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Quotation no: AQ2505780 - 00

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Subject: ETIVOL - TSDS 180

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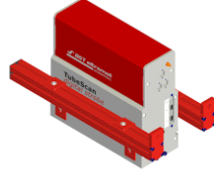
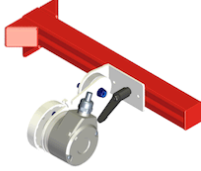
We thank you for your inquiry.

Offer according to the following application parameters:

Max. web width:	160 mm
Max. speed:	20 m/min

Item	Quantity	Description	Price
10	1	TubeScan Print Inspection System The TubeScan is designed as an optical quality assurance system to be used in high quality printing. The intelligent combination of imaging technology and the strobe principle allows a simple and reliable quality check during printing or finishing. The system consists of a modular designed, highly integrated PC system and a digital camera unit. High-level camera technology and advanced operating elements are used together with the latest microelectronics. TubeScan is available in the variants digital strobe, digital strobe XL and eagle view, which include the following functions:	37.983,00 €
	1	TubeScan Digital Strobe 180 Web Viewing System for web width < 180 mm including: • TubeScan Image Capture System with digital camera • high power LED illumination • power supply 100V - 240V, 50/60Hz • friction wheel encoder with spring load bracket and cable • TubeScan Digital Strobe software • menu guided graphic GUI for intuitive touch operation • automatic repeat synchronization by reference image • no additional print mark sensor required	

Item	Quantity	Description	Price																						
		1 Touch monitor for operation 1 Full HD monitor for high-speed web viewing 1 Desktop PC with Intel CPU with Windows 10 (64 bit operating system)																							
		System:																							
1		Operating mode Fine Inspection (Digital Strobe++) Upgrade of a TubeScan web monitoring system to a TubeScan++ inspection system - detection of missing labels and fine print inspection for small defect sizes featuring: - job management - multi-zone processing (adjustable inspection sensitivity) - masking function - auto matrix detection - selectable 'averaging' mode - fine-text algorithm - inspection on up to 20 lanes with adjustable width - individual defect counter per lane - global repeat and defect counter - generation of binary defect output upon finding a defect (150 mA, 0 V low, +24 V high)																							
1		Power cord EU Power cord with plug type for EU.																							
1		UPS 230 V Uninterrupted Power Supply Protects the TubeScan against unexpected power loss and by this also against disordered shut-down. In the case of unexpected power loss, the TubeScan will be automatically shut-down in regular manner. Additional integrated overvoltage protection for the TubeScan electronic. Power infeed 230 V AC																							
		Camera unit 1:																							
1		Technical Information <table><tr><td>TubeScan:</td><td>DS 180</td></tr><tr><td>Camera width:</td><td>260 mm</td></tr><tr><td>Camera height:</td><td>290 mm</td></tr><tr><td>Inspection width:</td><td>180 mm</td></tr><tr><td>extended to:</td><td>without extension</td></tr><tr><td>Max. inspection speed:</td><td>150 m/min</td></tr><tr><td>Speed level:</td><td>Standard</td></tr><tr><td>Camera type:</td><td>HR 1 option</td></tr><tr><td>System resolution:</td><td>0.0833 mm/px</td></tr><tr><td>Defect size in homogeneous areas:</td><td>0.03 mm²</td></tr><tr><td>Defect size in structured areas:</td><td>0.06 mm²</td></tr></table>	TubeScan:	DS 180	Camera width:	260 mm	Camera height:	290 mm	Inspection width:	180 mm	extended to:	without extension	Max. inspection speed:	150 m/min	Speed level:	Standard	Camera type:	HR 1 option	System resolution:	0.0833 mm/px	Defect size in homogeneous areas:	0.03 mm²	Defect size in structured areas:	0.06 mm²	
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1		Camera type HR1 Camera option with higher resolution (2580 Pixel)																							
1		Roll Guided Backing Bar for TubeScan DS 180																							

Item	Quantity	Description	Price
		Backing bar with rotating support rollers for sensitive materials including black / white acrylic contrast plate.	
		Note: The material web may wrap around the rollers by max. 3°	
1		Cantilever Mounting Set Single-sided traverse for mounting the camera housing (Contents: 2 aluminum profiles with 1 wall mounting bracket each, 4 camera mounting brackets)	
1		Measuring Wheel Cantilever Mounting Set Single-sided traverse for mounting the encoder (Contents: 1 aluminum profile with wall mounting bracket)	
User interface:			
1		Operator Monitor 22" Multitouch monitor for intuitive operation	
1		Extension Cable Set 5 m Extension of the video, touch and power supply cables to a total of 5 m consisting of: • 2 x 5 m HDMI cable to the operating and viewing monitor • 1 x 3 m USB cable to the operating monitor • 2 x 3 m extension power supply cable to the operating and viewing monitor • 1 x 3 m extension cable DC jack for the power supply of the TubeScan	
1		View monitor 22" Parallel display of the live image and found defects on an additional viewing monitor	
1		Alarm Set External signal status unit with a green "Inspection active" LED and a red "Defect" LED, which is activated when the tolerance values of the respective inspection modules are exceeded. • ABS housing (IP54) • Width 70 mm x height 150 mm with magnetic base • including 2 m connection cable	
Functions:			
1		Print Report Manager Pro Creates an error log of all detected errors including error images and inspection settings. • defect images including position within the roll • reference image	

Item	Quantity	Description	Price
		- changes of inspection settings with time stamp - sensitivities settings - inspection ON or OFF - new reference images taken - results of additional inspection functions - Barcode validation - Distance monitoring - DeltaE monitoring - creation of a PDF roll report - output via printer possible <u>Note:</u> This software feature requires at least software version 8.0.	
1		Dynamic Roll Map - stores all defects including images per lane - dynamic refresh during inspection - graphical display with zoom function over the entire roll	
1		PDF Validation This feature allows to compare the actual reference image with a PDF image. The operator can select one or multiple PDF images and display them on top of the actual printed image in a semi-transparent way. The automatic defect detection algorithm shows instantly deviations either as difference image or highlighted with a color. This enables the operator to validate very easily the conformity of the printed image with the PDF reference. The validated PDF will be stored automatically with the job. It can also be retrofitted to an existing system.	
1		Barcode & Variable Data Processing inline reading and decoding of 1D and 2D barcodes like UPC-A, UPC-E, Codabar, Code 39, Code 93, Code 128, EAN 8, EAN 13, EAN 14, GSI-128, QR-Code, Datamatrix Barcode module size needs to be 3x optical resolution - quality grading of 1D and 2D barcodes according to ANSI standard (limitations apply and need to be clarified with a BST specialist; a resolution of 0.055 mm is recommended) - checking of codes or parts of the code (barcode and OCR) for sequence (numeric or alphanumeric), duplication, or against an input database - all codes, quality grades and verification results are output in csv files - images of rejected codes are stored in the dynamic roll map, defect queue, QLink protocol and included in the PDF report - maximum achievable inspection speed maybe reduced using this feature - requires hardware license dongle (included) <u>Note:</u> Sample test necessary! It is recommended to send samples to BST for a feasibility test.	
1		Alphanumeric Sequence Recognition - Optical character recognition (OCR) of any installed font - Completeness check (number of digits) - Font height needs to be 30x optical resolution - Checking of codes or parts of codes for sequence (numeric or alphanumeric), duplication, or against an input database - All results are output in csv files	

Item	Quantity	Description	Price
		- Images of rejected codes are stored in dynamic roll map and defect queue, QLink protocol and included in PDF report - Feasibility of application needs to be clarified with a BST specialist Only in combination with "Barcode & Variable Data Processing" Documentation / Manual: 1 Document type CD and User Manual User manual including assembly and maintenance instructions on CD-ROM and in printed edition. You can also find all documentation in other languages as well as additional information at https://bst.help/s/tubescan. 1 1st Language English Current lead time 5-7 weeks Subject to technical clarification Warranty period 12 months The warranty period is regulated in our general terms and conditions. The warranty period begins with the delivery of the product (passing of risk), not after commissioning.	
20	1	Commissioning and training Total 3 man-days (max. 10 hours each) on site. Also included in the price are the costs for the one-off arrival and departure time, hotel and travel expenses and daily expenses. The assignment is carried out on weekdays (Monday-Friday; except Sundays and public holidays and/or during night shifts). Prerequisites for the performance of the work during the above-mentioned period are that when the BST technician arrives, all mechanical system components are set up or installed, all cables are laid and connected and the machine is ready for production. Any additional costs, the cause of which not attributable to the fault of BST (e.g. waiting times caused by the fact that the printing material is not ready for production for machine of the BST commissioning) will be charged according to the current service rates separately. General conditions Field Service department BST eltromat France 1 Product TubeScan The scope of services offered is specifically tailored to the TubeScan. In addition to the basic system, the following equipment is considered: . Product quantity The service is to be provided for 1 TubeScan (s).	5.074,80 €
236		Travel to Customer by Car 236 km for the roundtrip.	

Item	Quantity	Description	Price
Standard service rate			
2		Installation 2 working-day(s) (max. 10 hours each). The installation includes the assembly of your system in your machine / system / application.	
1		Commissioning and training 1 working-day(s) (max.10 hours each) Commissioning includes starting the system for the first time with subsequent parameterization and an operator training. The delivery of electrical and mechanical installation materials and their installation are not included in the scope of delivery and services of the commissioning.	
Total Duration on site 3 working day(s) (max.10 hours each) duration for the desired service assignment depending on the selected service task.			
Current lead time upon request Subject to technical clarification			
Total			43.057,80 € excl. options

Option 1 not included in the total price

Item	Quantity	Description	Price
10.5.3	1	Roll Map Manager The Roll Map Manager provides tools for archiving and visualizing roll map data, ensuring accessibility and traceability and contains: Roll Map Archiver (requires installed "Fine Print Inspection" and "Dynamic Roll Map" license) - Stores and organizes roll map data, including defect images and details, events like operator interactions, waste information, time stamps, quality statistics etc. on the TubeScan PC or a network location - Includes additional hard drive storage for secure local data storage - Ensures long-term accessibility of inspection data for analysis and reporting Roll Map Viewer - Software tool for viewing archived roll map data - Automatically included with the Roll Map Archiver on the TubeScan PC - Can be installed on additional customer PCs, provided system requirements are met - additional internal (in the TubeScan PC installed) 2TB SSD hard disk for data storage	
Total - Option 1			3.780,00 €

Option 2 not included in the total price

Item	Quantity	Description	Price
10.5.8	1	Delta-E Monitoring	

Item	Quantity	Description	Price
		Calculation of color difference between zones defined in the reference image and corresponding live image (L-a-b color space). The zones can be easily defined using the zone editor. The zone area is adjustable. Each result is stored in a CSV-File for further evaluation. Inspection is based on a defined Δ-E value which triggers a defect upon exceeding this value. The applied method based on a RGB camera cannot be compared to spectrographic measurement and shows a trend only.	
Total - Option 2			3.460,00 €

Option 3 not included in the total price

Item	Quantity	Description	Price
10.5.4	1	Distance Monitoring Define sets of anchor points within a repeat and monitor the longitudinal and lateral geometric distance per set. - define single anchor points and monitor the distance between consecutive repeats - store all measurements in a standard CSV file (together with repeat number and actual machine speed) for quality reporting - show a x/y diagram of measurements in PDF report via optional Print Report Manager - create an alarm signal when desired tolerance values are exceeded	
Total - Option 3			4.320,00 €

Delivery conditions:

CPT Carriage Paid To (Incoterms 2020)

Exclusive freight and packaging

Terms of payment:

30 days invoice date, net

subject to a positive credit check

This quotation expires on:

23/07/2025

Our deliveries and services are based on our general Terms and Conditions.

In particular we refer to the reservation of property in all its forms.

Our general Terms and Conditions are available on our homepage

<https://www.bst.elexis.group/en/global/general-terms-and-conditions>.

Attention: Deliveries from these goods/products, software, technologies into other countries (e.g. embargo affected countries) or other receivers can be subject to authorization or can be prohibited. We refer to the current Embargo restriction of the European Union.

Info: Germany: www.bafa.de

The Customer warrants that the supplied goods will not be (re-)exported to or for the use in Russia or Belarus. If the Customer (re-)exports the supplied goods to or for the use in Russia or Belarus, the Seller has the right to terminate the contract with immediate effect and will notify the competent authorities of the respective breach.

Kind regards

BST eltromat France

Signature



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