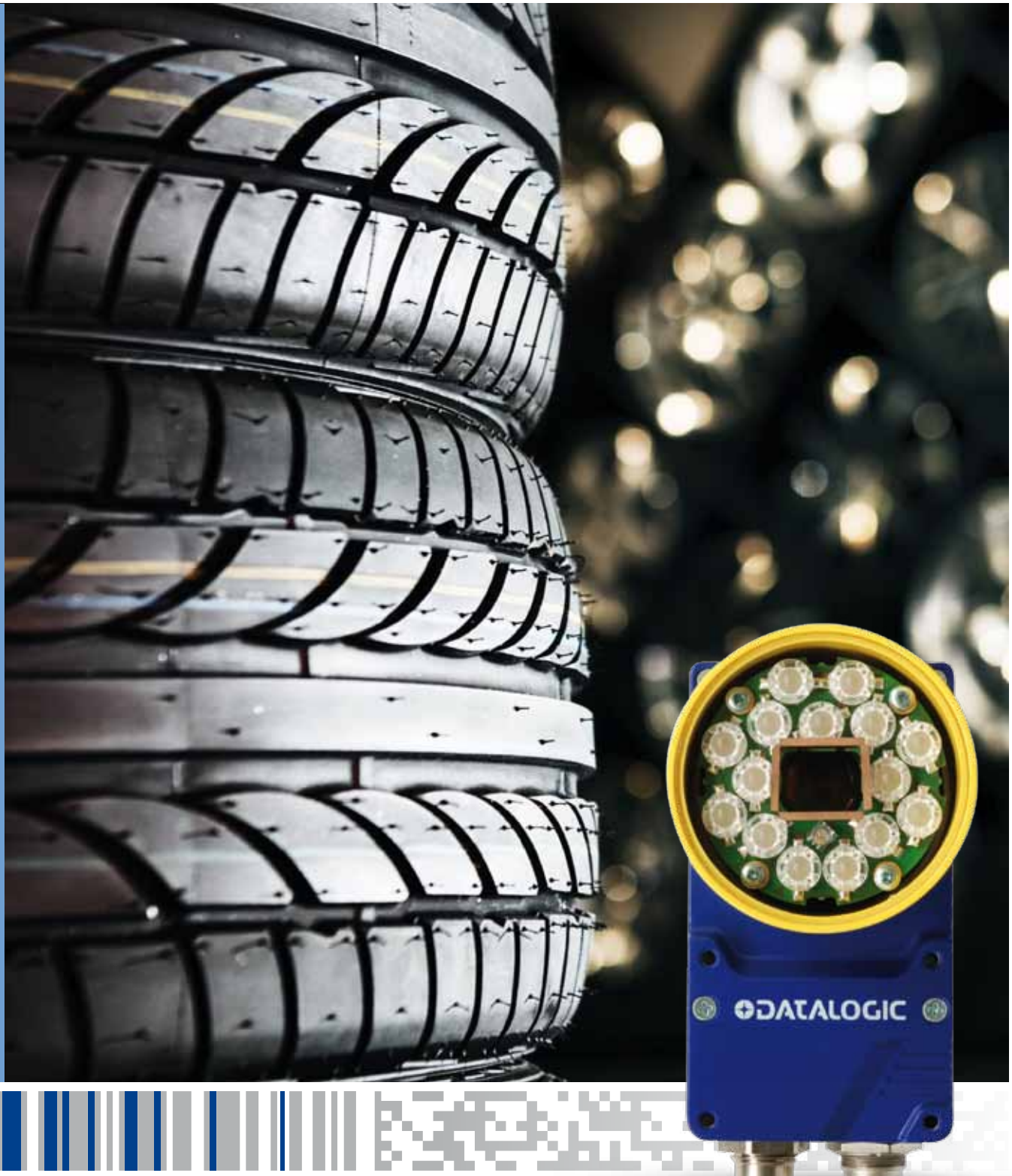
> STS400™



Solutions for Tire Sorting

DATALOGIC
THE VISION IS YOURS

STS400™ SOLUTIONS FOR TIRE SORTING

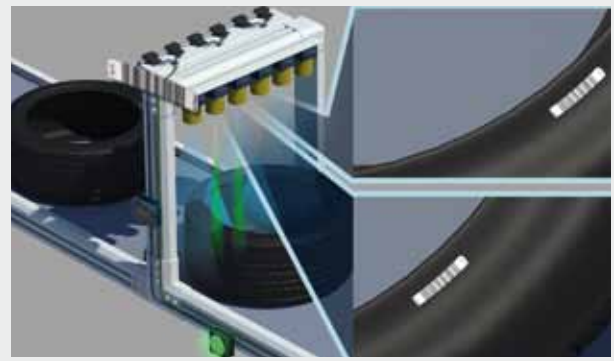
The **STS400™** is the first solution in its class to effectively address the demanding requirements of tire Tracking and Traceability applications.

Tracking and Traceability are critical aspects in tire manufacturing. In logistics, WIP, quality control, and compliance, tires are tracked during every step of the production process. From raw materials through tire assembly to the end-of-line sorting, the ability to read bar codes on tires is a necessary, but difficult, task. It calls for omni-directional reading of low aspect ratio bar codes, whose quality degenerates during the manufacturing process. If the correct technology is not applied, it may result in loss of production efficiency, additional manual handling, and extra costs for compliance management.

The **STS400™** is extremely compact and mounted on a self-contained structure. This solution delivers the highest reading performance with simple, user-friendly installation and maintenance. The solution is pre-assembled and calibrated, making integration into a tire sorting system the fastest in the industry. In less than one hour, with no special tools or training, the STS400™ can go from the shipping carton to reading tires on the production line!

PERFORMANCE

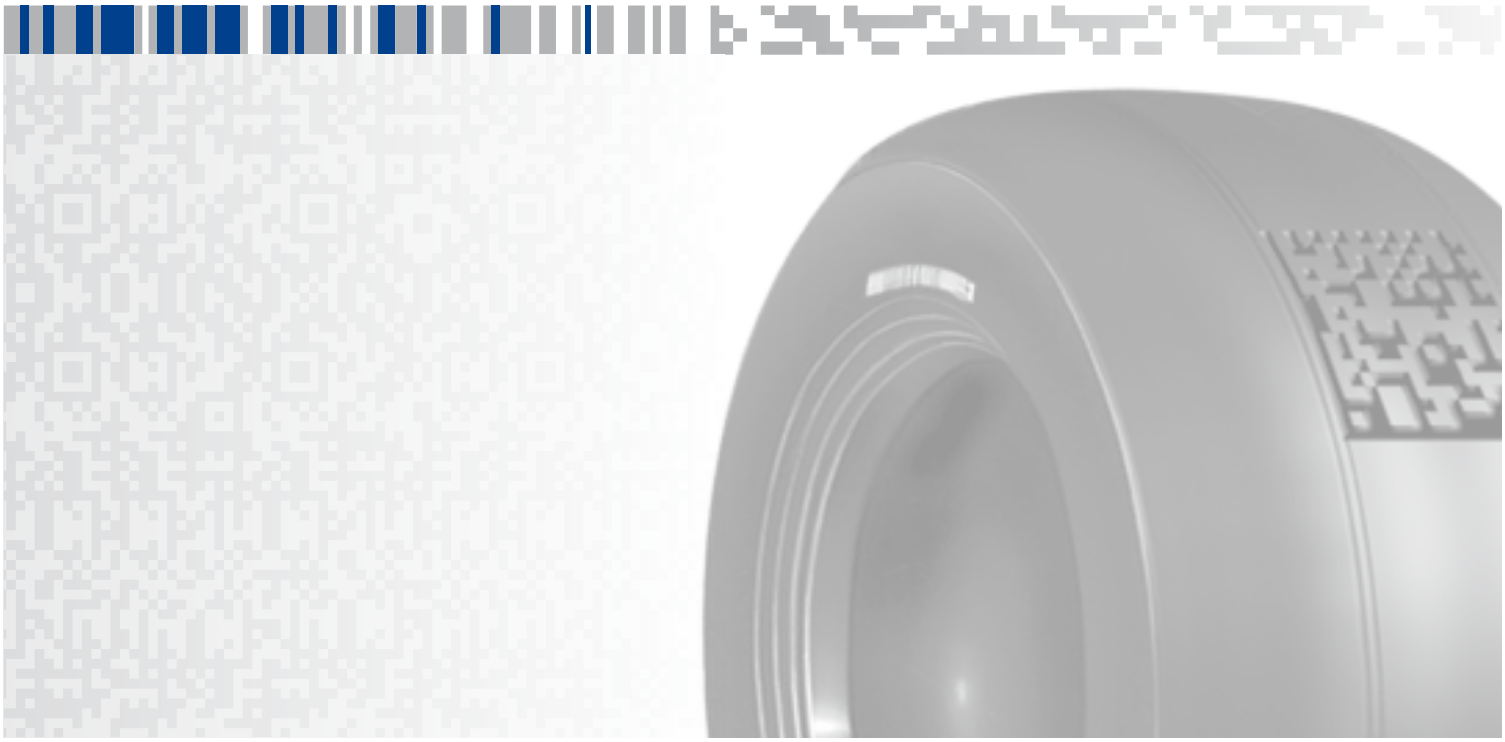
The **MATRIX 410™** is the ideal solution for high speed sortation with minimal distance between tires.



The **MATRIX 410™** can read hard to read bar codes and transfer large images over the Ethernet, with a full bitmap resolution.

Since the entire bar code is caught in a single capture, the **MATRIX 410™** guarantees the best performance for image acquisition and performs advanced processing algorithms for bar code location and decoding. These features are extremely critical when reading low aspect ratio bar codes, especially when they are dirty or damaged.

Powerful illuminators have been specifically designed for tire applications to increase the depth-of-field and improve the reliability of reading, even when faced with damaged or low contrast bar codes.



EASY TO INSTALL

The **STS400™** saves manufacturers in installation costs and time – 100% pre-assembled and calibrated – with no focusing, no height barrier and no encoder requirement. The high read rates are guaranteed by the factory-validated reading performance. Additionally, the self-contained mechanical layout makes the integration into constrained spaces quick and easy. The complete reading system fits into a maximum space of:
1080 x 241 x 176 mm - 42.5 X 9.6 x 7 in (cables, connection boxes, and readers included).

EASY TO MAINTAIN

With no moving parts, the **STS400™** requires minimal maintenance. Detecting a reading problem is simple with the Green Spot feature: a flashing green light indicates a good read at the single device level, providing immediate feedback of the read status without any additional software tools or displays.

SIMPLE AND COMPACT

The imaging approach provides a simple reader layout. This approach eliminates the need for complex articulated mounting patterns, typical of other reading technologies. Easy integration and compactness of the reading system are exclusive advantages of the imaging approach.

LONG-TERM RELIABILITY

No moving parts guarantee reliability and a longer life-cycle. Imagers offer values of MTBF (Mean Time Between Failures) several times longer than readers working with moving parts, such as rotating mirrors in laser scanners.

READY FOR THE FUTURE

Driven by physical constraints, upgrades of the tire labeling, or government mandates, manufacturers have to comply with the downsizing of the bar code heights or the introduction of 2D bar codes. 2D imagers are the ideal solution for these changing requirements. The downsizing of bar code height and reading 2D bar codes can present challenges for other reading technologies. Solutions based on 2D imagers are a reliable investment, ensuring high read rates, durable life-cycle and adaptability to future requirements.

MATRIX410™

The **MATRIX 410™ ATS** offers a single, self-contained reading head, including illuminator and lens. It is pre-mounted with the best optical setup and parameter configuration, ready to read in-line when powered on.

The **MATRIX 410™** also features the extra power illuminator (MATRIX 410™ ATS-100) which provides the optimal solution for single head reading stations used in many tire manufacturing stages such as Visual Inspection, Trimming or Testing.

ONE SOLUTION-ONE PART NUMBER

Each complete **STS400™** solution has a single order number. All of the required accessories, such as cables, connectors and photocells, are included into the shipping package. Only the power supply is ordered separately.

MODELS

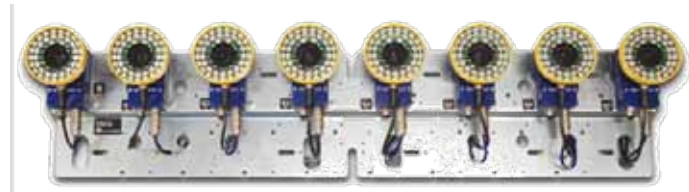
STS400™ models are optimized for bar code resolution and reading range: models are configured to read 0.25 mm (10 mil) and 0.33 mm (13 mil) for passenger, light truck tires and 0.35 mm (14 mil) for commercial vehicle tires.

STS400 - STANDARD READING RANGE

STS400™ is available in different versions - fully pre-configured and optimized - for any possible reading layout:
- top reading (versions -00x and 01x)
- bottom reading (versions -02x)
- side reading (versions -03x)

STS400 - LONG READING RANGE

The **STS400™** long reading range is the perfect identification solution for industrial vehicle tire sorting applications, offering a simple solution that meets the demanding requirements of reading large tires.
With its ultra-powerful, integrated illuminator, the **STS400™** long reading range delivers unprecedented reading coverage setting a new standard for automatic identification in the tire industry.

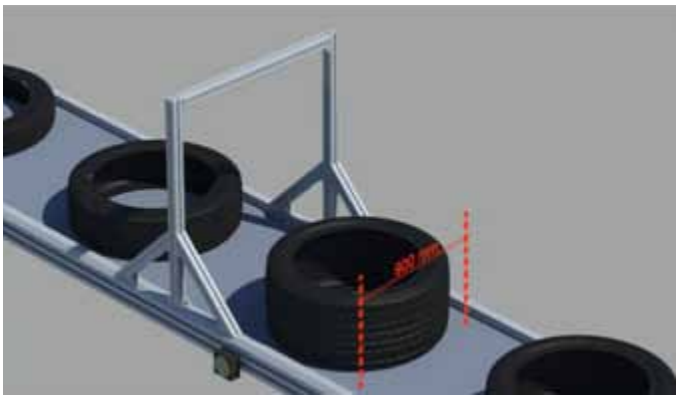


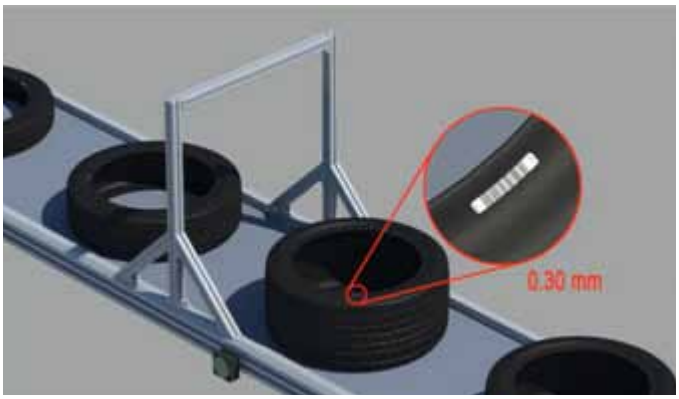
STS400™ - SOLUTIONS FOR TIRE SORTING

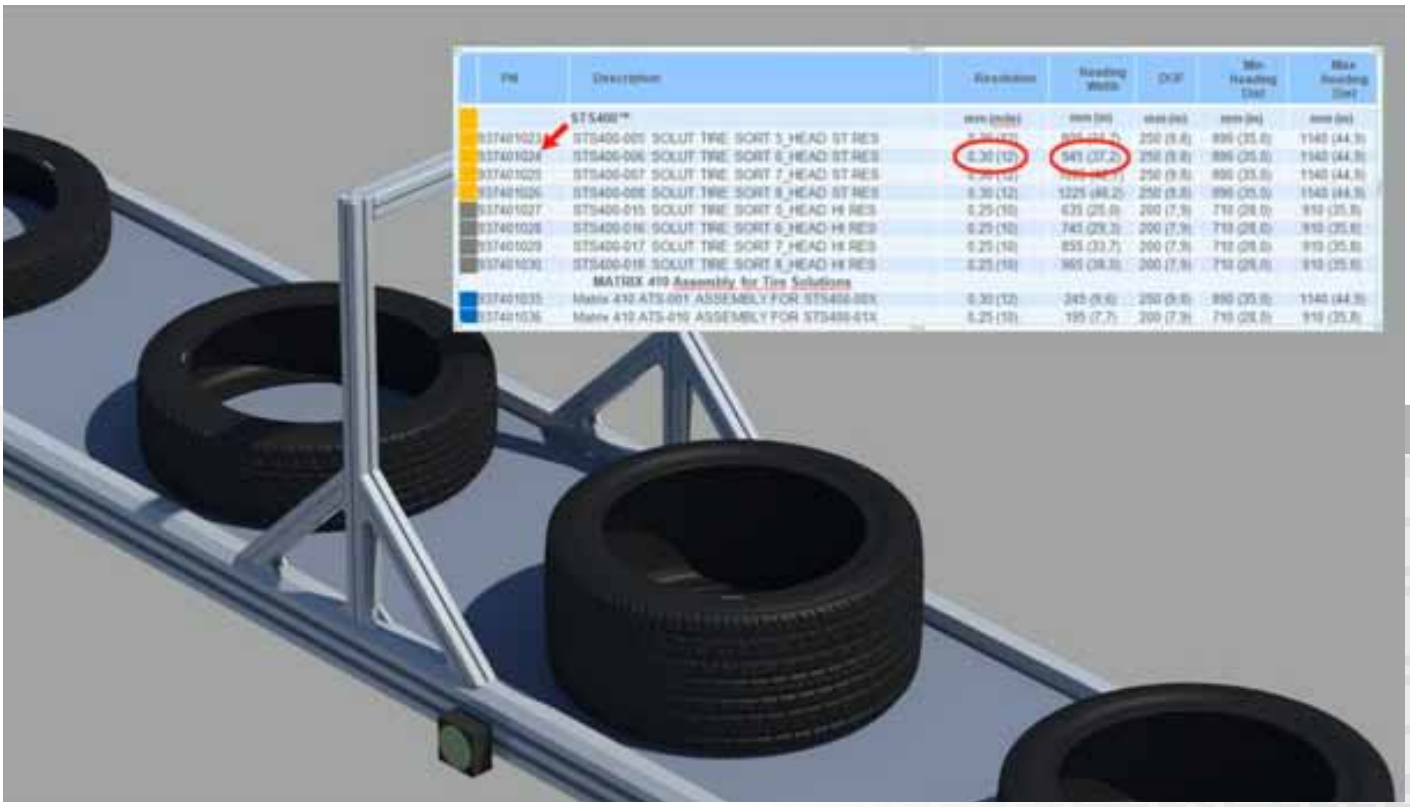
MODEL SELECTION

Finding the right solution for any application is easy. The only information required is the bar code resolution and the conveyor width to identify a single order number for a complete reading solution.

A simple match table is available for a quick model selection.







STS400 - TOP READING PASSENGER LIGHT TRUCKS

PN	DESCRIPTION	READERS	1D CODE RES MM (MILS)	READING WIDTH MM (INCH)	MIN READING DIST MM (INCH)	MAX READING DIST MM (INCH)	DOF MM (INCH)	FOCAL POSITION MM (INCH)
937401023	STS400-005 SOLUT TIRE SORT 5_HEAD ST RES	5	0,30 (11,8)	805 (31,7)	890 (35,0)	1140 (44,9)	250 (9,8)	1065 (41,9)
937401024	STS400-006 SOLUT TIRE SORT 6_HEAD ST RES	6	0,30 (11,8)	945 (37,2)	890 (35,0)	1140 (44,9)	250 (9,8)	1065 (41,9)
937401025	STS400-007 SOLUT TIRE SORT 7_HEAD ST RES	7	0,30 (11,8)	1085 (42,7)	890 (35,0)	1140 (44,9)	250 (9,8)	1065 (41,9)
937401026	STS400-008 SOLUT TIRE SORT 8_HEAD ST RES	8	0,30 (11,8)	1225 (48,2)	890 (35,0)	1140 (44,9)	250 (9,8)	1065 (41,9)
937401027	STS400-015 SOLUT TIRE SORT 5_HEAD HI RES	5	0,25 (9,8)	635 (25,0)	710 (28,0)	910 (35,8)	200 (7,9)	788 (31,0)
937401028	STS400-016 SOLUT TIRE SORT 6_HEAD HI RES	6	0,25 (9,8)	745 (29,3)	710 (28,0)	910 (35,8)	200 (7,9)	788 (31,0)
937401029	STS400-017 SOLUT TIRE SORT 7_HEAD HI RES	7	0,25 (9,8)	855 (33,7)	710 (28,0)	910 (35,8)	200 (7,9)	788 (31,0)
937401030	STS400-018 SOLUT TIRE SORT 8_HEAD HI RES	8	0,25 (9,8)	965 (38,0)	710 (28,0)	910 (35,8)	200 (7,9)	788 (31,0)

STS400 - BOTTOM AND HOOK CHAIN READING PASSENGER LIGHT TRUCKS

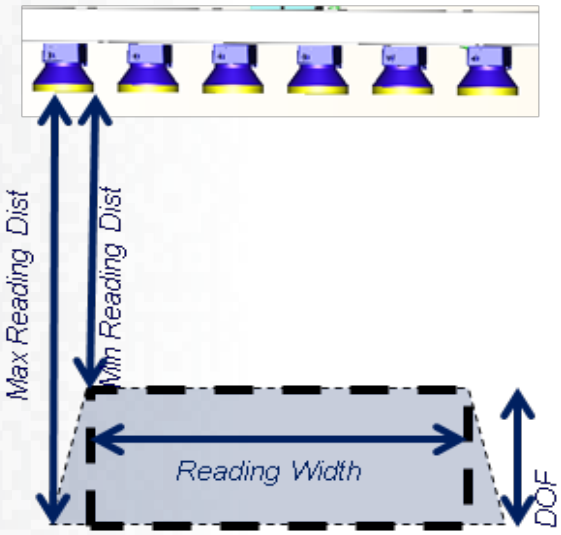
PN	DESCRIPTION	READERS	1D CODE RES MM (MILS)	READING WIDTH MM (INCH)	MIN READING DIST MM (INCH)	MAX READING DIST MM (INCH)	DOF MM (INCH)	FOCAL POSITION MM (INCH)
937400018	STS400-205 SOL TIRE BOTTOM 5_HD ST RES	5	0,30 (11,8)	754 (29,7)	317 (12,5)	457 (18,0)	140 (5,5)	380 (15,0)
937400019	STS400-206 SOL TIRE BOTTOM 6_HD ST RES	6	0,30 (11,8)	894 (35,2)	317 (12,5)	457 (18,0)	140 (5,5)	380 (15,0)
937400020	STS400-305 SOL TIRE HOOK CH. 5_HD ST RES	5	0,30 (11,8)	748 (29,4)	405 (15,9)	560 (22,0)	155 (6,1)	483 (19,0)
937400021	STS400-306 SOL TIRE HOOK CH. 6_HD ST RES	6	0,30 (11,8)	888 (35,0)	405 (15,9)	560 (22,0)	155 (6,1)	483 (19,0)

STS400 - LONG RANGE COMMERCIAL VEHICLE TIRES

PN	DESCRIPTION	READERS	1D CODE RES MM (MILS)	READING WIDTH MM (INCH)	MIN READING DIST MM (INCH)	MAX READING DIST MM (INCH)	DOF MM (INCH)	FOCAL POSITION MM (INCH)
937401037	STS400-105 SOLUT TIRE 5_HEAD LONG RANGE	5	0,35 (13,8)	805 (31,7)	880 (34,6)	1280 (50,4)	400 (15,7)	1065 (41,9)
937401038	STS400-106 SOLUT TIRE 6_HEAD LONG RANGE	6	0,35 (13,8)	945 (37,2)	880 (34,6)	1280 (50,4)	400 (15,7)	1065 (41,9)
937401039	STS400-107 SOLUT TIRE 7_HEAD LONG RANGE	7	0,35 (13,8)	1085 (42,7)	880 (34,6)	1280 (50,4)	400 (15,7)	1065 (41,9)
937401040	STS400-108 SOLUT TIRE 8_HEAD LONG RANGE	8	0,35 (13,8)	1225 (48,2)	880 (34,6)	1280 (50,4)	400 (15,7)	1065 (41,9)

MATRIX 410 - ATS ASSEMBLIES FOR TIRES SOLUTIONS

PN	DESCRIPTION		1D CODE RES MM (MILS)	READING WIDTH MM (INCH)	MIN READING DISTMM (INCH)	MAX READING DIST MM (INCH)	DOF MM (INCH)	FOCAL POSITION MM (INCH)
937401035	MATRIX 410 ATS-000 ASSY FOR STS400-00X		0,30 (11,8)	245 (9,6)	890 (35,0)	1140 (44,9)	250 (9,8)	1065 (41,9)
937401036	MATRIX 410 ATS-010 ASSY FOR STS400-01X		0,25 (9,8)	195 (7,7)	710 (28,0)	910 (35,8)	200 (7,9)	788 (31,0)
937400022	MATRIX 410 ATS-200 ASSY FOR STS400-20X		0,30 (11,8)	194 (7,6)	317 (12,5)	457 (18,0)	140 (5,5)	380 (15,0)
937400023	MATRIX 410 ATS-300 ASSY FOR STS400-30X		0,30 (11,8)	188 (7,4)	405 (15,9)	560 (22,0)	155 (6,1)	483 (19,0)
937401041	MATRIX 410 ATS-100 ASSY FOR STS400-10X		0,35 (13,8)	245 (9,6)	880 (34,6)	1280 (50,4)	400 (15,7)	1065 (41,9)



WEBSENTINEL-IMAGES™

DESCRIPTION

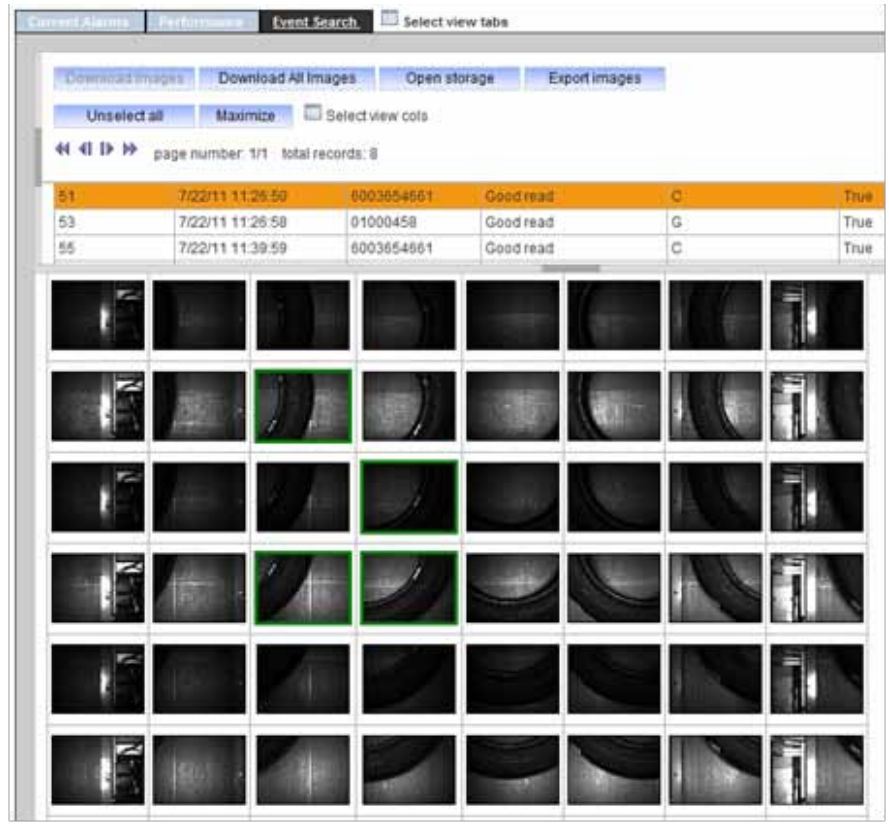
Datalogic WebSentinel™-IMAGES is the remote management software solution for monitoring the operational activities of reading devices. This platform collects and archives all the critical information related to functional status, including diagnostics, performance and working images.

Captured images provide an effective and precise analysis of processes and reading performance. Because of the high level of data integrity and intrinsic vividness, captured images are an excellent forensic tool. Analysis of unsuccessful reading attempts provides quick and precise problem diagnosis, resulting in superior reading performance.

WebSentinel™ integrates a user-friendly, web-based interface for remote data representation and control. While the central application runs on a server machine, users can access data and control the operational functionalities through a standard web browser, such as Internet Explorer or Google Chrome. No additional software components are required.

Captured images are automatically transferred from the readers to the WebSentinel-IMAGES™ database for archiving. Images are linked to the information of the specific object scanned. For example: basic no-read information, such as timestamp of the event can be correlated [or linked] to the set of working images captured during the reading attempt.

An advanced research tool allows users to quickly locate events of interest and access an image preview, resulting in a fast evaluation of the entire reading phase.



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