

Client Project Unit Location	NIS A.D. Novi Sad Kalkulacija 60FQIT-29M			3051SFC COMPACT ORIFICE FLOWMETER Specification		Sheet		of	
						Spec No.		Rev.	
						Contract		P.O.	
						Req.		BY	
						CHK'D		APPR.	
GENERAL	1	Tag No.	60FQIT-29M						
	2	Description of Service	MERENJE PROTOKA KONDENZATA SP-2604						
	3	PID No. Line Number							
PROCESS CONDITIONS			Minimum	Normal	Maximum	Full Scale	Unit		
	4	Flow Rates	15000.000	25000.000	30000.000	36000.000	kg/hr		
	5	Pressure	12	15	16	17.000	bar-g		
	6	Temperature	50.00	100.00	150.00	160.00	C		
FLUID DATA	7	Fluid name	WATER						
	8	Fluid State	Liquid						
	9	Density @ Operating @Base	958.84581 kg/m3						
	10	Specific Gravity @Operating @Base							
	11	Molecular Weight							
	12	Operating Viscosity	0.28203 cP						
	13	Isentropic Exponent							
	14	Compressibility @Operating @Base							
	15	Vapor Pressure	14.687	psia					
	16	Maximum Permanent Pressure loss	111.012	mbar					
	17	Base Pressure Base Temperature							
	18	Atmospheric Pressure	14.696	psia					
Differential Pressure			Minimum	Normal	Maximum	Full Scale	Unit		
	19	Differential Pressure	49.328	137.613	198.424	286.078	mbar		
ORIFICE FLANGE & FITTING	20								
	21	Flange Type Rating Material							
	22	Connection Nominal Size							
	23	Connection Style	Horizontal						
ORIFICE PLATE	24	Tap Size Tap Orientation							
	25	Plate Type	Square Edged						
	26	Beta ratio d/D	0.650						
	27	Orifice Bore	0.997 inch						
	28	Plate Outside diameter							
METER TUBE	29	Plate Thickness Plate Material	316 SST						
	30	Line Size	3 in (80 mm)						
	31	Pipe Schedule Pipe Material I.D	40	Carbon Steel	3.068				
	32	Mounting Bolt Length							
	33	Remote Adapters							
	34	Bolts							
OPTIONS	35	Wetted Materials							
	36	Cleaning							
	37	Material Traceability							
	38	Bore Calculation Sheet							
	39	Special Bore							
	40	Manufacturer	Rosemount						
	41	Model Number	3051SFC1CS030N065T32JA1A3WCQ4M5						
NOTES	42								
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This report is provided according to the terms and conditions of the Instrument Toolkit(TM) End-Use Customer License Agreement.

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ROSEMOUNT INC.

3051SFC COMPACT ORIFICE FLOWMETER

CALCULATION DATA SHEET



GENERAL DATA

Customer: NIS A.D. Novi Sad
 Project: Kalkulacija 60FQIT-29M
 S. O. No:
 P. O. No:
 Calc. Date:
 Model No: 3051SFC1CS030N065T32JA1A3WCQ4M5
 Tag No: 60FQIT-29M

PRODUCT DESCRIPTION

Bore Type:		Tap Type:	
Nominal Beta:	0.65	Tap Location:	
Plate Type:	Conditioning Orifice Plate	Line Size:	3 in (80 mm)
Plate Material:	316 SST	Pipe Schedule:	40
Meter Schedule:		Pipe Material:	Carbon Steel
Process Connection:			

INPUT DATA

Fluid Type:	Liquid	Calibration Factor (Fc):	1.0000
Fluid Name:	WATER		
Pipe I.D.:	3.068 inch	Base Pressure:	
Pressure at Flow:	15.000 bar-g	Base Temperature:	
Temperature at Flow:	100.00 C		
Absolute Viscosity:	0.28203 cP	Base Density:	
Isentropic Exponent:		Atmospheric Pressure:	14.696 psia
Compressibility at Flow:			
Density at Flow:	958.8458 kg/m3		
Flow Rates:			
Minimum:	15000.00 kg/hr		
Normal:	25000.00 kg/hr		
Maximum:	30000.00 kg/hr		
Full Scale:	36000.00 kg/hr		

CALCULATED DATA

(Calculation Performed at Normal Conditions.)

Typical Orifice Hole Size:	0.997 inch	Pipe Reynolds Number (Normal):	401947
Calculated Orifice Bore Size:	1.994 inch	Gas Expansion Factor:	1.0000
DP at Min Flow:	49.328 mBar	Permanent Pressure Loss	
DP at Normal Flow:	137.613 mBar	at Normal Flow:	76.96 mBar
DP at Max Flow:	198.424 mBar	at Max Flow:	111.01 mBar
URV (DP at Full Scale):	286.078 mBar	Velocity at Max Flow:	1.82 m/sec
Beta:	0.6499		
Discharge Coefficient:	0.6065		
Pipe Sch Adjustment Factor:	1.000		

Pipe ID (thermally corrected)	3.071 inch	Bore Size (thermally corrected)	1.997 inch
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GUIDELINES

Primary Element Min Limit of Use	1715.73 kg/hr	Min Recommended Pipe Reynolds:	5000.0
Max. Allow. Pressure @ Temp:	75.9 bar-g	160.00 C	Recommended Min DP:
Design Pressure/Temperature:	17.000 bar-g	160.000 C	Max. Allow. Temp.:
			232.222 C

WARNINGS

NOTES