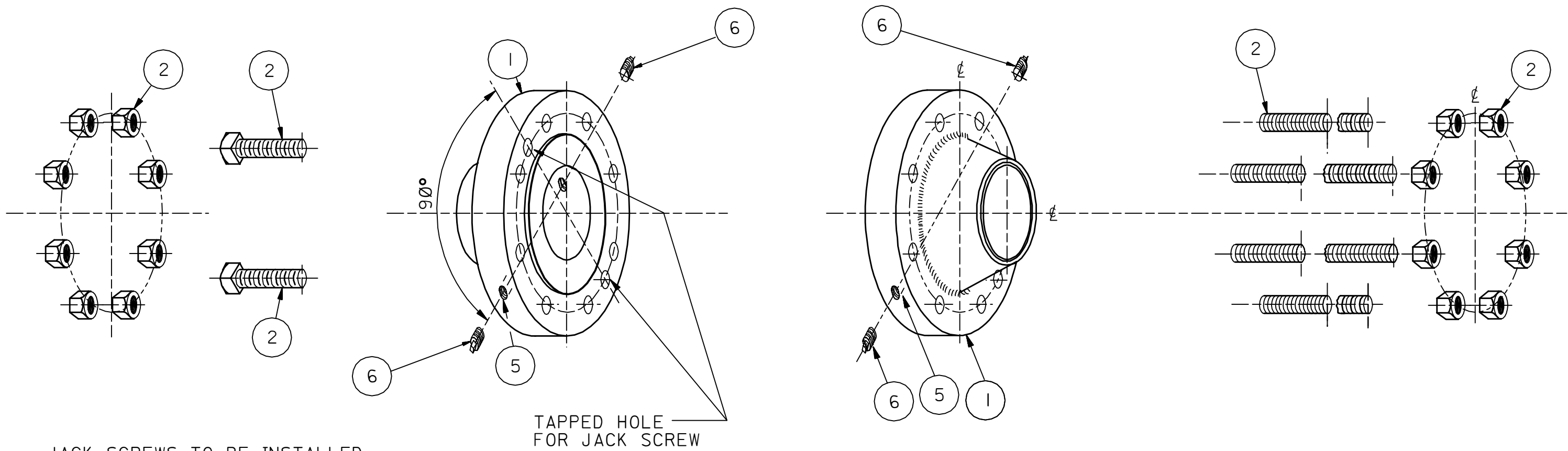


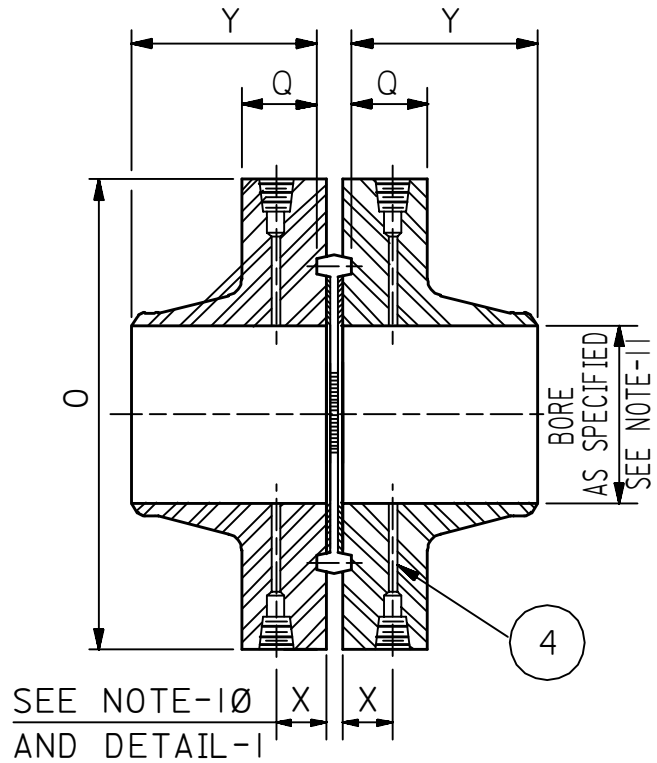
02	002	14	AB-0364	J	990
PLANT NO.	INDEX	DRAWING NUMBER	SH.T. NO.	REV. NO.	



JACK SCREWS TO BE INSTALLED
AS SHOWN ON STD. DWG. AD-036630
JACK SCREWS WITH HEXAGONAL HEAD ARE ACCEPTABLE
FOR ORIENTATION OF TAPS SEE STD. DWG. AD-036004.

TAPPED HOLE
FOR JACK SCREW

EXPLODED VIEW



CROSS SECTION

NOTES:

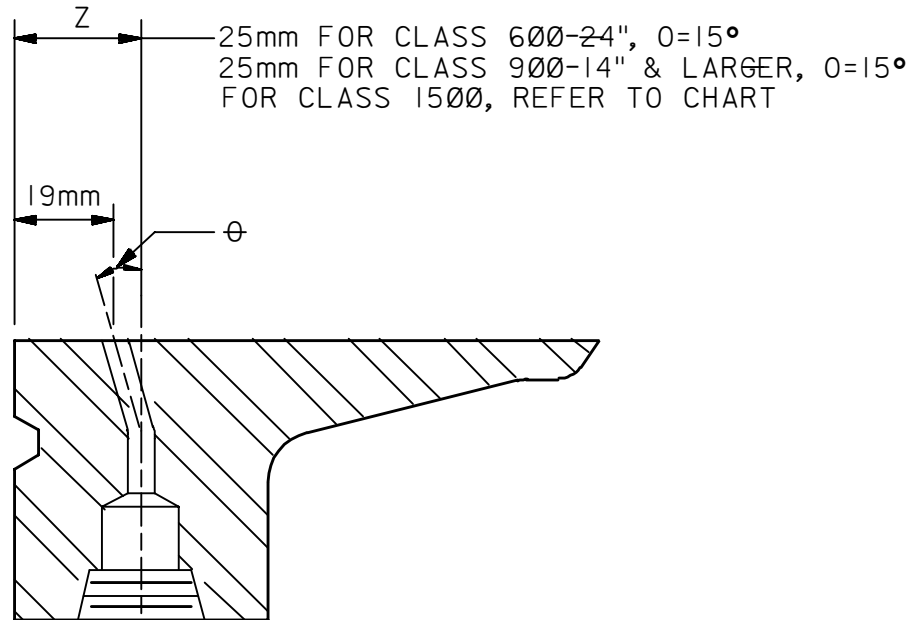
- FLANGES TO BE IN ACCORDANCE WITH ANSI B.16.5 EXCEPT FOR THICKNESS "Q" AND FLANGE LENGTH "Y" SEE ALSO NOTES-12 & 13.
- ALLOY STEEL STUDS, NUTS AND JACKSCREWS TO BE SUPPLIED WITH FLANGES ASSEMBLED.
MATERIAL FOR BOLTS: ASTM A 193 B7
NUTS: ASTM A 194 GRADE 2H
- THREADING OF STUDS, NUTS AND SCREWS;
3.1 UP TO AND INCLUDING 1 INCH:
TO BE THREADED IN ACCORDANCE WITH UNIFIED NATIONAL COARSE SERIES CLASS 2-A-FIT, ANSI B 1.1.
3.2 SIZES LARGER THAN 1 INCH:
TO BE THREADED IN ACCORDANCE WITH 8N SERIES CLASS 2-A-FIT, ANSI B 1.1.
- HOLES FOR PRESSURE TAPS TO BE DRILLED 6mm FOR SIZES 2"; 10mm FOR SIZE 3"; 12mm FOR SIZES 4" AND UP.
- FLANGE TAP CONNECTIONS TO BE TAPER THREADED IN ACCORDANCE WITH ANSI B 2.1, SIZE 1/2 ".
- FLANGE TAP CONNECTIONS TO BE PROVIDED WITH CARBON STEEL PLUGS, SQUARE OR HEXAGONAL HEAD.
- ALL FLANGES SHALL BE WELDING NECK.
- FOR DETAIL OF ORIFICE PLATE, SEE DWG. AB-036094.
- X=19mm FOR CLASS 600 & CLASS 900 EXCEPT AS SHOWN IN DETAIL-1. FOR CLASS 1500 REFER TO CHART.
- TOLERANCES ON DIMENSION "X":
± 0.40mm FOR SIZES 3" AND SMALLER
± 0.80mm FOR SIZES 4" AND LARGER
ON FLANGE BORE: ± 0.5% OF NOMINAL BORE
ON BOLT CIRCLE : ± 0.80mm
- HUBS OF FLANGES 16" AND LARGER SHALL BE OF THE SINGLE TAPER TYPE.
- MATERIAL FOR FLANGES TO BE ASTM A-105 UNLESS NOTED OTHERWISE IN THE SPECIFICATIONS.
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED.

DIMENSIONS ARE IN INCHES

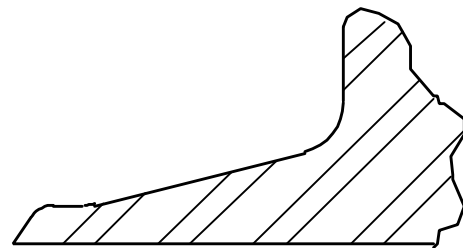
600 RING JOINT	NOMINAL PIPE SIZE	2	3	4	6	8	10	12	14	16	18	20	24
	FLANGE DIAMETER-O mm.	165	210	275	355	420	510	560	605	685	785	815	940
	FLANGE LENGTH-Y mm.	80	83	102	117	133	152	156	165	178	184	190	203
	API RING NUMBER	R-23	R-31	R-37	R-45	R-49	R-53	R-57	R-61	R-65	R-69	R-73	R-77
	DIA. OF BOLTS (INCHES)	5/8 "	3/4 "	7/8 "	1 "	1 1/8 "	1 1/4 "	1 1/4 "	1 3/8 "	1 1/2 "	1 5/8 "	1 5/8 "	1 7/8 "
	LENGTH OF BOLTS mm.	140	140	165	190	205	230	240	255	280	295	320	350
	NUMBER OF BOLTS	8	8	8	12	12	16	20	20	20	20	24	24
	JACKSCREWS (IN. DIA. x mm. LG.)	5/8 " x 100	3/4 " x 100	7/8 " x 100	1 " x 115	1 " x 130	1 " x 130	1 " x 130	1 " x 140	1 " x 140	1 " x 150	1 " x 165	1 " x 180
	FLANGE THICKNESS-Q mm.	32	32	38	48	55	64	66	70	76	83	90	102

900 RING JOINT	NOMINAL PIPE SIZE	2	3	4	6	8	10	12	14	16	18	20	24
	FLANGE DIAMETER-O mm.		240	295	380	470	545	610	640	705	785	855	1040
	FLANGE LENGTH-Y mm.	USE	102	114	140	162	184	200	213	216	230	248	292
	API RING NUMBER	CLASS	R-31	R-37	R-45	R-49	R-53	R-57	R-62	R-66	R-70	R-74	R-78
	DIA. OF BOLTS (INCHES)	1500	7/8 "	1 1/8 "	1 1/8 "	1 3/8 "	1 3/8 "	1 3/8 "	1 1/2 "	1 5/8 "	1 7/8 "	2 "	2 1/2 "
	LENGTH OF BOLTS mm.	FLANGE	165	190	205	240	255	270	295	315	355	375	470
	NUMBER OF BOLTS	↓	8	8	12	12	16	20	20	20	20	20	20
	JACKSCREWS (IN. DIA. x mm. LG.)		3/4 " x 100	7/8 " x 100	1 " x 130	1 " x 130	1 " x 140	1 " x 140	1 " x 165	1 " x 165	1 " x 180	1 " x 190	1 " x 215
	FLANGE THICKNESS-Q mm.		38	44	56	64	70	80	86	90	102	108	140

1500 RING JOINT	NOMINAL PIPE SIZE	2	3	4	6	8	10	12	14	16	18	20	24
	FLANGE DIAMETER-O mm.	215	270	310	395	485	585	675	750	825	915	985	1170
	FLANGE LENGTH-Y mm.	102	118	124	170	213	254	283	298	310	327	356	406
	API RING NUMBER	R-24	R-35	R-39	R-46	R-50	R-54	R-58	R-63	R-67	R-71	R-75	R-79
	DIA. OF BOLTS (INCHES)	7/8 "	1 1/8 "	1 1/4 "	1 3/8 "	1 5/8 "	1 7/8 "	2 "	2 1/4 "	2 1/2 "	2 3/4 "	3 "	3 1/2 "
	LENGTH OF BOLTS mm.	165	190	215	280	320	355	400	440	490	535	585	670
	NUMBER OF BOLTS	8	8	8	12	12	12	16	16	16	16	16	16
	JACKSCREWS (IN. DIA. x mm. LG.)	5/8 " x 100	3/4 " x 100	7/8 " x 100	1 " x 150	1 " x 165	1 " x 180	1 " x 205	1 " x 230	1 " x 255	1 " x 255	1 " x 305	1 " x 330
	FLANGE THICKNESS-Q mm.	38	48	54	83	92	108	124	134	146	162	178	203
	PRESSURE TAP- Z mm.	25	32	35	35	38	38	41	41	44	44	44	46
	PRESSURE TAP ANGLE- Ø	25	20	15	15	15	15	15	15	15	15	15	15



DETAIL-1



SINGLE TAPER HUB FOR SIZES 16" AND LARGER

DWG. RESPONSIBILITY :											
INSTRUMENTS STANDARD COMMITTEE											
02	NOV96	RCR		CHGD. MANDATORY DRAWING NOTE TO DRAWING RESPONSIBILITY NOTE.							
01	07-11-89	RLO		REDRAWN AND ADDED MANDATORY NOTE. CHANGE DWG. SIZE FROM "C" TO "B"				ORIG. SIGNED	ORIG. SIGNED	ORIG. SIGNED	
REV. NO.	DATE	BY	JO/EWO	DESCRIPTION				CHKD.	CERT.	APPD.	
SAUDI ARABIAN OIL COMPANY											
DRAWN BY <u>AD HOUT</u> CHECKED BY <u>GK</u> SCALE <u>NONE</u>											
DATE STARTED _____ DATE COMPLETED _____											
OPR'G. DEPT. _____ ENG. DEPT. _____											
APP'D FOR CONSTR. _____											
THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION OR FOR ORDERING MATERIAL UNTIL CERTIFIED AND DATED						CERTIFIED _____ BY _____ DATE _____					
RING JOINT											
ORIFICE FLANGE ASSEMBLY											
STD. DWG. METRIC											
PLANT NO.		INDEX		DRAWING NUMBER				SHT. NO.		REV. NO.	
990		J		AB-036414				002		02	