

FURNACE FOR CONTROLLED ATMOSPHERE HEAT TREATMENT



Trademark: IVA Schmetz

MODEL: RM 300

IVA Schmetz GmbH
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Commerzbank AG Essen
IBAN: DE39 3604 0039 0132 4003 00
BIC: COBADEFF360

Sparkasse Dortmund
IBAN: DE86 4405 0199 0351 0101 50
BIC: DORTDE33XXX



TECHNICAL SPECIFICATIONS OF THE OVEN.

No.	Magnitude	Specification
1	Controlled Atmosphere Heat Treatment Furnace	
1.2	Working temperature	1060 °C
1.3	Power total connection	80 kVA
1.4	Connection voltage	220 V
1.5	Frequency	60 Hz
1.6	Heating power	51 kW
1.7	Working load capacity	200 Kg
1.8	Retort Volume	365 liters
1.9	Volume of locks	660 liters
1.10	Temperature homogeneity	+/- 3.5°C
2	Oil Cooling System	
2.1	Volume	1,190 liters
2.2	Service temperature	40 °C
2.3	Temperature after short-term cooling.	80 °C
2.4	Cooling medium	Oil

DOCUMENTATION THAT ACCOMPANIES THE OVEN.

No.	Document
1	Operation and maintenance manual in original language and a simple translation into Spanish.
2	Operation and programming manual of control systems in original language and a simple translation into Spanish.
3	List of parts, spare parts and consumables in the original language and a simple translation into Spanish.
4	Diagrams of electrical, electronic, hydraulic and mechanical circuits in the original language and a simple translation into Spanish.
	Schematic diagrams of the furnace, cooling system, peripheral equipment, as well as mechanical guides of 5 installation in the original language and a simple translation into Spanish.
6	List of Codes of the heat treatment programs for each of the parts indicated in Annex "A".
7	Letter of guarantee against manufacturing defects and/or hidden defects for two years.
8	Manual of alarms, common faults and solution procedures in original language and a simple translation into Spanish.
9	Document certifying compliance with the standards: NOM-043-SEMARNAT-1993, NOM-052-SEMARNAT-2005 and NOM-002-ECOL-1996 or an international one that is within the ranges of national standards such as CE declaration.

OVEN ATTRIBUTES:

No.	Attribute
1	Controlled Atmosphere Heat Treatment Unit.
1.1	Electric heating based on resistors.
1.2	Semi-automatic operation and liftable floor.
1.3	Heat treatment of bulk or small parts made of alloyed or non-alloyed case-hardened steel.
1.4	Heat treatment: Tempering, gas carburizing, carbonitriding, hardening in oil
1.5	Auxiliary gases for heat treatments: nitrogen, acetone, ammonia and methanol.
1.6	Acoustic Alarm for Process Interruption and Completion of Heat Treatment Cycle and Shutdown Function automatic and rest between loads.
1.7	Fan for uniform circulation of gas.

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1.8	Furnace control panel with IP54 or higher protection, computer with keyboard and LCD screen and printer, for programming, graphical display of the cycle and parameters of the heat treatment in real time, alarms and historical records, open and closed valves, cooling status, pressure indicators, amperage, gas flow and all those that are necessary for the system to operate safely and efficiently, as well as cooling system of the integrated panel.
1.9	Secondary control panel at the front of the oven with visual indicators of the parts in operation and the cycle and stages of operation of the furnace, as well as the controls of operation of the furnace.
1.10	High precision temperature control system.
1.11	Integrated water cooling system
1.12	Buffer tank for treatment gases (supplied by customer).
1.13	Hydraulic thrust loading device or similar system.
1.14	Furnace on top of the heat treatment unit and gas-proof retort.
1.15	Retort: round stainless steel sheet metal construction
1.16	High-precision oxygen measurement probe with zirconium oxide.
1.17	LP gas-based waste gas burning equipment and air pump for gas washing.
1.18	Rolling table and lifting mechanism.
1.19	Gas leak alarm system with acoustic alarm.
1.20	Safety system for pressure release.
1.21	Equipped with thermal insulation, structured by modules that allow easy maintenance.
1.22	The furnace retort enclosure able to hold various loads placed in the baskets (supplied by customer)
2	Oil Cooling System
2.1	Integrated tempering bath in the lower part of the furnace
2.2	Chiller to control and lower the temperature of the oil.
2.3	Quench oil for cooling.

REFERENCE IMAGE



**RM 300 KAN during assembly at VAT Schmetz
(immediately before delivery)**

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