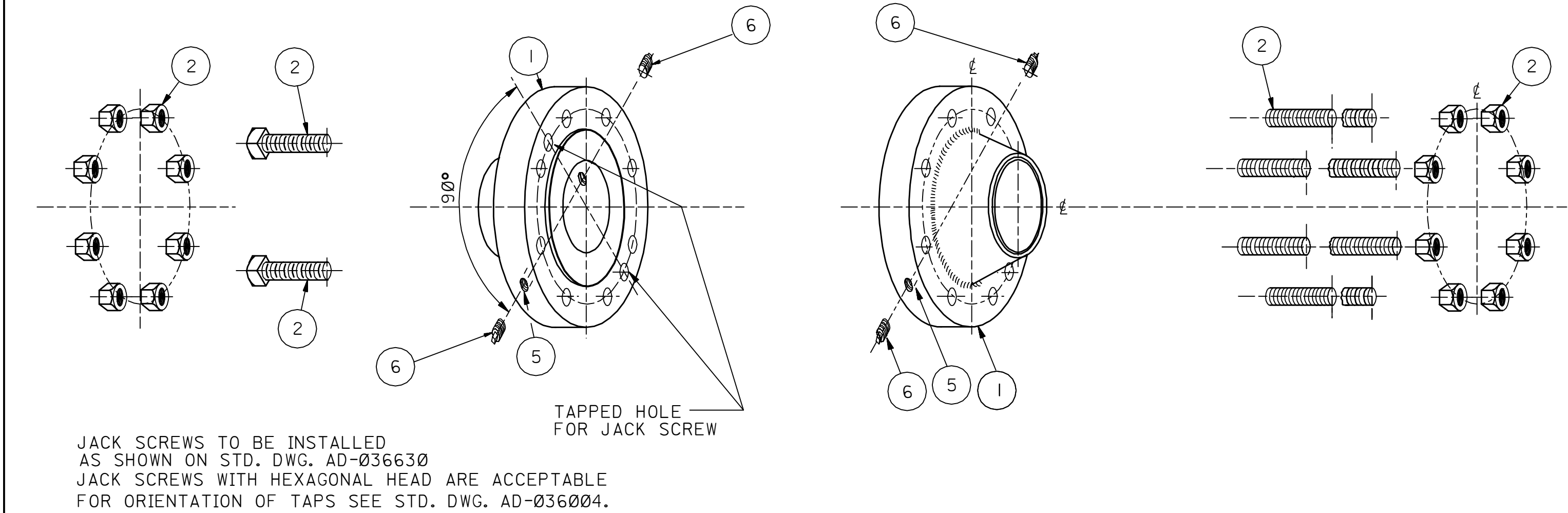
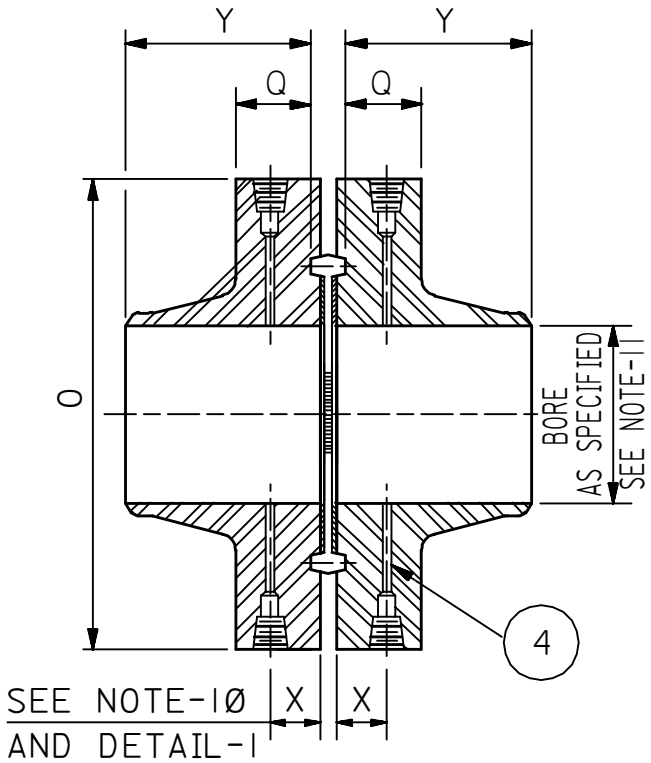


18	001	AB-036414	J	990
REV. NO.	SHT. NO.	DRAWING NUMBER	INDEX	PLANT NO.



EXPLODED VIEW



CROSS SECTION

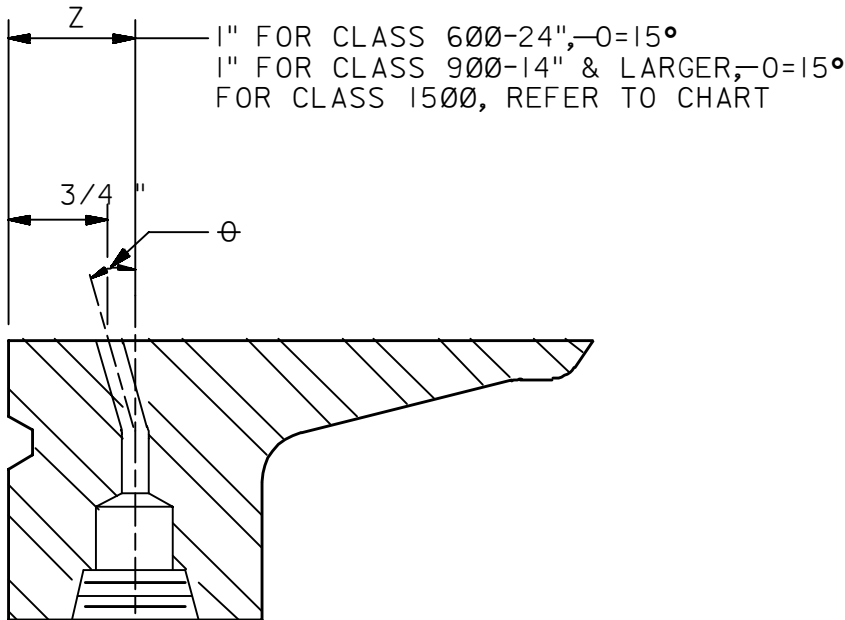
- NOTES:**
- FLANGES TO BE IN ACCORDANCE WITH ANSI B.16.5 EXCEPT FOR THICKNESS "Q" AND FLANGE LENGTH "Y" SEE ALSO NOTES-12 & 13.
 - ALLOY STEEL STUDS, NUTS AND JACKSCREWS TO BE SUPPLIED WITH FLANGES ASSEMBLED.
MATERIAL FOR BOLTS: ASTM A 193 B7
NUTS: ASTM A 194 GRADE 2H
 - THREADING OF STUDS, NUTS AND 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 1/4 " FOR SIZES 2"; 3/8 " FOR SIZE 3"; 1/2 " 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= 3/4 " ; EXCEPT AS SHOWN IN DETAIL-1.
 - TOLERANCES ON DIMENSION "X":
± 1/64" FOR SIZES 3" AND SMALLER
± 1/32" FOR SIZES 4" AND LARGER
ON FLANGE BORE: ± 0.5% OF NOMINAL BORE
ON BOLT CIRCLE : ± 1/32"
 - HUBS OF FLANGES 16" AND LARGER SHALL BE OF THE SINGLE TAPER TYPE.
 - MATERIAL FOR FLANGES TO BE ASTM A350 LF2 UNLESS NOTED OTHERWISE IN THE SPECIFICATIONS.

DIMENSIONS ARE IN INCHES

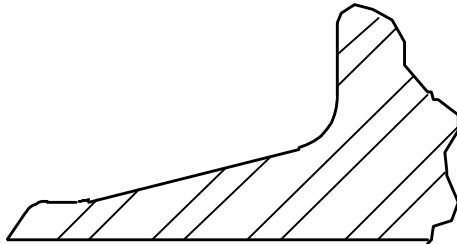
600 RING JOINT	NOMINAL PIPE SIZE	2	3	4	6	8	10	12	14	16	18	20	24
	FLANGE DIAMETER-O	6 1/2	8 1/4	10 3/4	14	16 1/2	20	22	23 3/4	27	29 1/4	32	37
	FLANGE LENGTH-Y	3 1/8	3 1/4	4	4 5/8	5 1/4	6	6 1/8	6 1/2	7	7 1/4	7 1/2	8
	API RING NUMBER	R-23	R-31	R-37	R-45	R-49	R-53	R-57	R-61	R-65	R-69	R-73	R-77
	DIA. OF BOLTS	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	5 1/2	5 1/2	6 1/2	7 1/2	8	9	9 1/2	10	11	11 1/2	12 1/2	13 3/4
	NUMBER OF BOLTS	8	8	8	12	12	16	20	20	20	20	24	24
	JACKSCREWS	5/8 x 4 3/4	3/4 x 4 3/4	7/8 x 4 3/4	1 x 4 1/2	1 x 5	1 x 5	1 x 5	1 x 5 1/2	1 x 5 1/2	1 x 6	1 x 6 1/2	1 x 7
	FLANGE THICKNESS-Q	1 1/4	1 1/4	1 1/2	1 7/8	2 3/16	2 1/2	2 5/8	2 3/4	3	3 1/4	3 1/2	4

900 RING JOINT	NOMINAL PIPE SIZE	2	3	4	6	8	10	12	14	16	18	20	24
	FLANGE DIAMETER-O		9 1/2	11 1/2	15	18 1/2	21 1/2	24	25 1/4	27 3/4	31	33 3/4	41
	FLANGE LENGTH-Y	USE	4	4 1/2	5 1/2	6 3/8	7 1/4	7 7/8	8 3/8	8 1/2	9	9 3/4	11 1/2
	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	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	FLANGE	6 1/2	7 1/2	8	9 1/2	10	10 1/2	11 1/2	12 1/4	14	14 3/4	18 1/2
	NUMBER OF BOLTS		8	8	12	12	16	20	20	20	20	20	20
	JACKSCREWS		3/4 x 4 3/4	7/8 x 4 1/2	1 x 5	1 x 5	1 x 5 1/2	1 x 5 1/2	1 x 6 1/2	1 x 6 1/2	1 x 7	1 x 7 1/2	1 x 8 1/2
	FLANGE THICKNESS-Q		1 1/2	1 3/4	2 3/16	2 1/2	2 3/4	3 1/8	3 3/8	3 1/2	4	4 1/4	5 1/2

1500 RING JOINT	NOMINAL PIPE SIZE	2	3	4	6	8	10	12	14	16	18	20	24
	FLANGE DIAMETER-O	8 1/2	10 1/2	12 1/4	15 1/2	19	23	26 1/2	29 1/2	32 1/2	36	38 3/4	46
	FLANGE LENGTH-Y	4	4 5/8	4 7/8	6 3/4	8 3/8	10	11 1/8	11 3/4	12 1/4	12 7/8	14	16
	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	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	6 1/2	7 1/2	8 1/2	11	12 1/2	14	15 3/4	17 1/4	19 1/4	21	23	26 1/4
	NUMBER OF BOLTS	8	8	8	12	12	12	16	16	16	16	16	16
	JACKSCREWS	5/8 x 4 3/4	3/4 x 4 1/2	7/8 x 4 1/2	1 x 6 1/2	1 x 6 1/2	1 x 7	1 x 8	1 x 9	1 x 10	1 x 10	1 x 12	1 x 13
	FLANGE THICKNESS-Q	1 1/2	1 7/8	2 1/8	3 1/4	3 5/8	4 1/4	4 7/8	5 1/4	5 3/4	6 3/8	7	8
	PRESSURE TAP-2	1	1 1/4	1 3/8	1 3/8	1 1/2	1 1/2	1 5/8	1 5/8	1 3/4	1 3/4	1 3/4	1 13/16
	PRESSURE TAP ANGLE	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									
18	NOV96	RCR		CHGD. MANDATORY DRAWING NOTE TO DRAWING RESPONSIBILITY NOTE.					
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.									
PLANT NO.	INDEX	DRAWING NUMBER			SHT. NO.	REV. NO.			
990	J	AB-036414			001	18			