FN-MASS FLOWMETER

FLOWMETER CALCULATION SHEET

1	DATE	2020년 4월 20일		
2	COMPANY	Golden Rules Co.,Ltd.		
3	MODEL	KC-7730OP		
4	OPERATING ELEMENT DATA			
5	FLUID	helium Gas	MOLE FRACTION	
6	FLUID STATE	Gas State	Helium	1.000000
7	MOLECULAR WEIGHT [g/mol]	4.002602		
8	THROAT DIAMETER at 20˚C [mm]	14.340		
9	PIPE INNER DIAMETER [mm]	23.900		
10	CONNECTION	KS 10K S0 STS304		
11	PIPE MATERIAL	STS304		
12	DEVICE MATERIAL	STS304		
13	STANDARD	D-5.0D Orifice		
14	PRESSURE LOSS COEFFICIENT	3.342545		
15	PRESSURE LOSS [kPa]	12.512931		
16	UPSTREAM CONDITION			
17	PRESSURE [kPa]	5470.00		
18	TEMPERATURE [˚C]	20.00		
19	VELOCITY [m/s]	15.980979		
20	PROCESS DATA			
21	MASS FLOW RATE [kg/h]	225.981836		
22	VOLUME FLOW RATE [m3/h]	25.810212		
23	NORMAL VOLUME FLOW RATE [Nm3/h]	1266.121815		
24	ENERGY FLOW RATE [MJ/h]	349.086127		
25	DIFFERENTIAL PRESSURE [Pa]	20000.00		
26	DENSITY [kg/m3]	8.755520		
27	VISCOSITY [μPa-s]	19.811636		
28	SONIC VELOCITY [m/s]	1031.886300		
29	REYNOLDS NUMBER(Re) [-]	168477		
30	ISENTROPIC EXPONENT [-]	1.704348		
31	COMPRESSIBILITY FACTOR [-]	1.025943		
32	SPECIFIC HEAT (Op) [Kj/KGk]	5.194818		
33	ENTHALPY [Kj/KG]	1544.753036		
34	UNCERTAINTY			

FLOW RATE	MASS FLOW ACCURACY[%]	PRESSURE DROP [Pa]	VELOCITY [m/s]	Re
m X 1.00		0.000000	0.000000	0
m X 0.75		0.000000	0.000000	0
m X 0.56		0.000000	0.000000	0
m X 0.24		0.000000	0.000000	0

NOTE :