



# Reliability and high performance

Process cranes for  
waste handling

**DEMAG**.....









## Key role for reliable processes

In waste processing facilities, the requirements to be met by cranes are particularly high: dirt, heat and humidity create aggressive ambient conditions. Cranes operate here around the clock to ensure that incineration processes run reliably.

Our process cranes are ideally equipped for these applications – thanks to their rugged components, they can deliver their performance without any limitations.

Demag cranes play a key role in waste recycling processes all over the world: we have installed more than 350 cranes in refuse incineration facilities since 1970. Safety and reliability – made by Demag.

# Continuously serving incineration furnaces



## Process cranes for bunker management

Picking up, moving, blending and feeding waste to the furnaces: refuse incineration plants demand continuous processes. Consistently high crane performance is just as important in regional facilities as it is in the large-scale plants that serve major cities. Uniform incineration processes can only be ensured by homogenous waste treatment.

Thanks to our many years of industry expertise, we can supply reliable solutions that are tailored to meet the needs of all sizes of operation: from advice and consultation to engineering and commissioning. With a portfolio ranging from manually controlled cranes to fully automated systems that can manage bunkers in 24/7.

### AT A GLANCE

- Crane systems designed to satisfy specific customer requirements: from manually controlled cranes (350 t/day) for facilities in low-population areas to fully automated systems for major cities (5,000 t/day)
- Solutions to meet your needs from a single source: rugged and reliable crane systems and software solutions developed in-house – based on decades of expertise in the industry
- Worldwide presence thanks to the largest sales and service network in the industry





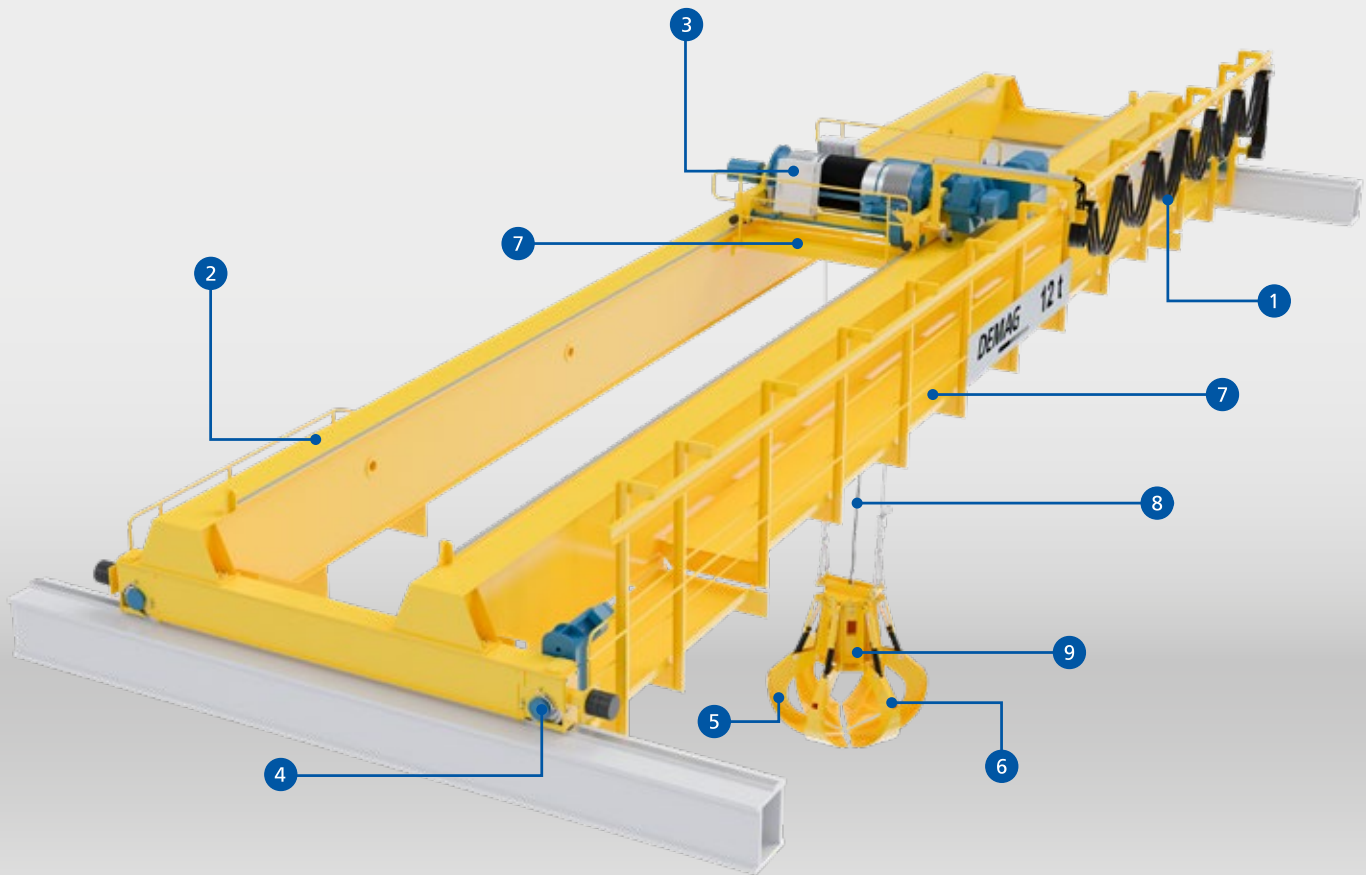
03969983 CE

DEMAC

10t / 2,5 t

max. Tr  
der Br





## High-level efficiency

### Process cranes for waste handling

- 1 **Reliable supply:** rugged cable system for reliable transfer of power and process data – also under extremely harsh conditions
- 2 **Optimised weight:** compact crane girder and crab design
- 3 **Efficient processes:** integrated weighing system with data transfer
- 4 **Precisely guided:** individually adjustable wheels with hardened surfaces
- 5 **Firm grip:** hydraulic multi-jaw grabs with high capacities
- 6 **Reliable operation:** central system to lubricate the grab mechanism
- 7 **Easy to service:** maintenance platforms for direct access to the crane and components
- 8 **Fast and reliable positioning:** high speeds thanks to load-sway reduction and 2/2 rope reeving
- 9 **High efficiency:** integrated sensors for 24/7 automatic operation



## TECHNICAL DATA

Crane		
Span	[m]	18 - 35
Lifting height	[m]	29 - 42
Crane	[m/min]	60 - 100
Travelling hoist	[m/min]	60 - 80
Lifting/lowering	[m/min]	30 - 60/40 - 100
Grab		
Grab volume	[m³]	2.5 - 18
Capacity	[t]	4 - 28
Second crab (optional)		
Lifting speed	[m/min]	16/2.7
Grab volume	[m³]	0.5
Capacity	[t]	2.5

### AUTOMATIC SYSTEM AT A GLANCE:

- High capacity performance resulting from continuous 24/7 operation
- Rugged and reliable crane systems with sensitive electronic components located at a distance
- Precise positioning with automated measurement of travel and lifting paths
- Safe and reliable operation thanks to continuous gate monitoring and temporarily blocked working areas (tipping positions)

# Maintaining value Utilizing raw materials

The thermal treatment of waste is not always the most favoured method. Sophisticated methods for mechanical and biological treatment are becoming increasingly more important. They enable high-quality raw materials to be separated and recycled and also allow residual waste to be processed into generally useful energy sources.

Fully automated Demag process cranes can play a key role in mechanical and biological treatment processes. After the waste has been delivered to the facility, the crane systems can transfer it to a box system after it has been pre-treated. In the subsequent computer-assisted dry stabilisation processes, the crane systems transfer and re-arrange the box covers to promote rapid biological composting. The result: mineral and metal materials can be separated from fuel materials, which are then processed to form pellets as a hygienic source of energy.

The process cranes are controlled fully automatically. Comprehensive visualisation provides an overview of all steps in the process and facilitates further levels of detail:

- Bunker utilisation
- Shredder interfaces
- Interface to blending processes
- Bunker fill level display
- Status of drying processes
- Management of boxes incl. fill level display
- Current crane data

## THE CRANES: AT A GLANCE

		Bunkers	Box management
Capacity	[t]	8	14
Auxiliary hoist unit	[t]		2x8
	[m³]	5	11
Max. span	[m]	31	31
<b>Speeds:</b>			
Crane	[m/min]	0-60	0-120
Crab	[m/min]	0-60	0-80
Lifting	[m/min]	0-20	0-26
<b>Handling capacity:</b>			
Input/output	[t/year]	120,000	120,000/84,000

### DEMAG CRANES FOR AUTOMATED RECYCLING PROCESSES:

- Rated for highly demanding processes: M8 classification to FEM
- Very rugged components proven in operation all over the world for
  - Picking up and blending waste
  - Automated box handling







DEMAG

16t / 2,5t

Safe working load  
of the bridge 16t

## Smart solution integration

### Bunker management for reliable processes

#### DEMAG BUNKER MANAGEMENT

- Smart software for efficient waste processing
- Individual strategies for blending waste and serving chutes for a continuous process chain
- Automatic control of travel missions with optimised travel paths
- Operating and installation status information provided in real time



# Smart features for reliable processes

Demag crane systems for waste handling work with rugged components – if required with automatic control for reliable bunker management. Monitored from ergonomically designed workplaces with a convenient cockpit.

Dedicated storage strategies ensure that waste is continuously processed and fed to the incineration lines.

Complex processes and the current status of the installation can be displayed to provide a simple and easily understood overview. Thanks to smart crane functions, maximum handling speeds can be combined

with a high level of safety and reliability for all control modes (from manual to automatic):

- Active load-sway damping function
- Slack-rope detection
- Target positioning
- By-pass control systems for safety zones

Power consumption can be significantly reduced by the use of regenerative braking systems: the energy recovered from lowering motions is fed back into the system and power consumed by the crane system can be cut by up to 30%.







**DEMAG** 16t / 2,5t

**Continuous material flow  
thanks to consistently  
high handling rates**

**DEMAG CRANES & COMPONENTS GMBH**

Wetter Site

Ruhrstrasse 28

58300 Wetter, Germany

**E** [info@demagcranes.com](mailto:info@demagcranes.com)

**T** +49 2335 92-0

**F** +49 2335 92-7676

[www.demagcranes.com](http://www.demagcranes.com)

**DEMAG**