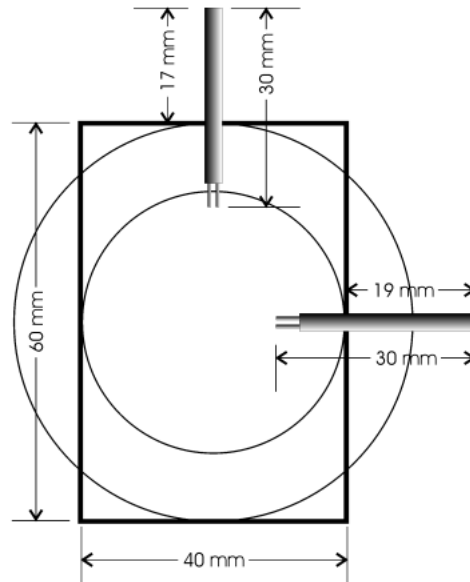


Calculating rectangle profiles

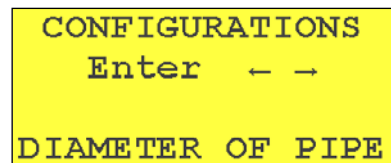
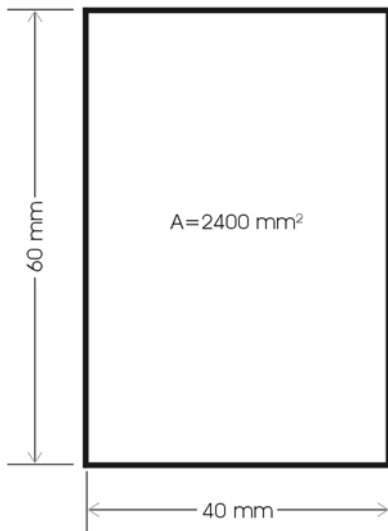
When using a rectangle profiled tube, some calculations for the configuration of the SF-586a are necessary. For better understanding we use the following *test-channel*.



■ Configuration of the diameter input (example):

1. Calculating the surface of the rectangle tube profile:

$$A = a \cdot b = 40\text{mm} \cdot 60\text{mm} = 2400\text{mm}^2$$



2. Calculating, with this surface (2400mm^2), of the diameter of a circle tube profile:

$$d = 1,1284 \cdot \sqrt{2400\text{mm}^2} = 55,3\text{mm}$$

The value 55,3mm is the input for the *DIAMETER OF PIPE*-menu in the SF-586a.

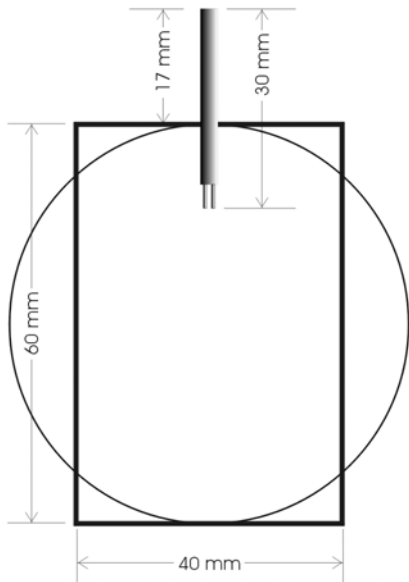
■ Calculating the install length (example):

1. Installing on the small side, caculated with a diameter of 60mm:

install length (E) = 17mm

sensor surface (A) = 47mm²

The 47mm² is the input for the SENSORAREA-menu in the SF-586a.



Calculations at norm conditions

60	[mm]	(D) Inner pipe diameter
1	[mm]	(S) Wall thickness
30	[mm]	(L) Sensor length
12	[mm]	(M) Sensor diameter
START		
17	[mm]	(E) Install length
47	[mm ²]	(A) Sensor surface
600.44	[Nm ³ /h]	Volume flow at 60m/s

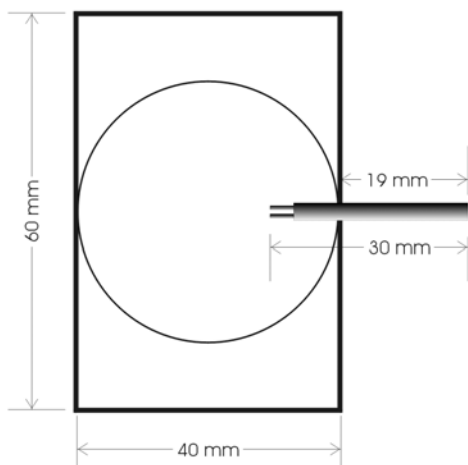
CONFIGURATIONS
Enter ← →
SENSORAREA

2. Installing on the long side, caculated with a diameter of 40mm:

install length (E) = 19mm

sensor surface (A) = 38mm²

The 38mm² is the input for the SENSORAREA-menu in the SF-586a.



Calculations at norm conditions

40	[mm]	(D) Inner pipe diameter
1	[mm]	(S) Wall thickness
30	[mm]	(L) Sensor length
12	[mm]	(M) Sensor diameter
START		
19	[mm]	(E) Install length
38	[mm ²]	(A) Sensor surface
263.13	[Nm ³ /h]	Volume flow at 60m/s

CONFIGURATIONS
Enter ← →
SENSORAREA