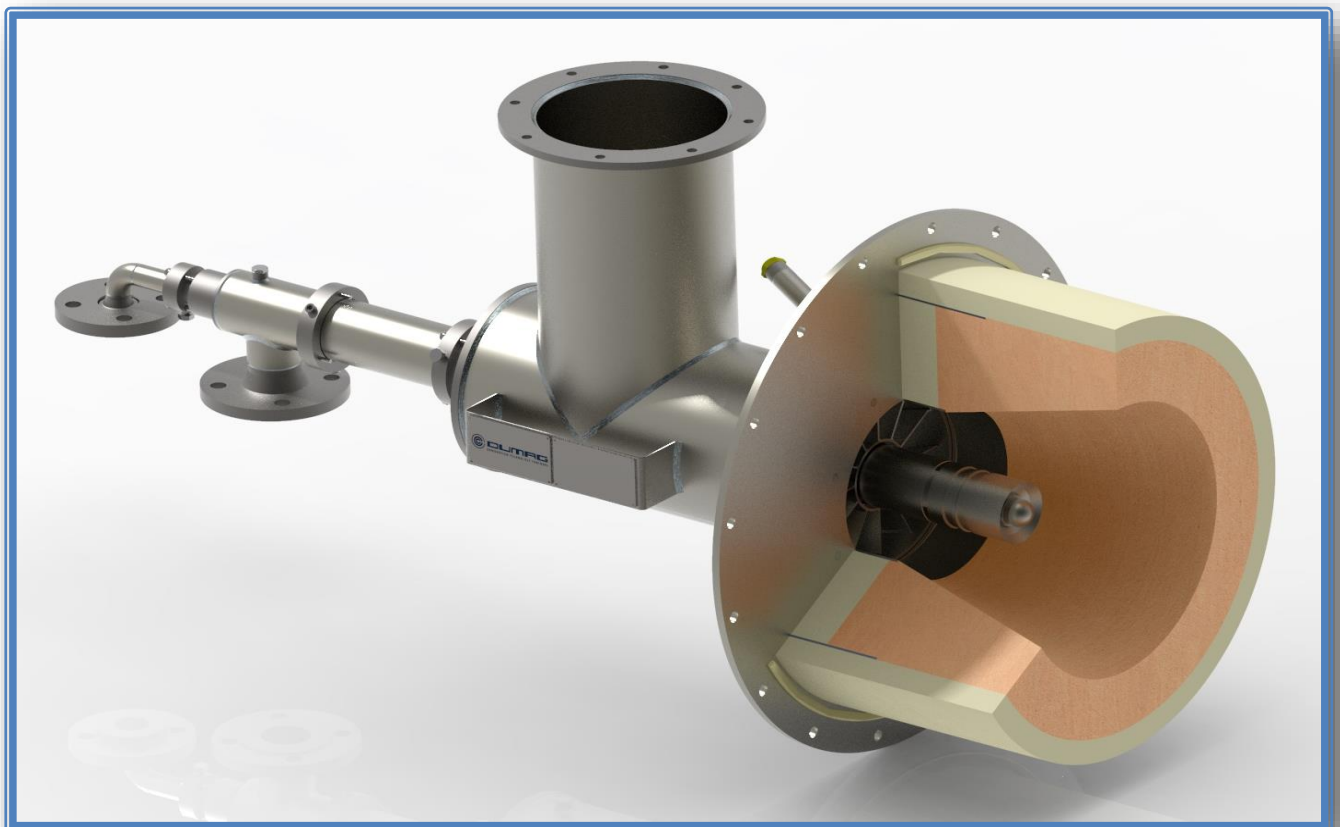


DUMAG® Lance Burner LZB

Multi-fuel burner for fuel gas, fuel oil, waste gas, waste oil



**General + Assembly
Description
Standards
Certificates
Material
Dimensions**

Data sheet

1. General:

The Lance Burner is a burner, which is equipped with a single lance for the combustion of liquid or gaseous waste products. It is used in combustion chambers with refractory lining temperatures of 850 ° C and above

It is used as an auxiliary burner positioned directly at the front wall or side wall of the combustion chamber, and it operates parallel to the main burner.

Combustion air temperatures up to 300°C are possible.

2. Assembly

air (8), the burner flange (3.1) with sealing (3.2), the burner block flange (3.3) for mounting to the counterflange (3.4 and 3.5) of the combustion chamber wall.

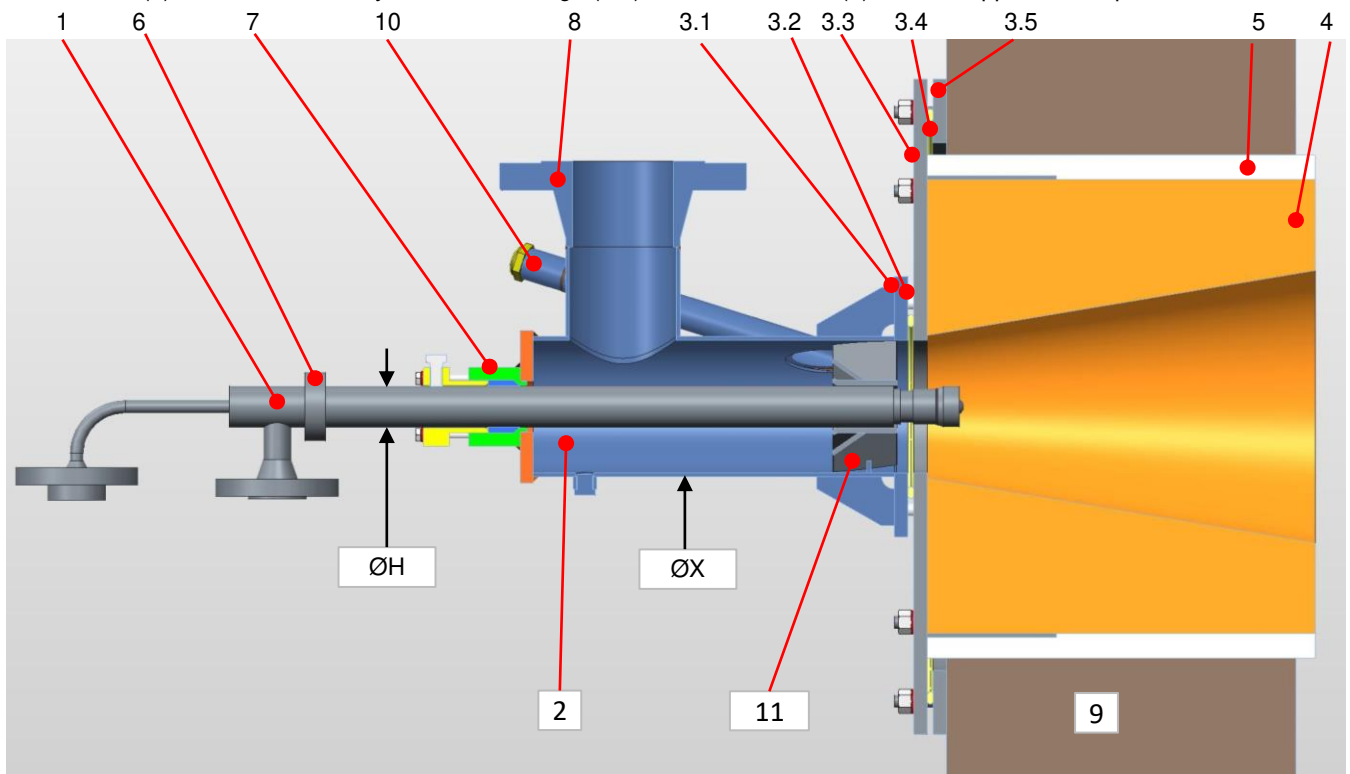
A flange with a stuffing box (7) is attached to the burner housing (2). Centering discs with swirl (11) are placed between the burner and burner block.

The burner lance (1) is inserted through the stuffing box (7) to the beginning of the burner block (4) and is fixed centrally by the centering discs (11). An adjusting ring (6) fixes the position of the lance

A small sight port grants (10) flame monitoring.

In case optimized combustion air/fuel mixture is necessary, a swirl disc (11) is integrated in the centering disc.

Burner block (4) lined with refractory bricks, with flange (3.3) and ceramic fibre (5) can be supplied as required

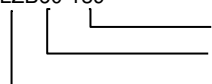


- 1 Burner lance for liquid or gas
- 2 Burner housing for combustion air
- 3.1 Burner flange
- 3.2 Sealing
- 3.3 Burner block flange
- 3.4 Sealing (by client)
- 3.5 Counterflange combustion chamber (by client)
- 4 Burner block - refractory lining

- 5 Ceramic fiber
- 6 Adjusting ring to fix the position of lance
- 7 Stuffing box
- 8 Connecting flange for combustion air
- 9 Combustion chamber refractory lining (on site)
- 10 Small sight port
- 11 Centering disc and swirl

Labeling example

LZB60-139



ØX of burner housing

ØH of inserted lance

LZB: Lance burner LZBK: additional ball valve for shut off after removal of lance

Data sheet

3. Description:

Burner housing for combustion air (2)

The burner housing (2) contains the connection for combustion air (8), the burner flange (3.1 + 3.2) for connection to the burner block (3.3 + 4 + 5) and a burner front panel for the stuffing box as a bracket for the lance.

Centering discs (11) grant centric position of the lance.

Usually, the centering disc (11) is designed as a swirl body
Combustion air pressure drop at maximum capacity ca. 20 - 30 mbar
Combustion air temperatures of up to 300°C are possible

The burner equipped with the swirl disc grants a profound intermixture of gas or atomized liquid with combustion air.

Inserted gas lance or burner lance for liquids (1):

Lance (1) is mounted in the stuffing box (7) and centered via centering discs (11).

The adjusting ring (6) is slid up to marking to the stuffing box screws to fix the position of the lance in the combustion chamber.

The stuffing box screw at the side fastens the lance to prevent slide within the burner.

Stuffing Box (7)

The sealing of the stuffing box (7) is to be tightened to a degree where it seals off from the combustion chamber.

Lance Cooling

During operation of the burner, combustion air is constantly inserted in at least stoichiometric ratio.

If the combustion chamber is in operation but the burner's on shutdown, at least 10% of the maximal air volume has to be used as cooling air (approx. 3 m/s in outlet ØA, see chapter "7 Dimensions").

Small Sight Port (10):

Flame can be monitored via the small sight port on the side of the burner housing.

Burner Block (4) and Ceramic Fiber (5) and Burner block flange (3.3) as assembly group

Burner block (4) and ceramic fiber (5) and Burner block flange (3.3) are not included in the scope of delivery. The burner block is configured according to the fuel and resulting exhaust gases.

The ceramic fiber (5) fills the gap between burner block (4) and opening in the combustion chamber. It also evens out irregularities in the gap and prevents radiation reflection onto the burner plate (3.3).

The burner block must be provided by the customer or can be supplied as an option.

4. Rules and Regulations

Rules and regulations regarding the operation of a burner without flame monitoring are to be obeyed.

The operation of the burner is to be interlocked in a way that it is unblocked only when the burner chamber has reached the necessary temperature.

See:

EN 746-2 Industrial thermoprocessing equipment —Part 2: Safety requirements for combustion and fuel handling systems systems

- flame monitoring at temperatures 750° and up (lining temperature)

Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions (integrated pollution prevention and control, article 50):

- combustion of liquid or gaseous waste:
minimum 2 seconds residence time at at least 850°C.
- for halogenated organic materials:
minimum 2 seconds residence time at at least 1100°C

5. Certificates

certified according to ISO9001, EAC (Euroasian Conformity)

Produced according to European and American standards, regulations and quality certificates

6. Materials

- Burner housing: standard 1.4571 or 1.4404 (AISI316L/AISI316Ti), upon request P265GH or other materials
- Burner lance: standard 1.4571 or 1.4404 (AISI316L/AISI316Ti), upon request Hastelloy or others.
- Ultrasonic Nozzle: standard 1.4841 (AISI314 or AISI310), upon request 1.4571 or 1.4404 (AISI316L/AISI316Ti), Hastelloy

Components exposed to the radiation of the combustion chamber may also be made of 1.4841.