

# HARDENING - CARBURIZING - CARBONITRIDING

## TECHNICAL SPECIFICATIONS - STANDARD EXECUTION

SYSTEM 350		20/200	30/200	30/300	40/300	40/400	60/300	60/500	60/700
Max. temperature	°C	950	950	950	950	950	950	950	950
Output capacity	*Kg/h	50	70	110	140	180	210	350	500
Belt width	mm	200	300	300	400	400	600	600	600
Height	mm	60	60	60	80	80	100	100	100
Heated length	mm	2000	2000	3000	3000	4000	3000	5000	7000
Gas consumption	m³/h	2-3	4-5	4-5	5-7	5-7	13-18	13-18	13-18
Electric heating	kW	34	50	64	73	101	125	175	225
Gas heating	kW	—	—	—	—	—	155	220	260

\* Values for hardening and carbonitriding, case depth 0,10 mm

## FURNACE WITH **ECONOX** CONTROL AND SUPERVISION SYSTEM



## FURNACES AND HEAT TREATMENT INSTALLATIONS FOR MASS PRODUCTION



Hardening  
Carburizing  
Carbonitriding

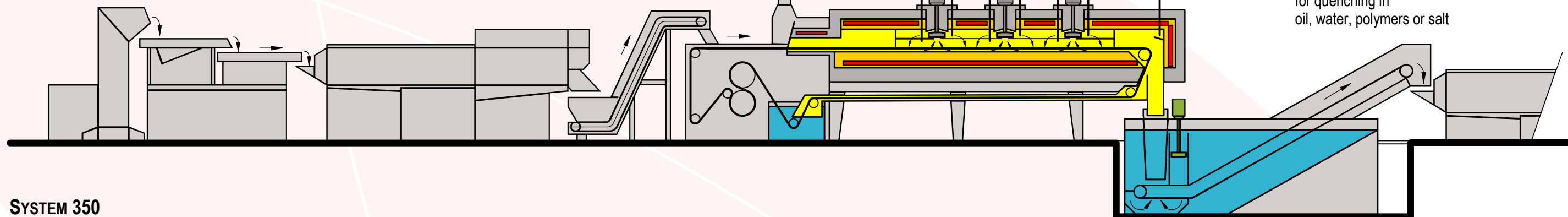




## A RANGE OF FURNACES WITH BELT CONVEYOR FOR HARDENING, CARBURIZING AND CARBONITRIDING

- Production: hardening 50 - 500 kg/h
- Conveyor width: 200 - 600 mm
- Heating length: 2000 - 7000 mm
- Maximum temperature: 950°C

## SYSTEM 350



### SYSTEM 350

Automatic production line with belt conveyor including:

- loading systems
- handling systems
- weighing device
- washing machines
- hardening furnace - quenching baths
- tempering furnace
- tank to stop tempering process



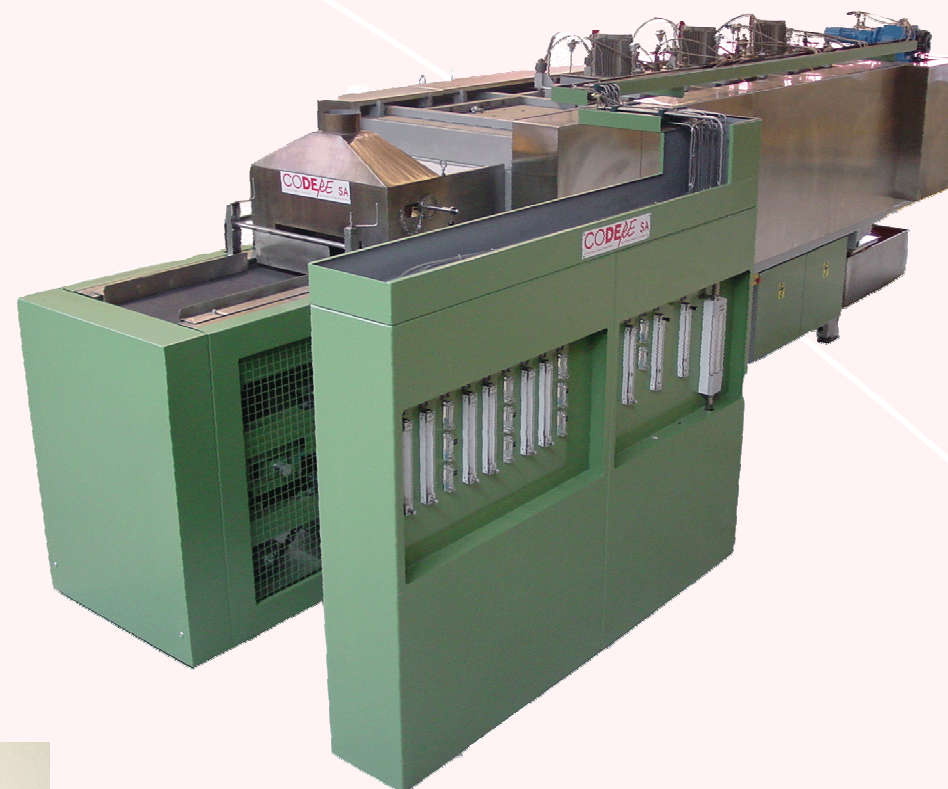
The elements can be heated by electricity or gas.

These continuous lines are used for carburizing, carbonitriding, tempering and hardening with quenching in oil, water, polymers or salt.

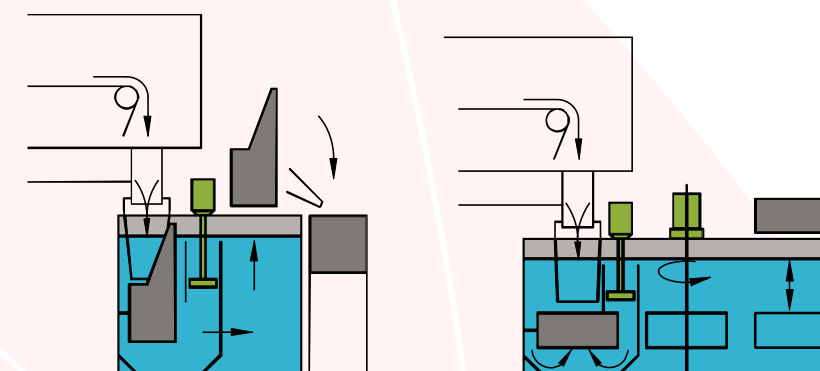
They serve to treat series pieces, e.g. screws, bolts, ball-bearings, springs etc.

The high degree of informatisation, the quality of the materials and the simple construction guarantee a reliable and at the same time profitable production.

The elements of our installations can be easily integrated into already existing production lines.



**Extraction of the pieces per conveyor, magnetic conveyor or buckets**

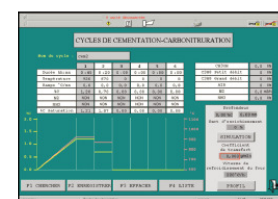
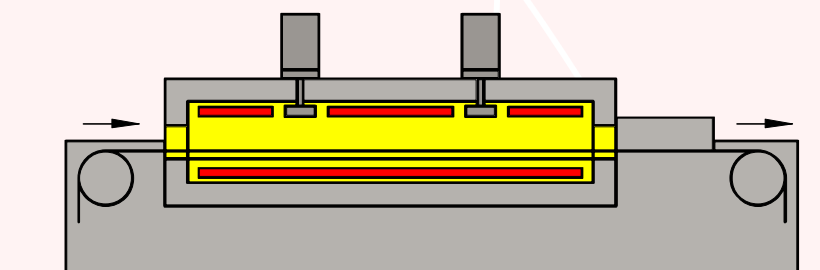


### WASHING MACHINE

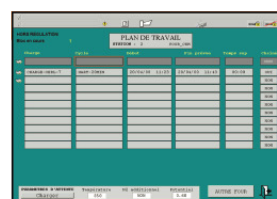
with conveyor, baskets or spiral screw

### TEMPERING FURNACE

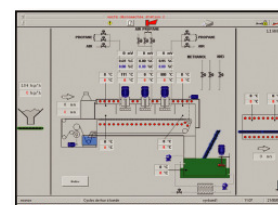
with belt conveyor or baskets, with or without channel and protective gas



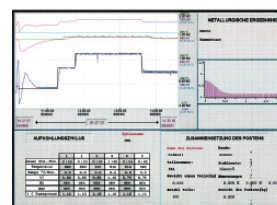
Programming



Managing



Monitoring



Recording

### SUPERVISION

- Installation management
- Synoptic of the installation
- Control and regulation of the different elements
- Automatic or semiautomatic handling
- Production planning
- Follow-up of the production, management of the series
- Filing of the production records
- Production analysis
- Treatment of the events
- Traceability according to ISO



### AVANTAGES

- Gas-tight muffle with preheating zone
- The upper part of the furnace consists of several elements, which can be dismantled easily.
- The engine-turbine-units are mounted on a system of weight compensation, which allows expansion
- Dismantling of turbines and O2-probes from the top of the furnace
- Heating elements and burners can be dismantled without complete standstill of the installation
- Continuous, controlled drive of the conveyor
- System to dry the conveyor
- Easy access to all regulating elements
- Regulation of the carbon potential for every single zone (Econox oxygen probe)
- Homogeneity and reproducibility of the treatments
- Quick change of the treatment cycles