

# FLOWRATE MEASURE PROBE DEBIX serie



- For pipes: ND 15 up to ND 3000
- Very low pressure loss
- Flow = (f)  $\sqrt{\Delta P}$
- For liquids, gazs and steams
- Permanent accuracy  $\pm 1\%$
- Excellent repeatability: 0.1 %
- Proof against impurities
- Fast installation

## GENERALITIES

The main advantages in regard of other primary flow sensor as ventury tube and orifice plate are very characteristic.

DEBIX flow sensor can be used on all usual such liquids as water, petrol, oil or such gases as air, butane. Over heated or saturated steam flowrates can be measured to make energy balance.

The DEBIX probe allows measures in all kind of pipe such as carbon steal or concrete and all various forms (circular, square or rectangular).

## PRINCIPE

Flow =  $f(\sqrt{\Delta P})$  - Extension of Bernoulli theorem.

## DESCRIPTION AND FUNCTIONING

HP side: static P + dynamic P

Facing the flow, 4 ports are localised cutting the surface in 4 sections of equal flowrate. These 4 measured pressures are averaged and get added with static pressure into the pipe.

LP side: static P

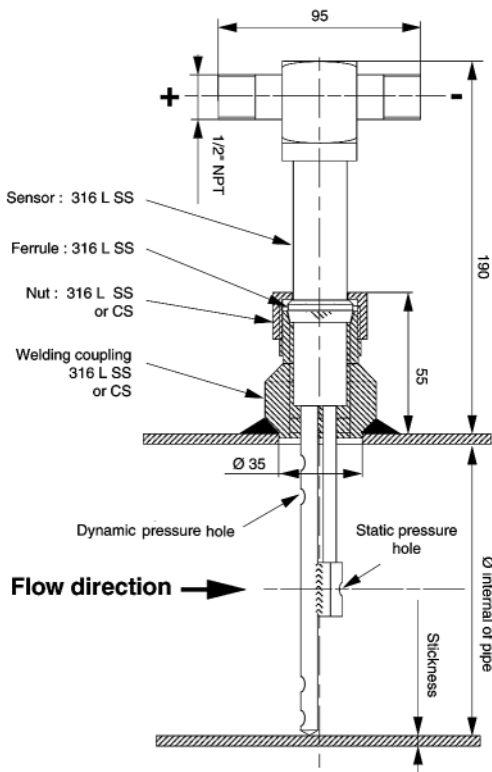
Opposite flow, a 5th port get static pressure .

So, on the connection head, it is possible to get a differential pressure image of the flow as:

$$\Delta P = (HP - LP) = \text{stat. P} + \text{dyn. P} - \text{stat. P} = \text{dyn. P}$$

## COMPLETE MEASURING LINE

- 1) DEBIX flow sensor (following: pipe DIA and general conditions)
- 2) 2 insulation ball valves for High and Low Pressures (or manifold).
- 3) 1  $\Delta P$  electronic measure transmitter with 4-20 mA output, coupled with  $\sqrt{\quad}$  extractor.
- 4) 1 indicator + calculator, totalizer...



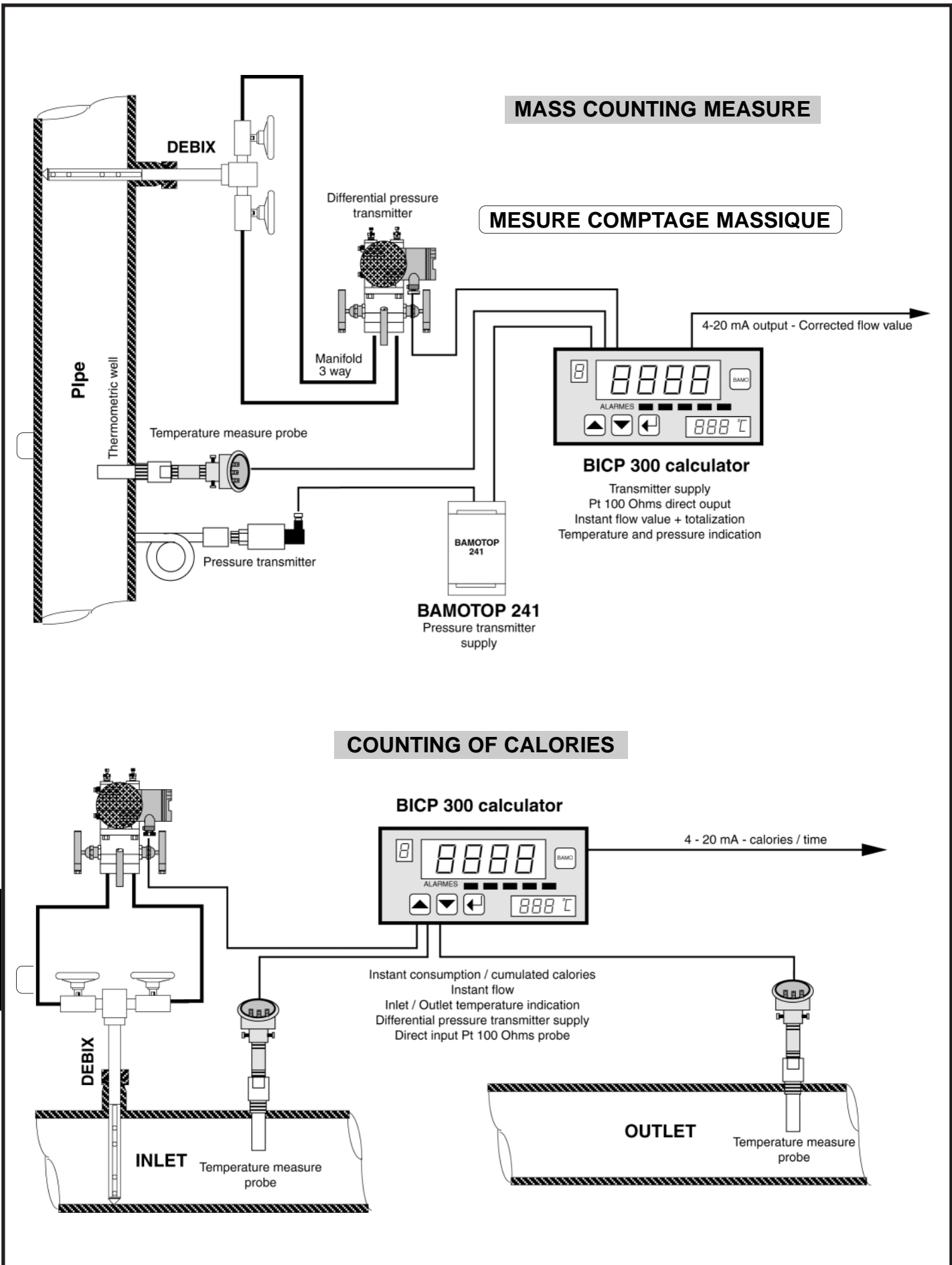
# BAMO MESURES

22, Rue de la Voie des Bans - 95 100 ARGENTEUIL - FRANCE  
Tél : (+33) 01 30 25 83 20 - E-mail : info@bamo.fr  
Fax : (+33) 01 34 10 16 05 - Site : http://www.bamo.fr

FLOW SENSOR  
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# FLOWRATE MEASURE PROBE DEBIX RO 215 - 220 - 225 - 226

## TECHNICAL CHARACTERISTICS

Manufacture : 316 L Stainless steel  
 Connection : 1/4" or 1/2" M NPT  
 Fixing : Iron steel welding coupling with compression ferrule  
 Accuracy :  $\pm 1\%$   
 Repeatability : 0,1 %  
 Max. pressure : 16 bar (for P > 16 bar : see RB series)  
 Max. temperature : 400 °C

## OPTIONS - ACCESSORIES

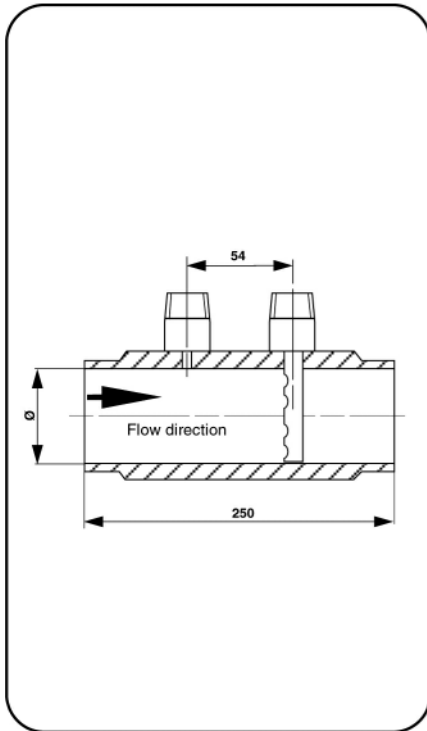
Connection : 1/4" M NPT  
 Fixing : Stainless steel welding coupling with compression ferrule  
 Ball valve : According to operating conditions  
 Needle valve : ..... identical .....  
 3 way manifold : ..... identical .....

## RB 215 - 220 - 225 - 226 DEBIX Serie

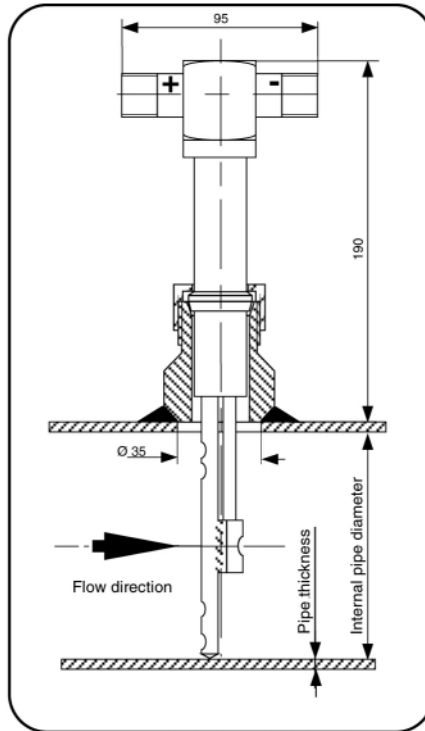
Max. pressure : 40 bar  
 Max. temperature : 400 °C  
 Fixing : By mounting flanges DN 32 PN 40  
 Max. flowrate : The same as RO serie

## MAXIMUM FLOWRATE

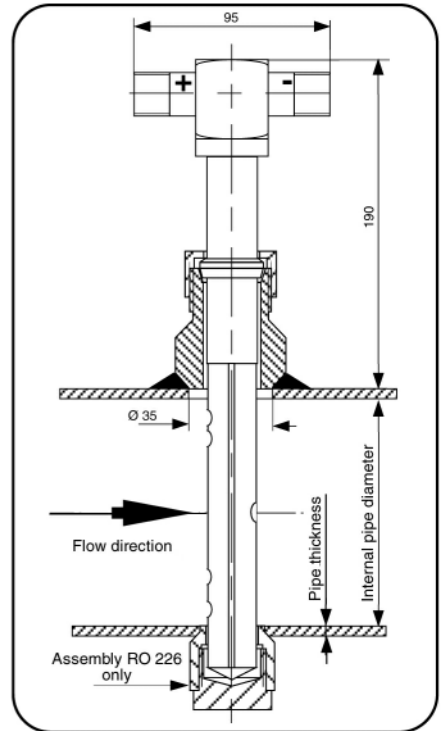
int. Ø	Flow in m3/h - Water - 20 °C			
25	30			
35	40			
40	50			
50		80		
60		100		
75		120		
90		150		
100		170		
125		220		
150			690	
200			950	
250			1220	
300			1480	2880
350			1730	3360
400			1980	3850
450			2220	4320
500			2460	4800
600			2890	5800
750			3580	7340
900			4610	8650
1050			5440	9940
1200				11590
1500				14330
1800				18470
	RO 215	RO 220	RO 225	RO 226



DEBIX RO 215



DEBIX RO 220



DEBIX RO 225 / 226

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# STEAM FLOWRATE MEASURE PROBE DEBIX ROV 215 - 220 - 225 - 226

## TECHNICAL CHARACTERISTICS

Manufacture : 316 L Stainless steel  
 : Condensing cup: Iron steel (std)  
 : Insulating taps: Iron steel (std)  
 Connection : 1/2" F NPT on condensing cup  
 Fixation : Iron steel welding coupling with compression ferrule  
 Accuracy :  $\pm 1\%$   
 Repeatability : 0,1 %  
 Max. pressure : 16 bar (for P > 16 bar : see RBV series)  
 Max. T° C : 400 °C

## OPTIONS - ACCESSORIES

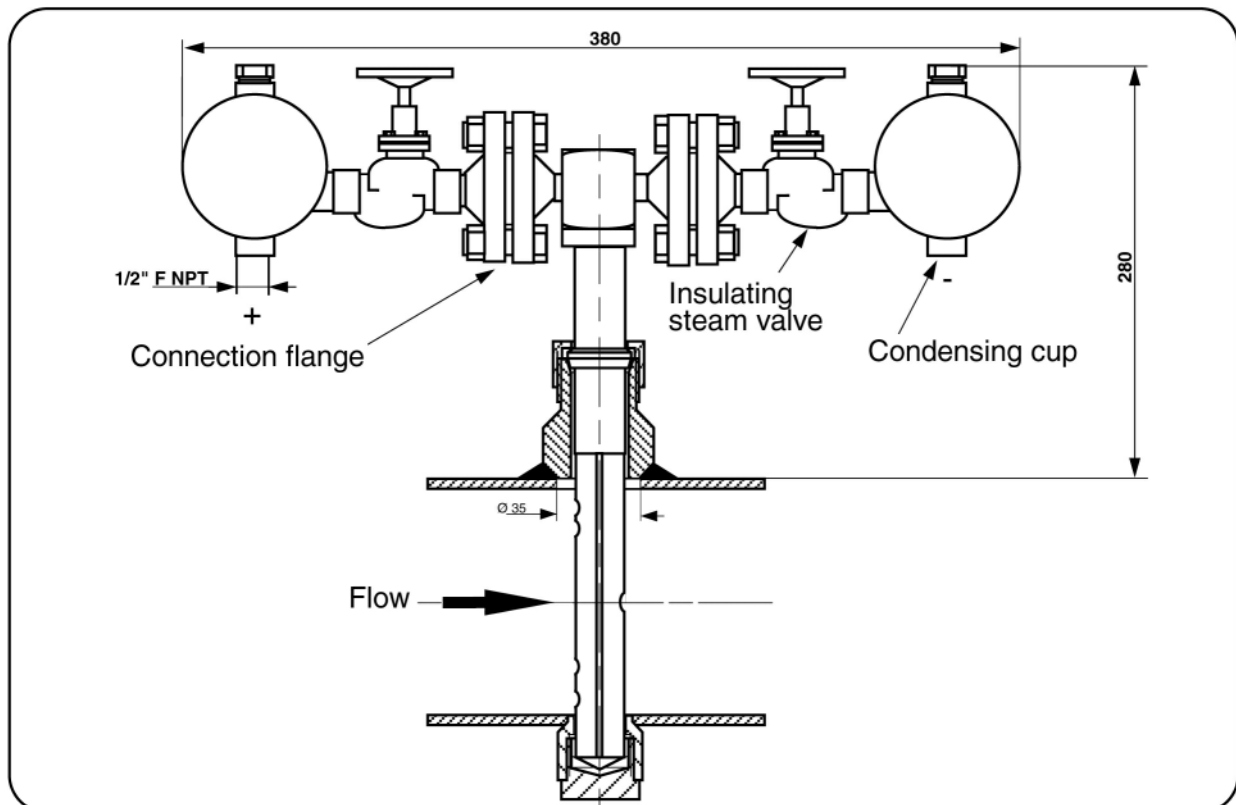
Fixing : 316 L stainless steel welding coupling with compression ferrule  
 Insulating taps : Stainless steel

## RBV 215 - 220 - 225 - 226 DEBIX Serie

Max. pressure : 400 bar  
 Max. T° C : 400 °C  
 Fixing : Nipple and flanges ND 32 PN 25 up to PN 400  
 $\Delta P$  Max. : The same as RO serie

## $\Delta P$ MAX. DIFFERENTIAL PRESSURE

int.Ø	Differential pressure in mbar			
25	3000			
30	1500			
40	1000			
50		1250		
60		800		
75		520		
90		400		
100		300		
125		200		
150			1250	
200			750	
250			500	
300			350	1250
350			250	900
400			20	700
450			150	550
500			100	450
600			70	300
750			50	200
900			40	150
1050			35	125
	ROV 215	ROV 220	ROV 225	ROV 226



DEBIX RO 225 WITH CONDENSING CUPS

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# FLOWRATE MEASURE PROBE DEBIX RF 110 - 112 - 113 - 118

## TECHNICAL CHARACTERISTICS

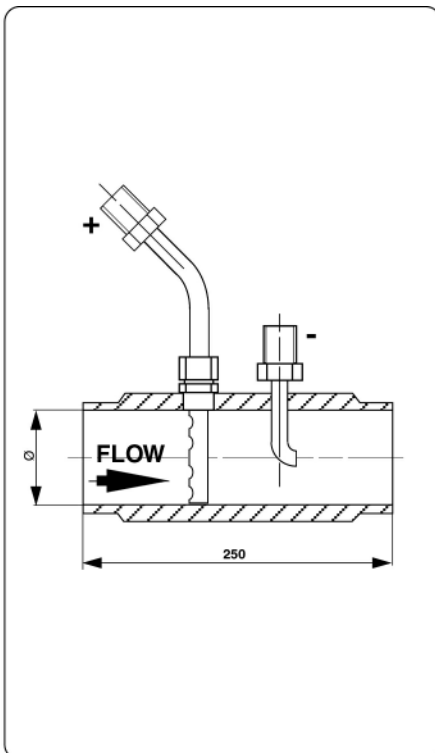
Manufacture : 316 L stainless steel  
 Connection : 1/4" M NPT  
 Fixing : According to type  
 Accuracy :  $\pm 3\%$   
 Repeatability : 0,3 %  
 Max. pressure : 16 bar  
 Max. temperature : 200 °C

## OPTIONS - ACCESSORIES

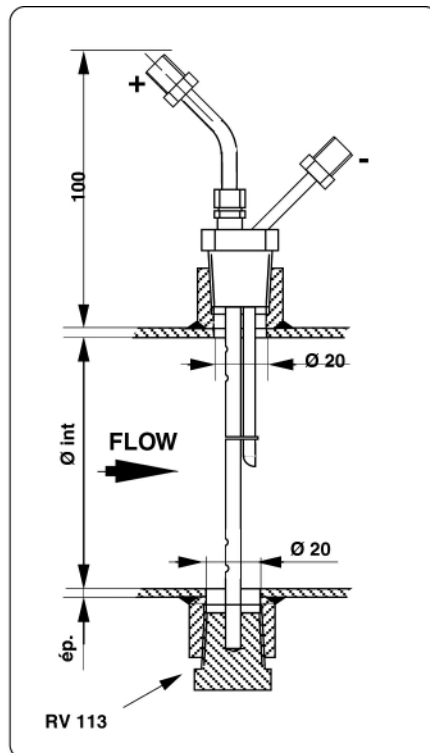
Connection : 1/2" M NPT  
 Ball valve : According to operating conditions  
 3 way manifold : ..... identical .....

## MAXIMUM FLOWRATE

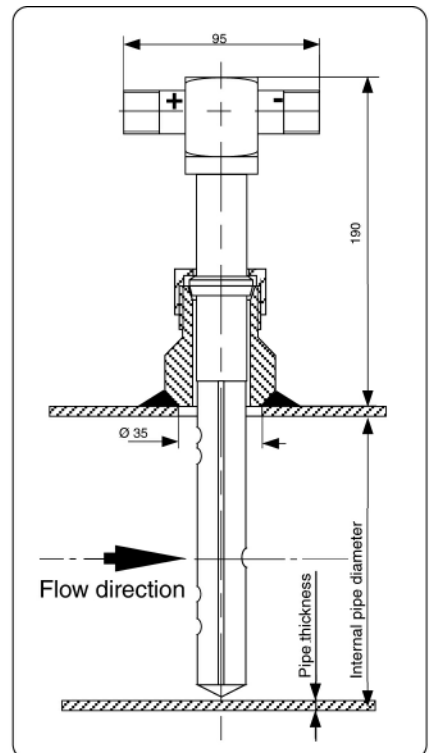
int. Ø	Flow in m <sup>3</sup> /h - Water 20 °C			
	RF 110	RF 112	RF 113	RF 118
25	30			
30	35			
40	45	70		
50	65	89		
65	90	125		
75		135	295	
90		155	350	
100		175	390	
125		220	490	
150		265	590	820
175		300	640	950
200		350	790	1200
225		410	910	1350
250		510	1020	1500
300		650	1220	1840
400				2400
550				3090
600				3890
	RF 110	RF 112	RF 113	RF 118



DEBIX RF 110



DEBIX RF 112 - 113



DEBIX RF 118

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