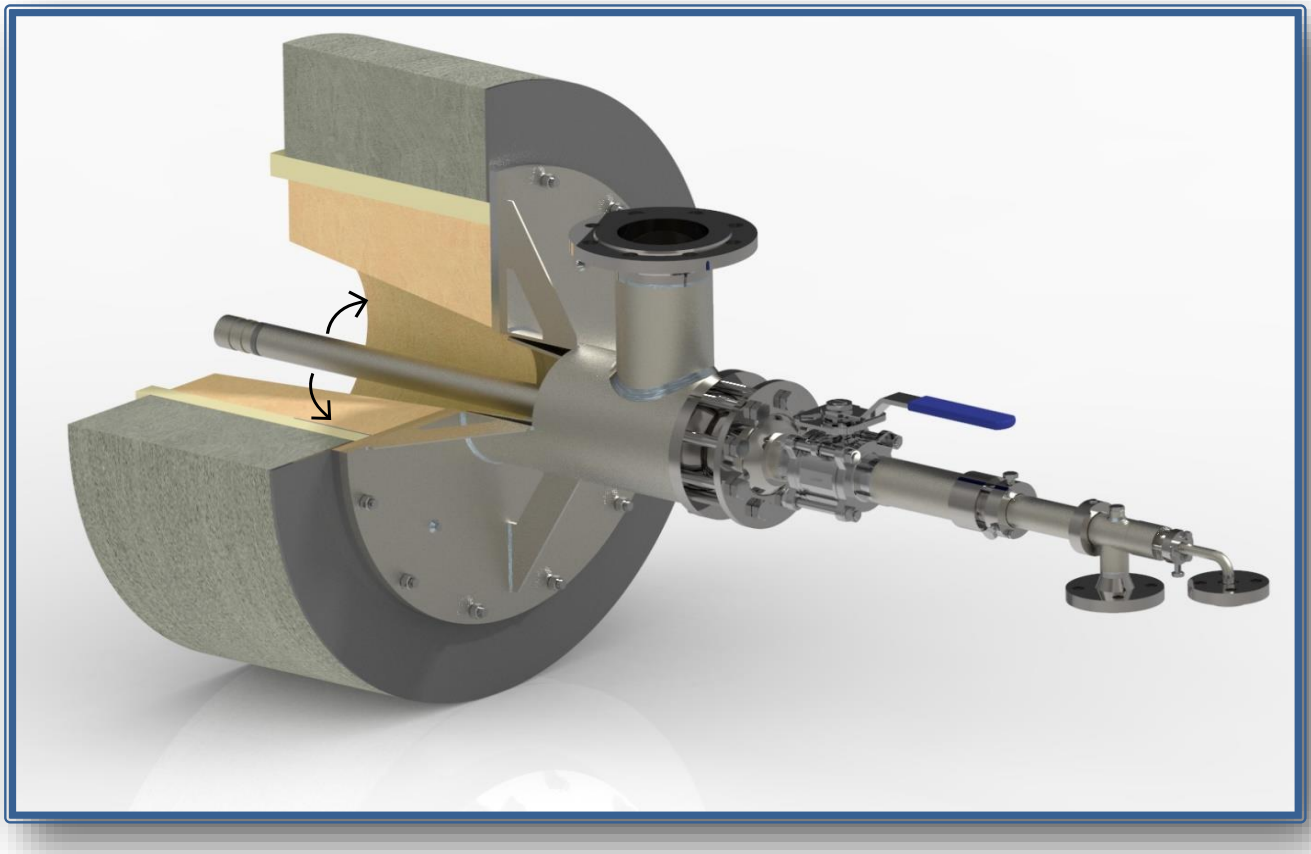
DUMAG® Melt Off Burner ASB..C or ASB..B

To melt off slag baking at the tip of the rotary kiln or in the secondary combustion chamber



DUMAG® Melt Off Burner ASB..C or ASB..B

for melting slag

1. General:

DUMAG® Melt Off Burner ASB.. are used to melt off slag baking at (for example) the tip of the rotary kiln or in the post combustion chamber of a waste incineration plant.

ASB..C: The combustion air is partially provided by the cooling air (**connection (6)**) and partially by the surplus air of the furnace atmosphere

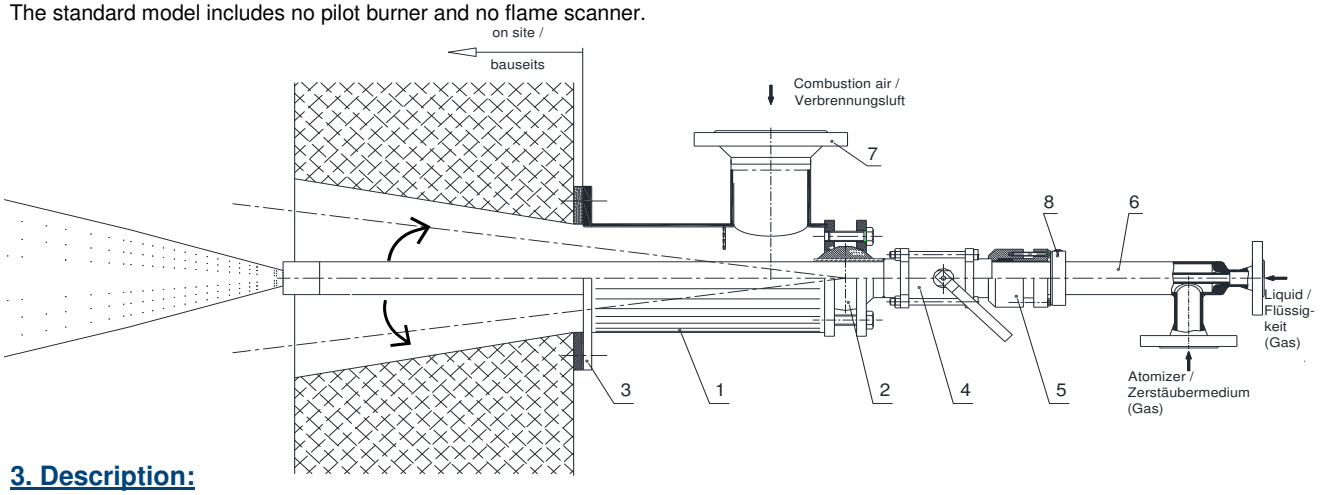
ASB..B: The combustion air is supplied entirely via **connection flange (7)**.

2. Assembly:

The DUMAG® Melt Off Burner ASB.. consists of the **burner housing (1)** for air supply, the connecting flange for the **combustion air (7)** and the **burner flange (3)** for mounting to the combustion chamber.

On the burner housing, the **swivel head (2)** is mounted. Through this a burner lance for liquid fuel or a **gas lance (6)** is inserted. The lance can be swiveled during the melting process

The stuffing box (5) is used to seal the lance. The adjusting ring (8) fixes the lance position.
The ball valve (4) is closed, when the lance is pulled out after the melting.
The standard model includes no pilot burner and no flame scanner.



3. Description:

Lance operation:

The **lance (6)** is positioned in a **swivel head (2)**. After loosening the screws, the lance (and the flame, respectively) can be aimed into all directions in an angle of ±7.5° and thus melt off the slag caking in a targeted effort. If the lance is needed in a certain position, the screws are to be fastened again.

Stuffing box (5)

The **stuffing box (5)** is to be fastened during operation to the extent that it seals off to the combustion chamber.

Lance cooling

As long as the combustion chamber is in operation or the lining is still smoldering, the **lance (6)** needs to be cooled by **cooling air (flange (7)**). Min. cooling air flow rate is calculated from case to case, pressure drop approx. 20 mbar.

After melting off, it's recommended to extract the lance and close the **ball valve (4)**. The cooling air needs to remain in operation to protect the burner housing against radiation.

Should the lance not be pulled out of the burner housing, it needs to be retracted inside the burner housing and the compressed air or steam for atomizing needs to remain in operation at a pressure of 0,3 - 0.5 bar.

Lance position:

The lance position is to be locked in a way that the Melt Off Burner ASB will only go into operation when lance is inserted up to marking **(adjusting ring (8)**).

Variation of flame:

Nozzles for atomization of liquids (GS..):
Via variation of pressure of the compressed air or steam for atomizing, the flame can be transformed from a soft to an acute flame.

Nozzles for heating gas (GG..):
By varying the flow rate of atomizer gas and combustion gas, the flame can be varied in length between soft and acute flame.

Sight port

Regarding mounting the Melt Off Burner ASB.., be advised that an sight port needs to be installed nearby to optically supervise the melt off of the slag caking and the melt off flame.

4. Standards, rules and regulations

Rules and regulations regarding the operation as a burner without flame monitoring and ignition by neighboring flame are to be respected. Operation of the lance is to be secured in a way that it will only be released at the necessary burner chamber temperature. See:

EN 746-2 Industrial thermoprocessing equipment - Safety requirements for combustion and fuel handling systems:
- Where use is made of a portable pilot burner or ignition device
- Flame supervision at temperatures higher than 750°C (brick temperature)

Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions (integrated pollution prevention and control):
- for burning waste liquid or waste gas: temperature of at least 850 °C for at least two seconds.
- for halogenated organic substances: temperature of at least 1100 °C for at least two seconds.

5. Material

Burner housing: standard 1.4571 or 1.4404 (AISI316L/AISI316Ti), by request P265GH or other

Burner lance: standard 1.4571 or 1.4404 (AISI316L/AISI316Ti), by request Hastelloy or other

Nozzle: standard 1.4841 (AISI314 or AISI310), by request 1.4571 or 1.4404 (AISI316L/AISI316Ti), Hastelloy or other

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