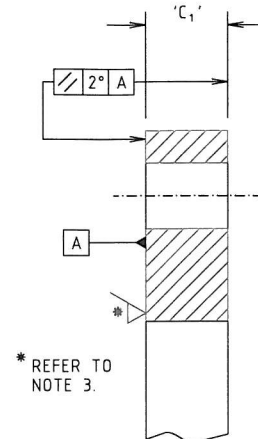
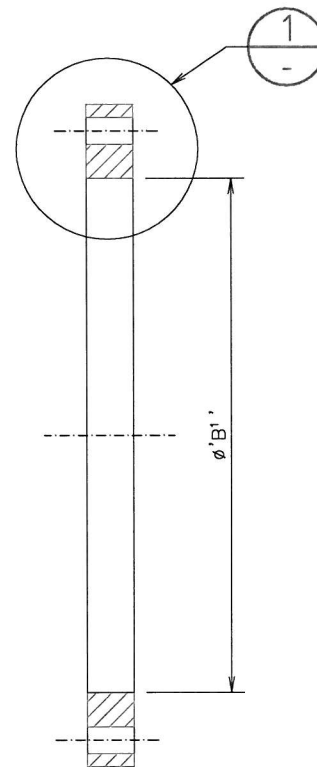
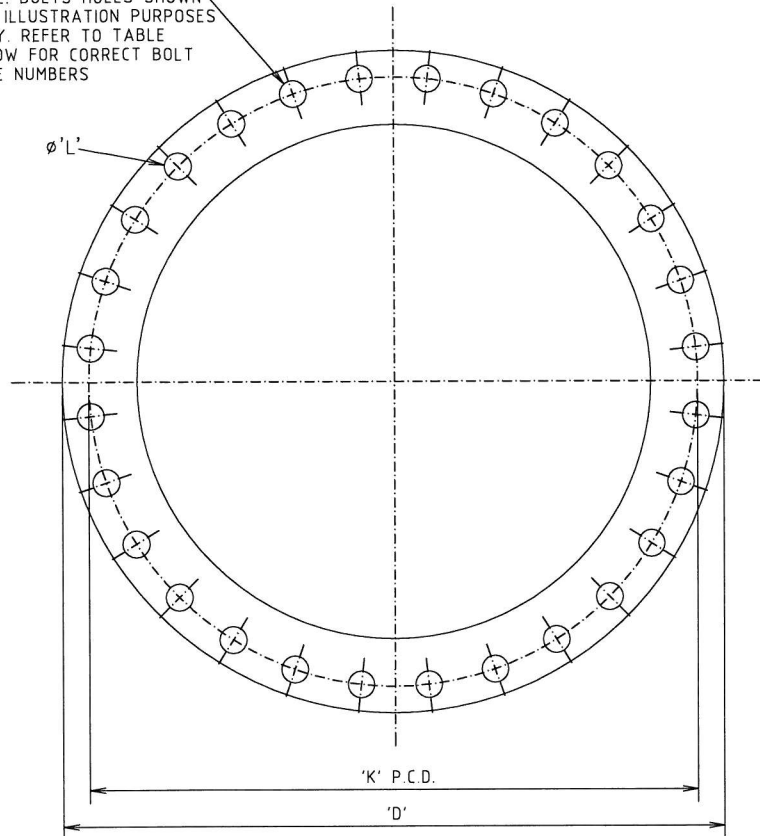


NOTE: BOLTS HOLES SHOWN FOR ILLUSTRATION PURPOSES ONLY. REFER TO TABLE BELOW FOR CORRECT BOLT HOLE NUMBERS



* REFER TO NOTE 3.



GENERAL NOTES

- INSPECTION AND TESTING: INSPECTION AND TESTING OF THE MATERIAL SHALL BE CARRIED OUT IN ACCORDANCE WITH AS3678.
- DATA SHEETS & MATERIAL TEST CERTIFICATES ARE TO BE SUPPLIED WITH ALL FLANGES.
- GASKET FACE SURFACE TO BE MACHINED TO EN1092-1:2007 AS FOLLOWS:

METHOD OF MACHINING	RADIUS OF TOOL NOSE mm	R _a *		R _z *	
		MIN.	MAX.	MIN.	MAX.
TURNING	1.0	3.2	12.5	12.5	50

*ROUGHNESS AVERAGE R_a IS THE ARITHMETIC AVERAGE OF THE ABSOLUTE VALUES OF THE ROUGHNESS PROFILE ORDINATES.

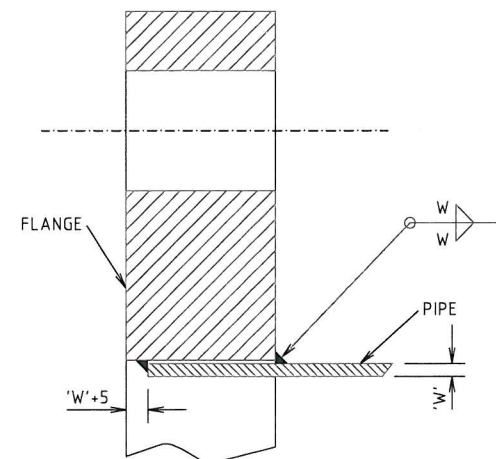
MEAN ROUGHNESS DEPTH R_z IS THE ARITHMETIC MEAN VALUE OF THE SINGLE ROUGHNESS DEPTHS R_{zi} OF CONSECUTIVE SAMPLING LENGTHS.

- SURFACE FINISHES TO BE TO EN1092-1:2007 AS FOLLOWS:

OUTER DIAMETER µm		CENTRE BORE DIAMETER µm		SPOT FACING
R _a MAX.	R _z MAX.	R _a MAX.	R _z MAX.	
25	160	25	160	YES*

*REFER TO NOTE 5.

- ANY SPOT FACING OR BACK FACING SHALL NOT REDUCE THE FLANGE THICKNESS TO LESS THAN THE FLANGE THICKNESS SPECIFIED. WHEN SPOT FACING IS USED, THE DIAMETER SHALL BE LARGE ENOUGH TO ACCOMMODATE THE OUTSIDE DIAMETER OF THE EQUIVALENT NORMAL SERIES OF WASHERS IN ACCORDANCE WITH EN ISO 887 (IDENTICAL TO AS1237) FOR THE BOLT SIZE BEING FITTED. THE BEARING SURFACES FOR THE BOLTING SHALL BE PARALLEL TO THE FLANGE FACE WITHIN THE LIMITS SPECIFIED IN DETAIL 1. WHEN THE FLANGE IS FACED BACK A MINIMUM FILLET RADIUS OF 3.2mm SHALL BE MAINTAINED.
- WELD INSPECTION AS PER EN13445.5 GROUP 1,2,3 & 4.
- FLANGES TO BE COATED WITH SILICONE BASED WATER REPELLENT AS PER WATER CORPORATIONS STANDARD DS 60. GASKET FACE COATING TO BE REMOVED PRIOR TO FLANGE ASSEMBLY.
- FLANGE JOINTS SHALL BE SQUARE TO PIPE WITHIN 0.25° OR 2mm WHICHEVER IS THE LESSER AND THE LAYBACK SHALL BE WITHIN THE RANGE OF 0 - 0.75° (LAYBACK AS PER AS1579 IS "THE ANGULAR DISTORTION OF A FLANGE FROM IT'S ORIGINAL PLANE DUE TO WELDING THE FLANGE ONTO A PIPE OF FITTING")



FLANGE TO PIPE WELD DETAIL

DESIGN DATA

DESIGN STANDARD:	EN1591-1:2001 / EN13445-3:2002
DIMENSIONAL SPECIFICATIONS:	EN1092-1:2007
FLANGE PRESSURE RATING:	PN25
SERVICE:	WATER
DESIGN PRESSURE:	2500 kPa
MAXIMUM HYDROTEST PRESSURE:	3575 kPa
DESIGN TEMPERATURE:	50 °C
FLANGE MATERIAL:	AS3678 Gr250

FASTENER SPECIFICATIONS

BOLT DIMENSIONAL SPECIFICATION:	AS1110.1
NUT DIMENSIONAL SPECIFICATION:	AS1112.1
BOLT & NUT MECHANICAL PROPERTIES:	AS4291.1:2000 - GRADE 8.8 (HOT DIP GALVANISED)
WASHER TOLERANCES & MECHANICAL PROPERTIES:	AS1237
GALVANISING:	AS1214
FLANGE BOLTING PROCEDURE:	WATER CORP. DS 38-03

GASKET SPECIFICATIONS

SPECIFICATION:	EN1591 & EN13445
GASKET TYPE:	NON-METALLIC FLAT
GASKET MATERIAL:	NON-ASBESTOS COMPRESSED FIBRE
GASKET PROPERTIES:	
"E ₀ "	500MPa
"K ₁ "	20
"m"	1.6
"g _c OR P _{QR} "	0.9
"Q _{0 min} "	35 MPa
"Q _{max} "	70 MPa
"Q _{smin} "	10 MPa
"Q _{smax} "	120 MPa

PN25 FLANGE DIMENSIONS (TYPE 1 - "SLIP ON")

DN	MATING DIMENSIONS						'B ₁ '	'C ₁ '	APPROX. WEIGHT (KG)	PIPE THICKNESS	MIN. REQUIRE BOLT-UP TORQUE (Nm)			
	'D'		'K'	'L'	BOLTING									
					NUMBER	SIZE								
700	960	+5 0	875	±1.5	42	24	M39	717	+3 0	68	+2* 0	170	6	2130
800	1085		990		48	24	M45	819		75		230	7	3110
900	1185		1090		48	28	M45	920		83		280	7	3300
1000	1320		1210		56	28	M52	1022		94		370	8	4530
1200	1530		1420		56	32	M52	1225		115		580	9	6210
1400	1755		1640		62	36	M56	1428		130		750	11	7690

* IF ONLY FRONT FACE IS MACHINED TOLERANCE TO BE +7

NOT TO BE USED WITH SEAL-ON BODY BUTTERFLY VALVES DUE TO INCOMPATIBILITY OF I.D. WITH VALVE SEAL. - USE WELD NECK FLANGE

HATCH

RECOMMENDED 01/12/2009
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APPROVED 01/12/2009
S.W.EVANS
PROJECT MECHANICAL ENGINEER

WATER CORPORATION

MECHANICAL STANDARD DRAWING
MECHANICAL DESIGN STANDARD DS 38-03
PN25 FLAT FACE SLIP-ON FLANGES

FILE PROJECT PLAN JZ39-91-5 CAD ISSUE E ORIGINAL SHEET SIZE A1