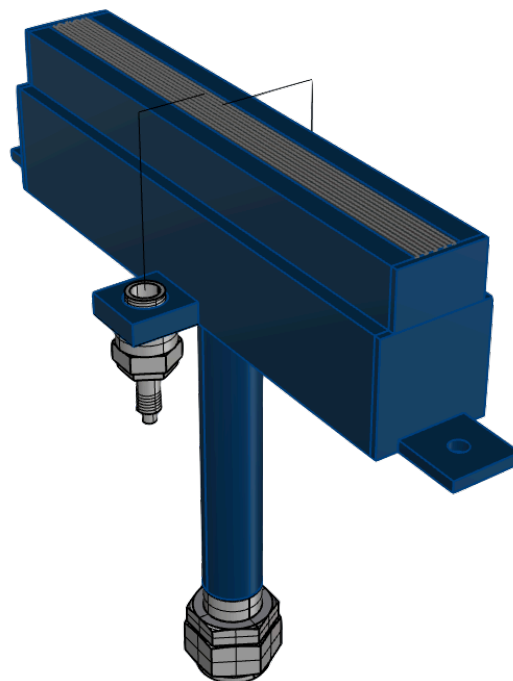


Bruciatori Santin

LN – Nido D'ape **Burner**

[Bulletin 110-01 LN – 26/10/16]

MADE IN ITALY



GENERAL WARNING!

Only qualified staff properly trained for work on Bruciatori Santin equipment are authorized for regular burner system maintenance. Some local authorities require the personnel involved in maintenance, repair and inspection to be certified. Manipulating the safety devices can result in unsafe operation of the burner system, which can cause severe or even lethal injuries!

All personnel involved in the installation, integration, commissioning, maintenance, repair, inspection and operation of this burner system shall ensure that all the necessary health and safety requirements are fulfilled before commencing the work.

They should wear the appropriate personal protective equipment (PPE) together with – if applicable - required site-specific equipment.

This instruction manual must be stored in a place near the burner system and must be accessible for operators.

It is the responsibility of the company operating the machinery to keep an equipment history record of the integrated burner system, which is to include commissioning records with final settings, maintenance and inspection reports, as well as reports on modified settings and replacement of parts.

We advise to systematically add the above records to this instruction manual and keep the resulting binder (hardcopy) or folder (electronic) accessible for operators and service technicians.

Integrating the burner system into an overall installation according to assembly instructions and the instructions in this manual neither eliminates nor mitigates potential residual risks.

General residual risks are described in the assembly instructions.

Safety devices:

- All safety devices must always be in perfect and operative condition.
- Qualified staff must regularly check the safety devices to ensure that they are fully functional.
- Never deactivate any of the safety devices on the burner system.
- All safety devices must be in full working order before starting the burner system for the first time.
- Do not start up the burner system if any safety device is defective.
- Stop the burner system if a safety device fails during operation and restart it only after the safety device has been repaired.
- Wait until the burner system has been shut down and secured before removing any safety devices.

Application

LN are premix linear burners used in low temperature applications and in any industrial operations.

LN burners are developed according to the customer needs and thanks to Bruciatori Santin mixers, LN guarantee excellent performance in all working range.

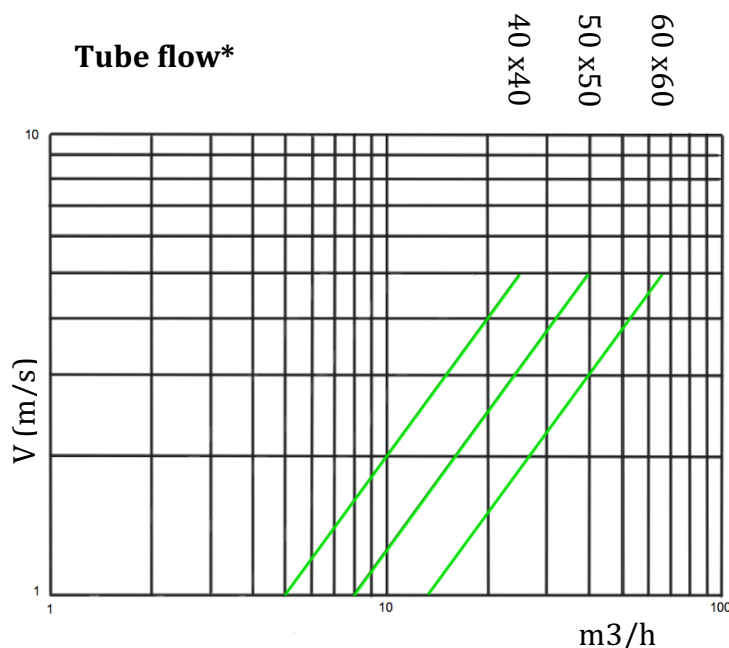
The typical applications of LN are:

- Food ovens
- Furnaces
- Packaging machines
- Textile cylinders and machines
- General heating

LN burners can also have a custom design according to the customer needs.

Technical information

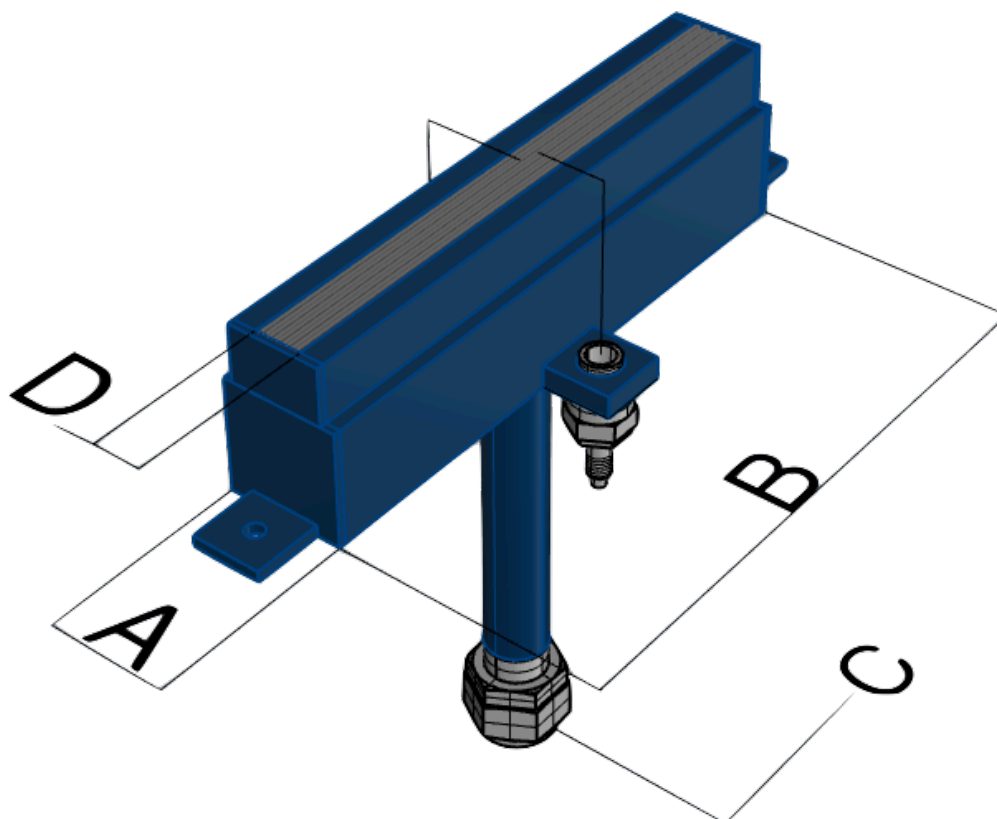
Description	LN
Gas type	NG/LPG**
Mixture pressure mbar	0,5 / 3
Ignition	With ignition transformer 8 KV
Flame	Rod or UV
Materials	Carbon steel or Stainless steel



*Please consider 5 m/s as max speed

PL model	PL mm	Kw/500 mm	Flame Height mm
PL5	5	10	20 / 100
PL10	10	20	20 / 100
PL15	15	30	20 / 110
PL20	20	40	20 / 120

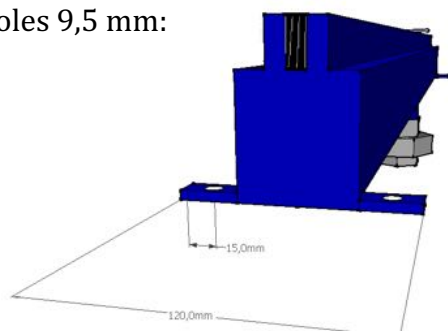
Dimensions



A	40x40	50x50	60x60	Custom
B	Custom	Custom	Custom	Custom
C	1"	1"-1/2	2"	Custom
D	5/10/15/20	5/10/15/20	5/10/15/20	5/10/15/20

Installation

Bruciatori Santin develops LN burners with custom brackets for installation. Here below the standard with holes 9,5 mm:



Pilot

LN do not have pilot burner. They can be lighted with direct ignition with rod and 7,5/8 KV ignition transformer

Burner control

These burners can work with on-off or min/max system using atmospheric or air/gas Bruciatori Santin mixer.

LN burner can be equipped with flame rod or thermocouple.

Burner system must be equipped with suitable safety equipment comply to EN 746-2 and/or other applicable local codes or standards as NFPA86.

Ignite the system with ignition transformer 8 KV.

Piping tips

The pipe connection is a critical choice. The following suggestions can help you:

- Ensure that size of air and gas pipe are large enough to avoid excessive pressure loses.
- The number of elbows is kept to a minimum.
- Flexible pipe can cause more pressure drop than standard pipe. Check flexible detail.
- Put in a pipe union in a burner can simplify maintenance service.

Electrical tips

Electrical wiring must comply all applicable local standards as: CEI EN 61439-1

Start & Stop procedures

1. Close all gas valves
2. Start combustion air blower/compressed air
3. Set high fire according to the mixer and devices installed
4. Set low fire according to the mixer and devices installed
5. Check that every part of the burner is in a good condition

Caution! Do not turn off the blower until the chamber temperature is below 80°C.

List of common issues

Problem	Possible Cause	Possible solution
Burner does not start	There is incorrect power supply	Check the wiring diagram
	The spark electrode is dirty	Clean the spark electrode
	The spark electrode is not grounded to the burner	Clean the spark electrode
Burner has an insufficient flame signal	UV or flame sensor are dirty	Clean the flame sensor
	Flame sensor is grounded to the burner	Check and adjust the position of ceramic insulation
Flame too long or short	Incorrect air / gas ratio	Adjust ratio mixer
Backfires	Mixture pressure	Adjust ratio mixer
	High temperature in the chamber	Protecting the burner

Maintenance

An accurate maintenance program extends the life of the machine and assures high performance. The general cleaning of the machine represents a very important security factor together with the compliance of the following instructions:



WARNING

We suggest checking yearly the parts in the list below. If the environment is dirty the check must be monthly.

Leak test on gas train.

Check the correct operation of control unit sequence and all alarm system.

Check gas and air pressure switches.

Check flame rod and ignition electrode conditions.

Control air and gas ratio

Test valves and solenoids.

Visual check of cable and gas/air connections.

Control the flame through the pipe sight in order to control the flame conditions.

Control all components and clean / replace if necessary.

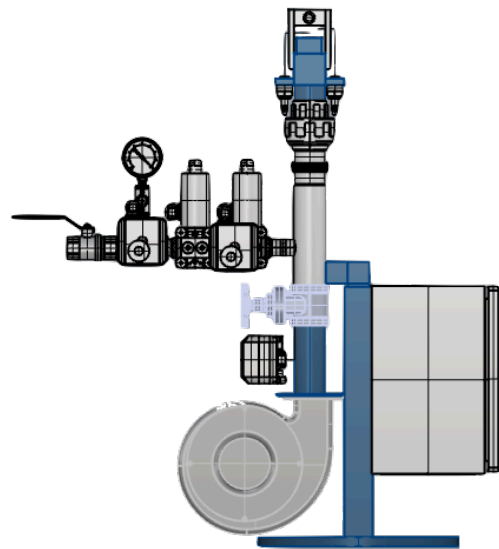
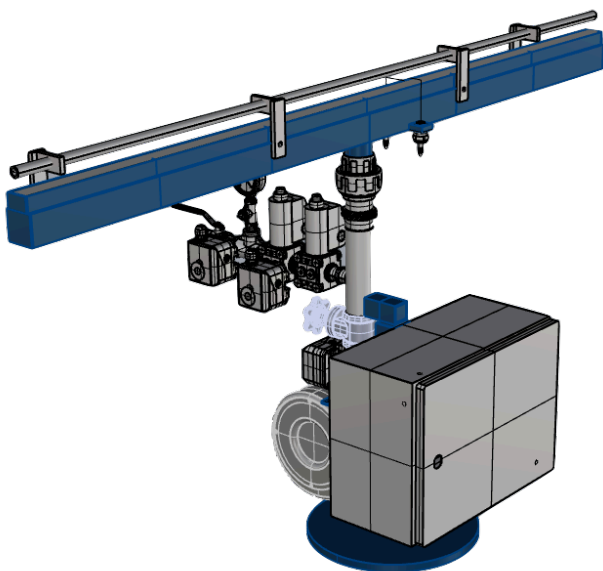
Storage

If the machine has to be stored for a considerable period of time, it has to be protected from humidity and dust. Wrap up with plastic material for better isolation.

LN standard packaging solutions:

1. SCALDAFILO
2. NIDO D'APE

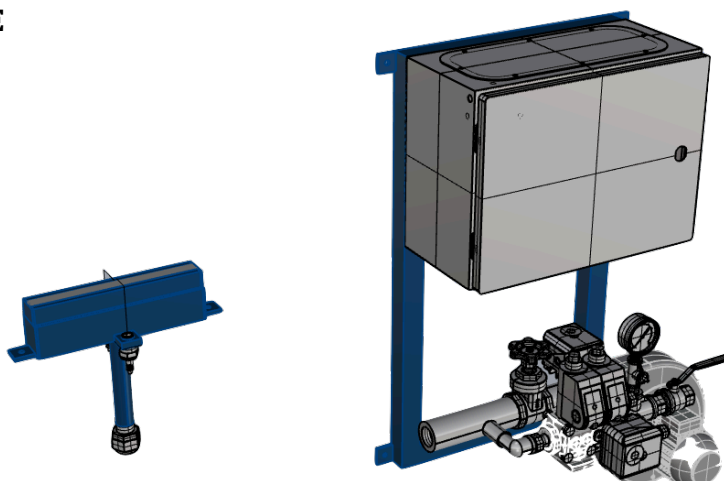
1. LN - SCALDAFILO



LN – Scaldafilo is available in 4 lengths: 500/750/1000/1500 mm and it is equipped with basement vertically adjustable. It is also equipped with one stage gas train, mixer with blower and panel with control unit.

LN Scaldafilo is mainly used for screws heating applications but it is also suitable for any industrial application where small and long flame is necessary.

2. LN-premix – NIDO D’APE



LN – Nido d’ape solution is developed according to the customer needs. It’s equipped with mixer with gas train, blower and all necessary devices. The control unit is placed inside the panel and Bruciatori Santin can also supply special support for an easy installation.

LN – Easy Order –

LN				
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1

2

3

4

1 -----PL

5

10

15

20

2-----Pipe

40x40

50x50

60x60

3-----Length

mm

4-----Material

Carbon Steel

INOX304

Other

- Bruciatori Industriali Santin riserva il diritto di modificare e variare i prodotti senza obbligo di notifica.
- Tutti di dati / grafici indicati e presentati in questo documento sono approssimativi.
- The performances mentioned are indicative. Performance and dimensions are guidelines only. The information contained in this catalogue is updated at the time of printing but can be changed without notice or obligation to notify.
- All data / graphs shown in this document are approximate.

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