



INTRA-AUTOMATION GmbH - Postfach 10 03 27 - D-41487 Grevenbroich

Yokogawa France S.A.S.
Vèlizy Valley
Mr. Gerber
17, rue Paul Dautier BP 267

78140 Vèlizy-Villacoublay
FRANKREICH

QUOTATION

offer no.: 10/26226

Date 18.01.2010
our reference EE-ej

e-mail:

Your inquiry : 04.01.2010 / Your inq. to our Mr. Houllier

Dear Mr. Gerber,

We thank you for your inquiry and are pleased to submit the following quotation acc. to our general conditions for sales and distribution:

item	description	quant.	price each EUR		total amount EUR
001	ITABAR-FLOW-SENSOR type: IBF-25-ID230/12mm-D-B70-0-0-0-0-KI-HL-T0- A03-A63 sensor material: PVDF sensor flange: 1 1/2" ANSI 150# FF instrument connection: 1/2" NPT with 2 off shut-off- valves mat. PVDF without mounting stud	1	1.922,00	net	1.922,00

Please find flow calculation sheet.

Pricing: ex works, packing extra.

Terms of payment: 30 days net.

Delivery time: 6 weeks after receipt of order and clarification of technical and commercial matters.

Instruments made by Intra-Automation GmbH are not subject to any restrictions for Im- or Export by EU-, German or US-law.

Standard documentation 1-fold included in price for each type of instrument.

Validity of quote: 60 days.

Should you have any further questions do not hesitate to contact us.

Yours faithfully

INTRA-AUTOMATION GmbH

Ernst Evers

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Kto.-Nr. 891 535 000
IBAN:
DE 94 310 800 150 891 535 000
SWIFT-BIC: DRES DE FF

Geschäftsführer
Ernst Evers
Handelsregister HRB 7395
Amtsgericht Mönchengladbach
UST.-ID-Nummer:
DE 811 214 588

INTRA-AUTOMATION GmbH

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

Company: Yokogawa
Name(capital letters):
Street:
Zip Code/City:
Offer-/Com. No: 10/26226
P. Order Number:
Tag No.:
Serial No.:
Pipe Data: ID=230,00/12,000 mm - horizontal
Date: 15.01.2010
Person in charge E,E,

Calculation: Volume Rate of Flow Gas(Operating Cond.)
Fluid: Gas mixture

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

Pipe Internal Dimensions to 20°C 230,00 mm

Flowing Temperature: 30,000 °C
Flowing Pressure: 1,300 bar G
Density: 1,400 kg/Nm3 Op. Density: 2,88
Viscosity: 0,0180 cPs
K-Factor: 0,6109 without unit

Comp. factor at operating cond. : 1,0000
Comp. factor at norm cond. : 1,0000
Ratio of Specific Heat: 1,40

	QMax	QNorm	QMin	
Flow Rate	1.500,00	1.200,00	300,00	m3/H
Reynolds No.	368.961	295.169	73.792	without unit
Permanent press. loss	0,460	0,300	0,020	mbar
Expansionsfactor	1,000	1,000	1,000	without unit
Velocity:	10,03	8,02	2,01	m/sec.
Differential Pressure	3,788	2,424	0,151	mbar

Itabar-Type: IBF-25-ID230/12mm-B70-0-0-0-0-KI-HL-T0-A03-A63
Material Sensor PVDF
Note:

Max. DeltaP 35,40 mbar Max. Flow Rate 4.586,15 m3/H
Natural Freq.: 191,51 hz Operat. Freq.: 3,95 hz

Your specialist for measuring level and flow