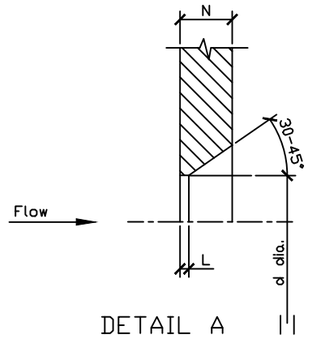
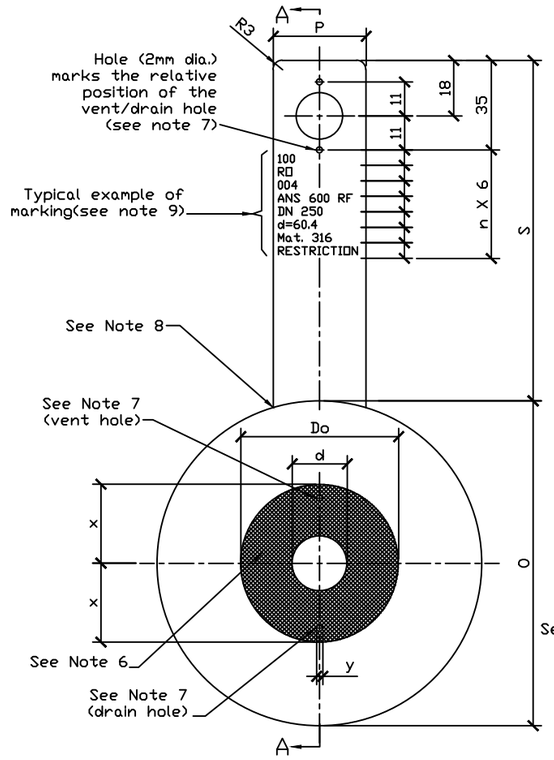
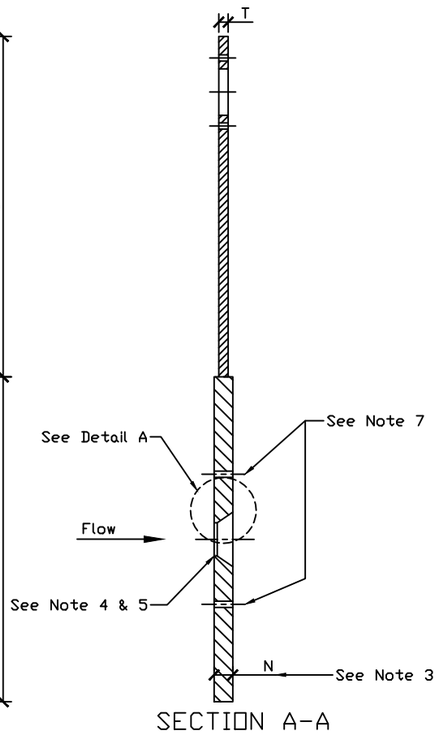


DETAIL A





SECTION A-A

NOTES:

Unless otherwise specified in the requisition, the following applies:

1. Dimensions :Expressed in millimeters unless otherwise indicated. Stated tolerances shall be strictly adhered to.
2. Material: :As per requisition.
3. Plate thickness :The difference between any two measurements of a plate thickness, for annular part d–Do, shall not differ by more than 0.001 DN in mm.
   The plate shall not depart from flatness along any diameter by more than 0.01Do.
   Tolerance for N shall be:
   N ⩽ 6mm +0.1/–0.25mm and
   N > 6mm +/–1.5mm
   Thickness for annular part Do–O, may be slightly less, max 0.05mm, du to surface finishing difference between d–Do and Do–O.
   (see note 6)
4. Concentricity :The centre of the orifice shall not differ from the centre of the plate by more than 0.1mm for DN ⩽ 200mm and 0.2mm for DN > 200mm.
5. Finish of throat :The throat and outlet cone shall have a surface roughness Ra ⩽ 0.4µm According to ANSI B46.1.
   All edges shall be sharp and free from burrs, so that when viewed with the naked eye no light is reflected by the corners.
6. Finish of plate :The upstream and downstream faces of the orifice plate to a diameter equal to Do shall have surface roughness Ra ⩽ 0.8µm according to ANSI B46.1.
   The remaining annular part (between O and Do) of upstream and downstream faces shall have a surface roughness Ra between 3.2 and 3.6µm according to ANSI B46.1.
   This finish shall be obtained by machining with a round nosed cutting tool having a 0.8mm radius at a feed rate between 0.35 and 0.45mm per revolution.
   Facing roughness may be checked by visual or tactile comparison with roughness specimen "rubert 319" of "flexitallic 319".
7. Vent/drain hole :If so specified on the requisition, either a vent hole (for liquids) or a drain hole (for gasses/steam) shall be provided.
8. Welding of tab :Tab may be integral with orifice plate up to and included 7mm plate thickness. In other cases full penetration joint to be applied.
9. Marking :The upstream side of the orifice tab shall be stamped at the indicated locations with:
   –the word upstream
   –the Tag Number (in three lines)
   –the ANS flange class, followed by RF
   –the nominal line size DN (in mm)
   –the measured orifice diameter d (in mm)
   –the material of the orifice plate
   –the word RESTRICTION
   –Letter height approx. 4mm.

Nom. line size DN		d ±0.1%	Do ±1mm	L ±0.1 mm	N See note 3	O $^{0}_{-0.4mm}$						P ±1mm	S ±1mm						T see note 8	x ±1mm	y
						ANS Flange class							ANS Flange class								
mm	in.	dia.	dia.			150	300	600	900	1500	2500		150	300	600	900	1500	2500			(see note 7)
15	1/2	As per requisition	13	0.24	1.5	44	54	54	64	64	70	28*)	110	110	110	115	115	120	1.5		
20	3/4		19	0.34		53	67	67	70	70	77	30		115	115	120	120	125	2.0		
25	1		25	0.42	2.0	63	73	73	80	80	86			120	120	125	125	130	3.0	21.0	1.0
40	11/2		40	0.64	3.0	82	96	96	99	99	118			115	115						
50	2		51	1.0	6.0	101	111	111	143	143	146			120	120		135	140		23.0	1.5
80	3		76	1.5	8.0	133	149	149	168	175	197	40	115	125	125	130	140	150	5.0	45.5	2.0
100	4		102		10.0	171	181	194	206	209	235			120	130	135	145	170		70.5	2.5
150	6		152		15.0	219	250	266	289	282	317		120	125	135		155		7.0	95.0	3.5
200	8		202	3.5	15.0	276	307	320	358	352	387			130	145	145		190		120.0	4.5
250	10		253		19.0	336	361	399	434	434	475	45	125	135	140		165	195	10.0	144.0	5.5
300	12		302		20.0	406	422	456	497	520	549			140	145	150	175			163.5	6.0
350	14		341	6.0	20.0	447	485	491	519	577			130	145	150	155	180		11.0	188.5	7.0
400	16		392		21.0	511	539	564	573	640		50			155	160	195		13.0	213.5	8.0
450	18		443	8.0	23.0	546	596	611	637	703			135	150		165	205		16.0	238.0	9.0
500	20		494		25.0	603	653	681	697	754		60		160	165	190	225		18.0	288.0	10.0
600	24		595	10.0	29.0	714	773	789	836	899											

*) P-28 for DN15 -Class 150 only

KANTEY & TEMPLER
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COMPILED	GF	13/07/08	PROJECT: MECH STANDARD DRAWING
DRAWN	GF	13/07/08	TITLE: TYPICAL ORIFICE PLATE DETAILS
CHECKED	RT	13/07/08	

PROJ. NO.	SHT. NO.	REV.
MECH_STD	012	0