2. Technical Data

The wiring diagram of the soldering machine and the set up drawing are located in the appendix.

Machine dimension	Hotflow 2/14 *(ASP)*	Hotflow 2/20 *(ASP)*
Length:	4840 mm	6240 mm
Width:	1500 mm	1500 mm
Height:	1370-1500 mm	1370-1500 mm
Heigth (open):	1890-2010 mm	1890-2010 mm
Weight:	approx. 2400 kg	approx. 3050 kg

Paint finish	Hotflow 2/14 *(ASP)*	Hotflow 2/20 *(ASP)*
Standard:	RAL 7016 / 7035	RAL 7016 / 7035

Conveyor system	Hotflow 2/14 *(ASP)*	Hotflow 2/20 *(ASP)*
Working width:	50 - 500 mm	50 - 500 mm
Working width with center support:	50 - 500 mm	50 - 500 mm
Board clearance:	+35 / -20 mm	+35 / -20 mm
Conveyor speed:	20 - 200 cm/min	20 - 200 cm/min
Height above ground:	820 - 950 mm (Standard)	820 - 950 mm (Standard)
Pin chain conveyor:	5 mm (0.2“) pin length (2,85 mm (0.1“) optional)	5 mm (0.2“) pin length (2,85 mm (0.1“) optional)
PCB Length minimum:	80 mm	80 mm

Prozess zone	Hotflow 2/14 *(ASP)*	Hotflow 2/20 *(ASP)*
Prozess length:	3440 mm	4840 mm
Heating zone:	2570 mm	3620 mm
Cooling zone:	870 mm	1220 mm
Infeed zone:	700 mm	700 mm
Outfeed zone:	700 mm	700 mm
Width of process chamber:	700 mm	700 mm

Heating system	Hotflow 2/14 *(ASP)*	Hotflow 2/20 *(ASP)*
Convection:	100%	100%
Gas flow per module:	approx. 500cu.m/h (adjustable)	approx. 500cu.m/h (adjustable)
Convection module:	7 upper / 2 or 7 lower	10 upper / 3 or 10 lower
thereof		
*** Preating zone**	5 upper / optional 5 lower	7 upper / optional 7 lower
*** Soldering zone**	2 upper / 2 lower	3 upper / 3 lower
Capacity per module:	3,3kW / 400 V	3,3kW / 400 V
Heating-up time of the soldering machine:	ca. 20-25 min	ca. 20-25 min
Maximum temperature-difference between:		
***heating zones lying next to each other - Example: first preheating 150°C / second preheating 170°C**	ca. 20 °C (at high absolute-temperature values greater than 20°C are rechable)	ca. 20 °C (at high absolute-temperature values greater than 20°C are rechable)
***last preheating and first soldering zone - Example: last preheating 180°C / first soldering zone 320°C**	up to 120 °C	up to 120 °C

Cooling device	Hotflow 2/14 *(ASP)*	Hotflow 2/20 *(ASP)*
	ERSA Multijet-System on top and at the bottom with Water cooling unit	ERSA Multijet-System on top and at the bottom with Water cooling unit
Cooling zone:	2 - upper	3 - upper
Adjustment:	not separate adjustable	not separate adjustable
Coolant:	water / R407C / air	water / R407C / air

Environmental conditons	Hotflow 2/14 *(ASP)*	Hotflow 2/14 *(ASP)*
Max. ambient temperature:	10 - 35 °C	10 - 35 °C

Humidity	Hotflow 2/14 *(ASP)*	Hotflow 2/14 *(ASP)*
	20% - 95% (not condensating)	20% - 95% (not condensating)

Inert gas technology	Hotflow 2/14 *(ASP)*	Hotflow 2/20 *(ASP)*
Inert gas supply:	to soldering zone	to soldering zone
Delivery rate measuring instruments:	0-35 cu.m/h	0-35 cu.m/h
Pressure monitoring, inert gas supply:	6 bar	6 bar
recommended Inter gas-class:	5.0	5.0
Electrical data	**Hotflow 2/14** *(ASP)*	**Hotflow 2/20** *(ASP)*
U_{N} =	5 wire system, 3-phase 400V, N, PE equiv. IEC 38 (+10 %, -10%)	5 wire system, 3-phase 400V, N, PE equiv. IEC 38 (+10 %, -10%)
f_{N}	50 or 60 Hz	50 or 60 Hz
max. fuse	3x 125A (slow blow) **[**3x100A (slow blow)**]**	3x 125A (slow blow) **[**3x100A (slow blow)**]**
P Nenn	33-59* **[**40**]** kW	48-81* **[**55**]** kW
I Nenn	**[**58**]** A	**[**80**]** A
	[ ] Power Reduction * dependent on optional equipment	

Safety devices	Hotflow 2/14 *(ASP)*	Hotflow 2/20 *(ASP)*
	Main switch	Main switch
	Emergency stop switch (4x)	Emergency stop switch (4x)
	Fan monitoring each module	Fan monitoring each module
	Exhaust monitoring	Exhaust monitoring
	Two hands required for closing/opening the hood	Two hands required for closing/opening the hood

Extraction	Hotflow 2/14 *(ASP)*	Hotflow 2/20 *(ASP)*
Exhaust connections:	2 x Ø150 mm (5.9“)	2 x Ø150 mm (5.9“)
Extraction capacity each connection:	400 cu.m/h (237 CFM)	400 cu.m/h (237 CFM)

Permanent noise level	Hotflow 2/14 *(ASP)*	Hotflow 2/20 *(ASP)*
	< 70 dB (A)	< 70 dB (A)

Optionen	Hotflow 2/14 *(ASP)*	Hotflow 2/20 *(ASP)*
Bottom-side preheating, Multijet version	O	O
temperature monitoring / Cooling zone	X	X
Nitrogen Technology	O	O
Rest Oxygen Monitoring and Control	O	O
Process Atmosphere Cleaning in the outlet	X	X
Process Atmosphere Cleaning in the inlet	O	O
Low-mass tubes for pin-and-chain conveyor (excludes center support)	O	O
PCB-Center Support with hinged straps - program controlled adjustment	O	O
PCB-Center Support with continuous rest - program controlled adjustment	O	O
Conveyor Width Adjustment - program controlled adjustment	X	X
Automatic Chain Lubricator - for Conveyor and Center Support	X	X
Additional bottom side cooling in the cooling zone	O	O
Dual Track Conveyor	O	on request
second PCB center support for Dual track conveyor	O	on request
Operation Status Indicator	X	X
Inline-Interface (i.g. SMEMA, WMW)	O	O
PCB Pass Trough Control	O	O
Panel-PC incl. PC Support Arm and Touch-Screen	O	O
Standard PC (notebook) incl. swing arm ERSAsoft and EPOS basic module	X	X
Autoprofiler	O	O
Adjustable fan speeds for heating and cooling zones	X	X
Uninterrupted (Conveyor, Hood, PLC)	O	O
Temperature Profiling System (Sensor Shuttle)	O	O

X Standard
O Optional available