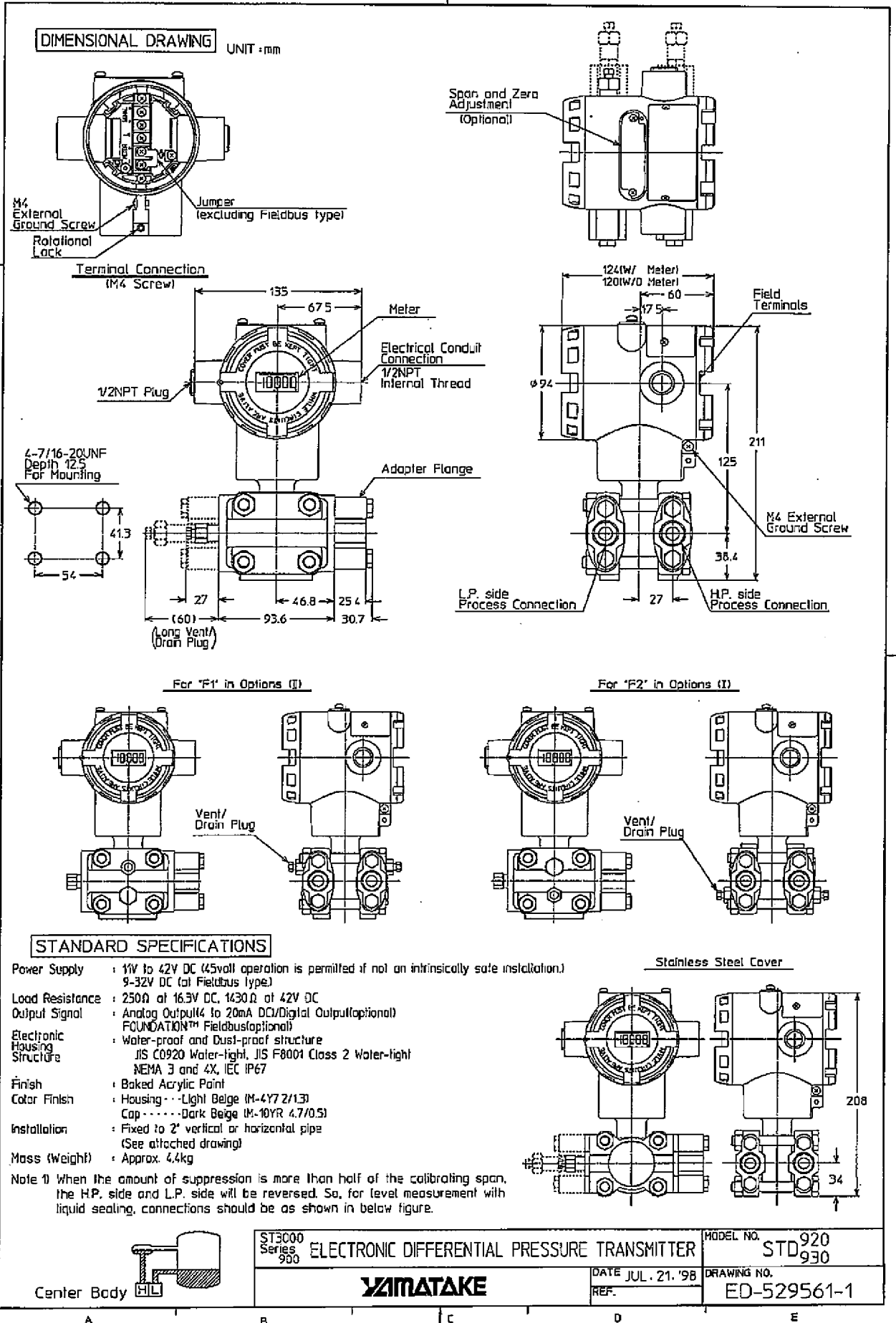


SPECIFICATION LIST

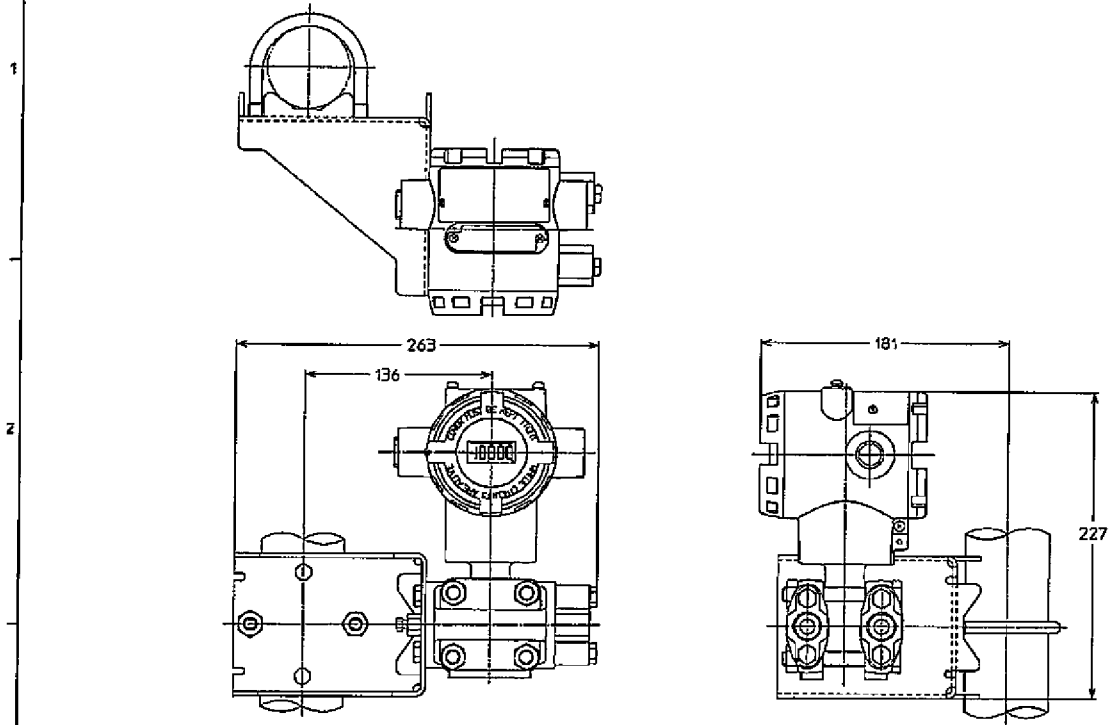
MODEL / NAME / SPECIFICATION	DRAWING No.	DWG. PAGE
<p>MODEL STD920-E1H-00000-PW-C7E9U1 NAME ST3000 S900 Electric Differential Pressure Transmitter (Standard Type) / Measuring Span : 0.75 to 100 kPa (75 to 10,160 mmH2O)</p> <p>-E : Material (Meter Body : SCS14A/SUS316 (Diaphragm:SUS316L) Cover/Wetted Parts of Center Body)</p> <p>1 : Fill Fluid : Regular type (Silicone OIL) H : Process Connection : Front Connection : 1/2NPT Internal Thread with Adapter Flange</p> <p>-00000 : Selection 2 : No Selection -P : Options 1 : Built-in Indicating Smart Meter (0 to 100% Liner Scale)</p> <p>W : Options 1 : SUS304 Bolt and Nut Material -C7 : Options 2 : Custom Calibration E9 : Options 2 : Carbon Steel Mounting Bracket U1 : Options 2 : SI Unit</p> <p>ACCESSORY MODEL MVG1-2SA-X-A NAME Manifold Valves Q'TY 1</p>	<p>ED-529561-1 ED-529561-3</p>	<p>P-1 P-2</p>
<p>R-PM349-41-011 Q'TY 1 TAG NO. : DPT8032 Range : 0-0.05MPa Process Connection : FRONT</p>	<p>ED-519031-1</p>	<p>P-3</p>
<p>R-PM349-41-021 Q'TY 1 TAG NO. : DPT8033 Range : 0-0.05MPa Process Connection : FRONT</p>		
<p>R-PM349-41-031 Q'TY 1 TAG NO. : DPT8034 Range : 0-0.05MPa Process Connection : FRONT</p>		
<p>R-PM349-41-041 Q'TY 1 TAG NO. : DPT8035 Range : 0-0.05MPa Process Connection : FRONT</p>		
<p>R-PM349-41-051 Q'TY 1 TAG NO. : DPT8036 Range : 0-0.05MPa Process Connection : FRONT</p>		
<p>R-PM349-41-061 Q'TY 1 TAG NO. : DPT8037 Range : 0-0.05MPa Process Connection : FRONT</p>		
<p>R-PM349-41-071 Q'TY 1 TAG NO. : DPT8046 Range : 0-0.05MPa Process Connection : FRONT</p>		



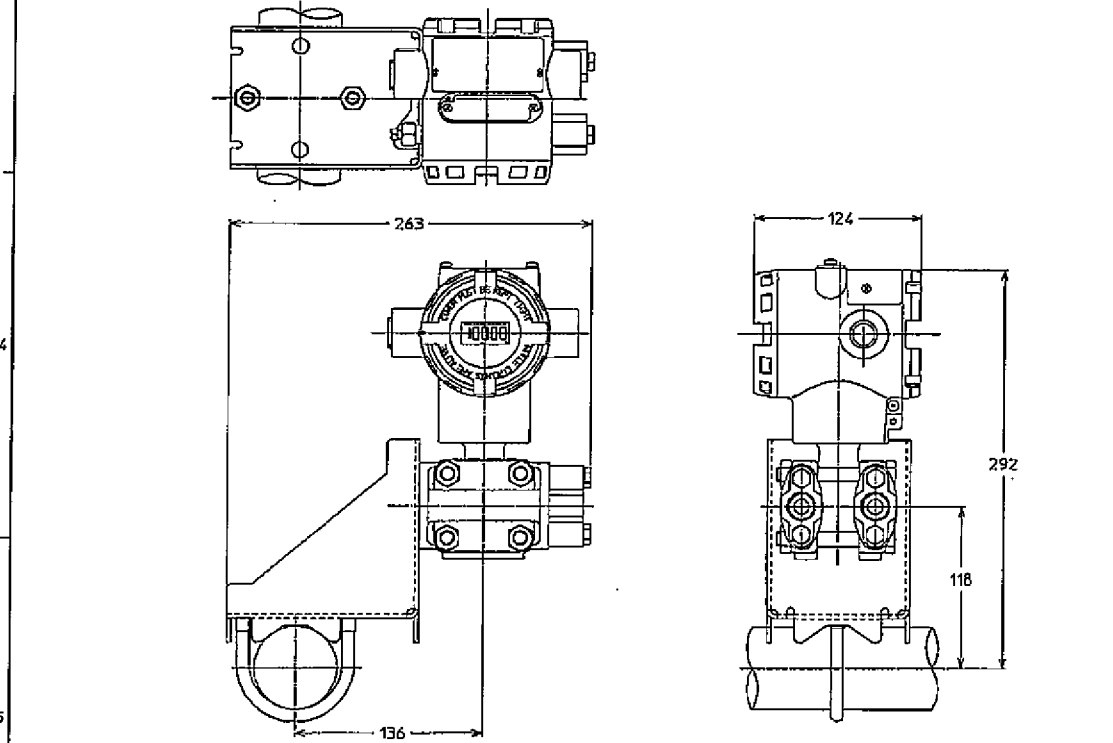


0	98-7-24	1. I. / K.N.	3	99-11-11	T.F.
1	98-12-1	K.Y. / K.N.	4	02-4-15	T.S. / K.N.
2	99-3-28	M.H. / K.N.	5	03-1-29	I. I. / K.N.
REV.					

DIMENSIONAL DRAWING UNIT : mm



For mounting on 2" vertical pipe



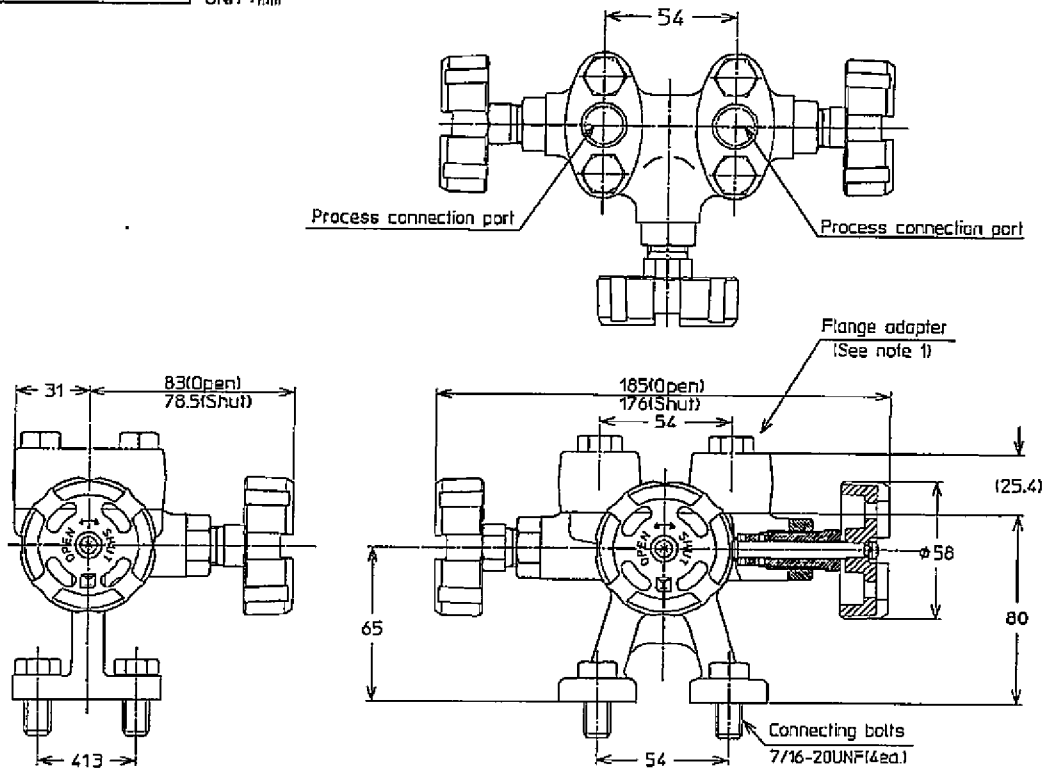
For mounting on 2" horizontal pipe

0	88-7-21	I.I./K.N.	3	...
1	98-12-1	K.Y./K.N.	4	...
2	5	...
REV				

ST3000 Series 900	FRONT CONNECTION MOUNTING DIAGRAM FOR DIFF. PRESS. TRANSMITTER	MODEL NO. STD 920 930
YAMATAKE		DRAWING NO. ED-529561-3
	DATE JUL. 21, '98	REF.

A B C D E

DIMENSIONAL DRAWING UNIT : mm



- NOTE 1. The flange adapter combined to the instrument body shall be used.
 2. The inner valve and sealed zone shall be coated with a very small amount of Fluoric oil (Daifol #10 or #20)

MODEL NUMBER TABLE

Basic Model Number	Selectable specifications		Options		Descriptions
	Body material	Connecting bolts	Body finish	I II	
MVG1					Manifold Valve (Special Type)
	-1				Carbon Steel (SF 440A)
	-2				Stainless steel (SUSF 316)
	-3				Stainless steel (SUSF 316) with oil free
	-5				Stainless steel (SUSF 316) with oil free and water free
	S				Connecting Bolts :SUS304
			A		When body material is carbon steel then Zinc-plating When body material is stainless steel then nothing
				-X	No options
				-X	No options
				-A	Assemble to instrument

STANDARD SPECIFICATIONS

Operating pressure range : -1 to +140kgf/cm²
 (-0.098 to 13.7MPa)
 Operating temperature range : -40 to +120°C
 Test pressure : 210kgf/cm² (20.6MPa)
 Gaskets : Teflon
 Mass (Weight) : Approx. 3.1kg

0	195-1-15	NM./YN	3	03-2-14	SF./T.F.
1	196-2-13	SA./SK.	4		
2	01-10-5	T.F.	5		

MANIFOLD VALVE (DIRECT MOUNTING TYPE)		MODEL NO.
		MVG1
		DRAWING NO.
DATE JUN 15, 1995	ED-519031-1	
REF.		

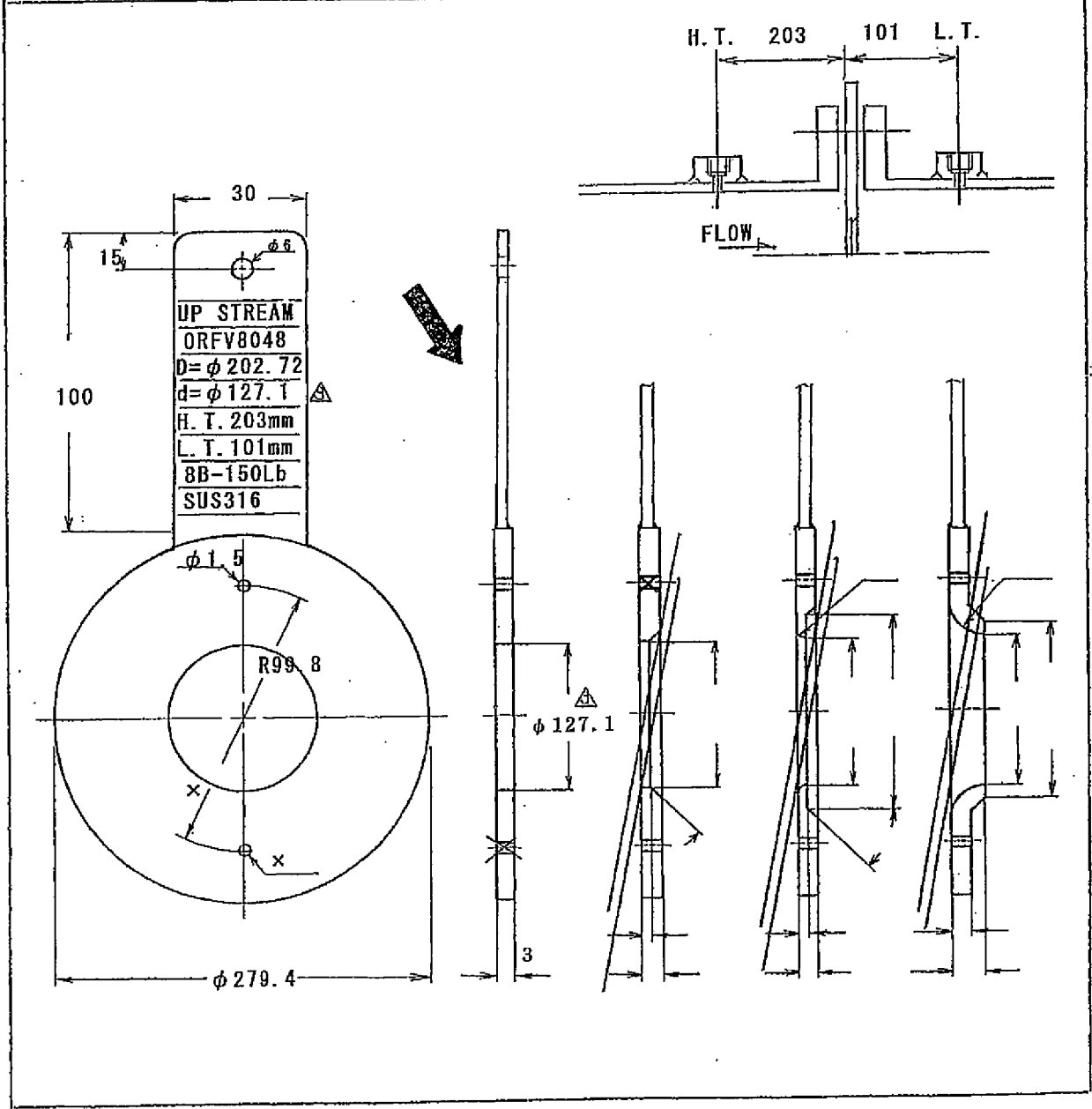
A B C D E

Job No. AG-1217-9

ORIFICE PLATE


TAG NO. ORFV8048

FLUID	Direct water	LINE PIPE SIZE	8B
MAXIMUM FLOW	5000 Lt/min Δ	PIPE DIAMETER	$D = \phi 202.72$
NORMAL FLOW	4200 Lt/min Δ	ORIFICE RATIO	$\beta = d/D = 0.62708$ Δ
FLOW PRESSURE	1.0 MPa G	ORIFICE DIAMETER	$d = \phi 127.1$ Δ
FLOW TEMPERATURE	35 °C	ORIFICE MATERIAL	SUS316
DIFF. PRESSURE	0.049 MPa Δ	FLANGE RATING	8B-ANSI-150Lb
DENSITY (OPERATE)	995 kg/m ³	EDGE TYPE	CONCENTRIC SHAPP EDGE
VISCOSITY	0.7196 mPa · s	HIGH TAP LOCATION	203 mm
R.H at TEMP	—	LOW TAP LOCATION	101 mm
DIRECTION OF FLOW	HORIZONTAL - VERTICAL	MINIMUM LENGTH OF STRAIGHT PIPE	H. T. APPENDIX
CALCULATION TYPE	JIS - ASME - DIN - SHELL		L. T. APPENDIX
QUANTITY	1 PC		



CALCULATION SHEET

2006-5-29

JOB NO.	AC-1217-9	TAG NO.	ORFV8048 
FLUID	LIQUID : Direct water	BASED ON	JIS Z 8762-1995
MATERIAL(UP STREAM)	SUS316	TAP TYPE	D-D/2 TAP
MATERIAL(ORIFICE)	SUS316	CONCENTRIC SHARP EDGE	

FLOW DATA

MAX.RATE OF FLOW	Q	300000.000	L/h
NOR.RATE OF FLOW	QA	252000.000	L/h
PIPE DIAMETER	D	202.72	mm
DIFF.PRESSURE	ΔP	49.033	kPa
PRESSURE	P	1.000	MPa G
TEMPERATURE	T	35.00	°C
DENSITY(OPERATE)	ρ_0	995.0000	kg/m ³
VISCOSITY	μ	0.7196	mPa·s

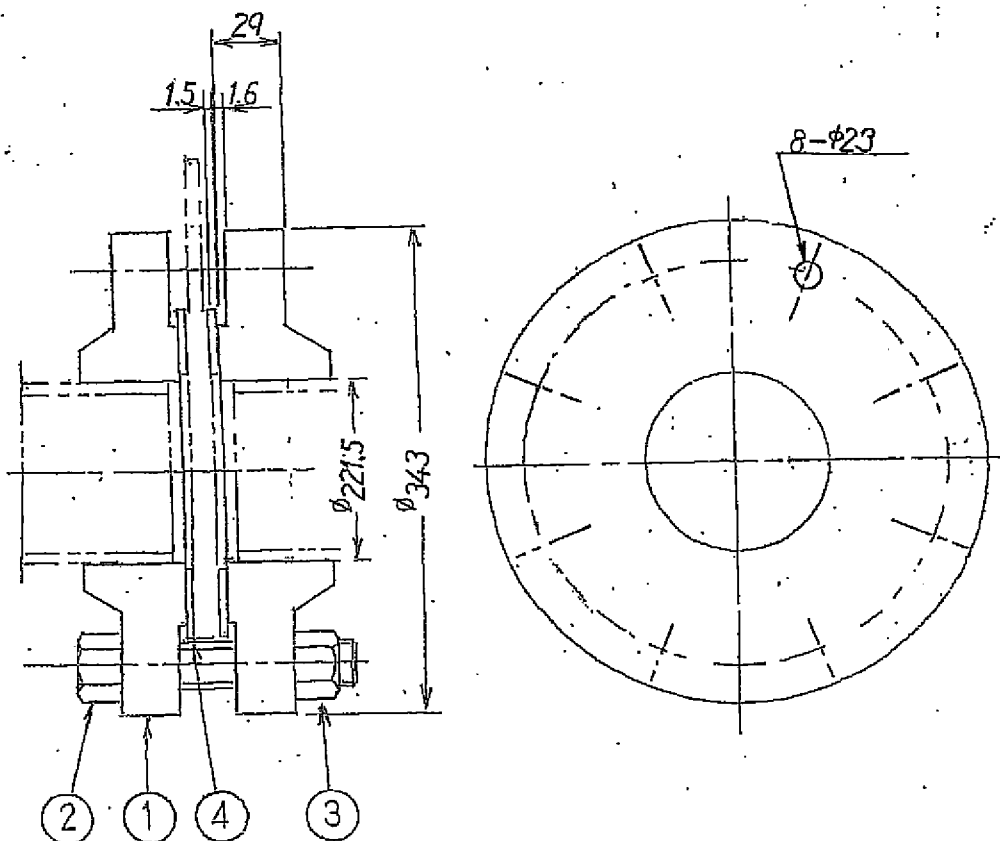
CALCULATION

REYNOLDS NUMBER (NOR.FLOW)	ReD	607755	
CONSTANT	C1	0.12645	
AREA CORRECTION (UP STREAM)	E1	1.00053	
AREA CORRECTION (ORIFICE)	E2	1.00053	
ORIFICE FACTOR	S	0.25993	
DISCHAGE COEFFICIENT	C	0.60775	
DIAMETER RATIO	β	0.62708	
ORIFICE DIAMETER	d20	127.1221	mm
HIGH TAP LOCATION	L1	202.7	mm
LOW TAP LOCATION	L2	101.4	mm
PRESSURE LOSS (MAX.FLOW)	PL	28.802	kPa
FLOW RANGE		17.0 ~ 100.0	%

(Deviation of the discharge coefficient is within $\pm 0.5\%$ in the Flow Range)

AOYAMA KOGYO CO.,LTD.

RATING	8B-ANSI50 Lb	JOB No.	AC-1217-9
DESIGN PRES.		TAG No.	ORFV8048
DESIGN TEMP.		Q'TY	1SET



		8				
		7				
		6				
		5				
		4	GASKET	V#6500	2	t1.5
		3	NUT	SUS304	8	UNC3/4
		2	BOLT	SUS304	8	UNC3/4xL100
		1	FLANGE	SUS316	2	8B-ANSI50 Lb
	REVISION	No.	PARTS NAME	MATERIAL	Q'TY	REMARKS
	DRAWN	CHK	APP	TYPE	ACCESSORIES ORIFICE PLATE	
青山工業株式会社 AOYAMA KOGYO CO., LTD				SCALE	DWG. No.	Rev.