

Specifications (cont.)

	RO400FC	RO400FC-C	RO400FC-SL
Environment	Noise level	70 dB (A) maximum	
Features	Emergency stop buttons	2 (on left and right side of the machine)	
	Main power disconnect	1 with undervoltage circuit breaker	
	Overheat security	Overheat temperature control for each zone (permanent breaker)	
	Safety standards	CE, EN ISO 13849-1	
	Color	White (RAL9002) silky lustre, fine structure	

Heating zone specifications

Temperature Profile	Preheat 1	Preheat 2	Preheat 3	Reflow	Cooling
Type	Convection	Convection	Convection	Convection	Convection
Max. gas temperature setting	290°C (554°F)	290°C (554°F)	290°C (554°F)	290°C (554°F)	--
Heating power	3000 W	3000 W	3000 W	2x3000 W	--
Regulation (Reflow conditions)	+/- 3°C	+/- 3°C	+/- 3°C	+/- 3°C	--
Ramp times (FR4 inboard measurem.)	1.8-2°C /sec	1.8-2°C /sec	1.8-2°C /sec	2-3°C /sec	2.5-3°C /sec
Temperature measurement	in airstream*	in airstream*	in airstream*	in airstream*	--
Heating up time from 20°C (68°F) to set temperature 160-160-160-235°C (320-320-320-455°F) (Typical used Profile)	9 min	7 min	7 min	18 min	--
ΔT within 400 mm (15.8") conveyor width	<4°C (39.2°F)	<4°C (39.2°F)	<4°C (39.2°F)	<4°C (39.2°F)	--
Cold start warm up to 235°C (455°F)	21 min	15 min	15 min	18 min	--
Cold start warm up to 290°C (554°F)	35 min	26 min	26 min	30 min	--
Max temp difference between two adjacent zones	← 270°C (518°F)	← 80°C (176°F)	← 80°C (176°F)	← 80°C (176°F)	← 260°C (500°F)
Blower rpm	2600	2600	2600	2x2600	2600

* Temperature measurement directly within air stream on PCB height

Option specification

Option	Value	Specification
Signal tower	Colours	3
	Audio signal	Optional
Slow speed option	Order number	RO400FC-15
	Conveyor speed range	10-200 mm / min (0.4"-7.9" / min)
Flying thermocouples	Order number	RO400FC-1
	Length	5 m (16.4 ft)
	Quantity	2
	Temperature display	Directly on the on the integrated LCD Panel or optional importable into RO-Soft
RO-Soft profiling software	Order number	RO400FC-SOFT-2
	Measure channels	6 (2 for thermocouples, 4 for zone temperature)
	Recording time	Up to 180 hours
	Data export format	.pdf (pdf writer necessary on the PC), .csv (for excel import)
	Delivered with	RS232 connection cable, SUB-D Adapter 25pin-9pin
	Data Connection	RS232 card (attention: No USB-RS232 adapter allowed)
	PC requirements	Intel Core-i series or better
Exhaust incl. ventilator	System requirements	Option RO400FC-1 (Flying Thermocouples)
	Order number	RO400FC-VNT
	Scope of delivery	Covered exhaust fan with connection pipes to the two exhaust nozzles, Power cable connected to the oven
	Technical details	500m ³ /h (300cfm) air exhaust, 230V 50/60Hz
Customers side installation	1 Pipe or tube to the outside or to air cleaning equipment Diameter 150mm (5.9"), max length 5.0m (16.4 ft). Fireproof and temperature resistant up to 70°C (158°F)	



Option specification (cont.)

Option	Value	Specification
Exhaust tubes (without Ventilator)	Scope of delivery	Connection pipes to the two exhaust nozzles Diameter 150mm (5.9") with T connection on top, Diameter 150mm (5.9")
	Customer side installation	Exhaust system with 1 Pipe or tube Diameter 150mm (5.9"), max length 5.0m (16.4 ft) Fireproof and temperature resistant up to 70°C (158°F) Technical requirements for exhaust system see on chapter "Exhaust"
Slide out unit	Order number	RO400FC-14
	Sliding angle	Adjustable with screws
PCB Counter	Sensor type	Optical polarized
	Order numbers:	Mesh belt RO400FC-3B Chain conveyor) RO400FC-3
Middle support rail	Order number	RO400FC-9
	Support Type	Steel rope
	Width adjustment	Motorized
	Height adjustment	Motorized, 18mm (0.71") up-down
	Oiling system	Not necessary
Oiling System for Chain conveyor	Weight	50 kg
	Order number	RO400FC-10
	Located	Directly on the two chain rails at the entrance side
	Type of used oil	High temperature oil up to 300°C (572°F)
	Oiling cycle	Daily to weekly (depending to operation time)
SMEMA Interface	Oil consumption	Depends from the oiling cycles
	Order number	RO400FC-12
	Sensor	One at entrance and one at exit side
	Sensor type	Optical polarized
	Functions by side	Board counter
3 color signal tower	Scope of delivery	SMEMA connectors at entrance and exit side of the oven, one SMEMA cable, two sensors
	Order number	RO400FC-13
	Light colors	Red, yellow, green
PC monitor and keyboard support arm	Standard with SMEMA interface	No, but recommended
	Order no.	RO400FC-7
Universal transformer	Located	At the entrance side of the oven, easy to handle from the operators place and moveable to the backside if not needed.
	Order number	RO400FC-20
	Input voltage (primary side)	3x480/277/240/208VAC, 60Hz, 25A
	Input connections	3 phases, earth (neutral not connected)
	Power input	16kWh max.
	Fuses	25A each phase
	Transformer wiring	Star with neutral at middle
	Output voltage (secondary)	3x400V
	Output connections	3 phases, earth, neutral (neutral generated by the transformer)
	Frequency	50/60Hz
	Necessary circuit breaker (at customers side)	Yes, 3 phase breaker in front of transformer
	Location	Outside or built in into the housing of the oven

Packing information

Specification	Value
Box (LxWxH)	3090x1150x1600 mm (10.14x3.77x.25 ft)
Shipping weight (air freight)	924 kg (2037 lb) with meshbelt
	1024 kg (2258 lb) with pinchain conveyor
	1074 kg (2368 lb) with pinchain conveyor and middle support rail
Shipping weight (sea freight)	961 kg (2119 lb) with meshbelt
	1061 kg (2339 lb) with pinchain conveyor
	1111 kg (2449 lb) with pinchain conveyor and middle support rail
Additional weight	70kg (154 lb) with built-in transformer

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