

## WINFLOW 2.75 (K) Diff. Pressure Calculation ITABAR - Flow - Sensor

Company: Yokogawa  
 Name(capital letters): Mr Cadrot  
 Street:  
 Zip Code/City:  
 Offer-/Com. No:  
 P. Order Number:  
 Tag No.:  
 Serial No.:  
 Pipe Data: ID=40,00/3,00 mm - horizontal  
 Date: 17/10/2011  
 Person in charge

Calculation: Mass rate Gas & steam  
 Fluid: Carbon dioxide

Pipe Internal Dimensions: 40.000 mm  
 Flowing Temperature: -27.000 °C  
 Flowing Pressure: 22.000 bar G  
 Density: 37,96 kg/m3  
 Viscosity: 0,02 cPs  
 K-Factor: 0.4505 without unit

Base Temperature	273,15 Kelvin
Base Pressure	101,33 kPa

density corrected value: 0

Comp. factor at operating cond. : 1,0000  
 Comp. factor at norm cond. : 1,0000  
 Ratio of Specific Heat: 1,30

	QMax	QNorm	QMin	
Flow Rate	2,500.00	1,343.00	806.00	kg/H
Reynolds No.	1,364,198	732,847	439,817	without unit
Permanent press. loss	59.510	17.170	6.180	mbar
Expansionsfactor	1.000	1.000	1.000	without unit
Velocity:	14.56	7.82	4.69	m/sec.
<b>Differential Pressure</b>	<b>191.971</b>	<b>55.387</b>	<b>19.948</b>	<b>mbar</b>

Itabar-Type: IBR20  
 Material Sensor 316SS  
 Note:

Max. DeltaP	3,139.20 mbar	Max. Flow Rate	10,111.18 kg/H
Natural Freq.:	6,949.10 hz	Operat. Freq.:	1,708.71 hz