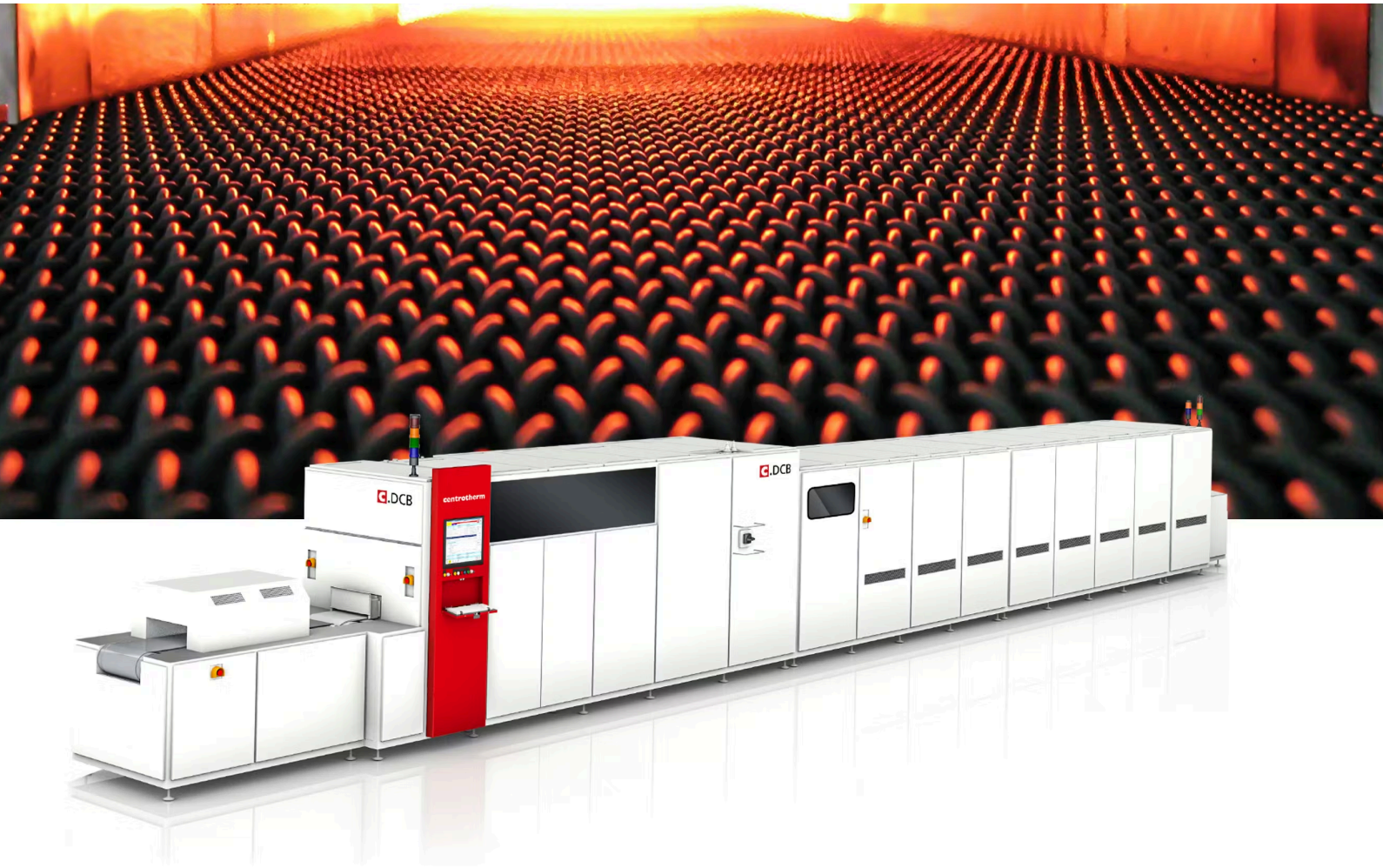
c.DCB

Muffle furnace for Direct Copper Bonding (DCB)



The c.DCB conveyor furnace is especially designed for direct copper bonding (DCB) applications. The system provides a high process capability and ensures an economic and efficient production.

A PLC system with bus connection monitors and controls all relevant process parameters. Data logging of process data for documentation and quality management complements the system.

Gas purity and gas flow inside the process channel play a central role to the product quality. All c.DCB furnaces are characterized by a gas tight muffle with excellent temperature and process gas control.

HIGH PROCESS CAPABILITY

GAS TIGHT MUFFLE

LOW TOTAL COO

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FEATURES & BENEFITS

- Excellent cross-temperature uniformity (<1%)
- Easy temperature profile adjustment by separate controlled heating zones
- Independent gas system for N_2 curtain and N_2 process atmosphere
- Process muffle tensioner
- Conveyor belt tightener
- Oxygen concentration analyzer
- O_2 controller with MFC for bonding and preheating area
- Type S thermocouples
- Manual belt wheel enables belt transport in case of power failure
- Active cooling of housing

PROCESSES

- Direct Copper Bonding

OPTIONS

- Profiling system with thermocouple

KEY DATA

Process temperature	1075°C (max. 1160°C)
Cross belt temperature uniformity	± 1.5 K
Process gases	N_2, O_2, air
Typical belt speed	50-300 mm/min
Belt width	400 mm
Height above belt	70 mm
Heating length	5000 mm
Cooling length	8500 mm
No. of heating zones	16
Dimensions (LxWxH)	17000x1440x2100 mm^3

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