

SERVO DRIVEN WIRE FEEDER FOR ROBOTIC WELDING

AutoDrive® S

LINCOLN
ELECTRIC

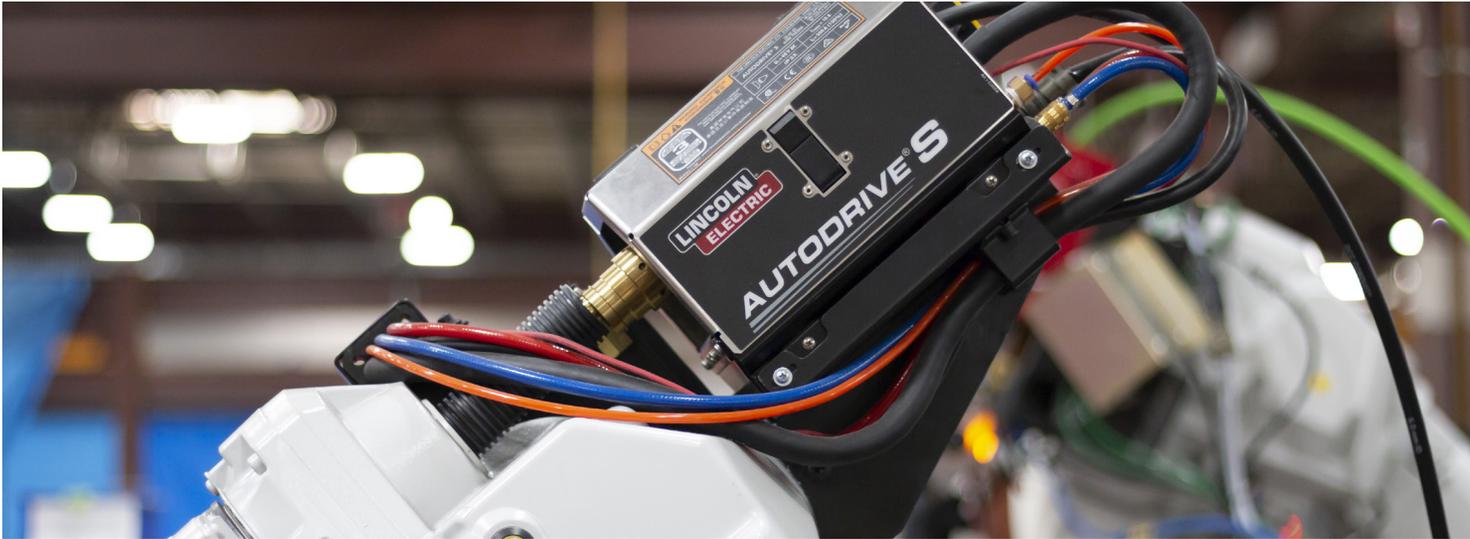


The Evolution of Speed and Precision

AutoDrive[®] S

Sometimes less is more, even when it comes to robotic welding in automotive fabrication and other industries. AutoDrive S is designed and built with this principle in mind. It reduces inconsistent or failed starts, spatter, burnback and other mishaps associated with pre-programmed wire feeding.

AutoDrive S employs touch-retract starting technology, a system that touches the wire to the work, senses the touch and retracts the wire, initiating the arc at a lower current. The softer start minimizes spatter or eliminates it altogether, and extends the life of the consumable. This reduces operating costs over the long term, and when there is little or no spatter to remove after the weld, up time and productivity improve dramatically.



Get In Touch

Precise Starts, Increased Production

Get the right touch when you need it. AutoDrive S is engineered with touch-retract starting technology that reduces arc start failures and increases arc-on time. This improves up time and productivity, and reduces operating costs over the long term.

More Control, Better Quality

Not all welding tasks are created equal. The AutoDrive S delivers higher quality welds that are more consistent throughout the entire length, producing the best results for the more challenging welding applications.

Minimal Spatter, Longer Life

Don't let spatter drive up your costs. AutoDrive S ensures the cleanest possible start and minimizes damage to the contact tip. Less wear and tear on the tip means longer life, fewer replacement tips and less downtime – all of which improves the bottom line.

Processes »

MIG

Applications »

Trailer Manufacturing
Automotive

Output »



Input »



Product Number »

· K4303-2

Compatible robotic Arms »

- ABB®
- FANUC®
- Kuka®
- Motoman®

Perfect Starts

In a standard robotic starting routine, the wire feeder and the welding power supply work together, but operate independent of each other. This can cause inconsistency from one start to another.

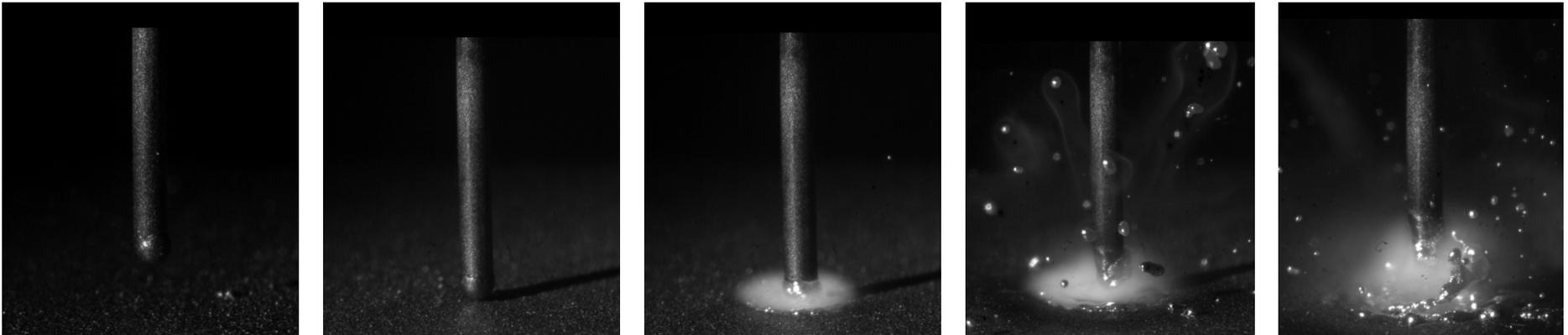
The Precision of the AutoDrive S

in combination with the fast communication speed and welding capability of the Power Wave platform, results in nearly flawless arc initiation every time.

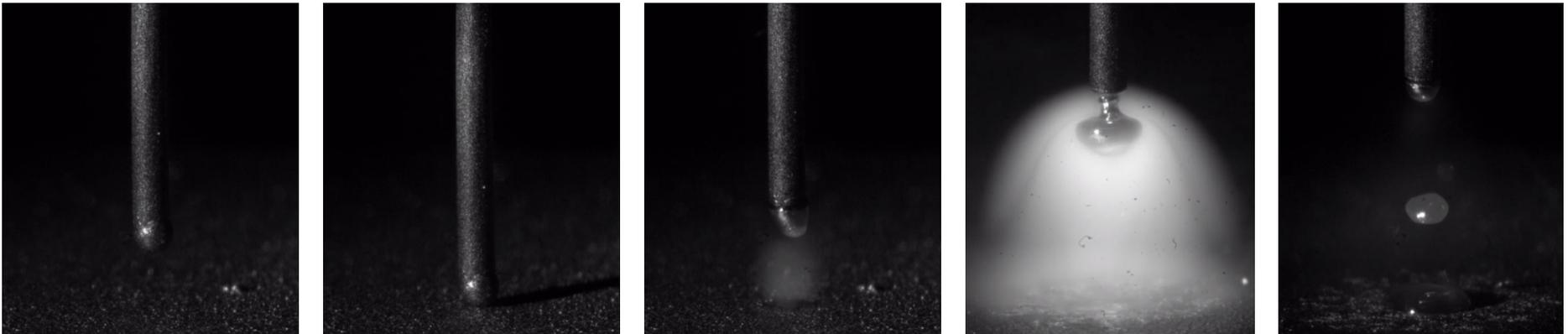
AutoDrive S Touch-Retract Starting

Creates perfect synergy between the Power Wave® platform and the wire feeder, providing absolute control over the acceleration and deceleration of wire feed speed.

Normal Start Photos



Touch Retract Start Photos



Improved Weld Consistency

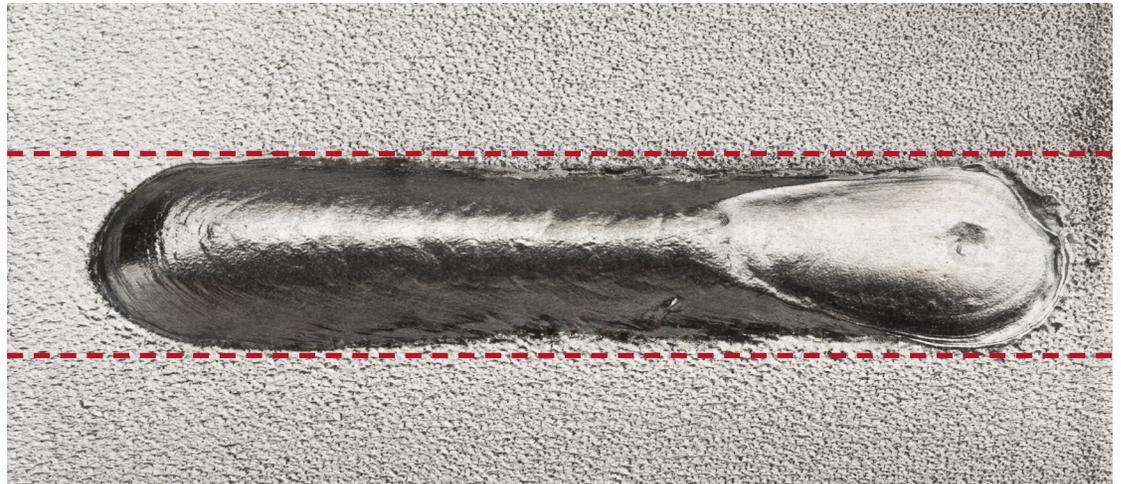
Inconsistent weld profiles are a common result of poor starts.

AutoDrive S Touch-Retract Starting

Improved control between the feeder and power supply results in higher quality welds that are consistent from start to finish.



Dog bone created by standard robotic weld



Weld created with AutoDrive S Touch-Retract Starting.



Spatter from Standard
Robotic Starting Routine



Spatter from AutoDrive S
Touch-Retract Starting

Reduced Spatter

The standard robotic starting routine can generate a high volume of spatter, typically of a larger diameter and containing wire fragments.

AutoDrive S Touch-Retract Starting

Results in 85% less spatter, which means:

- No post-weld cleaning
- Less spatter on tooling and control cables
- Less cell cleanup required

85% Less Spatter

Improved Contact Tip Life

Consumables used in robotic welding processes can wear out easily due to higher starting currents and spatter buildup. These issues lead to fused contact tips, constricted gas coverage and more frequent cleaning cycles.

AutoDrive S Touch-Retract Starting:

Provides consistent, controlled starting, which results in:

- Longer consumable life
- Less time spent on consumable cleaning routines
- More consistent gas coverage from one weld to the next



Consumables used during Standard Robotic Starting (right) versus Consumables used during AutoDrive S Touch-Retract Starting (left).

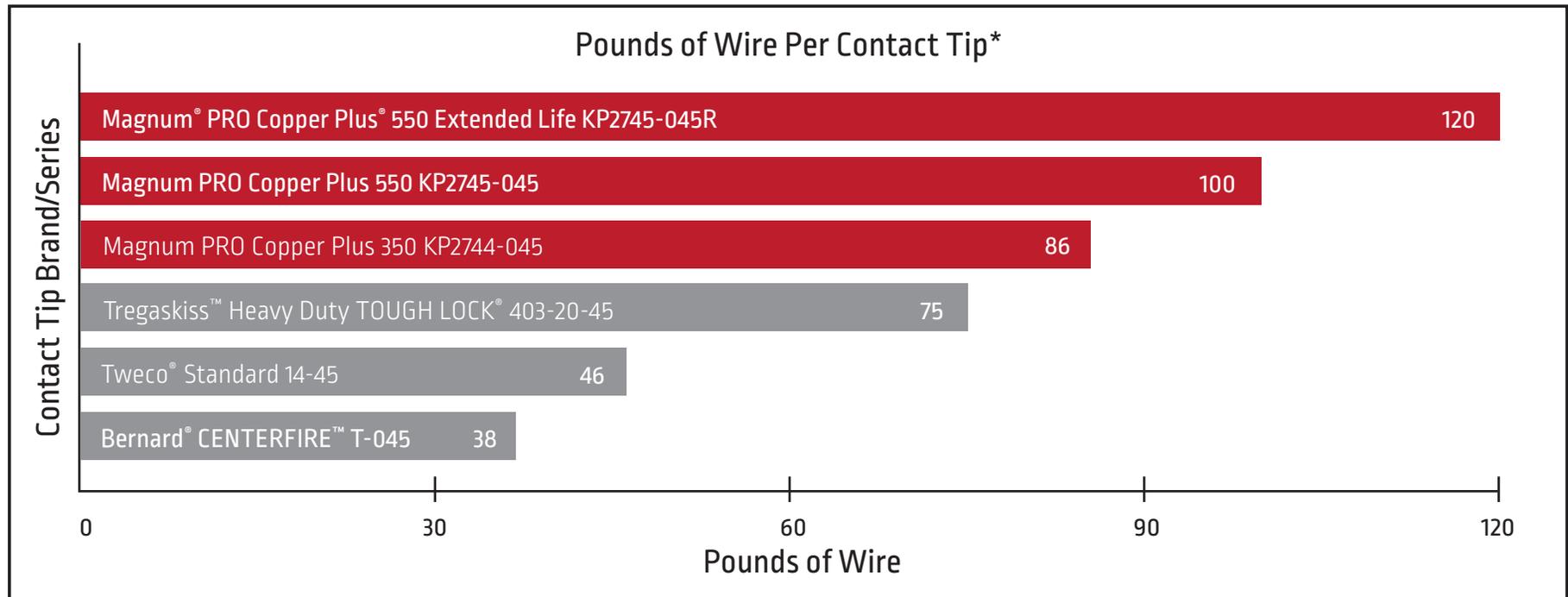
The Magnum[®] PRO Advantage

Patent Pending Anti-Seize[™] Tip and Diffuser

Flattened thread profile increases the thread cross-section where heat typically concentrates and tips fail. The result is reduced melting, fusion and seizing.

Lincoln Copper Plus[®] Contact Tips

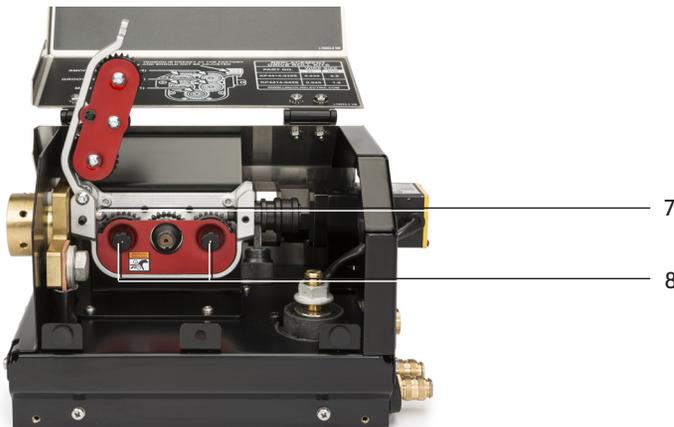
More copper than the leading competition for better heat dissipation, resulting in longer tip life.



* Results based on the following test parameters:

.045 SuperArc[®] L-56 on 60 lb. spools. Two spools of wire per tip. Pulse program. 350 ipm wire feed speed (approx. 16 welding hours per tip). 100% duty cycle. Contact tip usage values based on replacing tip after 10% wear. Your actual results may vary.

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System Overview »

1. Cable assembly designed to improve system connectivity
2. Wire Conduit Connection
3. Weld Cable Connection
4. Gas Connection
5. ArcLink® Connection
6. Water Connections
7. Rear loading liner-simplifies replacement process
8. Drive Roll System-bearings contained within drive rolls themselves resulting in simplified preventative maintenance

Product Name	Product Number	What's Included
ABB		
AutoDrive S Wire Feeder One-Pak For ABB IRB 1520ID	K4306-1520ID	Feeder
AutoDrive S Wire Feeder Air-Blast One-Pak® For ABB IRB 1520ID	K4306-1520IDA	Torch
AutoDrive S Wire Brake One-Pak For ABB IRB 1520ID	K4306-1520IDW	Mounting Bracket
AutoDrive S Wire Feeder One-Pak For ABB IRB 1600ID	K4306-1600ID	Feeder Insulator
AutoDrive S Wire Feeder Air-Blast One-Pak For ABB IRB 1600ID	K4306-1600IDA	Breakaway Disk
AutoDrive S Wire Brake One-Pak For ABB IRB 1600ID	K4306-1600IDW	Housing
FANUC		
AutoDrive S Wire Feeder One-Pak For FANUC Arc Mate® 100iC	K4306-100iC	Nose Cone
AutoDrive S Wire Feeder Air-Blast One-Pak For FANUC Arc Mate 100iC	K4306-100iCA	Gun Tube
AutoDrive S Wire Feeder Wire Brake One-Pak For FANUC Arc Mate 100iC	K4306-100iCW	Diffuser
AutoDrive S Wire Feeder One-Pak For FANUC Arc Mate 100iC/6L	K4306-100iC/6L	Recessed Nozzle
AutoDrive S Wire Feeder Air-Blast One-Pak For FANUC Arc Mate 100iC/6LA	K4306-100iC/6LA	Insulator
AutoDrive S Wire Feeder Wire Brake One-Pak For FANUC Arc Mate 100iC/6LW	K4306-100iC/6LW	Contact Tip
AutoDrive S Wire Feeder One-Pak For FANUC Arc Mate 100iC/8L	K4306-100iC/8L	Liner
AutoDrive S Wire Feeder Air-Blast One-Pak For FANUC Arc Mate 100iC/8LA	K4306-100iC/8LA	
AutoDrive S Wire Feeder Wire Brake One-Pak For FANUC Arc Mate 100iC/8LW	K4306-100iC/8LW	Air-Blast Kit (Included in Air-Blast versions of AutoDrive S One-Paks)
AutoDrive S Wire Feeder One-Pak For FANUC Arc Mate 120iC	K4306-120iC	Wire Brake (Included in AutoDrive S Wire Brake One-Paks)
AutoDrive S Wire Feeder Air-Blast One-Pak For FANUC Arc Mate 120iCA	K4306-120iCA	
AutoDrive S Wire Feeder Wire Brake One-Pak For FANUC Arc Mate 120iCW	K4306-120iCW	
AutoDrive S Wire Feeder One-Pak For FANUC Arc Mate 120iC/10L	K4306-120iC/10L	
AutoDrive S Wire Feeder Air-Blast One-Pak For FANUC Arc Mate 120iC/10LA	K4306-120iC/10LA	
AutoDrive S Wire Feeder Wire Brake One-Pak For FANUC Arc Mate 120iC/10LW	K4306-120iC/10LW	
AutoDrive S Wire Feeder One-Pak for FANUC 100iD	K4306-100iD	
AutoDrive S Wire Feeder Air-Blast One-Pak for FANUC 100iD	K4306-100iDA	
AutoDrive S Wire Feeder Wire-Brake One-Pak for FANUC 100iD	K4306-100iDW	
AutoDrive S Wire Feeder One-Pak for FANUC 120iD and 100iD/10L	K4306-120iD100iD/10L	
AutoDrive S Wire Feeder Air-Blast One-Pak for FANUC 120iD and 100iD/10L	K4306-120iD100iD/10LA	
AutoDrive S Wire Feeder Wire-Brake One-Pak for FANUC 120iD and 100iD/10L	K4306-120iD100iD/10LW	
KUKA		
AutoDrive S Wire Feeder One-Pak For Kuka KR 5-2 ARC HW	K4306-KR5-HW-2	
AutoDrive S Wire Feeder Air-Blast One-Pak For Kuka KR 5-2 ARC HW	K4306-KR5-HW-2A	
AutoDrive S Wire Brake One-Pak For Kuka KR 5-2 ARC HW	K4306-KR5-HW-2W	
AutoDrive S Wire Feeder One-Pak For Kuka KR 16-L8 ARC HW	K4306-KR16-L8-HW	
AutoDrive S Wire Feeder Air-Blast One-Pak For Kuka KR 16-L8 ARC HW	K4306-KR16-L8-HWA	
AutoDrive S Wire Brake One-Pak For Kuka KR 16-L8 ARC HW	K4306-KR16-L8-HWW	
AutoDrive S Wire Feeder One-Pak For Kuka KR 16 ARC HW	K4306-KR16-HW	
AutoDrive S Wire Feeder Air-Blast One-Pak For Kuka KR 16 ARC HW	K4306-KR16-HWA	
AutoDrive S Wire Brake One-Pak For Kuka KR 16 ARC HW	K4306-KR16-HWW	
MOTOMAN		
AutoDrive S Wire Feeder One-Pak For Motoman 1440	K4306-MA1440	
AutoDrive S Wire Feeder Air-Blast One-Pak For Motoman 1440	K4306-MA1440A	
AutoDrive® S Wire Feeder Wire Brake One-Pak For Motoman 1440	K4306-MA1440W	
AutoDrive S Wire Feeder One-Pak For Motoman 2010	K4306-MA2010	
AutoDrive S Wire Feeder Air-Blast One-Pak For Motoman 2010A	K4306-MA2010A	
AutoDrive S Wire Brake One-Pak For Motoman 2010W	K4306-MA2010W	

*The AutoDrive S is compatible only with Magnum® PRO robotic welding guns.
*ABB, FANUC, Kuka and Motoman robots compatible with the AutoDrive S are available with air-blast (A), and wire brake (W) capabilities.

PRODUCT SPECIFICATIONS

Product Name	Product Number	Input Power	Rated Output	Input Current	Output Range	H x W x D in (mm)	Weight lbs (kg)	WFS Range ipm
AutoDrive S Robotic Wire Feeder	K4303-2	N/A (Power and Data via ArcLink*)	500A @ 100% Duty Cycle	N/A	N/A	7.0 x 7.5 x 10.8 (177.8 x 190.5 x 274.3)	14.5 (6.58)	30-800

Compatible Power Sources



Power Wave S500*
Power Wave S700*

*Requires the addition of an AutoDrive® 19 Controller Module

Power Wave R450
Power Wave R500



Power Wave i400

DRIVE ROLL KITS

Product Name	Product Number
.035 in (.89 mm) Drive Roll Kit	KP4335-035S
.040 in (1.01 mm) Drive Roll Kit	KP4335-040S
.045 in (1.14 mm) Drive Roll Kit	KP4335-045S
.047 in (1.19 mm) Drive Roll Kit	KP4335-047S
.035 in (.89 mm) Drive Roll Kit, Cored Wire	KP4335-035C
.040 in (1.01 mm) Drive Roll Kit, Cored Wire	KP4335-040C
.045 in (1.14 mm) Drive Roll Kit, Cored Wire	KP4335-045C
.047 in (1.19 mm) Drive Roll Kit, Cored Wire	KP4335-047C

CUSTOMER ASSISTANCE POLICY

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Publication E10.17 | Issue Date 06/19

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