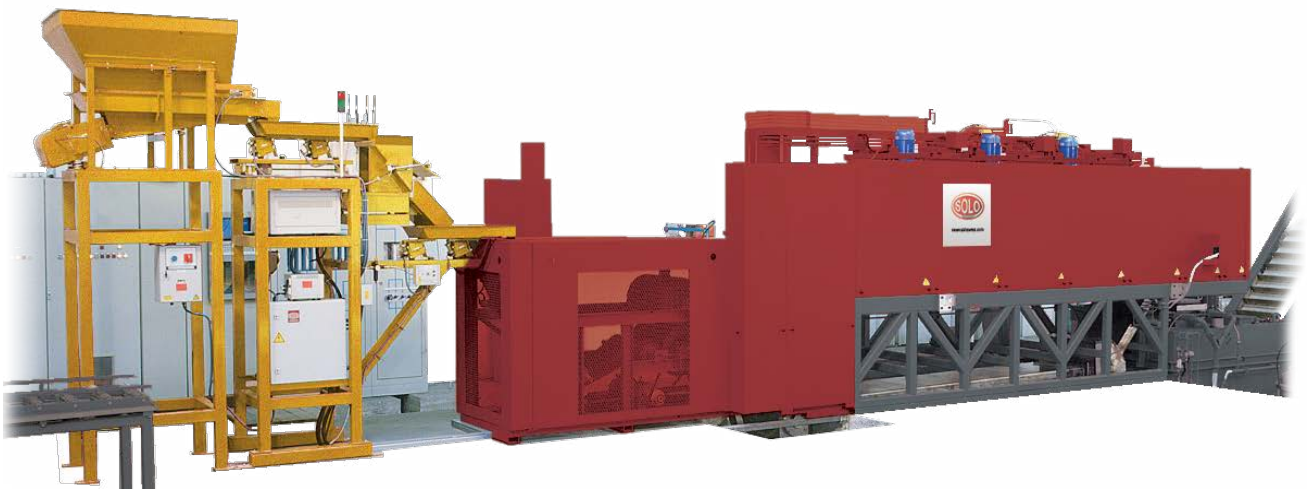




Continuous furnaces

with quenching tank
Type SOLO® 302



100%

Electric Heating

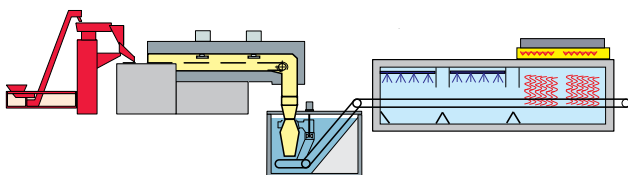
🇨🇭 Innovative. Reliable. Precise.

Furnaces under protective atmosphere with rapid cooling in different quenching media. All SOLO Swiss furnaces are equipped with a refractory steel muffle for precision heat treatment (fast conditioning of different processes).

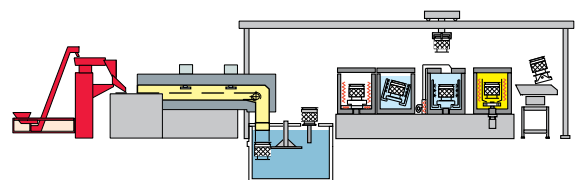


Models	Measurements (mm)					Heating Power (kW)	Production (kg/h)							
302-20/200	Belt width	200	Height	40	Heating length	2000	Electric	Quenching	40	Carbonitriding 0.10 mm	30	Carburizing 0.30 mm	-	
302-20/300		200		40		3000			45		84		72	30
302-40/250		400		80		2500			80		140		120	50
302-45/400		450		100		4000			136		220		190	80
302-45/500		450		80		5000			145		280		240	100
302-60/400		620		120		4000			170		336		288	120
302-60/500		620		120		5000			230		420		360	150

VARIOUS CONFIGURATIONS



Continuous flow



Discontinuous flow

FURNACE

- Muffle designed to resist high temperatures and to allow a rapid conditioning of atmosphere
- Several possible heating zones according to the production
- Chimneys for burning gas at the entrance for environmental protection
- Control of the automatic ignition of the protective gas
- Flat, mesh or waved belt, with edges or rims according to the type of the parts
- Easy replacement of the heating elements
- AMS 2750, CQI9 & Industry 4.0 (upon request)

PROCESS FLEXIBILITY

- Fast atmospheric change for : Austenitizing, Carburizing, Carbonitriding
- Choice of quenching media (oil/salt or water)

ECONOMICAL

- Low treatment gas consumption thanks to a metallic muffle
- Energy saving through internal belt return

RELIABILITY

- The dimensional stability of the canal is guaranteed by a profiled bottom muffle
- A pre-heating canal avoids thermic shocks and enables residual oil burning
- Forced gas circulation turbine

PRECISION

- Temperature homogeneity is guaranteed by several independent heating zones
- Forced treatment gas circulation through the parts
- Regulation of carbon potential in different zones
- Control and regulation of temperatures through thermocouples distributed throughout the muffle

GAS DISTRIBUTION

- N₂ purging, safety and cycle
- Automatic purge in case of lack of: protective gas, power breakdown or absence of flame
- CH₃OH direct injection
- Carbon potential regulation with air/propane (mass-flow meter)
- All security for gas injection
- Safety double valves

Major options

- NH₃ for carbonitriding (volumetric or mass-flow meter)
- Infra-red CO/CO₂ analysis device to control the O₂ probes or to regulate the carbon potential
- Methanol pump

PROCESS CONTROL**Control hardware**

- PLC and I/O hot swap Siemens S7
- Siemens industrial PC with 22" touch screen
- Siemens WinCC management system
- MS-SQL relational database
- Remote access for diagnostics
- UPS for PC and PLC
- Data backup system (NAS)
- Air-conditioned desk for the PC

Basic software features

- Piloting by the programmable PLC: the process flow is automatic
- Security management
- Recipe library, library of model parts and corresponding recipes
- Loads planning with mixed parts
- Animated synoptics for each station
- Archive (ISO 9000 compatible) of loads history with data planning, processed parts, curves, alarms, events. Search filters.
- Generation of processing reports
- Access to features by user profile

Add-ons

- AMS 2750 - CQI9
- Industry 4.0 Module
- ERP-link Module

ADDITIONAL EQUIPMENT

- Carousel quenching tank
- Quenching tank with belt extractor
- Quenching tank with bucket extractor
- Carousel washing machine
- Centrifuge
- Conveyor belt washing machine
- Automatic feeding system
- Integrated water cooler
- Supervision with PC
- Remote PC control, M.E.S, ERP connection

DIFFERENT SIZES



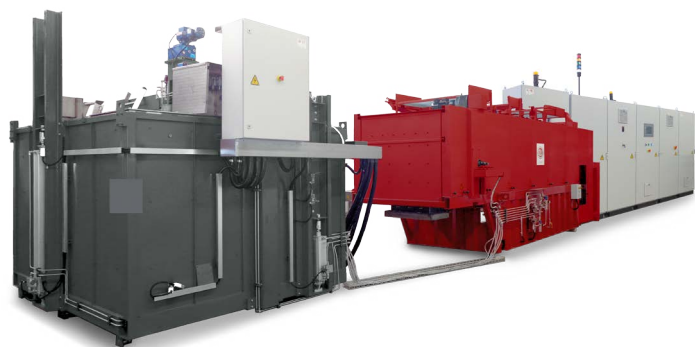
Furnace 302-45/400



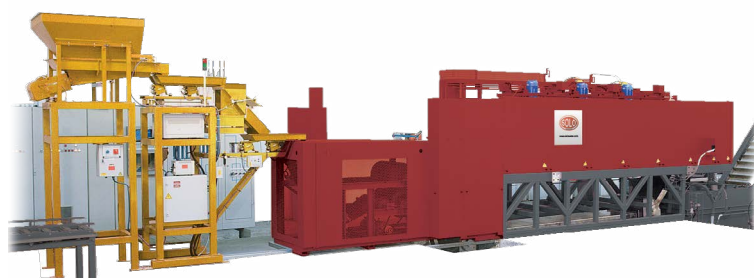
Furnace 302-45/500



Furnace 302-60/400



Furnace 302-60/400



Furnace 302-60/500

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