



ECM
TECHNOLOGIES

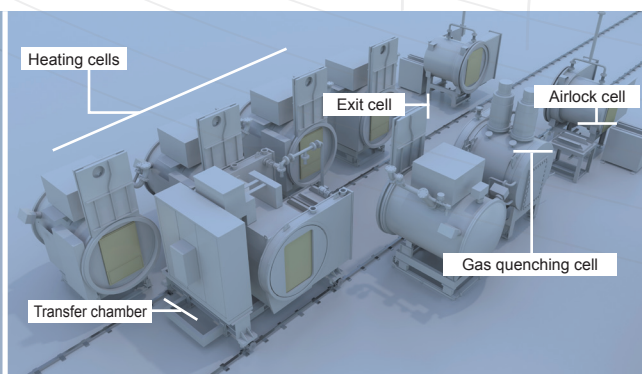
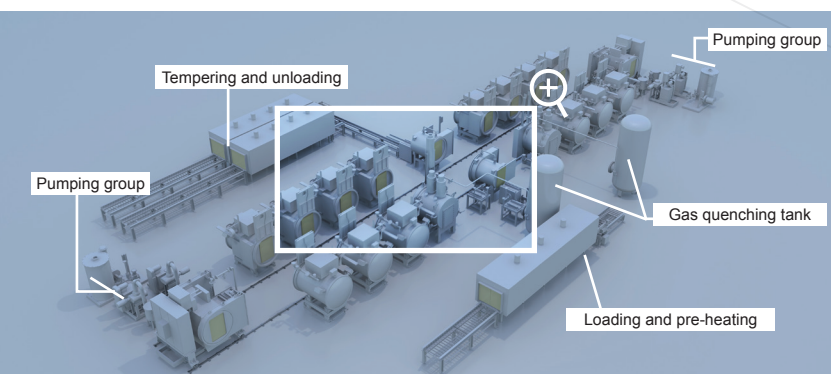
ICBP® JUMBO



MULTI CHAMBER FURNACES: MODULAR CONCEPT WITH A CENTRAL SHUTTLE

ICBP® JUMBO is the biggest design solution of our Low Pressure Carburizing furnace range. It maintains all the compact and modular qualities of the ICBP® Flex design but goes further in terms of volume and number of parts treated in a low pressure carburizing installation. Thanks to this concept the length of the load can reach 1200 mm.

The transfer module is isolated and heated to guarantee quenching uniformity from one load to the next. This modularity guarantees the possibility of mixing any type of process, between oil quenching and gas quenching with a continuous workflow.



ADVANTAGES:

Multi chamber furnaces: your system grows with you

The ICBP® range comprises 1 to 14 heating cells, from ICBP® 100 to ICBP® 1400. Adding treatment cells to an existing installation allows the production capacity to be increased very inexpensively with only a few days of down time.

OTHER ADVANTAGES IN COMMON WITH CONVENTIONAL FURNACES

- **Flexibility:** easy addition of a treatment cell to an existing installation to increase productive capacity
- **Improved productivity:** less operating personnel & shorter treatment cycles
- **Personal protection:** cold system, no fire hazard & waste elimination of scrap
- **Guaranteed performance:** thanks to the test platform & integrated metallurgy laboratory
- **Repeatability:** repeat process easily and quickly

COMPARED TO COMPETITORS

- **More compact:** heating cells can be installed face to face
- **More flexible:** both gas quenching and oil quenching are possible on the same line
- **Better up-time:** individual maintenance is possible on heating cells without interruption of production thanks to the easy movement of the backwards «garage» position
- **Cost saving:** no extra costs for civil engineering because no "heavy moving shuttle"
- **Gas quenching cell compatible** with Helium and Nitrogen gases without modification



FEATURES:

DIMENSIONS

Gross load	Width	Height	Length
750 kg	610 mm	750 mm	1000 mm
1000 kg	610 mm	750 mm	1200 mm

POSSIBLE PROCESSES *

- Vacuum carburizing
- Vacuum carbonitriding
- Hardening
- Hot temperature tempering
- Vacuum annealing
- Brazing
- Sintering

* if appropriate options are chosen

MAIN OPTIONS

- Machine compatible with AMS2750 and neutral atmosphere convection heating
- System for exhaust gas treatment
- Cooling water loop
- Power supply unit
- Quenching gas recovery system (for Helium)
- All peripherals such as washing machine, preheating, tempering, storage and loading/unloading stations, etc...
- Heating cell for deoiling and dewaxing (hot temperature tempering)

QUENCHING

Possibility to have both gas and oil quenching on the same line

Gas quenching: ■ Helium (H₂) or Nitrogen (N₂)

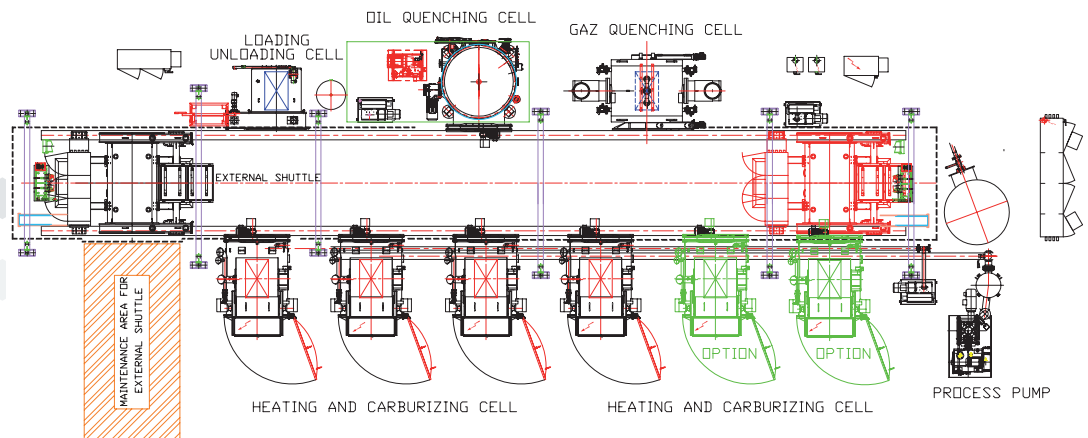
■ Up to 20 bar

■ Single or reverse flow

Oil quenching: ■ Up to 180°C (hot oil option)

INNOVATION:

"Garage" position to facilitate maintenance



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