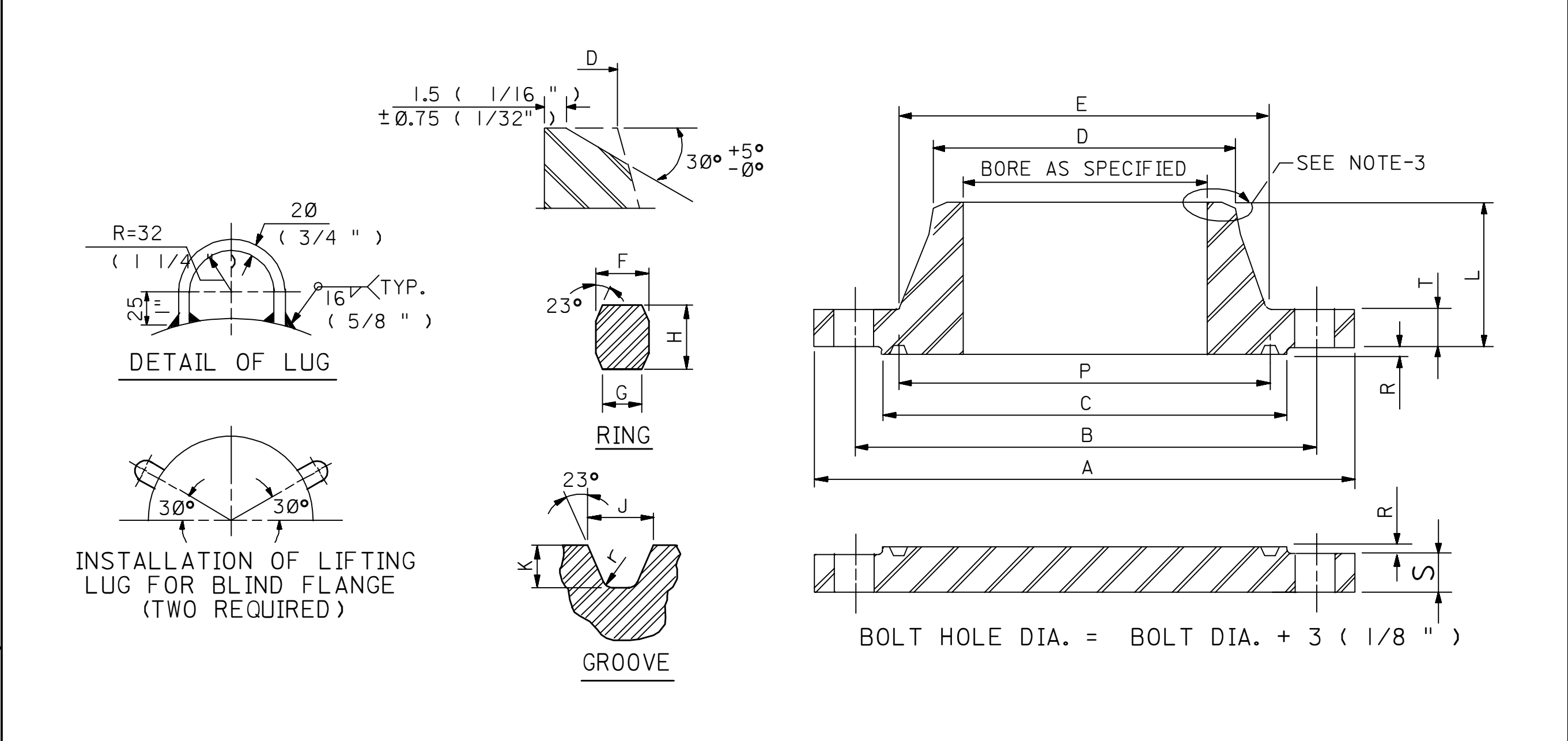


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- NOTES:
- DIMENSIONAL TOLERANCES NOT SHOWN, MARKING, FINISHES AND SPOT FACING SHALL CONFORM TO ASME B 16.5 LATEST EDITION, EXCEPT TOLERANCE ON MAX. BORE + 0,-3, AND TOLERANCE ON FLANGE OUTSIDE DIAMETER ± 3.2 (1/8 ").
 - DIMENSIONS FOR SIZES LARGER THAN 36" ARE EXTRAPOLATED FROM MSS-SP-44-1972 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 Ø2-SAMSS-Ø11 AND THE PURCHASE ORDER.
STANDARD 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. WHEN F65 HIGH YIELD BLINDS ARE SPECIFIED IN THE PURCHASE ORDER, THEY SHALL BE UNS H 41300 ALLOY STEEL IN ACCORDANCE WITH ASTM A668 CL J, NORMALIZED, QUENCHED, AND TEMPERED AT 620°C MINIMUM. SAUDI ARAMCO-APPROVED NDE PER A668 S7.1 & S14, AND S11 IMPACT TEST AT MINUS 30°C IN ACCORDANCE WITH API 6A PSL 2, CLASSIFICATION L, ARE ALSO REQUIRED. THICKNESSES SHOWN FOR BLINDS ARE BASED ON 42 KSI SMYS. THICKNESS MAY BE REDUCED ACCORDING TO MSS-SP-44 (1985) ANNEX B USING VALUES FROM TABLE I OF SP-44. UTS OF 90000 (NINETY THOUSAND) PSI MAY BE USED FOR F65.
 - 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".
 - FOR BLIND TO W.N. FLANGE CONNECTION INCREASE BOLT LENGTH WITH DIFFERENCE BETWEEN "S" AND "T" DIMENSIONS.
 - BOLT LENGTHS FOR USE WITH LAP JOINT FLANGES ARE SHOWN ON DWG. AE-Ø36443.
 - 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	1015	40	915	36	810	31 7/8	26.31	748	29 7/16	169	3 1/4	12.3	.485	24	15/16	20	25/32	13	1/2	225	8 3/4	450	29 1/2	2115	4 9/16	1608	4 1/8	R-93	645	25.375	28	48	1 7/8	8362	14 1/2	4170	1040	745	1640	
28	1075	42 1/2	965	38	860	33 7/8	28.32	803	31 5/8	189	3 1/4	12.3	.485	24	15/16	20	25/32	13	1/2	235	9 1/4	4800	31 1/2	2125	4 7/8	1812	4 3/8	R-94	695	27.360	28	52	2	375	14 3/4	5400	1190	880	1940	
30	1130	44 1/2	1022	40 1/2	920	36 1/8	30.34	862	33 15/16	19	3 1/4	12.3	.485	24	15/16	20	25/32	13	1/2	250	9 3/4	4857	33 3/4	430	5 3/8	1615	4 1/2	R-95	745	29.312	28	52	2	381	15	600	1320	1050	2310	
32	1195	47	1080	42 1/2	985	38 3/8	32.38	918	36 1/8	222	7 3/8	14.8	.583	27	1 1/16	23	29/32	14	9/16	260	10 1/4	4915	36	140	5 7/8	1618	4 5/8	R-96	794	31.250	28	57	2 1/4	4406	16	685	1510	1225	2700	
34	1245	49	1130	44 1/2	1035	40 3/8	34.38	973	38 5/16	22	7 3/8	14.8	.583	27	1 1/16	23	29/32	14	9/16	270	10 5/8	4965	38	145	5-11/16	120	4 3/4	R-97	845	33.250	28	57	2 1/4	4413	16 1/4	4750	1650	1405	3100	
36	1315	51 3/4	1194	47	1095	43	36.40	1032	40 5/8	22	7 3/8	14.8	.583	27	1 1/16	23	29/32	14	9/16	285	11 1/8	5022	40 1/2	1455	6 1/2	1625	4 7/8	R-98	894	35.200	28	64	2 1/2	4432	17	845	1860	1625	3580	
38	1370	54	1250	49 1/4	1100	43 1/2	38.44	1092	43	19	3 1/4	12.3	.485	24	15/16	20	25/32	13	1/2	300	11 3/4	5030	40 1/2	1260	6 3/8	1830	5 1/8	-	943	37.125	28	64	2 1/2	4444	17 1/2	8600	2120	1870	4120	
40	1420	56	1295	51	1135	44 3/4	40.50	1137	44 3/4	19	3 1/4	12.3	.485	24	15/16	20	25/32	13	1/2	315	12 1/2	5067	42	170	6 5/8	1837	5 3/8	-	991	39.000	28	70	2 3/4	4470	18 1/2	9045	2300	2085	4600	
42	1490	58 3/4	1365	53 3/4	1185	46 3/4	42.50	1202	47 5/16	169	3 1/4	12.3	.485	24	15/16	20	25/32	13	1/2	325	12 3/4	5118	44	180	7	140	5 1/2	-	1042	41.000	28	70	2 3/4	4470	18 1/2	9190	2620	2410	5310	
44	1560	61 1/2	1422	56	1265	49 3/4	44.50	1254	49 3/8	189	3 1/4	12.3	.485	24	15/16	20	25/32	13	1/2	335	13 1/4	5195	47	185	7 5/8	1645	5-11/16	-	1092	43.000	28	76	3	495	19 1/2	9325	2920	2765	6100	
46	1620	63 3/4	1480	58 1/4	1300	51 1/4	46.50	1307	51 7/16	169	3 1/4	12.3	.485	24	15/16	20	25/32	13	1/2	350	13 3/4	5232	48 1/2	1295	7 5/8	1847	5 3/4	-	1143	45.000	28	76	3	495	19 1/2	9430	3150	3110	6850	
48	1665	65 1/2	1537	60 1/2	1355	53 1/4	48.50	1364	53-11/16	19	3 1/4	12.3	.485	24	15/16	20	25/32	13	1/2	360	14 1/2	5283	50 1/2	1200	7-15/16	153	6	-	1194	47.000	28	76	3	508	20	1530	3370	3445	7600	

DWG. RESPONSIBILITY:
PIPING STANDARDS COMMITTEE

10	12-1999	EDSD WED		REVISED NOTES 1 & 4			
09	06-11-97	MAQ		DRAWING REVISED AS PER MARK-UP	ORIGINAL SIGNED	ORIGINAL SIGNED	ORIGINAL SIGNED
08	07-24-96	WAS		REVISED NOTES 4 & 9.	ORIGINAL SIGNED	ORIGINAL SIGNED	ORIGINAL SIGNED
07	07-24-94	CAB		REVISED NOTES 4 & 9.	ORIGINAL SIGNED	ORIGINAL SIGNED	ORIGINAL SIGNED
REV. NO.	DATE	BY	JO/EWO	DESCRIPTION	CHKD.	CERT.	APPD.

SAUDI ARABIAN OIL COMPANY

DRAWN BY N.M. CHECKED BY SCALE NONE

DATE STARTED DATE COMPLETED

OPR'G. DEPT. ENG. DEPT. ORIGINAL SIGNED 09-01-71

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 09-01-71

W.N. FLANGES AND BLIND FLANGES

LARGE SIZE

CLASS 600 RING JOINT

STD. DWG.

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