

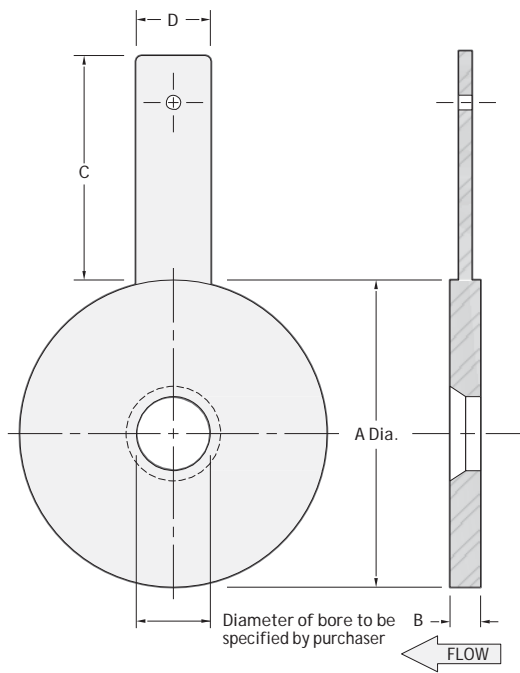


**EXCELOK** - EXCELOK Orifice plate is the most common flow element due to its simplicity, ease of installation and maintenance. Performance is predictable and reliable as the design and tolerances are governed by international standards such as ISO, AGA, and ASME

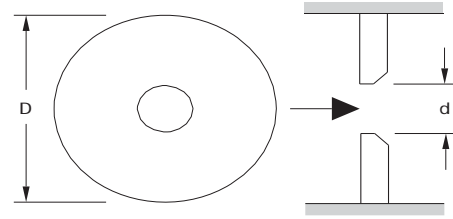
Unlike the orifice for measurement, “Restriction orifice” uses the intrinsic high- pressure loss characteristic to reduce the flowing pressure or to regulate fluid flow. Multistage restriction orifices are used to achieve high pressure drops with acceptable noise levels. These orifices are installed in a pipe section and supplied as a spool piece suitable for flange mounting or for welding directly to piping

**Sizing** In accordance with ISO 5167, ASME, AGA3 standards using “Flow Consultant” software by R.W. Miller & Associates





Orifice Bore  
 Square Edge (Standard) Bore



For the common square edge concentric bore orifice, the bore and bevel is the standard method of limiting the plate edge thickness. Unless otherwise specified, plates will be beveled to the current accepted AGA standards.

Line Size	125 lbs. & 150 lbs. ANST	250 lbs. & 300 lbs. ANST	400 lbs	600 lbs	900 lbs	1500 lbs	2500 lbs	For all Pressure Ratings		
	A	A	A	A	A	A	A	B	C	D
1/2	1-7/8	2-1/8	2-1/8	2-1/8	2-1/2	2-1/2	2-3/4	1/8	4	1
3/4	2-1/4	2-5/8	2-5/8	2-5/8	2-3/4	2-3/4	3	1/8	4	1
1	2-5/8	2-7/8	2-7/8	2-7/8	3-1/8	3-1/8	3-3/8	1/8	4	1
1-1/4	3	3-1/4	3-1/4	3-1/4	3-1/2	3-1/2	4-1/8	1/8	4	1
1-1/2	3-3/8	3-3/4	3-3/4	3-3/4	3-7/8	3-7/8	4-5/8	1/8	4	1
2	4-1/8	4-3/8	4-3/8	4-3/8	5-5/8	5-5/8	5-3/4	1/8	4	1
2-1/2	4-7/8	5-1/8	5-1/8	5-1/8	6-1/2	6-1/2	6-5/8	1/8	4	1-1/4
3	5-3/8	5-7/8	5-7/8	5-7/8	6-5/8	6-7/8	7-3/4	1/8	4	1-1/4
4	6-7/8	7-1/8	7	7-5/8	8-1/8	8-1/4	9-1/4	1/8	4	1-1/4
5	7-3/4	8-1/2	8-3/8	9-1/2	9-3/4	10	11	1/8	5	1-1/2
6	8-3/4	9-7/8	9-3/4	10-1/2	11-3/8	11-1/8	12-1/2	1/8	5	1-1/2
8	11	12-1/8	12	12-5/8	14-1/8	13-7/8	15-1/4	1/8	5	1-1/2
10	13-3/8	14-1/4	14-1/8	15-3/4	17-1/8	17-1/8	18-3/4	1/4	6	1-1/2
12	16-1/8	16-5/8	16-1/2	18	19-5/8	20-1/2	21-5/8	1/4	6	1-1/2
14	17-3/4	19-1/8	19	19-3/8	20-1/2	22-3/4	n/a	1/4	6	1-1/2
16	20-1/4	21-1/4	21-1/8	22-1/4	22-5/8	25-1/4	n/a	3/8	6	1-1/2
18	21-1/2	23-3/8	23-1/4	24	25	27-5/8	n/a	3/8	6	1-1/2
20	23-3/4	25-5/8	25-3/8	26-3/4	27-3/8	29-5/8	n/a	3/8	6	1-1/2
22	26	27-3/4	27-1/2	28-7/8	n/a	n/a	n/a	3/8	6	1-1/2
24	28-1/8	30-3/8	30-1/8	31	32-7/8	35-1/2	n/a	3/8	6	1-1/2
30	34-5/8	37-3/8	37-1/4	38-1/8	n/a	n/a	n/a	1/2	6	1-1/2
36	41-1/8	43-7/8	43-7/8	44-3/8	n/a	n/a	n/a	1/2	6	1-1/2



## SPECIFICATIONS

### Materials-

Orifice Plates 304 & 316 SS standard. Specials Duplex & Super Duplex SS, Hastelloy, Stellite faced Stainless steel, Monel and Titanium. Mill Test Certificates can be provided on request;

Flanges Carbon steel & SS Standard. Specials DSS, SDSS & Monel. Others on request.

**Plate Size:** Available for line sizes from 25 mm to 1250 mm NB.

**Thickness:** Standard thickness of 3mm & 6 mm.

Restriction orifices are offered in various thicknesses according to calculation based on line size, pressure drop and flowing temperature.

**Edges** Square, Sharp and free from burrs so that when viewed with naked eye no light is reflected by the corners. Plates without beveled edge are available for bi-directional flow measurement or for restriction applications at no additional charge.

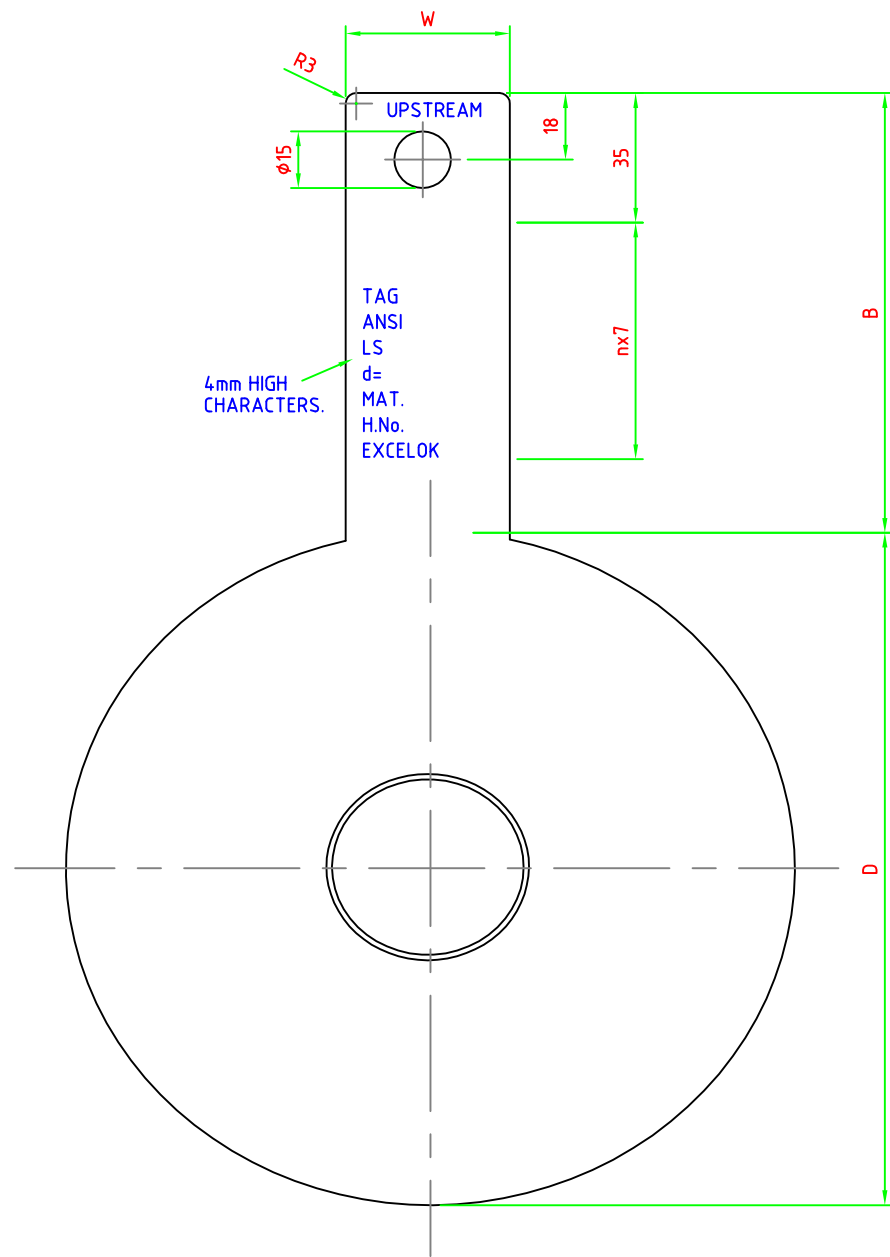
**Finish :** Directionally polished, uniform smooth finish standard. Optional differential finish for gasket area 8 microns and upstream flow facing area 3 to 3.6 microns.

**Markings :** All plates are marked with the line size, bore size, material of plate, customer's Tag Number, Flange Class and Face type

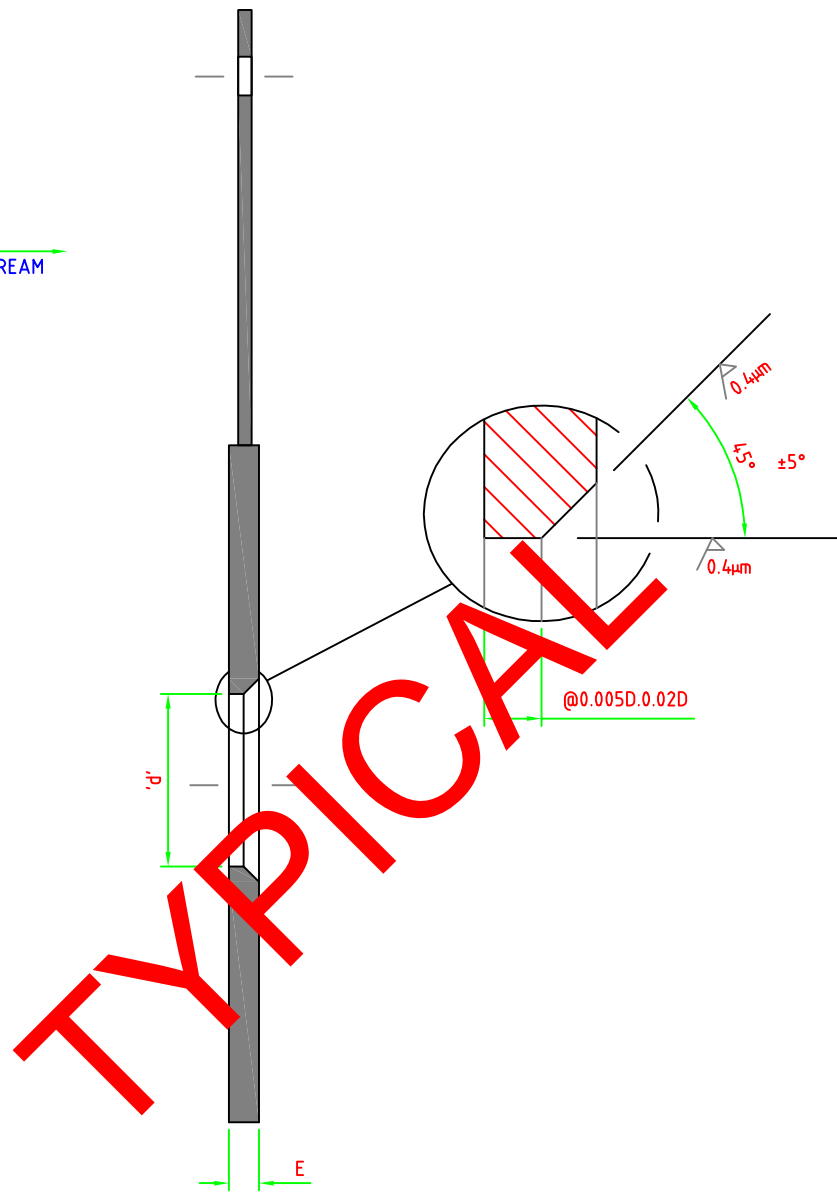
**Vent or Drain Holes:** Vent or drain holes are an option.

**Mounting:** Orifice assemblies are supplied with forged Carbon steel or Stainless-steel flanges. Alloy steel flanges are supplied where required. Carrier Rings, RTJ holders and Meter runs with or without flanges are also available.

**EXCELOK** supplies as standard orifice plate with tab for use with raised-face orifice flange unions for flow measurement or for installation between standard ANSI flanges in Restriction applications. Orifice plates without tab are also available for installation in existing orifice fittings or with Ring Joint Type plate holders.



FLOW  
UPSTREAM



1. MANUFACTURING STANDARD ISO 5167/AGA3
2. FINISH OF PLATE SURFACES ~200μ"
3. MARKING (UPSTREAM FACE OF TAB)
  - THE WORD "UPSTREAM"
  - THE TAG No. See Table
  - THE ANSI 150# RF
  - THE LINE SIZE : 1"
  - THE MEASURED ORIFICE φ 'd'(IN mm) See Table
  - THE ORIFICE PLATE MATERIAL 316LSS
  - THE MATERIAL HEAT No. (AFTER MANUFACTURING)
  - THE BRAND NAME EXCELOK
4. MATERIAL CERTIFICATION TO ISO10204.3.1

TYPICAL

TAG NO	PLATE MATERIAL	D	B	W	d	E	QTY
TBA	316 SS	2-5/8	4	1	6mm	4mm	2

CLIENT:	REV: 00
Your PO No:	DATE: 07/05/2015
MATERIAL: SS316L	DRN BY: ARUL
QUANTITY: 2	CHECKED: Jaya
	APPROVED: Ilan

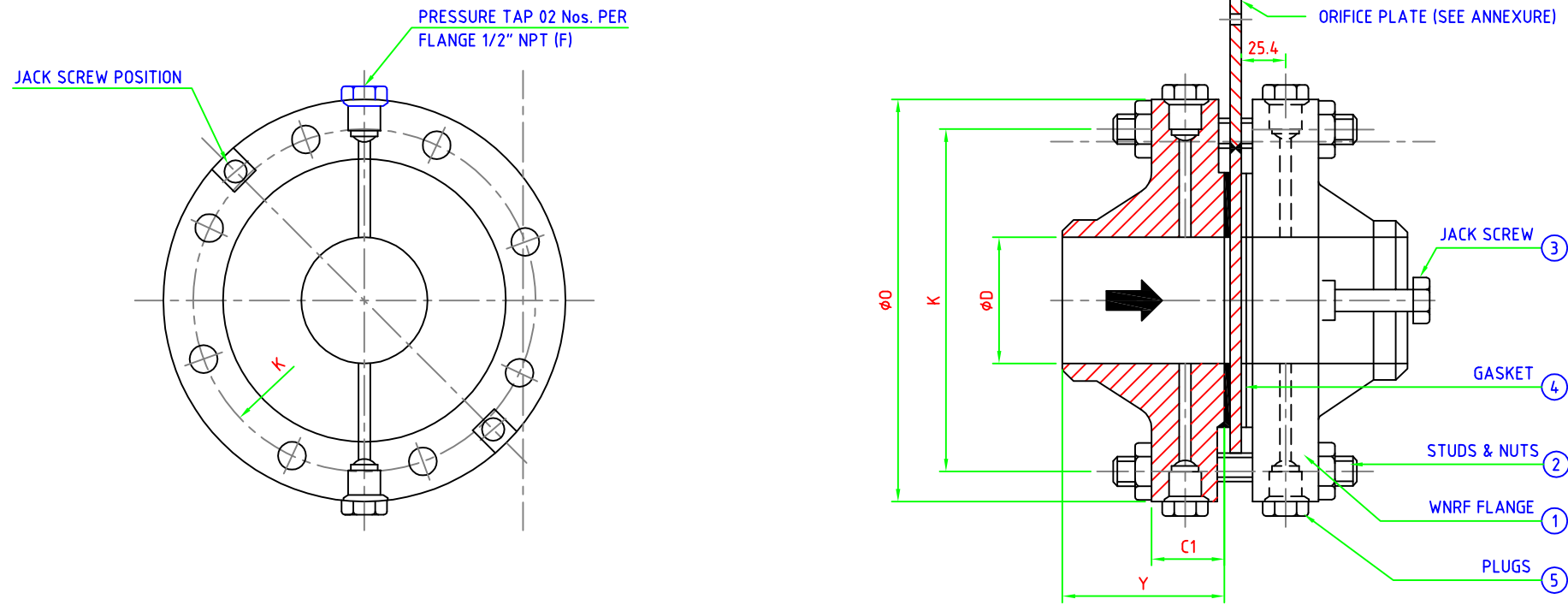


TITLE	ORIFICE PLATE	LINE SIZE : 1"	CLASS	150	SCH	80
No.	EK-OP-J655-01	MODEL No : E780P	SHEET SIZE : A3	SCALE : 1:2		



**EXCELOK TECHNOLOGIES PTE LTD**  
Singapore

# Typical GA Drawing Reference Only



**BILL OF MATERIAL:**

S.No.	DESCRIPTION	QTY	MATERIAL
1	WNRF FLANGE	2	ASTM A105
2	STUD/HEX NUT	8	ASTM A193 Gr. B7 / A194 Gr.2h
3	JACK SCREW	1	ASTM A193 Gr. B7
4	GASKET	2	SPRL. WIND. SS316 + GRAPHITE
5	PLUGS	2	SAME AS FLANGE MATERIAL

ALL DIMENSION ARE IN "inch "UNLESS OTHERWISE SPECIFIED

S.No.	TAG No	FLANGE MATERIAL	FLANGE SIZE & RATING	O	C1	Y	K	STUDS / NUTS	SIZE & LENGTH OF STUD
1	FE-V-001-1	ASTM A105	3" 300# WNRF	8.30	1.50	3.50	6.60	8 Nos	0.875" x 159

**NOTES:-**  
 1. FLANGE DIMENSIONS AS PER ANSI B16.36  
 2. BOLT LENGTH INCLUDE THICKNESS OF TWO NUTS BUT NOT HEIGHT OF CROWN

CLIENT: PT.SEMANGGI TEKNIK	REV: 01
Your PO No: PO-001-15	DATE: 14.01.2015
MATERIAL: A105	DRN BY: Arul
QUANTITY:1	CHECKED: Jaya
	APPROVED: ilan



TITLE	ORIFICE FLANGE UNION	SIZE	3"	CLASS	300
No.	EX-0FU-J632	SHEET SIZE	A3	SCALE	1:5



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