

CAT GmbH · Heimsheimer Strasse 35 · D-70499 Stuttgart · Phone: +49 711 365 91 99 - 0 · email: patrick.siegel@catgmbh.de

Invisible Soil for Visible Profits – Particle Monitoring on Surfaces

Surface Scan Probes for APCs LWS Solair 1100+, Solair 3100+, 3200+ and Boulder



- 1: SS 50 T
- 2: SS 30 T
- 3: T 50 T
- 4: T 30 T

Possible combination to LWS Solair 3100+, 3200+, 1100+ and Boulder



Why surface particulate detection?

In many branches of industry the manufacture of an ultra clean surface is crucial to the functionality and quality of the product. Particles have an impact on the overall effectiveness of process equipment, decreasing tool availability and increasing defects, reject rates and costs. Therefore avoiding particles on surfaces is an essential task of an effective quality assurance. The question is how to obtain reliable data giving evidence of the cleanliness of critical parts, work surface, process equipment etc.?

The Solution – CAT Surface Scan Probes hooked up to ordinary APCs

With CAT scan systems the user can instantly assess the cleanliness of critical surfaces (e. g. supply chain QA) and the effectiveness of cleaning procedures. Its unique technology and portable design makes CAT scan systems the perfect tool Companies concerned with surface cleanliness.

Benefits of CAT Surface Scan Probes

- Inspection of cleanliness before and after cleaning processes (work pieces, tools, equipment, cleanroom walls, floors, etc.).
- Qualification of processes
- Cleanliness qualification of incoming and outgoing materials
- Reduction of defect and reject rates and thus increase of productivity
- Reduction of time of maintenance cycles

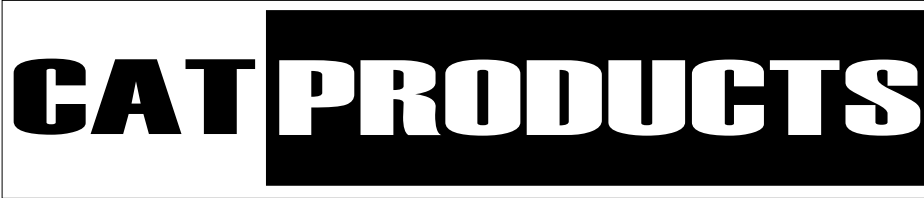
Major pros

- Online
- Direct
- Rapid
- Non destructive
- Eliminating in contrast to alternative techniques the human error
- Antistatic design (10⁻⁹ Ω)
- Ionisation unit available

CAT Clean Air Technology GmbH
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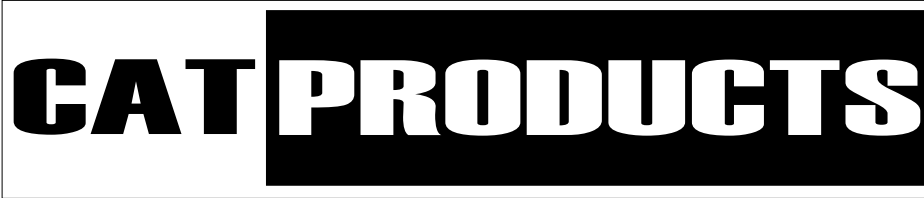
Measurement Log

Type of count :	Original count (OC)				
Date (Time) :	02.04.2008 (11:08:52)				
Size (µm)	Differential counts	Cumulative counts	Admissible counts	Passed / Failed	Comment
5	8	23	5		
10	7	15	2		
25	6	8	1		
40	0	2	0		
50	2	2	0		
100	0	0	0		
Type of count :	Decay 1				
Date (Time) :	02.04.2008 (11:09:24)				
Size (µm)	Differential counts	Cumulative counts	Admissible counts	Passed / Failed	Comment
5	1	7	1		
10	4	6	1		
25	1	2	0		
40	0	1	0		
50	1	1	0		
100	0	0	0		
Type of count :	Decay 2				
Date (Time) :	02.04.2008 (11:09:56)				
Size (µm)	Differential counts	Cumulative counts	Admissible counts	Passed / Failed	Comment
5	0	0	0		
10	0	0	0		
25	0	0	0		
40	0	0	0		
50	0	0	0		
100	0	0	0		

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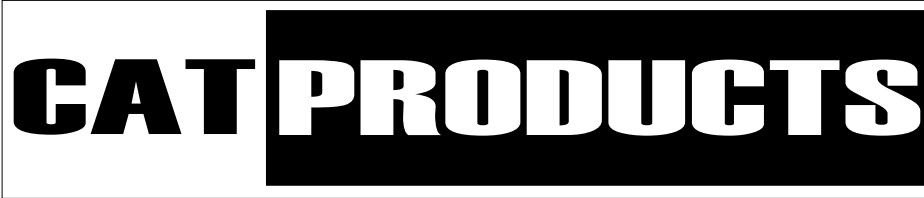
Prices and Specifications of 30 mm Surface Scan Probes (T 30 T and SS 30 T)

Line	Item #	Product Description	Qty.	Price	Picture
010	T.30.T	Surface Scan Probe T.30.T <ul style="list-style-type: none"> • Antistatic materials • Probe diameter: 30 mm • Standard Sensitivity (Standard Range): 0.3 µm (0.3 - 25 µm) • Possible upgrade of sensitivity to 0.1 µm (see below position) • Internal remote Start-/Stop (micro switch) • Quick releases for quick and easy tube exchange • Demountable faceplate (exchange recom. every 6 to 12 mths.) 	1	€ 2.041,-	 Ø 30 mm
011	SS.30.T	Surface Scan Probe SS.30.T <ul style="list-style-type: none"> • Stainless Steel • Probe diameter: 30 mm • Standard Sensitivity (Standard Range): 0.3 µm (0.3 - 25 µm) • Possible upgrade of sensitivity to 0.1 µm (see below position) • Internal remote Start-/Stop (micro switch) • Quick releases for quick and easy tube exchange • Demountable faceplate (exchange recom. every 6 to 12 mths.) 	1	€ 2.347,-	
012	0.1F	Finish for 0.1 µm counting for T.30.T and SS.30.T (e. g. internal electro polished stainless steel cladding)	1	€ 204,-	
013	MK.30.1	Maintenance kit 1 including exchange faceplate and tube set	1	€ 182,-	
014	MK.30.2	Maintenance kit 2 including faceplate key	1	€ 75,-	
015	ION0.3	Ionisation unit for in line installation (down to 0.3 µm)	1	€ 731,-	
016	BOX.SCAN	Trolley for APC and scan probe fitted with handles and heavy duty foam	1	€ 320,-	

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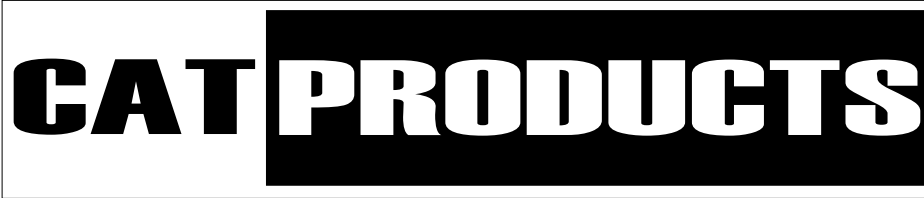
Prices and Specifications of 50 mm Surface Scan Probes (T 50 T and SS 50 T)

Line	Item #	Product Description	Qty.	Price	Picture
020	T.50.T	Surface Scan Probe T.50.T <ul style="list-style-type: none"> • Antistatic materials • Probe diameter: 50 mm • Standard Sensitivity (Standard Range): 0.3 µm (0.3 - 25 µm) • Possible upgrade of sensitivity to 0.1 µm (see below position) • Internal remote Start-/Stop (micro switch) • Quick releases for quick and easy tube exchange • Demountable faceplate (exchange recom. every 6 to 12 mths.) 	1	€ 2.141,-	
021	SS.50.T	Surface Scan Probe SS.50.T <ul style="list-style-type: none"> • Stainless Steel • Probe diameter: 50 mm • Standard Sensitivity (Standard Range): 0.3 µm (0.3 - 25 µm) • Possible upgrade of sensitivity to 0.1 µm (see below position) • Internal remote Start-/Stop (micro switch) • Quick releases for quick and easy tube exchange • Demountable faceplate (exchange recom. every 6 to 12 mths.) 	1	€ 2.347,-	
022	0.1F	Finish for 0.1 µm counting for T.50.T and SS.50.T (e. g. internal electro polished stainless steel cladding)	1	€ 204,-	
023	MK.50.1	Maintenance kit 1 including exchange faceplate and tube set	1	€ 182,-	
024	MK.50.2	Maintenance kit 2 including faceplate key	1	€ 75,-	
025	ION0.3	Ionisation unit for in line installation (down to 0.3 µm)	1	€ 731,-	
026	BOX.SCAN	Trolley for APC and scan probe fitted with handles and heavy duty foam	1	€ 320,-	

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Surface Scan Probes for APCs LWS Solair 1100+, Solair 3100+, 3200+ and Boulder

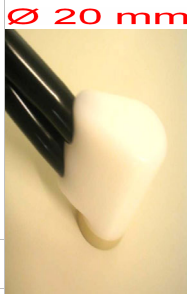


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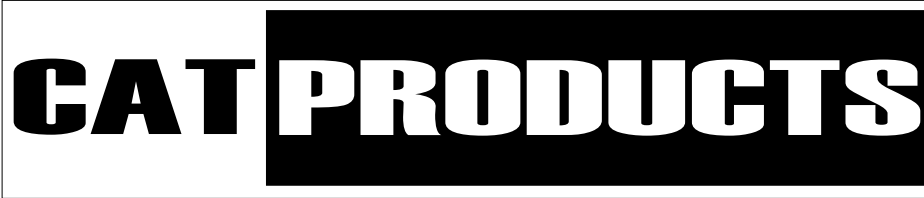
Prices and Specifications of 20 mm Surface Scan Probe (T 20 T)

Line	Item #	Product Description	Qty.	Price	Picture
030	XS.20.TECA	Surface Scan Probe XS.20.TECA <ul style="list-style-type: none"> • Antistatic materials • Probe diameter: 20 mm • Sensitivity (Range): 0.1 µm (0.1 - 25 µm) • External Remote Start-/Stop (micro switch) • Quick releases for quick and easy tube exchange • Demountable faceplate (exchange recom. every 6 to 12 mths.) 	1	€ 1.800,-	
031	MK.20.1	Maintenance kit 1 including exchange faceplate and tube set	1	€ 182,-	
032	MK.20.2	Maintenance kit 2 including faceplate key	1	€ 75,-	
033	ION0.3	Ionisation unit for in line installation (down to 0.3 µm)	1	€ 731,-	
034	BOX.SCAN	Trolley for APC and scan probe fitted with handles and heavy duty foam	1	€ 320,-	

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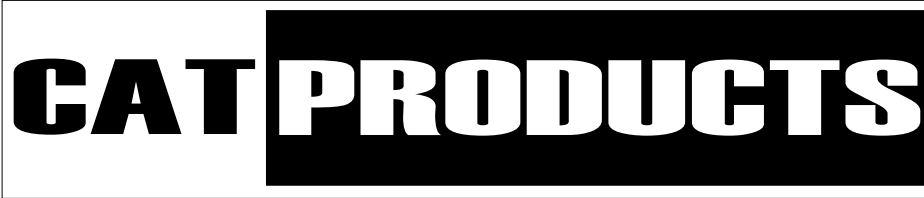
Prices and Specifications of Surface Scan Probes with integrated sensor (XL.SS.30/50.T.IS)

Line	Item #	Product Description	Qty.	Price/unit	Picture
040	XL.SS.30.50T.IS	Surface Scanprobe XL.T.30.50.T.IS <ul style="list-style-type: none"> Surface Scanprobe XL SS 50 T IS for detection and analysis of particle deposits on surfaces IS = Sensor is part of probe and not of the APC (see on the right) Material quality: Stainless steel, synthetic material Standard Probe measuring diameter: 30 mm or 50 mm Standard sensitivity range: 0.3, 0.5, 1.0, 3.0, 5.0, 10.0 µm Optional sensitivity range: 5, 10, 25, 40, 50 and 100 µm Delivery includes: Probe body & faceplate, laser diode as part of the scan probe, micro switch for external Start/Stop, antistatic tubing, interface cable, user manual. Ultra sonic cleaning of all assembly parts Assembly of the Sensor unit and tubing of the sensor Electrical assembly Sensor testing and quality approval 		€ 3.640,-	<p>Benefit of XL.SS.30.50.T.IS scan probes – Laser diode is placed directly inside the scan probe and not in the APC (PATENT PENDING)</p> <ul style="list-style-type: none"> Transport distance from particle removal on surface to laser diode shortened to a minimum. Thus particle counts are up and particle losses are down both to an overall
041	0.1F	Finish for 0.1 µm counting for T.50.T and SS.50.T (e. g. internal electro polished stainless steel cladding)	1	€ 204,-	
042	MK.XL.IS.1	Maintenance kit 1 including exchange faceplate and tube set	1	€ 182,-	
043	MK.XL.IS.2	Maintenance kit 2 including faceplate key	1	€ 75,-	
044	ION0.3	Ionisation unit for in line installation (down to 0.3 µm)	1	€ 731,-	
045	BOX.SCAN	Transport trolley for APC and scan probe fitted with handles and heavy duty foam	1	€ 320,-	

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Prices and Specifications of Surface Scan Probes with integrated sensor (SS.50.T.XTRA)

Line	Item #	Product Description	Qty.	Price/unit	Picture
050	SS.30.50.XTRA	Surface Scan Probe SS.30.50.XTRA <ul style="list-style-type: none"> • Customized scan probe for detection and analysis of particles on micro devices (e. g. micro engines, micro electronic circuit boards, micro cameras, etc.) • Material quality: Stainless steel, synthetic material • Standard Probe measuring diameter: 30 mm or 50 mm • Standard sensitivity range: 0.3, 0.5, 1.0, 3.0, 5.0, 10.0 µm • Optional sensitivity range: 5, 10, 25, 40, 50 and 100 µm • Possible upgrade of sensitivity to 0.1 µm (see below pos.) • Internal remote Start-/Stop (micro switch) • Quick releases for quick and easy tube exchange • Demountable faceplate (exchange recom. every 6 - 12 mths.) • Delivery includes: Customized lower probe section (hemisphere), fixations in stainless steel, customized probe body and faceplate, micro switch for external Start/Stop, tubing, antistatic (Bev-a-liner), interface cable, user manual. 	1	€ 3.490,-	
051	0.1F	Finish for 0.1 µm counting for SS.30.50.XTRA (e. g. internal electro polished stainless steel cladding)	1	€ 204,-	
052	MK.XTRA.1	Maintenance kit 1 including exchange faceplate and tube set	1	€ 182,-	
053	MK.XTRA.2	Maintenance kit 2 including faceplate key	1	€ 75,-	
054	ION0.3	Ionisation unit for in line installation (down to 0.3 µm)	1	€ 731,-	
055	BOX.SCAN	Transport trolley for APC and scan probe fitted with handles and heavy duty foam	1	€ 320,-	

Benefit of SS.30.50.XTRA scan probes – Direct and online detection and analysis of particles on micro devices:

- Micro engines,
- Micro electronic circuit boards,
- Micro cameras,
- Etc.

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