

Part No./ Art.-Nr.		price/unit excl. VAT Preis/Stück exkl. MwSt.
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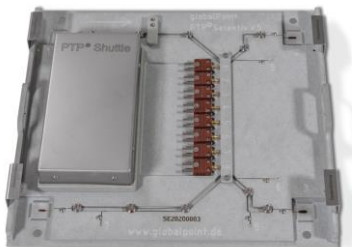
OGP-ME001	<b>PTP Electronics + Software</b> for Reflow-, Wave-, Selective Soldering Systems calibrated, Measuring Range -150 to 1350 °C, 8 Channels, case	4.535,00 €
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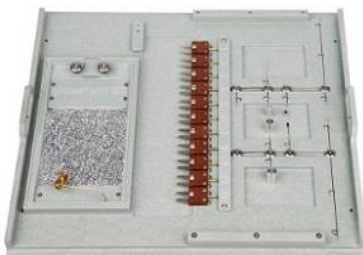
OGP-ME002	<b>PTP VP Electronics + Software</b> for Vapourphase Reflow Soldering calibrated, 8 Channels, Real-Time-Data, (Incl. use in Vacuum Chambers)	5.820,00 €
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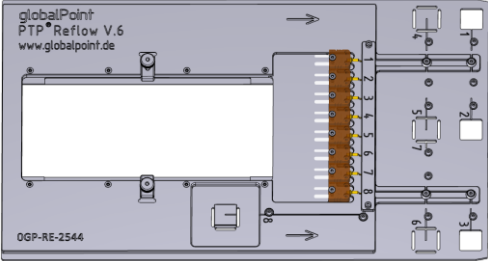
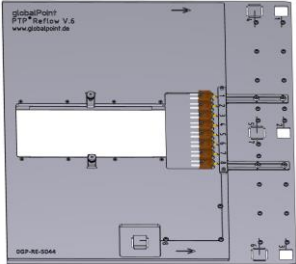
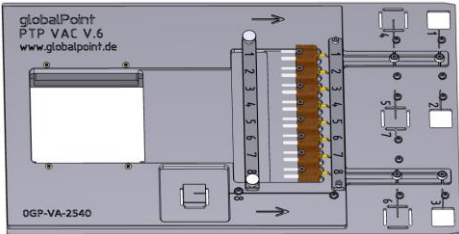
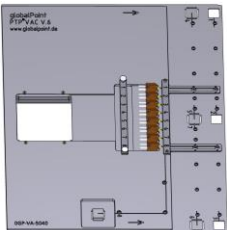


OGP-SE001	<b>measuring board PTP Selective V5 - 330x300</b> 8 Sensors 8 Thermo cable PTFE Isolation (+260°C), labeled, length 350 mm each	4.250,00 €
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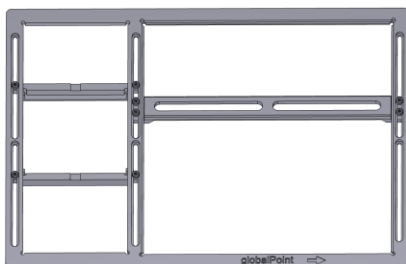
OGP-WE001	<b>measurement Board PTP Wave V6 - 330x300</b> 8 Thermo cable PTFE Isolation (+260°C), labeled, length 350 mm each	4.310,00 €
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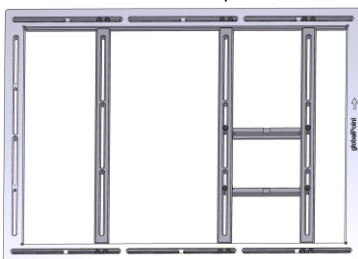
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OGP-RE-2544	<p><b>measuring board Reflow V6 - 250x434</b></p> <p>8 Thermo cable Fibreglass Isolation (+320°C), lengths: 2x120 mm, 2x150 mm, 2x180 mm, 2x220 mm</p> 	3.540,00 €
OGP-RE-5044	<p><b>measuring board Reflow V6 - 500x434</b></p> <p>8 Thermo cable Fibreglass Isolation (+320°C), lengths: 2x120 mm, 2x150 mm, 2x180 mm, 2x220 mm</p> 	3.740,00 €
OGP-VA-2540	<p><b>measurement board Vapour phase/ Vacuum - 250x400</b></p> <p>8 Thermo cable PTFE Isolation (+260°C), labeled, length 250 mm each</p> 	3.540,00 €
OGP-VA-5040	<p><b>measurement board Vapour phase/ Vacuum - 500x400</b></p> <p>8 Thermo cable PTFE Isolation (+260°C), labeled, length 250 mm each</p> 	3.680,00 €

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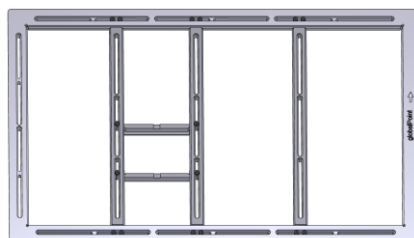
<b>OGP-SH-V-2840</b>	<b>Carrier for EXOS dual track (FLFL) - 280x400</b> For an Exos with two conveyors: fixed - loose - fixed - loose	<b>3.950,00 €</b>
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<b>OGP-SH-V-5340</b>	<b>Carrier for EXOS dual track (FLLF) - 530x400</b> For an Exos with two conveyors: fixed - loose - loose - fixed	<b>4.650,00 €</b>
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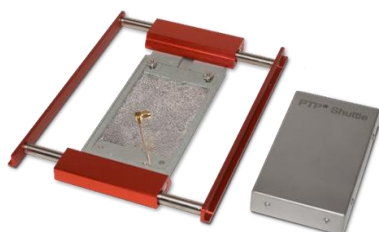





<b>OGP-SH-V-6340</b>	<b>Carrier for EXOS single track - 630x400</b> For an Exos with one conveyor	<b>4.950,00 €</b>
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**General Information** Special measuring boards on request

<b>OGP-SH002</b>	<b>shuttle carrier for PTP-electronic</b> Standard 130x283 mm [WxL] variable width 130-600 mm	<b>2.030,00 €</b>
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<b>339701 K-Type Thermocouple Fibreglass L=300 mm</b> (+320°C) 2x0,2mm / L=300 mm	28,00 €
<b>339702 K-Type Thermocouple Fibreglass L=400 mm</b> (+320°C) 2x0,2mm / L=400 mm	28,00 €
<b>339703 K-Type Thermocouple Fibreglass L=500 mm</b> (+320°C) 2x0,2mm / L=500 mm	30,00 €
	
<b>340082 K-Type Sheated Thermoc. Inc.(VPE=5), 150</b> (+320°C) D=0,5 / L=150 mm	277,00 €
<b>340083 K-Type Sheated Thermoc.,Inc.(VPE=5) 200</b> (+320°C) D=0,5 / L=200 mm	280,00 €
<b>340086 K-Type Sheated Thermoc.Inc.(VPE=5) 300</b> (+320°C) D=0,5 / L=300 mm	295,00 €
<b>340000 K-Type Sheated Thermoc. Inc. (VPE=5) 400</b> (+320°C) D=0,5 / L=400 mm	310,00 €
<b>340087 K-Type Sheated Thermoc.Inc.(VPE=5) 500</b> (+320°C) D=0,5 / L=500 mm	314,00 €
	
<b>340393 K-Type Thermoc. FG V5 (VPE=8) 120-220mm</b> Thermo cable Fibreglass Isolation (+320°C) lengths: 2x120 mm, 2x150 mm, 2x180 mm, 2x220 mm	347,00 €
<b>341242 K-Typ-Thermoc. V5A/3A/GS (VPE=8) 150-200</b>	340,00 €
<b>340149 K-Type Thermoc. FG V5A/3A,(VPE=8)220-350</b> Thermo cable Fibreglass Isolation (+320°C), lengths: 220, 240, 250, 270, 290, 310, 330 und 350 mm	345,00 €
	

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341245 K-Typ-Thermoc. GS, VPE=8, L=400mm	310,00 €
341247 K-Typ-Thermoc. GS, VPE=8, L=400mm	320,00 €
	
340160 K-Type Thermo-cable VP PTFE (VPE=8) 250 (+260°C), numbering "1" to "8", length 250 mm each	355,00 €
339318 K-Type Thermo-cables PTFE, (VPE =8) 350 PTFE Isolation (M-F, +260°C), L= 350 mm, Numbering 1 - 8	365,00 €
	
223683 Antenna RX folding 50R/SMA-M (+80°C)	45,00 €
	
201950 Antenna TX, Stub 50R/SMA-M TX, Stub (+80°C)	45,00 €
	
341288 USB2.0 cabel,A plug- Mini B, 1m,pack.	11,00 €
	
341289 VP short circuit plug, pack.	17,00 €
	
341290 VP USB-special-charger cable compl. pack	30,00 €

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341729 antenna cabel SMA/50R, pack.

32,00 €



212495 Li-Ion-Battery globalPoint ICS

41,00 €



REMARKS

All cables and thermocouples are K-Type, NiCr-Ni, Class1, DIN IEC 584, Tolerance:  $\pm 1.5$  K (0-375 °C)

Measuring range thermocouples approx. -200 to +1200 °C.

After calibration of thermocouples, tolerance  $\pm 0.2$  K, declares the uncertainty for 231.9 °C (tin solidification point).

- Maximum Temperature for a.m. Connectors / Cables with PTFE Insolation : 260 °C
- Maximum Temperature for a.m. Connectors / Cables with Fibre-Glass Insolation: 320 °C

- Measuring Boards contain 8 thermal cables in accordance with DIN International Electronical Commission 584 (used to connect the measuring sensors with the measuring electronics and optionally the measuring board calibration certificate. Further manuals on memory drive.

- Measuring Electronics consists of 2 transceiver modules (1 x stationary nearby the oven, 1 x mobile on the Measuring Board and/or Shuttle) with 8 channels and the accessories each: 1 charging adapter for USB (V Ponly), 1 USB data cable, 2 antennas 50R, 8 K-Type miniature thermocouples class 1, NiCr-Ni, in accordance with ISO IEC 584, size 2x0,2x300 mm and the Electronics Calibration Certificate. Electronics and PTP©Software are usable for all Measuring Boards (Reflow, Wave and Selective). The software (German, English, Russian, Spanish, Italian, Portuguese and Chinese) is supplied on memory drive and contains among other documents all manuals (user manual PTP©, start-up guidance, calibration and upgrade information) in pdf format. For Reflow and Wave measurements the evaluation of profiles and soldering ovens is inbuild/possible!

Electronics Carrier / Shuttle permits the use of PTP© Electronics without measuring board . The Shuttle (Reflow Convection) with thermal protection, adjustable width and an inbuild antenna for the connection of measuring electronics. This carrier board can be adapted over extenders to different conveyor widths. A special VP shuttle carries the VP Electronics. Both shuttles serve for measurements on user material / printed circuit boards or are used on PTP© measuring boards. Specially shuttle sizes on request.

- The local service at customer site covers start-up, function test (profile measurement) of the measuring system, software installation as well as a briefing (software operation, bases for the profile measurement, measuring preparation and measurements).

- Measuring electronics (forwarding of the 2 Transceiver modules) is calibrated with reference to thermal standards. The new calibration is activated by software. The calibration service should take place annually.

- Measuring Boards / Thermocouples will be calibrated with reference to thermal DKD-Standards. Because all measuring boards are made of K-Type thermocouples of the highest accuracy class (class 1) the maximum deviation is within the range of  $\pm 1,5$  K without any calibration. The deviations are in general for all thermocouples nearly identically, because they are from one manufacturing load. The calibration proves the concrete deviation (resolution 0,1 K) for all thermocouples for the measuring board at the calibration temperature of 231,9 °C. These calibration values are considered within PTP© Software. The deviation/error of calibrated thermocouples amounts to  $\pm 0,2$  K.

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