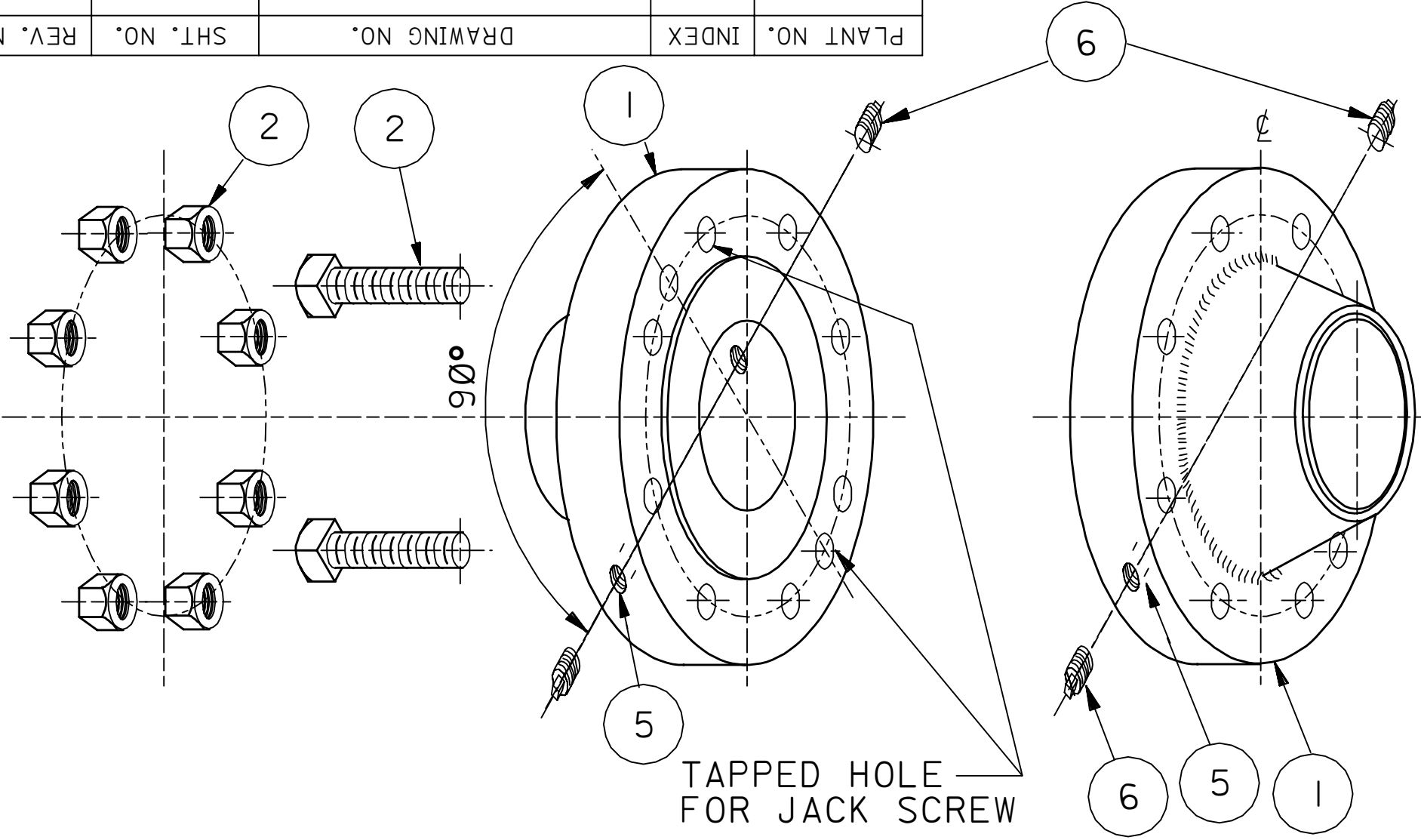


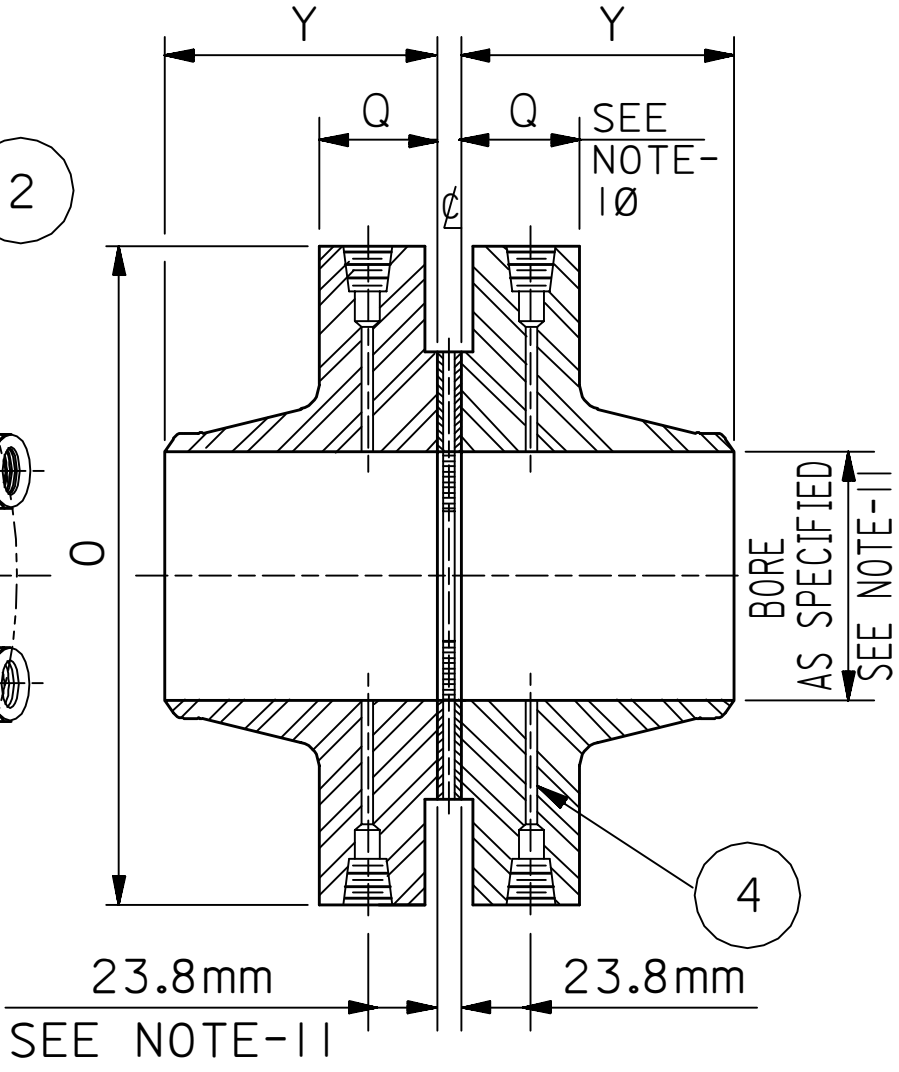
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PLANT NO.	INDEX	DRAWING NO.	SHT. NO.	REV. NO.



EXPLODED VIEW

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.

DIMENSIONS ARE IN INCHES
AND MILLIMETERS AS NOTED



CROSS SECTION

SINGLE TAPER HUB
FOR SIZES 16" AND LARGER

- NOTES:
- FLANGES TO BE IN ACCORDANCE WITH ANSI B 16.5 EXCEPT FOR THICKNESS "Q" AND FLANGE LENGTH "Y" OR IN ACCORDANCE W/ DIMENSIONS IN THIS DWG. AT MANUFACTURER'S OPTION. 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"; AND 12mm FOR SIZES 4" AND UP.
 - FLANGE TAP CONNECTIONS TO BE TAPER THREADED IN ACCORDANCE WITH ANSI B1.20.1, SIZE 1/2 ", EXCEPT AS INDICATED IN NOTE-9.
 - 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 DWGAB-036094.
 - CLASS 150 14" & 16" FLANGES SHALL HAVE 3/8 " FLANGE TAPS. PROPER BOLT LENGTHS TO BE SUPPLIED.
 - DIMENSIONS "Y" AND "Q" INCLUDE 1/16 " RAISED FACE FOR CLASS 150 & 300 FLANGES BUT EXCLUDE 1/4 " RAISED FACE FOR CLASS 600 FLANGES.
 - TOLERANCES:ON DIMENSION 23.8mm:
± 0.4mm FOR SIZES 3" AND SMALLER
± 0.8mm FOR SIZES 4" AND LARGER
ON FLANGE BORE:± 0.5% OF NOMINAL BORE
ON BOLT CIRCLE: ±0.8mm FOR SIZES 24" AND SMALLER
±1.6mm FOR SIZES 26" AND LARGER
 - HUBS OF FLANGES 16" AND LARGER SHALL BE OF THE SINGLE TAPER TYPE.
 - UNLESS NOTED OTHERWISE IN THE SPECIFICATION MAT'L. FOR FLANGES 2"-24" TO BE ASTM A-350 LF2 SIZES LARGER THAN 24" ASTM A-707 L3 CL3. MAXIMUM CE 0.44, MIN. 0.34.
 - PRESSURE TAP DETAILS & NOTES ON THIS DWG. ALSO APPLIES TO SIZES LARGER THAN 24", ALL RATINGS.

CLASS 150 RAISED FACE	NOMINAL PIPE SIZE	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	FOR SIZES LARGER THAN 24" REFER TO STD. DWG. AE-036634.
	FLANGE DIAMETER-O (mm)								535	600	635	700	750	815	
	FLANGE LENGTH-Y (mm)								127	127	140	145	150	152	
	DIA. OF RAISED FACE (mm)								413	470	539	584	640	692	
	DIA. OF BOLTS (IN.)								1"	1"	1 1/8 "	1 1/8 "	1 1/4 "	1 1/4 "	
	LENGTH OF BOLTS (mm)								140	150	165	165	180	180	
	NUMBER OF BOLTS								12	16	16	20	20	20	
	JACKSCREWS (IN. DIA. x mm LG.)								1" x 100	1" x 115	1" x 130	1" x 130	1" x 130	1" x 130	
	FLANGE THICKNESS-Q (mm)								35	37	40	43	46	48	

CLASS 300 RAISED FACE	NOMINAL PIPE SIZE	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	FOR SIZES LARGER THAN 24" REFER TO STD. DWG. AE-036991.
	FLANGE DIAMETER-O (mm)	165	210	255	320	380	445	520	585	650	710	775	840	915	
	FLANGE LENGTH-Y (mm)	86	90	92	100	110	117	130	143	146	160	162	165	168	
	DIA. OF RAISED FACE (mm)	92	127	157	216	270	324	380	413	470	533	584	640	692	
	DIA. OF BOLTS (IN.)	5/8 "	3/4 "	3/4 "	3/4 "	7/8 "	1"	1 1/8 "	1 1/8 "	1 1/4 "	1 1/4 "	1 1/4 "	1 1/2 "	1 1/2 "	
	LENGTH OF BOLTS (mm)	130	140	140	140	150	165	180	190	205	205	215	230	240	
	NUMBER OF BOLTS	8	8	8	12	12	16	16	20	20	24	24	24	24	
	JACKSCREWS (IN. DIA. x mm LG.)	5/8 " x 354 "	3/4 " x 354 "	3/4 " x 354 "	3/4 " x 354 "	7/8 " x 354 "	1" x 100	1" x 115	1" x 130	1" x 130	1" x 130	1" x 130	1" x 130	1" x 130	
	FLANGE THICKNESS-Q (mm)	38	38	38	38	42	48	50	54	58	60	64	67	70	

CLASS 600 RAISED FACE	NOMINAL PIPE SIZE	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	FOR SIZES LARGER THAN 24" REFER TO STD. DWG. AE-036673.
	FLANGE DIAMETER-O (mm)	165	210	275	356	420	510	560	605	685	745	815	870	940	
	FLANGE LENGTH-Y (mm)	86	90	102	117	133	152	156	165	178	184	190	197	203	
	DIA. OF RAISED FACE (mm)	92	127	157	216	270	324	380	413	470	533	584	640	692	
	DIA. OF BOLTS (IN.)	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 3/4 "	1 7/8 "	
	LENGTH OF BOLTS (mm)	140	150	150	180	205	230	230	240	270	280	305	305	345	
	NUMBER OF BOLTS	8	8	8	12	12	16	20	20	20	20	24	24	24	
	JACKSCREWS (IN. DIA. x mm LG.)	5/8 " x 354 "	3/4 " x 354 "	3/4 " x 354 "	7/8 " x 354 "	1" x 100	1" x 100	1" x 115	1" x 130	1" x 130	1" x 130	1" x 140	1" x 140	1" x 150	
	FLANGE THICKNESS-Q (mm)	38	38	38	48	56	64	67	70	77	83	90	95	102	

DWG. RESPONSIBILITY :						
INSTRUMENTS STANDARDS COMMITTEE						
02	MAR96	ESSD RLO	REVISED NOTE-13 & CHANGED "MANDATORY NOTE" TO " DWG. RESPONSIBILITY NOTE".			
01	04-23-89	WAH	REDRAWN, ADDED MANDATORY NOTE & CORRECTED DIMENSIONS.	ORIG. SIGNED	ORIG. SIGNED	ORIG. SIGNED
REV. NO.	DATE	BY	DESCRIPTION	CHKD	CERT.	APPD.
FOR SAUDI ARABIAN OIL COMPANY						
DRAWN BY <u>AD HOUT</u> CHECKED BY _____ 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 ORIGINAL SIGNED DATE 10-26-71		
RAISED FACE						
ORIFICE FLANGE ASSEMBLY						
STD. DWG. METRIC						
PLANT NO.	INDEX	DRAWING NO.			SHT. NO.	REV. NO.
990	J	AC-036413			002	02