ISOPIPE®
Insulation Calculator

New User Friendly App
for Tablet & Smartphones

User's Guide

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ISOPIPE®

Insulation Calculator

Contents

Instructions are in the form of use for both Tablets and Smartphones.

1. Introduction

ISOPIPE S.A.'s ISOPIPE Insulation Calculator has been developed to offer exact measurements for Certified Insulation, *ISOPIPE TC* (NBR) and *ISOPIPE HT-HF* (EPDM).

Through the Program's Calculations you receive many recommendations towards energy savings.

ISOPIPE Insulation Calculator Highlights:

✔ The app **works Offline**, online use while sending the PDF file

✔ **Save** the **Calculation** inside the Program

✔ More than **2000** Calculations can be Saved and seen any time

✔ **Send** the Calculation in any **Email** address in PDF form

✔ **Send** Multiple Saved Calculations in a **Single PDF** file

✔ **Translated in 8 languages**

✔ **Download it for free in** *Apple Store & Google Play Store* (See Table 01)

Table 01: Operating Systems	
Program	**Operating System**
Android	ARMv7/x86 processor with vector FPU, minimum 550MHz, OpenGL ES 2.0, H.264 and AAC HW decoders Android™ 4.0 and above
iOS	iOS 9 and above

You can download the Program from the following IP addresses or scan the QR Code.

Apple Store - Operating System iOS

https://itunes.apple.com/WebObjects/MZStore.woa/wa/viewSoftware?id=1300182351&mt=8

Google Play Store - Operating System Android

https://play.google.com/store/apps/details?id=air.eu.isopipe.IsopipeInsulationCalculator

For Online application use, please visit http://calculator.isopipe.eu

2. Instruction for Use

The program consists of five (5) Sections:
2.1 *Settings* (⚙)
2.2 *Calculator* (⊞)
2.3 *Calculations* (▦)
2.4 *Products* (⋇)
2.5 *Company* (**3i**)

Calculator	Calculations	Products	3i Company

2.1 *Settings*

At the time when the program is installed in your device, then it is ready for use.

The program's default language is English. Moreover, our program has been translated and is fully operational in the following eight (8) different languages:
1. English,
2. French (Français),
3. German (Deutsch),
4. Greek (Ελληνικἀ),
5. Spanish (Español),
6. Italian (Italiano),
7. Russian (Русский) και
8. Turkish (Türk).

Additionally, the program is set by default to indicate the temperature in degrees Celsius (°C), or Fahrenheit (°F).

Both *Language* and *Temperature* can be modified in each Program's section, from the *Settings* button (See Symbol ⚙, See Picture 01).

Picture 01: Settings

In Picture 01 you can enter your Email Address or any other email address on which you wish to receive your *Calculations*.

2.2 Calculator

The **Calculator** Section is the program's key part.

In the particular section:
- Make calculations with respect to insulation's thickness fitting into a bare tube,
- Retrieve your calculations' results.

The particular section's, *Home Page*, is practically the program's **Input Parameters** (See Picture 02).

As you can see in Picture 02, you can choose:
- *Material: Pipe or Sheets/ Rolls,*
- *Insulation: TC or HT-HF,*
- *Environment: Indoor or Outdoor,*
- *Line Temperature,*
- *Ambient Temperature,*
- *Humidity,*
- *Pipe Outer Diameter*
- *Insulation Thickness*.*

*All fields are required except for Insulation Thickness.

The Calculation is based on Copper (CU) Pipe and Wall Thickness of 1mm.

After having completed all **Input Parameters** (See Picture 02), then you may proceed to the calculation, by clicking the red button *Calculate* (See Picture 03).

Picture 03: Input Parameters - Calculate

On the occasion one parameter has been filled in incorrectly, then you may click the *Clear* button (See Picture 04) and fill in the new parameters (See Picture 02).

Picture 04: Input Parameters - Clear

Please apply the following example for Pipe Insulation:

- *Material:* Pipe
- *Insulation:* TC
- *Environment:* Indoor
- *Line Temperature:* -20°C
- *Ambient Temperature:* +20°C
- *Humidity:* 75%
- *Pipe Outer Diameter:* 60 mm

Then, please click the button *Calculate* (See Picture 05).

Having selected the *Calculate* button, the program will automatically refer you to the *Results* section.

In the *Results'* section you may see the following:
- All options with insulation thicknesses from 6 mm to 50 mm,
- the Input Parameters, all data you have previously selected,
- the Heat Loss diagram Q/ L (W/ m) and
- the picture with insulation's design.

In *Results* section, you have the choice:
- To Save the Calculation and
- To Send the Calculation in any Email address in PDF form.

(See Picture 06).

Picture 06: Results**

ISOPIPE	Bare	6 mm	9 mm	13 mm	19 mm	25 mm	32 mm	40 mm	50 mm
Surface Temperature	-20 °C	8.44 °C	11.72 °C	14.12 °C	16 °C	17.03 °C	17.76 °C	18.28 °C	18.68 °C
Heat Loss Q/ L (W/ m)	-102.54	-35.57	-27.58	-21.61	-16.74	-13.94	-11.86	-10.3	-9
Energy Savings	0 %	65.31 %	73.1 %	78.92 %	83.68 %	86.41 %	88.43 %	89.95 %	91.23 %
Dewpoint	15.43 °C	15.43 °C	15.43 °C	15.43 °C	15.43 °C	15.43 °C	15.43 °C	15.43 °C	15.43 °C
Condensation	YES	YES	YES	YES	NO	NO	NO	NO	NO

For safety reasons, it is recommended that the Surface Temperature is one degree higher than the Dewpoint.

Save Calculation   Input Parameters   Send PDF

Heat Loss Q/ L (W/ m)

Bare	-102.54
6 mm	-35.57
9 mm	-27.58
13 mm	-21.61
19 mm	-16.74

ISOPIPE 25x60

Calculator   Calculations   Products   Company   3i

**In this section you have the option to choose each column, by clicking on the insulation thickness categories as presented in the picture above. Moreover, you may also choose the specific line you wish to read about, from the grey section presented at the left hand side.

2.3 Calculations

In the *Calculations* Section:

- More than 2000 Calculations can be Saved and seen any time
- Send the Calculation in any Email address in PDF form
- Send Multiple Saved Calculations in a Single PDF file
- Deleted your Calculations

In order to save a *Calculation*, in the *Results* section (See Picture 06), you click the **Save Calculation** button (See Picture 07).

Picture 07: Results - Save Calculation

Once you have clicked the *Save Calculation* button, then you get a new window, where you can name your *Calculation* (See Picture 08).

Picture 08: Save Calculation - File Name

Your calculations are saved alphabetically.

To retrieve your Calculations you may choose the third section named *Calculations*.

Once, the **Calculation Storage** threshold is approached, you get a warning message on your screen which states:

You have saved X calculations. Remaining Y calculations.

At the time when the **Calculation Storage Limit** is reached, the warning message you will get on your screen will state:

You have reached the maximum number of calculations. Delete to proceed.

Your saved *Calculations* **can be retrieved any time (no internet connection is required),** just by selecting the *Calculation* you need.

2.3.1 *Send Calculation*

Your *Calculations* can be send by email in the following ways:
1. Though the **Results** section (See Pictures 06 & 07), you can send the *Calculation*, without saving it in the *Calculations* section.
2. Save the file in the **Calculation** section (See Section 2.3).

Attention! Only through the *Calculation* **section you can send multiple Calculations.**

In case No. 1: We follow the procedure as presented in Section *2.2 Calculator*. According to Picture 06, we click the button *Send PDF*, after having set our Email address in *Settings* (See Picture 01).

In case No. 2: You first save the *Calculation* as presented in Section *2.3 Calculations*, and then, just send the *Calculation* to your Email. .

All saved *Calculations* **are presented alphabetically in list form and they all have an indication of the date entered** (See Picture 09)**.**

Picture 09: Calculations
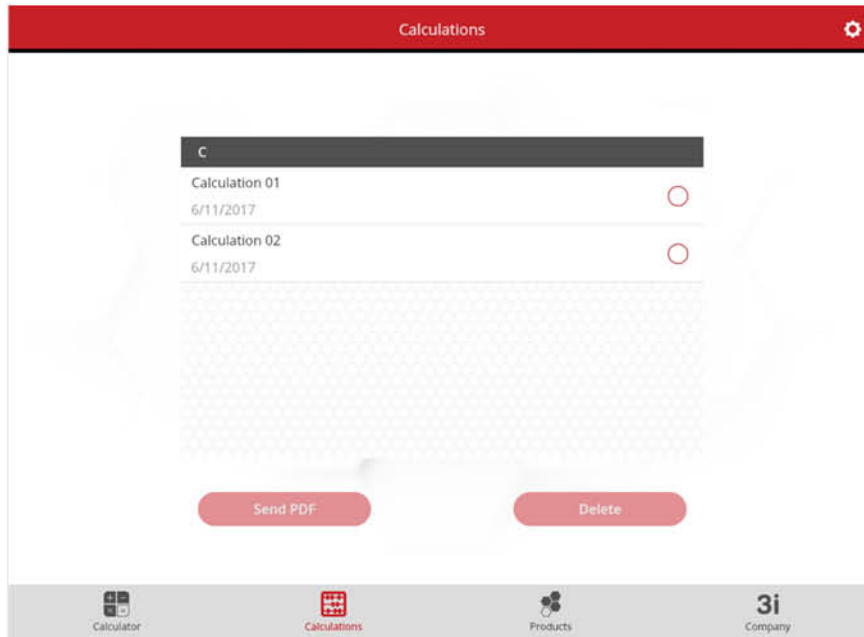
Send a Single Calculation: We just click on the circle presented on the right hand side of each saved calculation. Then, we click the button *Send PDF* (See Picture 10).

Send Multiple Calculations: You follow the same procedure as you were about to send a *Single Calculation*, however, in this case you just click multiple saved calculations (See Picture 10).
Attention! The recipient will receive a single PDF file containing all *Calculations* previously performed.

Picture 10: Send Calculations
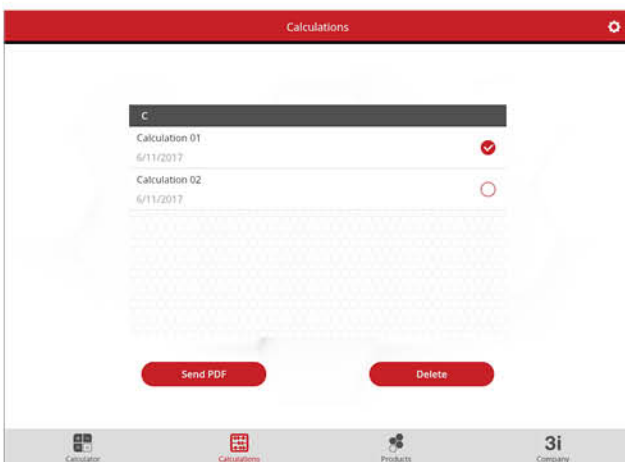
Send a Single Calculation

Send Multiple Calculations

2.3.2 PDF File

PDF file's dimension is A4 (210 mm x 297 mm).

Once you try to send your *Calculation* through the **Results** section (See Picture 06), then, the PDF file will not have a specific name (See Picture 11).

When you send your *Calculation* through the **Calculations** section (See Pictures 08, 09 & 10), the file has a header with the name you have previously selected for your *Calculation* (See Picture 11).
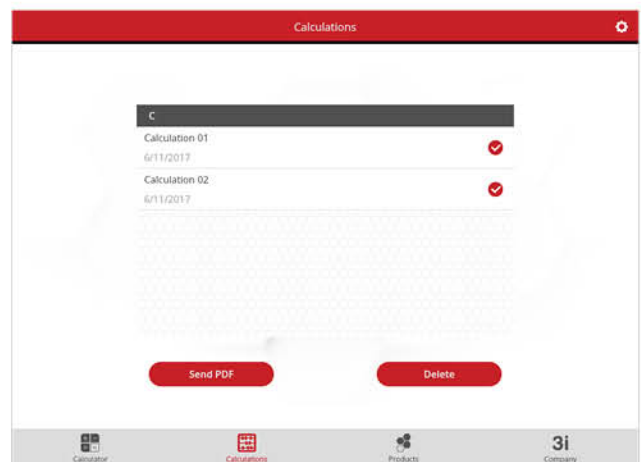
In the PDF file you may find:

* *Input Parameters*
* *Results Table*
* *Heat Loss Chart*

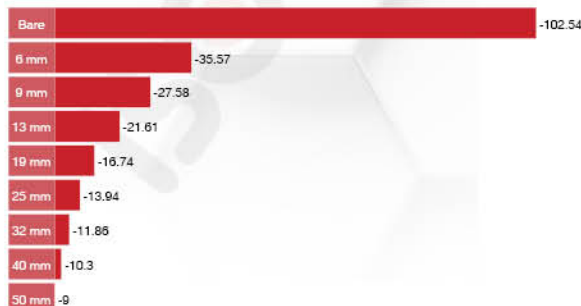(See Picture 11).

Picture 11: PDF File

Sending your Calculation through the *Results* section (See Picture 06)

Material	Environment	Line Temperature	Ambient Temperature	Humidity	Pipe Outer Diameter (mm)	Insulation Thickness (mm)
Pipe TC	Indoor	-20 °C	20 °C	75 %	60	-

For safety reasons, it is recommended that the Surface Temperature is one degree higher than the Dewpoint.

	Bare	6 mm	9 mm	13 mm	19 mm	25 mm	32 mm	40 mm	50 mm
Surface Temperature	-20 °C	8.44 °C	11.72 °C	14.12 °C	16 °C	17.03 °C	17.76 °C	18.28 °C	18.68 °C
Heat Loss Q/ L (W/ m)	-102.54	-35.57	-27.58	-21.61	-16.74	-13.94	-11.86	-10.3	-9
Energy Savings	0 %	65.31 %	73.1 %	78.92 %	83.66 %	86.41 %	88.43 %	89.95 %	91.23 %
Dewpoint	15.43 °C	15.43 °C	15.43 °C	15.43 °C	15.43 °C	15.43 °C	15.43 °C	15.43 °C	15.43 °C
Condensation	YES	YES	YES	YES	NO	NO	NO	NO	NO

Heat Loss Q/ L (W/ m)

Bare	-102.54
6 mm	-35.57
9 mm	-27.58
13 mm	-21.61
19 mm	-16.74
25 mm	-13.94
32 mm	-11.86
40 mm	-10.3
50 mm	-9

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Calculation's Entry Name (See Pictures 08, 09 & 10)

Calculation 02

Material	Environment	Line Temperature	Ambient Temperature	Humidity	Pipe Outer Diameter (mm)	Insulation Thickness (mm)
Sheets/Rolls TC	Indoor	-4 °C	20 °C	40 %	-	-

For safety reasons, it is recommended that the Surface Temperature is one degree higher than the Dewpoint.

	Bare	6 mm	9 mm	13 mm	19 mm	25 mm	32 mm	40 mm	50 mm
Surface Temperature	-4 °C	12.7 °C	14.59 °C	15.97 °C	17.09 °C	17.72 °C	18.18 °C	18.52 °C	18.8 °C
Heat Loss Q/ L (W/ m)	-326.4	-99.26	-73.64	-54.78	-39.58	-30.98	-24.72	-20.08	-16.26
Energy Savings	0 %	69.59 %	77.44 %	83.22 %	87.87 %	90.51 %	92.43 %	93.85 %	95.02 %
Dewpoint	5.99 °C	5.99 °C	5.99 °C	5.99 °C	5.99 °C	5.99 °C	5.99 °C	5.99 °C	5.99 °C
Condensation	YES	NO	NO	NO	NO	NO	NO	NO	NO

Heat Loss Q/ L (W/ m)

Bare	-326.4
6 mm	-99.26
9 mm	-73.64
13 mm	-54.78
19 mm	-39.58
25 mm	-30.98
32 mm	-24.72
40 mm	-20.08
50 mm	-16.26

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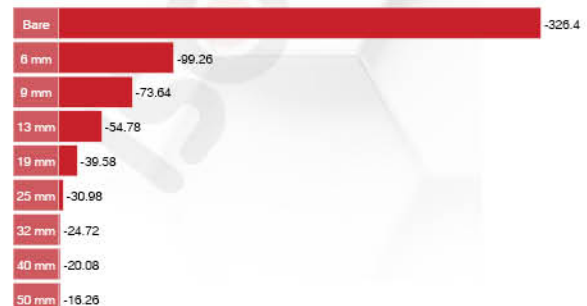
2.4 Products

In **Products** Section you may get all information needed about our products' basic and technical characteristics:
- *ISOPIPE TC*
- *ISOPIPE HT-HF*
- *ISOPIPE COVERINGS: Solar, UV Plus & Heavy Duty (HD)*
- *ISOSOUND & ISOCHIP*
- *Accessories: ISOGLUE, ISOTAPE, ISOCOVER, ISOCLAMPS & Jacketing Systems*

(See Picture 12).

2.5 Company

In **Company** Section you may find information about:
- *ISOPIPE S.A. Company Profile*
- *Environmetal Sustainability*
- *Products's Certificates*
- *Company's Contact Details*
(See Picture 12).

Picture 12: Products & Company

Products   Company

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Insulation Calculator

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