

Firing for your processes

## Municipal Waste Plant

### CTP-DUMAG – Burners for Municipal Waste Combustors

CTP-DUMAG industrial burners of the IB.-series, employed as gas burners, oil burners or multifuel burners in domestic waste combustors.

On one hand they serve as start-up burners, on the other they are also employed when the heating value of the domestic waste isn't sufficient anymore to grant a temperature of 650 – 1100° C in the incinerator.

The burners are laid out to grant the power output needed to keep the domestic waste combustor working.

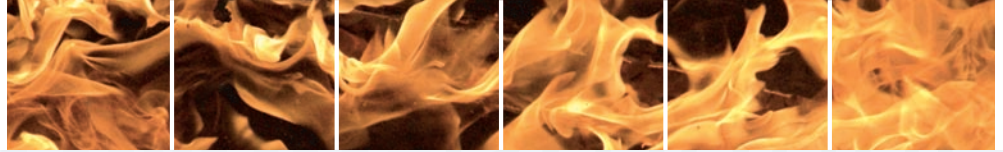


#### Burner Characteristics

- ▲ Power range of multicomponent burners 1 to 170 MW, for details please refer to CTP-DUMAG-documents on Industrial Burner IB..
- ▲ Deployable as gas burner, oil burner or combined gas-/oil burner
- ▲ Applicable for waste gases or liquid waste fuel if needed
- ▲ Dependable ignition by spark via ignition box featuring pneumatic retraction unit or ignition burner with separate combustion air supply
- ▲ Lances equipped pneumatic retraction unit to protect burner lances from irradiation area from combustion chamber
- ▲ Burner slide gate between burner and combustor protects burner from irradiation from combustion chamber when not in use
- ▲ Alternatively: cooling fan to kick into action when burner is shut down.
- ▲ Economic use of compressed air as atomizer for heating oil or liquid waste fuel
- ▲ Additionally, burner lances attached to the combustion chamber-wall via lance holder may be used for waste liquids or waste gases

More than 40 years of experience in constructing special use burners

More than 40 years of experience with the CTP-DUMAG® - ultrasonic nozzle



Firing for your processes

## Municipal Waste Plant

### CTP-DUMAG Advantage

- ▲ Competent partner with decades of experience
- ▲ Stable free flame without flame holder plates at burner outlet thanks to highly turbulent ultrasonic nozzle or especially designed gas lances. Thus less contamination and blackouts, lower maintenance rate
- ▲ Flame length and temperature distribution adjustable via burner swirl and controllable nozzle
- ▲ No rotating parts in the hot combustion chamber
- ▲ Newly developed ultrasonic atomizer nozzles with increased flame stability and increased control range up to 1:7
- ▲ Minimal pressure loss via burner
- ▲ Economic use of compressed air as atomizer for heating oil or liquid waste fuel
- ▲ High availability

### CTP-DUMAG – Burners for Municipal Waste Combustors

The burner can be designed as gas burner, oil burner, combined oil-/gas burner

Additional lances for waste liquid or waste gas can be mounted



Adjustment crank with angle scale to set the swirl for precise adjustment of the flame

5 MW-burner for domestic waste system in Austria, with  
- oil burner lance and CTP-DUMAG®-ultrasonic nozzle  
- fan for cooling in case no additional oil-power output is necessary



Burner with pneumatic slide gate and extractable lance

final testing at our company prior to delivery

Air cooling fan for cooling the burner during standstill



Burner with pneumatic lance retraction unit

## Municipal Waste Plant

The large sight port allows close monitoring of the burner flame



Large sight port on the burner with cooling air connection.

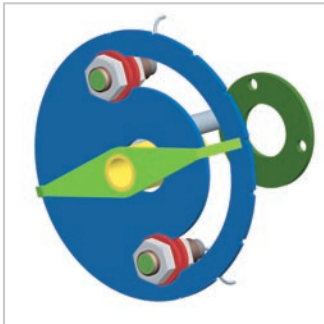


Interchangeable with flame-scanner by running the same flanges

Combustion air: with precise scale for flap position.

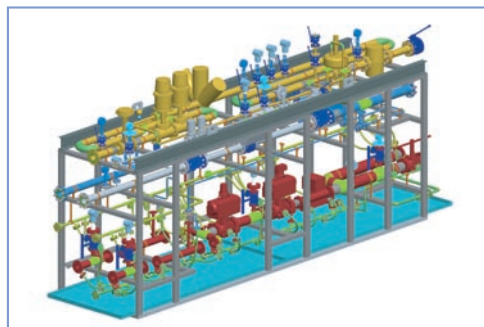
With support for limit switch.

Limit switches are also retrofittable



## Valve Racks

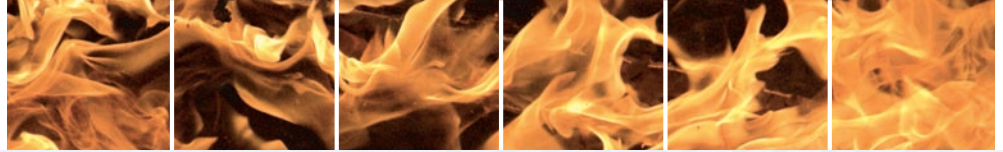
Diligent layout of control groups



## CTP-DUMAG Services

- ▲ Lay-out and engineering of the system
- ▲ Delivery of ready-for-use combustor including control and safety technology
- ▲ Delivery of valve rack including all necessary controls
- ▲ Mechanical testing at the CTP-DUMAG workshop – also for big burners – reduces commissioning time
- ▲ Documentation
- ▲ Supervision of erection
- ▲ Commissioning
- ▲ Service and remote maintenance of the burner plant



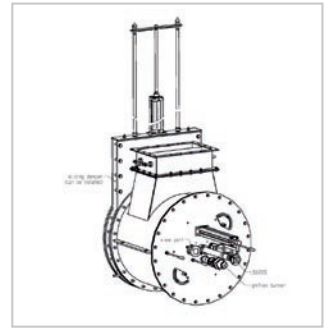
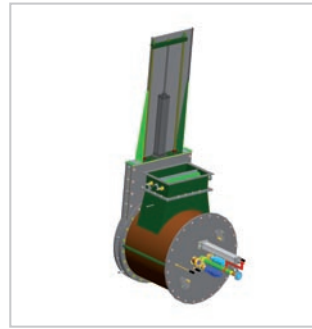


Firing for your processes

## Municipal Waste Plant

### Burner Slide Gate for standby-operation to protect burner from irradiation from combustion chamber

- Shut-off panel pneumatically retractable
- Sliding panel in irradiation area made from fire-proof concrete
- Gasket seal on shut-off slide to prevent combustion air from escaping
- Blow-out connection to keep opening of slide-rail dust-free
- Extracting rods guarded against contacts

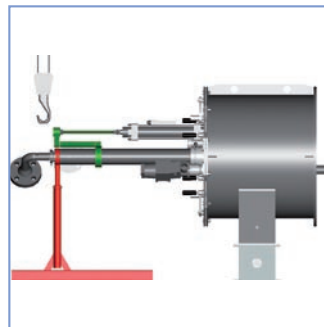
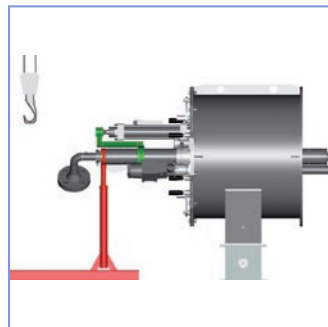


### Pneumatic Lance Retraction unit with Lance Retraction Bracket LAS

Lance retracted.

This device is retracted from the irradiation area for protection of the lance.

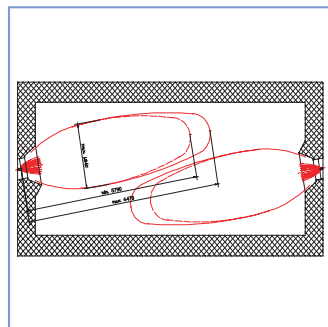
The lance retraction bracket is used with heavy lances.



Lance, extracted

### CTP-DUMAG Services

Lay-out of flame-geometry to determine mounting positions of burners



Burner without flame holder plates ...

... thus no contamination and blackouts of burner due to contamination during operation

Supervision of erection by CTP-DUMAG-technicians



In-house testing of valve rack and burner at our mechanical testing rig