The DEMO CENTER team consists of 4 qualified metallurgists, 2 material engineers, a safety & standards engineer and an Industry 4.0 engineer with a total of 140 years of experience at SOLO Swiss.

**METALLURGY**
Copper alloys, aluminum alloys, carbon steels, low alloyed steels, alloyed steels, stainless steels, titanium alloys, nickel alloys, precious metals.

**ATMOSPHERES**
Flammable gases: Hydrogen, Cracked ammonia, Methanol, Propane, Methane.
Inert gases: Nitrogen / Argon / Helium.
Oxidizing Gases: Air / Oxygen / Carbon Dioxide.

**ATMOSPHERE CONTROLLED HEAT TREATMENTS**
Annealing, hardening, tempering, brazing, carburizing, carbonitriding, nitriding, nitrocarburizing, oil / salt hardening.

**DIMENSIONS OF PROCESSED PARTS**
Up to 60 cm and 65 kg.

**CONTROLLING PROCESS PARAMETERS**
O2 probe, CO / CO2 / CH4 analyzer, oximeter, dew point, pyrometry (temperature monitoring on part and according to specific requests).

**QUALITY REPORT**
Hardness measurement (Hv, HRC), microstructure control, deformation control.

**COMPLIANCE WITH INTERNATIONAL STANDARDS**
CQI-9, AMS 2750E.
METALLURGY & THERMAL TREATMENT
Heat treatment basis, atmospheres used in heat treatment, how insure safety in heat treatment workshop and operations.

BY ACTIVITY / INDUSTRY
Heat treatment in watchmaking and micromechanics, heat treatment in medical, automotive and aeronautics.

QUALITY
Metallographic analyzes and controls.

INTER-COMPANY TRAINING
According to the annual program (max. 15 participants): theoretical classroom training with implementation on the DEMO CENTER equipment.

TRAINING ON CUSTOMER SITE
DEMO Center is a member of Swiss federation for continuing training.

CHARACTERIZATION EQUIPMENT
Cutting, coating, polishing for sample preparation. Hardness (HRC) / micro hardness (Hv). Optical microscopy (Olympus BX53M x 1000). Image analysis with Stream software (structure and microstructure, decarburization, grain size).

15 HEAT TREATMENT FURNACES
SOLO P80 carburizing / hardening / carbonitriding furnace, oil quenching, salt quenching. Continuous furnace SOLO 322-10/80. BOREL retort furnaces 650 °C and 1100 °C. Tilting furnace BOREL 1050 °C with oil quenching. BOREL chamber furnaces with removable shovel under protective gas. Various ovens and BOREL ovens from 200 °C to 1500 °C.
In agreement with our partners, tests on SOLO or BOREL furnaces currently in service are also possible on request.