



THE REYNOLDS
COMPANY
ELECTRICAL SUPPLY

TechTalks
Online Seminars

Legacy Ultra 3000 to Kinetix 5100 Migration

May 5, 2020

Our presentation will begin at 10:00 am Central

- Important to know the lifecycle status of your Installed Equipment Base
In most industries, less than 20 percent of companies can answer “yes” to more than two of these:

Do you have an accurate plant model that identifies all of the physical assets in your plants?

Do you have an updated complete bill of materials for your critical assets?

Do you know which parts are still being manufactured?

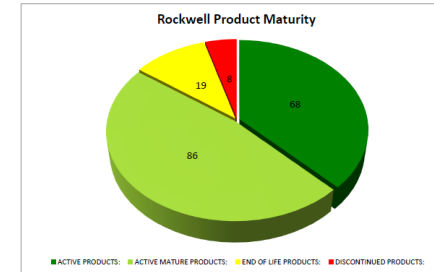
Do you know which parts have been announced for discontinuation or are already discontinued?

Do you have the right spare parts if a critical machine goes down?

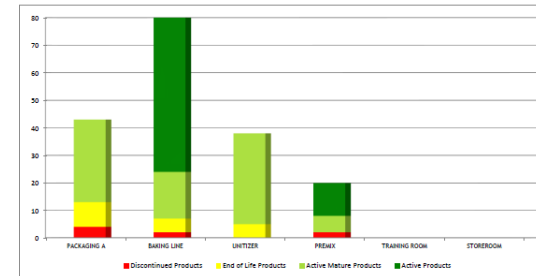
Do you have an efficient and accurate process for maintaining storeroom inventory?

Rockwell Automation Services Installed Base Evaluation™ (IBE)

Definition: An IBE is a site delivered service that provides actionable intelligence to help you make data-driven decisions regarding the support and obsolescence management of your installed base assets



Location	Total #	End of Life & Discontinued Products #	%	Active Products #	%	Active Mature Products #	%	End of Life Products #	%	Discontinued Products #	%
PACKAGING A	43	13	30%	0	0%	30	70%	9	21%	4	9%
BAKING LINE	80	7	9%	56	70%	17	21%	3	4%	2	2%
UNITIZER	26	0	0%	0	0%	33	127%	0	0%	0	0%
PREMIX	20	2	10%	12	60%	6	30%	0	0%	2	10%
TRAINING ROOM	0	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A
STOREROOM	0	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A
Page Totals:	181	27	15%	66	36%	86	48%	19	10%	8	4%

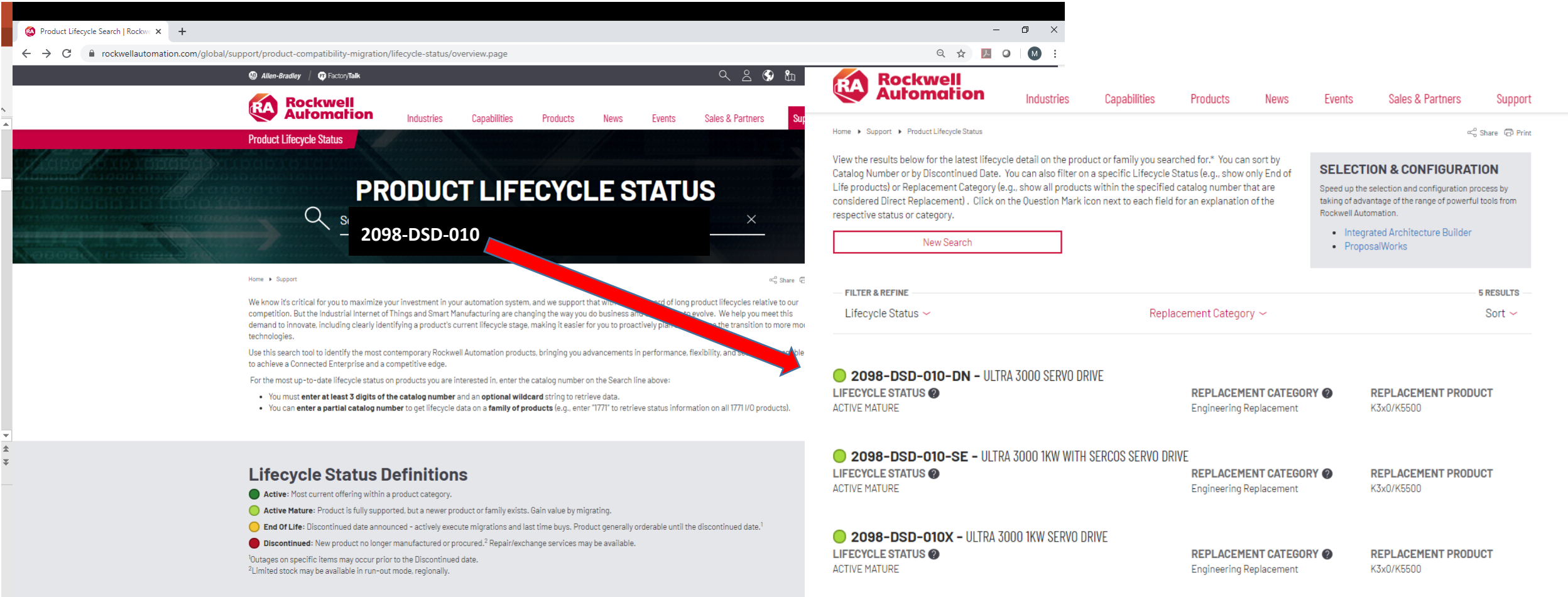


Value

- Identification of product lifecycle status via plant hierarchy
- Identification of legacy obsolescence risks
- Identification of excess/shortage of spare parts
- Mechanical and other OEM electronics may be included
- Identification of migration/conversion priorities
- Baseline for determining a Strategic Maintenance Program

Area Name	Location Name	Machine or Storeroom Name	Asset Name or Storeroom Type	Firmware Version	Required Software	Manufacturer	Part Number	Series	Description	Replacement Part	Quantity	List Price	Total Price	Lifecycle Status
MIXING	PREMIX	PREMIX DUMPER	PREMIX DUMPER CONTROL PANEL			ROCKWELL	1763-1016		COMPACTLOGIX 16 POINT DIO MODULE		4	\$ 253.00	\$ 1,012.00	A
MIXING	PREMIX	PREMIX DUMPER	PREMIX DUMPER CONTROL PANEL			ROCKWELL	1763-L02E		COMPACTLOGIX PROCESSOR 750KB		2	\$ 3,220.00	\$ 6,440.00	A
MIXING	PREMIX	PREMIX DUMPER	PREMIX DUMPER CONTROL PANEL			ROCKWELL	1763-DW16		COMPACTLOGIX 16 POINT DIO MODULE		2	\$ 421.00	\$ 842.00	A
MIXING	PREMIX	PREMIX DUMPER	PREMIX DUMPER CONTROL PANEL			ROCKWELL	1763-P44		COMPACTLOGIX POWER SUPPLY		2	\$ 475.00	\$ 950.00	A
MIXING	PREMIX	PREMIX DUMPER	PREMIX DUMPER CONTROL PANEL			ROCKWELL	1763-3M2		COMPACT I/O TO DSI COMMUNICATION MODULE		2	\$ 653.00	\$ 1,310.00	A
MIXING	PREMIX	PREMIX DUMPER	PREMIX DUMPER CONTROL PANEL			ROCKWELL	22B-D010N04		POWERFLEX 40 4 kW (5 HP) AC DRIVE		6	\$ 1,100.00	\$ 6,600.00	AM
MIXING	PREMIX	PREMIX DUMPER	PREMIX DUMPER CONTROL PANEL			ROCKWELL	271P-T10C4A1	A	PANELVIEW PLUS TERMINAL	271P-T10C4A8	2	\$ 6,615.00	\$ 13,230.00	D
PACKAGING	BAKING LINE	BAKING FORMER	BAKING FORMER CP			ROCKWELL	1756-A13		CONTROLLOGIX 13 SLOTS CHASSIS		1	\$ 775.00	\$ 775.00	A

• **RA Product Lifecycle Status Web Page – Google “Rockwell Lifecycle Status”**



Product Lifecycle Status

PRODUCT LIFECYCLE STATUS

Search: **2098-DSD-010**

SELECTION & CONFIGURATION

Speed up the selection and configuration process by taking advantage of the range of powerful tools from Rockwell Automation.

- Integrated Architecture Builder
- ProposalWorks

FILTER & REFINE

Lifecycle Status Replacement Category

5 RESULTS

2098-DSD-010-DN - ULTRA 3000 SERVO DRIVE

LIFECYCLE STATUS: ACTIVE MATURE

REPLACEMENT CATEGORY: Engineering Replacement

REPLACEMENT PRODUCT: K3x0/K5500

2098-DSD-010-SE - ULTRA 3000 1KW WITH SERCOS SERVO DRIVE

LIFECYCLE STATUS: ACTIVE MATURE

REPLACEMENT CATEGORY: Engineering Replacement

REPLACEMENT PRODUCT: K3x0/K5500

2098-DSD-010X - ULTRA 3000 1KW SERVO DRIVE

LIFECYCLE STATUS: ACTIVE MATURE

REPLACEMENT CATEGORY: Engineering Replacement

REPLACEMENT PRODUCT: K3x0/K5500

2098-DSD-010X-DN - ULTRA 3000 1 KW WITH DEVICENET DRIVE

LIFECYCLE STATUS: ACTIVE MATURE

REPLACEMENT CATEGORY: Engineering Replacement

REPLACEMENT PRODUCT: K3x0/K5500

Lifecycle Status Definitions

- Active:** Most current offering within a product category.
- Active Mature:** Product is fully supported, but a newer product or family exists. Gain value by migrating.
- End Of Life:** Discontinued date announced - actively execute migrations and last time buys. Product generally orderable until the discontinued date.¹
- Discontinued:** New product no longer manufactured or procured.² Repair/exchange services may be available.

¹Outages on specific items may occur prior to the Discontinued date.
²Limited stock may be available in run-out mode, regionally.

- “Discontinued” products continue to be “Supported”
- What does it mean for a product to be “Discontinued”?
 - New product is no longer manufactured, available for sale upon reaching “Discontinued” lifecycle status.
- Products are supported long after they are “Discontinued”.
 - Discontinued products can be repaired through Rockwell Repair/Exchange Services.
 - Firmware can be downloaded for “Discontinued” products.
 - Discontinued products are supported technically, through TechConnect Support Services.

Exchange Services

Priority Service Gets You a Replacement via Rush Delivery

With our priority service, a replacement part is sent to you via expedited service.

- Over 50,000 catalog items at eight exchange hubs worldwide
- More than \$100 million in products available for exchange
- A global network of service parts hubs
- Emergency service available 24x7x365

Remanufacturing Services

Factory-authorized Repair on Allen-Bradley and Reliance Electric Products

Same high-quality parts, standards, and specifications as the original manufacturing process.

- 12-, 18-, or 24-month warranty per service level.
- Rockwell Automation OEM-specified components
- Installation of applicable updates/enhancements
- Replacement of inoperative/aged components
- Functional and load testing
- Cleaning and cosmetic restoration

Subject: Ultra 3000 Lifecycle Announcement

Further to the announcement on February 7, 2017, Rockwell Automation® announces that as of January 1, 2021, the Ultra™ 3000 servo drive family and associated accessories will be End of Life and will not be available for sale globally.

For the past two years, the Ultra™ 3000 servo drive family and associated accessories have been in Active Mature status in regions not impacted by the CE marking removal and compliance to the European Union (2011/65/EU) RoHS directive restricting the use of hazardous substances in electrical and electronic equipment and contributes to the protection of human health and the environmentally sound recovery and disposal of waste electrical and electronic equipment

This announcement is to encourage all final purchases for the drive family and associated accessories. Guidance on migrating the product(s) is below. Impacted products are as follows:

Detailed Migration guide(s) are available on the [Rockwell Automation Literature Library](#) Publication Number(s) [2098-AP001A-EN-P](#), [2098-AP002A-EN-P](#) and future migration documentations for the Kinetix 5100 and Kinetix 5300 products.

Demanding market conditions pose significant challenges. Across the enterprise and throughout the lifecycle, you must continuously strive for ways to leverage your existing automation investment. Please visit our Lifecycle extensions and migrations page to let Rockwell Automation help you determine your options.

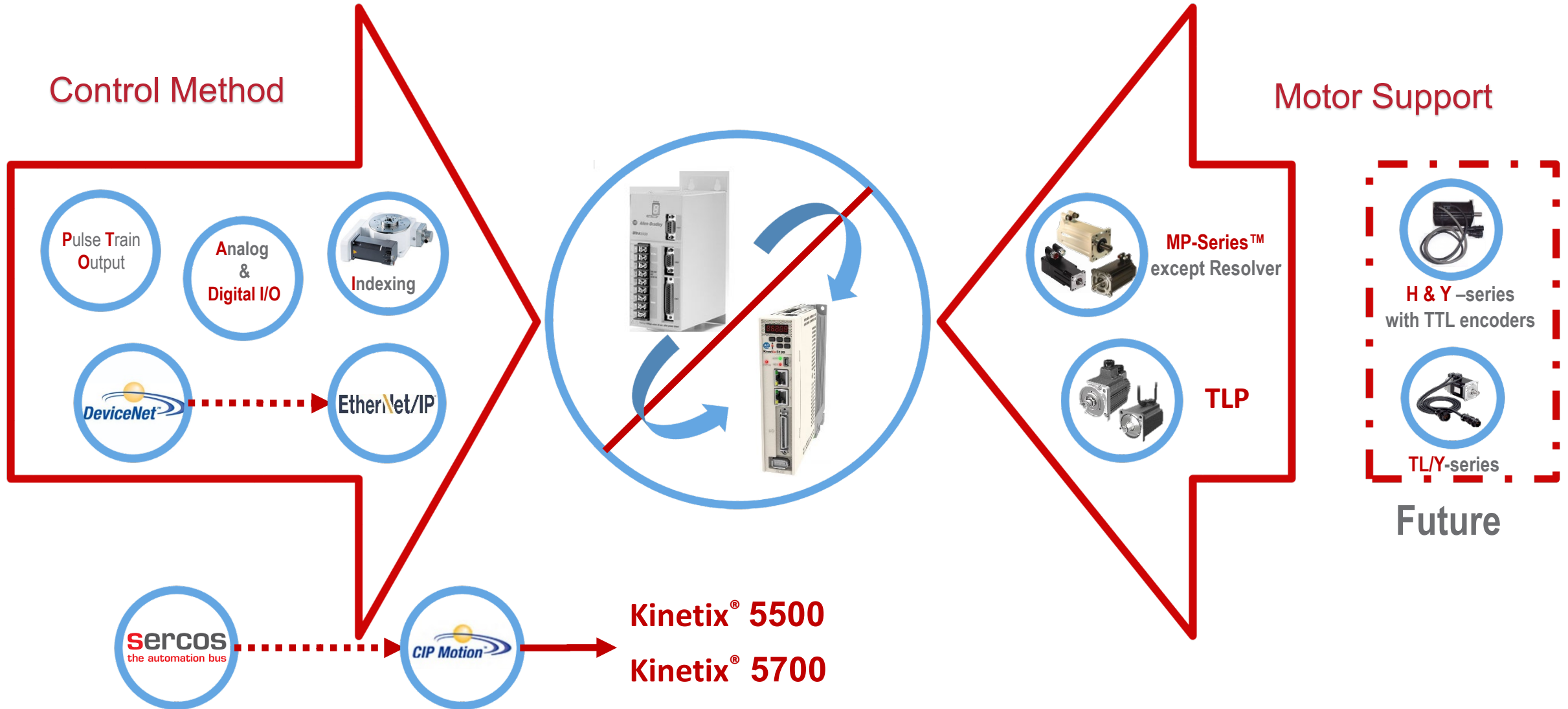
As always, we will make every attempt to satisfy your needs. Please feel free to contact me or to contact technical support with any concerns or questions you may have.

Sincerely,

Simon Wong
Manager, Product Marketing
Kinetix Motion Control Business
swong4@rockwellautomation.com

	Analog/DeviceNet/Indexing			Sercos		
	Ultra 3000	K300	K5100	K350	K5300***	K5500
200V Class	2098-DSD-005	2097-V31PR0 2097-V32PR0 2097-V33PR1	2198-E 1004-ERS*	2097-V31PR0-LM 2097-V32PR0-LM 2097-V33PR1-LM	2198-C 1004-ERS	2198-H008-ERS
	2098-DSD-010	2097-V31PR2 2097-V32PR2 2097-V33PR3	2198-E 1007-ERS*	2097-V31PR2-LM 2097-V32PR2-LM 2097-V33PR3-LM	2198-C 1007-ERS	2198-H015-ERS
	2098-DSD-020	2097-V32PR4 2097-V33PR5	2198-E 1015-ERS*	2097-V32PR4-LM 2097-V33PR5-LM	2198-C 1015-ERS	2198-H025-ERS
	2098-DSD-030	2097-V33PR6	2198-E 1020-ERS*	2097-V33PR6-LM	2198-C 1020-ERS	2198-H040-ERS
	2098-DSD-075		2198-E2075-ERS*		2198-C 2055-ERS	2198-H070-ERS
	2098-DSD-150				2198-C 2075-ERS	
400V Class	2098-DSD-HV030	2097-V34PR5	2198-E4015-ERS**	2097-V34PR5-LM	2198-C4015-ERS	2198-H015-ERS
	2098-DSD-HV050	2097-V34PR6	2198-E4020-ERS**	2097-V34PR6-LM	2198-C4020-ERS	2198-H025-ERS
	2098-DSD-HV100		2198-E4055-ERS**		2198-C4055-ERS	2198-H070-ERS
	2098-DSD-HV150		2198-E4075-ERS**			
	2098-DSD-HV220		2198-E4150-ERS**		2198-C4075-ERS	

* 200V class Kinetix® 5100 would be release November 2019
 ** 400V class Kinetix® 5100 would be release September 2020
 *** Kinetix® 5300 would be release August 2020



Core Design considerations:

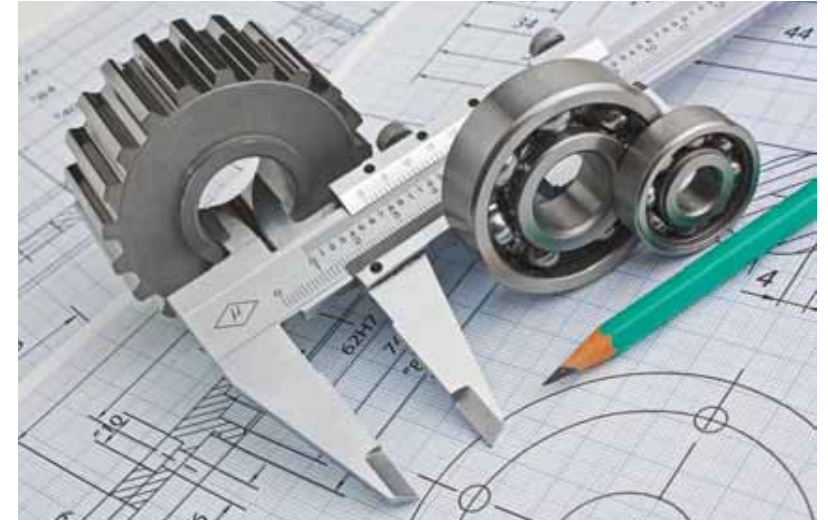
- Can the application be easily migrated or reused?
 - Is it available
 - How well known are the application design parameters(motion type, limits, dynamics, loads)
 - Is the motor going to be replaced too?
 - If not, that can limit drive selection
 - If so, is motor rating and a drawing available to assist with selection
 - How much room is in the panel?
 - Most new drives are smaller physically
 - Will the wires and cables reach?
 - What kind of control is to be used
 - Fully integrated? Standalone? Analog or PTO?
 - What is the power rating of the current drive?
 - How far away is the motor?
-
- Please contact us and we will help match the existing application with current hardware.

Motion Analyzer

Motor & Drive Selection

<https://motionanalyzer.rockwellautomation.com/>

Why use a motion sizing tool?



Rating Methods Differ

Issue: Manufacturers rate products with different conditions such as heat sink sizes and regeneration duty cycles

Result: This can lead to an undersized motor

Inertia is Critical

Issue: Converting power rating to torque does not take motor rotor inertia values into consideration

Result: This can lead to an undersized motor, especially in dynamic applications

Tendency is to “Size Up”

Issue: When comparing power/torque ratings, the next larger motor and drive are often selected

Result: This can lead to an oversized motor and drive

Program Migration

- Configuration of the Kinetix 5100 can be done using this software KNX5100C which is integrated into Connected Components Workbench (CCW)
- Use the migration manual to select the proper configuration mode for the new Kinetix 5100
- If standalone
 - Replicate the parameters from the existing drive.
 - Set the I/O to align with existing drives inputs
- If networked
 - Copy in the AOP in Studio 5000 V30+
 - Create message instruction in CCW

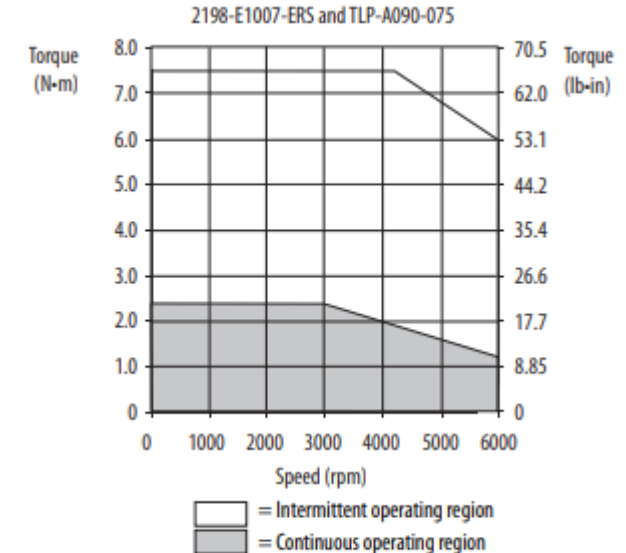
For each Ultra™3000 drive control feature, there is a suitable solution with Kinetix® 5100 servo drives, Logix 5000™ controller platforms, and the Studio 5000 Logix Designer® application.

Table 1 - Ultra3000 Drive to Kinetix 5100 Drive Migration Options

Ultra3000 drive Operation Mode	Equivalent Kinetix 5100 Drive Operation Mode	
	Abbreviation	Mode
Analog Current	T mode	
Analog Velocity	S mode	PT Position control (terminal block input)
Analog Position	PT mode	PR Position control (internal register input)
Preset Current	T or Tz mode	S Speed Control
Preset Velocity	S or Sz mode, or PR mode	T Torque control
Preset Position	PR mode	Sz Speed Control
Follower	PT mode	Tz Torque control
Indexing	PR mode	
Host Command	Any mode with Explicit Messaging over EtherNet/IP	
DeviceNet	IO mode (with Logix Add-On Instructions) using the EtherNet/IP network	

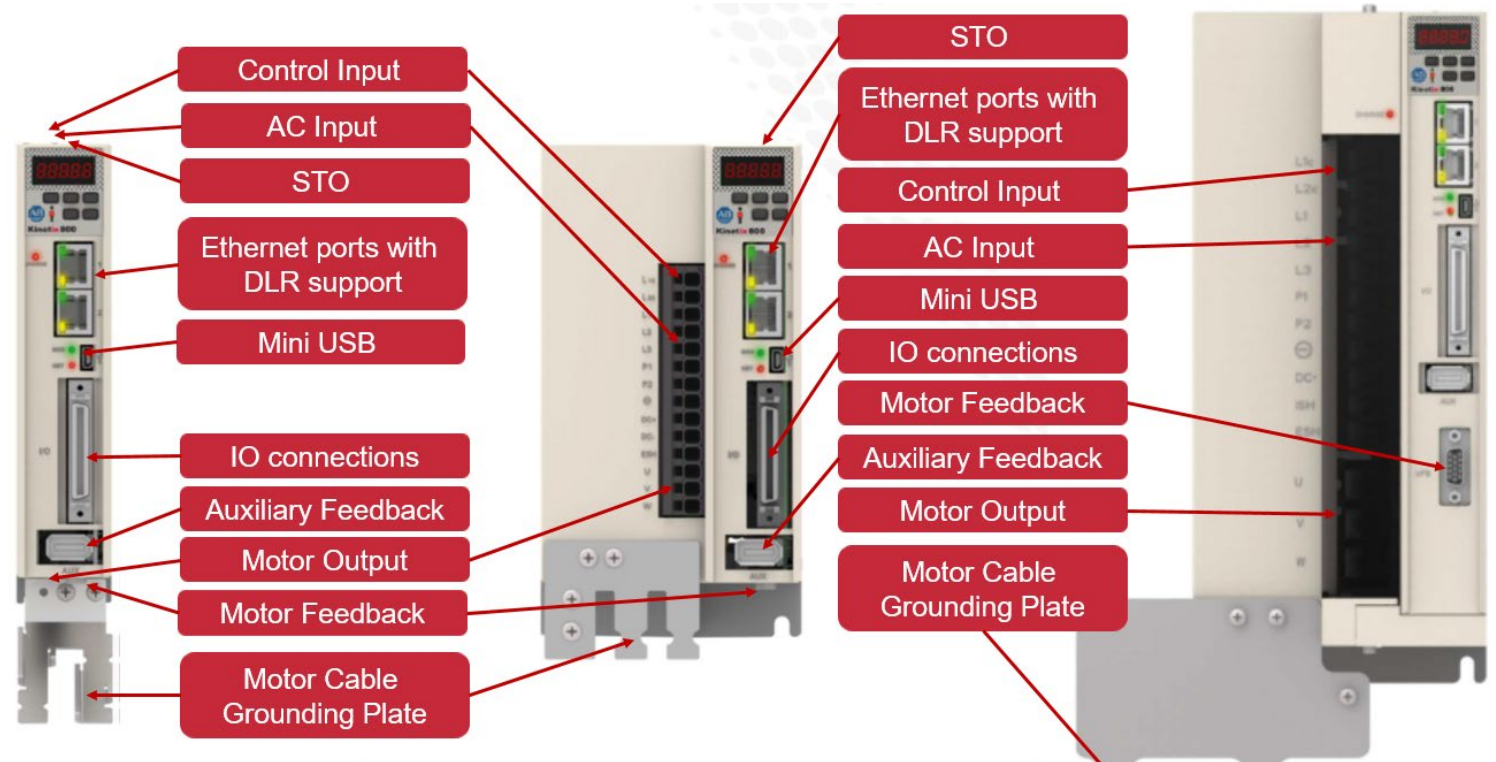
Motor Selection

- The Kinetix 5100 currently supports MP and TLP motors
- When replacing a motor it is important to consider the following
 - Torque, both peak and continuous. Best if you compare the torque speed curve.
 - Rated speed
 - Power
 - Inertia, the closer the match to the existing the better
 - Feedback type
 - Physical dimensions
 - Shaft size,
 - Pilot size
 - Bolt circle
 - Overall size
 - New mounting brackets or gearbox may be required.



Other considerations

- The Kinetix 5100 drives are dimensionally smaller than the Ultra 3000
- There is a cable length limit of 50M
- Sercos should migrate to a Kinetix 5500
- Device net will need to be converted to Ethernet.
- A Shunt is built into the Kinetix 5100 in most size variants
- Safety is built into the Kinetix 5100



Publication Library for Kinetix 5100 Servo Drives

Primary Publications	Kinetix TLP Multi-purpose Servo Motors Installation Instructions, publication TLP-IN001
	Kinetix 5100 Single-axis EtherNet/IP Servo Drive User Manual, publication 2198-UM004
Selection Guide	Kinetix Selection Guide, publication KNX-SG001
Technical Data	Kinetix Rotary Motion Specifications Technical Data, publication KNX-TD001
	Kinetix Servo Drives Specifications Technical Data, publication KNX-TD003
	Kinetix Motion Accessories Specifications Technical Data , publication KNX-TD004
System Design	Kinetix 5100 Drive Systems Design Guide, publication KNX-RM011
Migration Guides	Ultra 3000 to Kinetix 5100 Servo Drives Migration Guide, publication 2198-RM003
	Kinetix 300 to Kinetix 5100 Servo Drives Migration Guide, publication 2198-RM004
Additional Publications	Kinetix 5100 AC Line Filter Installation Instructions, publication 2198-IN017
	Kinetix 5100 Auxiliary Feedback Connector Kit Installation Instructions, publication 2198-IN018
	Kinetix 5100 Feedback Connector Kit Installation Instructions, publication 2198-IN019
	Kinetix 5100 I/O Terminal Expansion Block Installation Instructions, publication 2198-IN020
	Feedback Battery Box Installation Instruction, publication 2198-IN022
	Shaft Seal Kits for TLP Motors Installation Instructions, publication 2090-IN044
	2090-Series Cables for TLP Motors Installation Instructions, publication 2090-IN046
	Build Your Own Kinetix TLP Motor Cables Installation Instructions, publication 2090-IN048



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Questions???