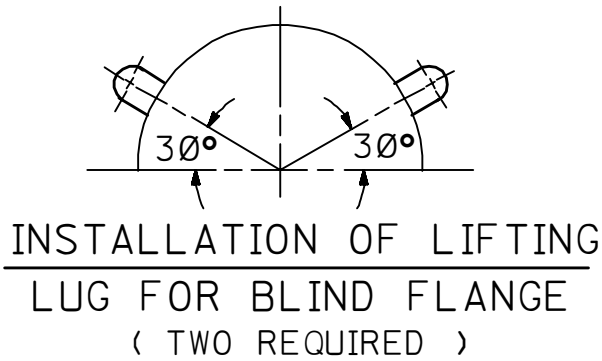
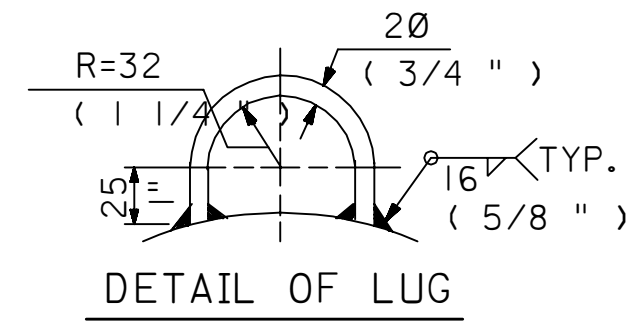


60	100	4849304V	7	090
REV. NO.	SHT. NO.	DRAWING NUMBER	INDEX	PLANT NO.



- NOTES:
- DIMENSIONAL TOLERANCES NOT SHOWN, MARKING, FINISHES AND SPOT FACING SHALL CONFORM TO ASME B 16.5 LATEST EDITION, EXCEPT TOLERANCE ON MAX. BORE + 0,-3 (1/8 "), TOLERANCE ON FLANGE OUTSIDE DIAMETER ± 3.2 (1/8 ")
 - DIMENSIONS FOR SIZES LARGER THAN 36" ARE EXTRAPOLATED FROM MSS-SP-44 AND DO NOT CORRESPOND WITH MSS-SP-44-1982; GROOVE AND RING DIMENSIONS ARE TAKEN FROM TAYLOR FORGE.
 - HUB TO BE SINGLE TAPER TYPE. BORE (EQUAL TO MATCHING PIPE I.D.) TO BE SPECIFIED IN PURCHASE ORDER.
 - MATERIALS:
WELD NECK FLANGES SHALL BE IN ACCORDANCE WITH 02-SAMSS-011 AND THE PURCHASE ORDER.
BLIND FLANGES SHALL BE 52 KSI SMYS, ASTM A694 F52 FORGINGS, OR PLATE IN ACCORDANCE WITH ASTM A737 GR C. OR EQUAL. BLIND FLANGES THAT ARE QUENCHED, SHALL BE TEMPERED AT 600°C MINIMUM.
 - GROOVE RADIUS "r" IS 1.5 (1/16 ")
 - HEIGHT OF RAISED PORTION "R" IS EQUAL TO DEPTH OF GROOVE "K" BUT IS NOT SUBJECT TO TOLERANCE GIVEN FOR "K".
 - DIMENSIONS FOR SIZES 54 AND 60 IN. ARE SHOWN ON STD. DWG. AC-036437.
 - MARK BLIND FLANGES PER MSS SP-25 AND WITH THIS DRAWING NUMBER.

NOM. PIPE SIZE IN.	A		B		C		D		E		F		G		H		J		K		L		P		S		T		RING NO.	MAX. BORE		NO. OF BOLT HOLES	STUD BOLT SIZE				APPROX. MASS W. N. FLANGE		APPROX. MASS BL. FLANGE	
	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.		mm.	in.		mm.	in.	mm.	in.	KG.	LB.	KG.	LB.
26	970	38 1/4	476	34 1/8	2810	31 7/8	8667	26.25	724	28 1/2	19	3/4	12.3	.485	24	15/16	20	25/32	13	1/2	185	7 1/4	750	29 1/2	285	3 5/8	680	3 1/8	R-93	648	25.50	28	41	1 5/8	280	11	285	630	505	1115
28	1035	40 3/4	440	37	2860	33 7/8	8718	28.25	775	30 1/2	19	3/4	12.3	.485	24	15/16	20	25/32	13	1/2	195	7 3/4	800	31 1/2	290	3 9/8	685	3 3/8	R-94	698	27.50	28	41	1 5/8	290	11 1/2	2345	760	620	1370
30	1090	43	997	39 1/4	2920	36 1/8	8768	30.25	827	32 9/16	19	3/4	12.3	.485	24	15/16	20	25/32	13	1/2	210	8 1/4	857	33 3/4	495	3 3/4	493	3 5/8	R-95	749	29.50	28	44	1 3/4	305	12	395	875	725	1600
32	1150	45 1/4	1054	41 1/2	2985	38 3/8	8820	32.25	880	34-11/16	22	7/8	14.8	.583	27	1 1/8	623	29/32	14	9/16	220	8 3/4	915	36	100	3-15/16	100	3 7/8	R-96	800	31.50	28	48	1 7/8	330	13	460	1010	850	1870
34	1205	47 1/2	1105	43 1/2	3035	40 3/8	8870	34.25	937	36 7/8	22	7/8	14.8	.583	27	1 1/8	623	29/32	14	9/16	230	9 1/8	965	38	105	4 1/8	102	4	R-97	850	33.50	28	48	1 7/8	345	13 1/2	2515	1130	980	2160
36	1270	50	1168	46	3090	43	920	36.25	990	39	22	7/8	14.8	.583	27	1 1/8	623	29/32	14	9/16	240	9 1/2	1022	40 1/4	110	4 3/8	105	4 1/8	R-98	900	35.47	32	51	2	355	14	580	1275	1135	2500
38	1325	52 1/4	1219	48	3100	43 1/4	9973	38.31	1048	41 1/4	19	3/4	12.3	.485	24	15/16	20	25/32	13	1/2	255	10	1030	40 1/2	115	4 7/8	110	4 5/16	-	950	37.44	32	51	2	360	14 1/4	655	1440	1250	2760
40	1385	54 1/2	1276	50 1/4	3140	44 3/8	10024	40.31	1105	43 1/2	19	3/4	12.3	.485	24	15/16	20	25/32	13	1/2	265	10 3/8	1067	42	115	4 9/16	115	4 1/2	-	1001	39.41	36	51	2	375	14 3/4	710	1565	1560	3440
42	1450	57	1340	52 3/4	3190	46 3/8	10075	42.31	1156	45 1/2	19	3/4	12.3	.485	24	15/16	20	25/32	13	1/2	275	10 7/8	1118	44	120	4-11/16	118	4 5/8	-	1051	41.38	36	51	2	380	15	795	1750	1815	4000
44	1505	59 1/4	1397	55	3265	49 3/8	10125	44.31	1210	47 5/8	19	3/4	12.3	.485	24	15/16	20	25/32	13	1/2	285	11 1/4	1195	47	125	4-15/16	120	4 3/4	-	1101	43.35	36	51	2	385	15 1/4	880	1935	2120	4670
46	1560	61 1/2	1454	57 1/4	3300	51 1/4	10176	46.31	1267	49 7/8	19	3/4	12.3	.485	24	15/16	20	25/32	13	1/2	300	11 3/4	1232	48 1/2	130	5 3/16	124	4 7/8	-	1151	45.32	40	51	2	395	15 1/2	2965	2130	2295	5060
48	1650	65	1543	60 3/4	3355	53 1/4	10227	48.31	1320	52	19	3/4	12.3	.485	24	15/16	20	25/32	13	1/2	310	12 1/4	1283	50 1/2	140	5 1/2	130	5 1/8	-	1201	47.29	40	51	2	405	16	1115	2455	2710	5980

DWG. RESPONSIBILITY:
PIPING STANDARDS COMMITTEE

09	12-1999	EDSD WED		REVISED NOTE 1			
08	07-24-96	WAS		REVISED NOTES 4 AND 8.	ORIGINAL SIGNED	ORIGINAL SIGNED	ORIGINAL SIGNED
07	03-20-94	ESSD CAC		REVISED NOTES 4 AND 8.	ORIGINAL SIGNED	ORIGINAL SIGNED	ORIGINAL SIGNED
06	04-21-90	RLO		REVISED NOTES AND ADDED NOTE 8.	ORIGINAL SIGNED	ORIGINAL SIGNED	ORIGINAL SIGNED
REV. NO.	DATE	BY	JO/EWO	DESCRIPTION	CHKD.	CERT.	APPD.

SAUDI ARABIAN OIL COMPANY

DRAWN BY _____ CHECKED BY _____ SCALE _____ NONE

DATE STARTED _____ DATE COMPLETED _____ 11-12-73

OPR'G. DEPT. _____ ENG. DEPT. _____ ORIGINAL SIGNED

APP'D FOR CONSTR. _____

THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION OR FOR ORDERING MATERIAL UNTIL CERTIFIED AND DATED

CERTIFIED _____ ORIGINAL SIGNED _____
BY _____ DATE _____

W.N. FLANGES AND BLIND FLANGES

LARGE SIZE

CLASS 300 RING JOINT

STD. DWG.

PLANT NO.	INDEX	DRAWING NUMBER	SHT. NO.	REV. NO.
990	L	AC-036484	001	09