



# PRODUCTS & PARTS

2014-15



**KEGEL**

YOUR LANES | OUR PASSION



# Welcome to the FLEX Generation

The modern design of the FLEX makes a bold statement, and the new DUO conditioning system under the lid backs it up. DUO Technology gives you the benefit of easily using more than one lane conditioner in your center. By combining the precise accuracy of Sanction Technology™ with dual conditioner cartridges, and still being able to verify how much conditioner will be applied to the lane, DUO Technology gives you versatility, dependability, and accountability.

FLEX gives you features to improve performance, simplify your experience, and allows you to have more control of your lane maintenance program. Want even more? Choose from four colors and add on any of our factory upgrades for a machine perfectly customized to fit your needs.



RED



BLACK



WHITE



BLUE

FLEX	17-5701 (115V/60 Hz)	17-5703 (115V/60 Hz)	17-5705 (115V/60 Hz)	17-5707 (115V/60 Hz)
	17-5751 (230V/50 Hz)	17-5753 (230V/50 Hz)	17-5755 (230V/50 Hz)	17-5757 (230V/50 Hz)
FLEX WALKER	17-5801 (115V/60 Hz)	17-5803 (115V/60 Hz)	17-5805 (115V/60 Hz)	17-5807 (115V/60 Hz)
	17-5851 (230V/50 Hz)	17-5853 (230V/50 Hz)	17-5855 (230V/50 Hz)	17-5857 (230V/50 Hz)

**FLEX Machine Weight: 331 lbs. | 150.1 kg**

**FLEX Walker Machine Weight: 370 lbs. | 167.8 kg**

## CONDITIONING

- Variable Speed Buffer (see upgrades)
- DUO conditioning system (two pumps and two conditioner cartridges)
- DUO transfer system
- Two pre-filled/refillable conditioner cartridges that allow for separate forward and reverse oiling
- Ability to use two conditioners in one pass
- Adjustable microliter streams (per load setting)
- Conditions each lane in less than 90 seconds
- Conditioner float switches with low level warning message
- Board-to-board pattern control
- "Oil Only" function
- Touchscreen control of oil pump calibration
- Measure conditioner volume before applying to lane

## CLEANING

- Cleaner Mixing System (see upgrades)
- Squeegee cartridge for easy replacement of blades
- Sprayless cleaning system
- Ability to monitor and adjust cleaner output
- Cleaner float switches with low level warning message
- Large waste recovery tank (50+ lanes before emptying)
- Duster/cleaning cloth waste roll on top for easy removal
- Patented cushion roller wrap for better cleaning
- Super quiet DC vacuum motor
- "Clean Only" function
- "Dust Only" function
- Touchscreen control of cleaner pump calibration

## DRIVE

- Patented six variable drive speeds
- Independent adjustable cleaning speed
- Self-adjusting drive speeds
- LED arrow for better operator positioning
- Dual Drive System

## TOUCHSCREEN/PLC

- Full color 5" touchscreen display
- Three programs for both AM and PM
- Stores 30 programs in memory
- Test input/output menu option
- Full detailed error messages with help screens

## BATTERIES

- Single lightweight lithium battery
- External battery charger
- Three battery options based on number of lanes conditioned per day

## ACCESSORIES

- KOSI™ software kit included (Kegel Online Support Interface)

## WALKER ONLY FEATURES

- Zero Turn Radius lane to lane walking function
- Auto-aligning lane whiskers
- Smart processor auto-align memory
- Object detection
- Automatic burn pair



## FLEX BONUS WARRANTY

Receive an 18 month warranty with an additional 18 months if you agree to only use Kegel lane maintenance products in your lane machine.

# UPGRADES

Cleaner Mixing System\* • Self-mixing cleaner adjustments  
• Precise mixing ratios

Variable Speed Buffer\* • Ability to customize four preset buffer speeds  
• More control of front to back taper

Batteries • Each machine comes with our new K2 Energy® lithium battery  
• Upgrade to larger battery based on number of lanes conditioned per day



158-1634\*\*  
(40 lanes)



158-1634B  
(62 lanes)



158-1634C  
(90 lanes)

\* Factory upgrade (must be installed at time of purchase)

\*\* All FLEX Machines come standard with battery 158-1634.







Cut the Cord



Innovation is the Key



Affordable Quality





The Kustodian ION is battery powered so you don't need to hassle with the cord during use. While it cleans and conditions the lane, you have more time to do other things.

**Features:**

- All of the Kustodian Plus features
- Battery powered for hassle-free operation
- One dry-cell battery can last up to 32 lanes per charge

**Machine Weight:** 359 lbs. | 162.8 kg

**Part Number:**

17-5400 (115V/60 Hz) MODEL B

17-5450 (230V/50 Hz) MODEL B



**KUSTODIAN  
BONUS WARRANTY**

Receive a 12 month warranty with an additional 24 months if you agree to only use Kegel lane maintenance products in your lane machine.

The Kustodian PLUS sets a high benchmark for the Kustodian family of lane machines. It's equipped with patented Sanction Technology™, a fluid metering conditioning system that gives you the ability to measure the exact volume of oil "before" you condition your lanes. Plus, the cleaning system features a patented sprayless system delivering the industry's cleanest lanes.

**Features:**

- Patented Transfer Brush Conditioner System provides consistency with little maintenance
- Patented Cushion Roller Wrap increases footprint on the lane to enhance cleaning performance

- Clean and Condition the lane in less than 90 seconds
- Condition only, clean only, and simultaneous modes
- 6 Drive Speeds for smooth lengthwise taper
- Large recovery tank can hold 50+ lanes of waste before emptying
- Cleaning cloth waste roll is located on top for easy removal
- KOSI™ Software is included to make pattern adjustments easy

**Machine Weight:** 302 lbs. | 137 kg

**Part Number:**

17-5100 (115V/60 Hz) MODEL B

17-5150 (230V/50 Hz) MODEL B

The Crossfire is a compact, durable and highly functional lane machine at a very affordable price. This wick combination lane machine allows small centers to experience high quality lane maintenance only Kegel can deliver.

**Features:**

- Cleans and conditions the lane in about 80 seconds
- On-board keypad for simple machine programming
- 6 High-Flow Wick Pads (upgradeable to 8)
- 12 Lane Conditioner Capacity (upgradeable to 60)
- 32 Lane Cleaner Capacity
- 3 Drive Speeds for enhanced pattern taper
- Compact Design

**Machine Weight:** 275 lbs. | 124.7 kg

**Part Number:**

Crossfire - 6 PAD MODEL C

17-5200C (115V/60 Hz) 6 PAD/CAM MACHINE

17-5250C (230V/50 Hz) 6 PAD/CAM MACHINE

**Optional Upgrade Kit**

Increase to 8 Wick Pads and Conditioner Capacity to 60 lanes

158-8241 - CROSSFIRE UPGRADE KIT - 115V

158-8241E - CROSSFIRE UPGRADE KIT - 230V

# LANE MACHINE COMPARISON CHART

	FLEX WALKER	FLEX	ION	KPLUS
<b>CONDITIONING</b>				
Sanction Technology™ fluid metering conditioning system	✘	✘	✘	✘
Conditions each lane in less than 90 seconds	✘	✘	✘	✘
Conditioner float switches with low level warning message	✘	✘	✘	✘
Left-Right pattern control	✘	✘	✘	✘
"Oil Only" function	✘	✘	✘	✘
Touchscreen control of microliter stream	✘	✘		
Touchscreen control of oil pump calibration	✘	✘		
DUO conditioning system (two pumps and two conditioner cartridges)	✘	✘		
DUO transfer system (roller and single transfer brush)	✘	✘		
Two pre-filled/refillable conditioner cartridges that allow for separate forward and reverse oiling	✘	✘		
Ability to use two conditioners in one pass	✘	✘		
Board-to-board pattern control	✘	✘	✘	✘
Measure conditioner volume before applying to lane	✘	✘	✘	✘
Adjustable mic streams (per load setting)	✘	✘		
4 Variable Buffer speeds (upgradeable)	✘	✘		
Different conditioners in each cartridge	✘	✘		
<b>CLEANING</b>				
Sprayless cleaning system	✘	✘	✘	✘
Ability to monitor and adjust cleaner output to the milliliter	✘	✘	✘	✘
Cleaner float switches with low level warning message	✘	✘	✘	✘
Large waste recovery tank (50+ lanes before emptying)	✘	✘	✘	✘
Duster/Cleaning cloth waste roll on top for easy removal	✘	✘	✘	✘
Patented cushion roller wrap for better cleaning	✘	✘	✘	✘
Ultra quiet DC vacuum motor	✘	✘	✘	✘
"Clean Only" function	✘	✘	✘	✘
"Dust Only" function	✘	✘	✘	✘
Adjustable "End Cleaning" and "Return" distance	✘	✘	✘	✘
Multi-adjustment squeegee assembly	✘	✘	✘	✘
Touchscreen control of cleaner volume	✘	✘		
Squeegee cartridge for easy replacement of blades	✘	✘		
Touchscreen control of cleaner pump calibration	✘	✘		
Self-mixing cleaner adjustments (upgradeable)	✘	✘		
Redesigned cleaner supply tank w/bigger opening for filling	✘	✘		
New style recovery tank w/handles for better transporting/emptying	✘	✘		
<b>DRIVE</b>				
Patented six variable drive speeds	✘	✘	✘	✘
Independent adjustable cleaning speed	✘	✘		
Self-adjusting drive speeds	✘	✘		
Zero Turn Radius lane to lane walking function	✘			
Auto-aligning lane whiskers	✘			
Smart processor auto-align memory	✘			
Object detection	✘			
LED arrow for better operator positioning	✘	✘		
<b>KEYPAD/PLC</b>				
Standard 2-line display keypad			✘	✘
Full Color 5" touchscreen display	✘	✘		
One program for AM and PM			✘	✘
Three programs for AM and PM	✘	✘		
Automatic burn pair	✘	✘		
Stores 4 programs in memory			✘	✘
Stores 30 programs in memory	✘	✘		
Test output menu option			✘	✘
Test input/output menu option	✘	✘		
Coded error messages			✘	✘
Full detailed error messages with help screens	✘	✘		
<b>BATTERIES</b>				
On-board charger			✘	
Single lightweight lithium battery	✘	✘		
External battery charger	✘	✘		
2 Dry-cell 925 batteries (approx. up to 40 lanes per charge)			✘	
3 lithium battery options based on number of lanes conditioned per day	✘	✘		
<b>ACCESSORIES</b>				
KOSI™ software kit included (Kegel Online Support Interface)	✘	✘	✘	✘

# Lane Conditioners

## Why Compromise? You can have it all.

When choosing a lane conditioner, you used to have to decide which you wanted more:

1. A durable lane conditioner that could withstand aggressive high tech balls or
2. A lane conditioner that was pinsetter and house ball friendly

With Fire and Ice, you no longer have to compromise. You can have it all. Fire and Ice are more durable than any of our existing lane conditioners, but are also pinsetter and house ball friendly. Now the only choice you have to make is whether you want Fire...or Ice.



**FIRE™**

For more hook or slick lane surfaces



**ICE™**

For more hold area or high friction lane surfaces

### For Sanction Technology™ Lane Machines

- Viscosity: 45.1 cps.
- Surface Tension: 23.6 dyn/cm

#### Part Number: 156-8135

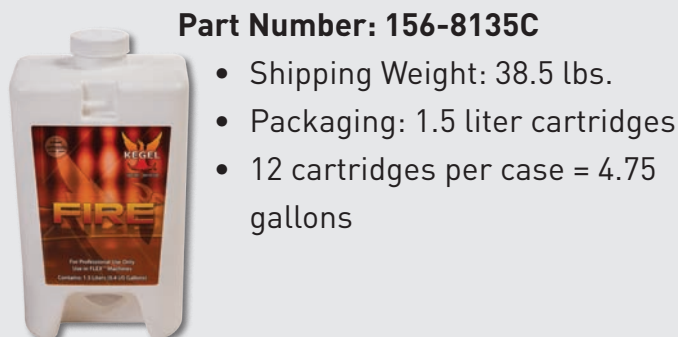
- Shipping Weight: 40 lbs.
- Packaging: 1.25 gallon containers
- 4 containers per case = 5 gallons

### For Sanction Technology™ Lane Machines

- Viscosity: 40.9 cps.
- Surface Tension: 23.2 dyn/cm

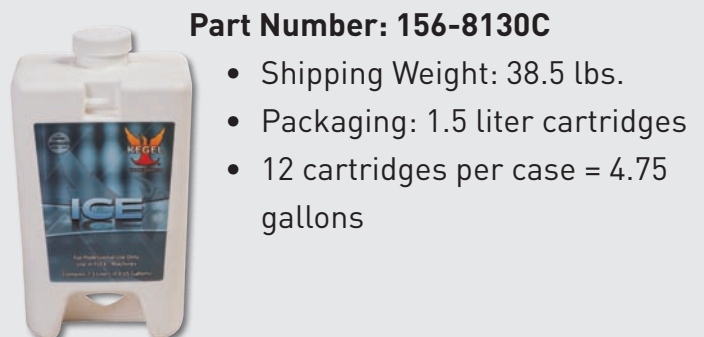
#### Part Number: 156-8130

- Shipping Weight: 40 lbs.
- Packaging: 1.25 gallon containers
- 4 containers per case = 5 gallons



#### Part Number: 156-8135C

- Shipping Weight: 38.5 lbs.
- Packaging: 1.5 liter cartridges
- 12 cartridges per case = 4.75 gallons



#### Part Number: 156-8130C

- Shipping Weight: 38.5 lbs.
- Packaging: 1.5 liter cartridges
- 12 cartridges per case = 4.75 gallons



# Lane Conditioners

## WICK-PAD CONDITIONER



### Physical Properties:

- Viscosity: 24.1 cps.
- Surface Tension: 23.6 dyn/cm.
- Shipping Weight: 40 lbs.
- Packaging: 1.25 gallon containers for easy use (4 containers per case = 5 gallons)

Part Number: 156-8105

## WICK-PAD & SANCTION® CONDITIONERS



### Physical Properties:

- Viscosity: 31.2 cps.
- Surface Tension: 23.7 dyn/cm.
- Shipping Weight: 40 lbs.
- Packaging: 1.25 gallon containers for easy use (4 containers per case = 5 gallons)

Part Number: 156-8095



### Physical Properties:

- Viscosity: 31.3 cps.
- Surface Tension: 23.5 dyn/cm.
- Shipping Weight: 40 lbs.
- Packaging: 1.25 gallon containers for easy use (4 containers per case = 5 gallons)

Part Number: 156-8125

## SANCTION® CONDITIONERS



### Physical Properties:

- Viscosity: 36.5 cps.
- Surface Tension: 23.1 dyn/cm.
- Shipping Weight: 40 lbs.
- Packaging: 1.25 gallon containers for easy use (4 containers per case = 5 gallons)

Part Number: 156-8115



### Physical Properties:

- Viscosity: 47.3 cps.
- Surface Tension: 22.7 dyn/cm.
- Shipping Weight: 40 lbs.
- Packaging: 1.25 gallon containers for easy use (4 containers per case = 5 gallons)

Part Number: 156-8025



### Physical Properties:

- Viscosity: 50.3 cps.
- Surface Tension: 23.9 dyn/cm.
- Shipping Weight: 40 lbs.
- Packaging: 1.25 gallon containers for easy use (4 containers per case = 5 gallons)

Part Number: 156-8075

# Conditioner Comparison

SANCTION TECHNOLOGY™							
PROPERTIES	FIRE	ICE	NAVIGATE	INFINITY	PRODIGY	DEFENSE-S	OFFENSE HV
VISCOSITY (at 72.5 F / 22.8 C)	45.1	40.9	31.3	36.5	31.2	47.3	50.3
DURABILITY							
High League Lineage	4.5	5	4.5	4.5	3.5	4.5	3
High Open Play Lineage	5	4.5	4	3	4.5	3	4
Reduced Pinsetter Calls	5	5	4.5	4	4.5	3	4
Easy Cleaning	5	5	4	3	4	2	4.5
Limits Carry Down	5	5	4.5	4	4.5	4	3
LANE SURFACES							
Pro Lane™	5	4.5	4.5	3	4.5	3	3
Anvilane™	4.5	5	4	4.5	4	4	4
AMF HPL™	4.5	5	4	4.5	4	4.5	4
AMF SPL™	4.5	5	4	4.5	4	4	4
Laneshield®	5	4.5	4	4	4	4	4.5
Guardian®	4.5	5	4	4	4	4.5	4
MAD Lanes®	4.5	5	4.5	4.5	4	4	4
WOOD FINISHES							
Water Base	4.5	5	3	4	3	4.5	3
100% Solids	4.5	5	3	4	3	4.5	4

WICK/PAD TECHNOLOGY			
PROPERTIES	NAVIGATE	PRODIGY	CROSSFIRE
VISCOSITY (at 72.5 F / 22.8 C)	31.3	31.2	24.1
WICKING TIME	13 minutes	14 minutes	10 minutes
DURABILITY			
High League Lineage	4.5	3.5	4
High Open Play Lineage	4.5	4.5	4
Reduced Pinsetter Calls	4.5	4.5	4
Easy Cleaning	4	4	4.5
Limits Carry Down	4.5	4.5	4.5
LANE SURFACES			
Pro Lane™	5	4.5	4
Anvilane™	4	4	5
AMF HPL™	4	4	4
AMF SPL™	3	3	4
Laneshield®	4	4	5
Guardian®	4	3	4
MAD Lanes®	3	4.5	5
WOOD FINISHES			
Water Base	3	3	5
100% Solids	3	3	5

5	Best
4	Better
3	Good

# Lane Cleaners



**DEFENSE CX4 S**

**Physical Properties:**

- Designed for low friction surfaces and stronger backend reaction
- pH: 11.5
- Shipping Weight: Only 10 lbs.
- Packaging: 3.29 liters (1 US Gallon)

Part Number: 156-8435



**DEFENSE CX4**

**Physical Properties:**

- Designed for high friction surfaces
- pH: 12.8
- Shipping Weight: Only 13 lbs.
- Packaging: 2 liter bottles for easy use (2 bottles per case = 4 liters)

Part Number: 156-8425



**FIZZION**  
CONCENTRATED CLEANER

**Physical Properties:**

- pH: 7.8
- Appearance: White Tablet with Citrus Scent
- Tablet Weight: 42 g
- Shipping Weight: 12 lbs. per case (4 bags/case)
- Packaging: 24 tablets/bag (4 bags/case = 96 tablets total)

Part Number: 156-8500B



**DEFENSE-C**

**Physical Properties:**

- pH: 12.6
- Shipping Weight: 46 lbs.
- Packaging: 2.5 gallon containers (2 containers per case = 5 gallons)

Part Number: 156-8405

Note: All Kegel cleaners meet European compliance requirements.

# Other Supplies



EZ Core Technology makes changing cloth "Quick & EZ"! Stop handling dirty cloth and get ultimate cleaning results.

**Physical Properties:**

- Color: White
- Roll Dimensions: 43" wide x 60' long
- Shipping Weight: Under 12 lbs.
- Packaging: 4 rolls per case

Part Number:

K2 Select (Reusable PVC Core): 153-0047EZ

K2 Kloth (Cardboard Core): 153-0047P



**NPS™ (NO PIN SLIDE)**

NPS (No Pin Slide) creates a textured surface which helps the pins grip and fall down rather than slide out of range. Apply it to the pin deck and the problem is solved.

**Physical Properties:**

- Weight per container: 9 lbs.
- Shipping Weight: 37 lbs.
- Packaging: 1 gallon bottle for easy use (4 gallons per case)
- Concentrated Solution

Part Number: K-99C





## MOPPING TABLET

Fizzion Mopping Tablet is an all-purpose floor cleaner designed for bowling centers. Its formula was created to leave NO sticky residue so your bowlers' shoes stay clean both on and off the lanes.



- Mixes up fresh every time you mop for maximum power
- Cuts through dirt & grease with ease
- Easily lifts set-in grout stains
- Includes mild bleaching action
- Concentrated product reduces waste & pollution
- Pre-measured tablet controls cost

Part Number: 156-8565B



PIN CLEANING MACHINE & CLEANER SOLUTION

## Physical Properties:

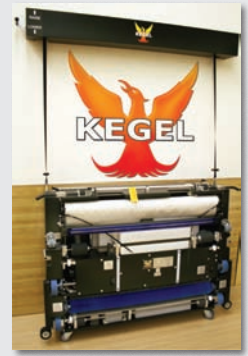
- Cleans ALL types of bowling pins
- Includes attachment to sand pins
- Weight: 37 pounds

Part Number:  
17-0040 – 115V 60 Hz  
17-0040E – 230V 50 Hz



## Lane Machine Assist

One person can quickly and easily raise and lower their lane machine safely.



## Physical Properties:

- Color: Black
- Dimensions: Width: 60" | Height: 8" | Depth: 8"
- Lifting Capacity: Any Kegel Lane Machine
- Packaging: Assembled and ready to mount

Part Number: 154-8510

(Must be installed by a qualified contractor.)

## Strap Replacement Kit

Part Number: 154-8519

## Bracket Kit for FLEX models

Part Number: 158-8615



## Physical Properties:

- Cleans ALL types of bowling pins
- Not harmful to skin
- For use in ALL pin cleaning machines
- Weight: 1 gallon is approximately 8.7 pounds
- Packaging: 1 gallon bottle/box
- Concentrated cleaner
- pH: 8.75

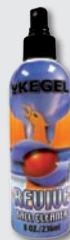
Part Number: 156-8800



## Physical Properties:

- Keep your hands moisture-free
- Not sticky - No odor
- No white powder residue
- Lasts all day
- Cleans off with soap and water

Part Number:  
156-8773 - 3oz. bottle  
156-8773C - Case (10 - 3oz. bottles)



## Physical Properties:

- pH: 8.4
- Easy to use - spray on, wipe off
- Gentle on the skin
- Can be used on ALL bowling balls
- Approved for use in USBC competition

Part Number:  
156-8768 - 8oz. bottle  
156-8768C - Case (12 - 8oz. bottles)  
156-8762 - 32oz. bottle

SUFFIX	MACHINE	SUFFIX	MACHINE
FXW	FLEX WALKER	STD	STANDARD
FLX	FLEX	PXS	SM II, PHOENIX S, BRUNSWICK ECHO
KW	KUSTODIAN WALKER	PX	PHOENIX
ION	KUSTODIAN ION	DT	DART
XF	CROSSFIRE	XL	EXCEL
KP	KUSTODIAN PLUS	LCM	LANEWALKER LANE CLEANING MACHINE
KK	KUSTODIAN	LW	LANEWALKER
EP	ELITE PLUS		
ELT	ELITE		

Suffix represents all model variations unless model type is specifically indicated (i.e. KP-A). Parts do not apply to original Sanction® Machines.

# Cleaning

## FLEX Cleaning System

Recovery Tank - 164-8017

Recovery Tank Filter (for tank 164-8017)

164-8017F - FXW | FLX (FLX-17733 / FXW-13229 and ABOVE)

Recovery Tank Filter (for tank 164-8017)

164-6114 - FXW | FLX (FLX-17732 / FXW-13228 and BELOW)

Cleaner Pump Motor Assembly - 158-8404

Cleaner Pump Assembly - 158-8404D

Norprene® Tubing - 154-0861B

Cleaner Supply Tank Float Switch - 154-8693

Complete Cleaner Tank Assembly (Standard)

164-8042

Cleaner Supply Tank Only (Standard)

164-6016



## Upgraded Cleaner Mixing System

Complete Cleaner Tank Assembly - 164-8043

Cleaner Supply Tank Only - 164-6741

Complete Water Tank Assembly - 164-8041

Cleaner Water Tank Only - 164-6740

Cleaner Pump Assembly - Concentrate

164-8027

Cleaner Tubing #14 for Super Concentrate

164-8025

Cleaner Tubing #16 for Regular Concentrate

164-8026

Supply Tank Caps

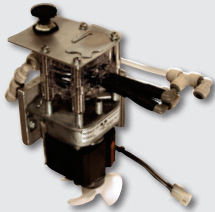
164-6018

# Cleaning

**Recovery Tank** - 153-8841 - XF | PXS-A,B | PX-A,B  
**Recovery Tank Filter** (for tank 153-8841) - 153-8844 - XF | PXS-A,B | PX-A,B  
**Recovery Tank** - 154-8683 - ION-A | KP-A | KK | ELT | STD | PXS-C | PX-C  
**Folded Recovery Tank Filter** (for tank 154-8683) - 154-8684  
**Recovery Tank** - 158-8434 - ION-B | KP-B  
**Recovery Tank** - 158-8617 - KW | ION-C,D  
**Recovery Tank Filter** (for tanks 158-8434 & 158-8617) - 158-0406  
**Recovery Tank Gasket** (for tanks 158-8434 & 158-8617) - 158-0405



**Vacuum Motor** - See Motors on page 26  
Following Items are Not Pictured  
**Vacuum Housing** - 153-0204H  
**Fan Blade** - 153-0204F  
**Flexible Hose** (Sold by the Inch) - 154-0260



**Cleaner Pump Drive Motor**  
154-8874 (115VAC)  
154-8875 (230VAC)  
158-8404 (24VDC)  
**Peristaltic Cleaner Pump** - 158-8404D  
**Norprene® Tubing** - 154-0861B  
**Cleaner Volume Control Valve** - 154-1855  
**Cleaner Tip & Hose Assembly** - 154-8852



**5" Cleaner Tank Filter** - 154-0212B  
**1/2" O-Ring** - 154-0287C



**Universal In-Line Filter Assembly** - 154-8867A  
**In-Line Filter Assembly** - 154-8887 - KW | ION | KP | EP

**Cleaning System Tubing**  
(Sold by the Inch)  
1/4" - 153-0208S - for Spray Jet Machines  
1/4" - 154-0202C



**Complete Supply Tank Assembly** - 154-8840 - XF | KK | PX-C  
**Complete Cleaner Tank Assembly** - 154-8680 - EP | ELT | STD | PXS-C  
**Complete Cleaner Tank Assembly** - 158-8433C - KW | ION-B,C,D | KP-B  
**Cleaner Supply Tank Only** - 158-8433 - KW | ION-B,C,D | KP-B  
**Cleaner Supply Tank Only** - 154-8894 - ION-A | KP-A  
**Expandable Supply Tank Plug** (1-1/2") - 153-0246A  
**Rubber Insert and Plug for Supply Tank** - 153-0247

**Potentiometer for Cleaner Control**  
154-8846 - KP  
158-8413 - KW | ION

**Complete Cleaner Pump Assembly**  
154-8859 (115VAC) - KP-A | EP  
154-8859E (230VAC) - KP-A | EP  
**Complete Cleaner Pump Assembly**  
158-8404C (24VDC) - KW | ION  
154-8847 (24VDC) - KP

**Solenoid Valve (3-Way)**  
154-1851 (115VAC) - KP-A Only | EP  
154-1852 (230VAC) - KP-A Only | EP

**Kustodian PLUS**  
(Model A Only)  
**24VDC Cleaner Pump**  
**Conversion Kit**  
154-8844 (115V)  
154-8845 (230V)





**Cushion Roller With Cloth Cover - 153-8839**  
 Compatible with FXW | FLX | KW | ION | XF | KP | EP  
 Contact Tech Support for use on these models: KK | ELT | STD | PXS | PX

**Cloth Cover Size**  
 Size A - 154-8889A  
 Size B - 154-8889B  
 Size C - 154-8889C  
 Size D - 154-8889D  
 Size E - 154-8889E

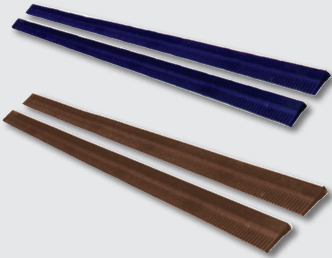


**Cushion Roller - 153-8838 - KK | ELT | STD | PXS | PX**  
**Cushion Roller - 153-8026 - LW**  
**Cushion Roller - 153-8238B - LCM**



**PVC Take-Up Reel - 153-8824**  
 (Not required with K2 Select EZ Core Cloth)  
**PVC Take-Up Reel Clamp - 154-6248 (Not Pictured)**

**Complete Squeegee Assembly (Blue) - 153-0202D**  
 KW | ION | XF | KP | KK | EP | ELT | STD | PXS-C  
**Complete Squeegee Assembly Kit (Brown) - 153-0202A - PXS | PX**  
**Complete Squeegee Assembly (Blue) - 153-0202 - LCM**



**Replacement Squeegee Blade & Gasket Kit - 164-8038K**  
 FXW | FLX - (also for machines with upgraded Squeegee Cartridge)

**Replacement Squeegee Blades - Blue pair - 153-8204E**  
**Replacement Squeegee Blade - Individual - 153-0202E**

**Replacement Squeegee Blades - Brown pair - 153-8834**  
**Replacement Squeegee Blade - Individual - 153-0202C**



**Spray Jet Cup Assembly Upgrade**  
 154-8692



**Spray Pressure Regulator Upgrade**  
 154-8268

**Cleaner Pump Repair Kit**  
**Valve/Diaphragm Kit for Kegel Pump**  
 158-8212K

## Spray Jet Cleaner Pumps

### Kegel Cleaner Spray Pumps

158-8212 (115V AC)  
 158-8213 (230V AC)

For older Standard AC and SE Machines with Pump Mounted Over Buffer Motor.

154-8651A (115V AC)  
 154-8652A (230V AC)

This pump replaces SHURflo® & FLOJET® pumps.

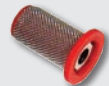


## Spray Jet Assembly

**Tip Retainer - 153-0218**  
**Spray Jet Body - 153-6252**  
**Nylon Body - 153-0217**



**Screen Check Valve - 153-0220**



**Outside Spray Tip (1501) - 154-0007**  
**Inside Spray Tip (8003) - 153-0207**  
**Inside Spray Tip (11003) - 153-0207A**



**Cleaner Tip Check Valve (Pkg of 5)**  
 154-0862K - KW | ION | KP | EP

**Cleaner Tip with Check Valve - 164-0012M**



## Cleaner Funnels

**Cleaner Funnel - Long Stem**  
 158-8252  
**Cleaner Funnel - Short Stem**  
 154-8647  
**Cleaner Funnel - No Stem**  
 153-0252



# Conditioning

## DUO System

Conditioner Transfer Brush Assembly - 164-0866



**Buffer Brush** - 164-8001 - FXW | FLX

**Buffer Belt Standard** - 164-9006 - FXW | FLX

**Buffer Belt Variable Speed Upgrade** - 154-9615 - FXW | FLX  
(FLX-17733 / FXW-13229 and ABOVE)

**Buffer Belt Variable Speed Upgrade** - 164-9006 - FXW | FLX  
(FLX-17732 / FXW-13228 and BELOW)

**Belt for Conditioner Pumps** - 164-9008 - FXW | FLX

**Transfer Roller** - 164-8008 - FXW | FLX

**Transfer Roller Belt** - 154-9203 - FXW | FLX

**Pulse Suppression Assembly** - 164-8021 - FXW | FLX

**Pressure Gauge** (60 psi) - 158-1613

**Oil Control Valve** (24V DC - Extended Wires with Fittings)  
154-8298 - FXW | FLX

**Oil Vent Valve Assembly** - 164-8007 - FXW | FLX



**FLEX Conditioner Cartridge**  
(Complete with Valve Assembly) - 164-8015

**FLEX Conditioner Cartridge**  
(Without Valve Assembly) - 164-8015A

**Cartridge Plunger** - 164-8015P  
**Cartridge Cap** (with 38mm hole)  
164-0004

**Valve Gasket for Cap**  
164-0002

**Viton O-Ring for Plunger** (outside)  
164-6079

**FLEX Conditioner Sub Tank**  
164-8016

**FLEX Conditioner Sub Tank Float Switch**  
154-8693

**FLEX Conditioner Sub Tank Filter Assembly**  
154-0212

## Conditioner Transfer System



**Conditioner Transfer Brush Assembly** - 154-0866 - KW | ION | KP | EP



**Buffer Brush** - 154-8641 - KW | ION | XF | KP | KK | EP | ELT | STD | PXS-C | PX-C

**Buffer Brush** - 153-8407 - PXS-A,B | PX-A,B | DT | XL

**Buffer Brush** - 153-8017 - LW



**Transfer Roller** - 153-8408 - PX-A,B | DT | XL

**Transfer Roller** - 154-8338 - PX-C

**Transfer Roller** (2.25 diameter) - 154-8207 - PXS-A,B

**Transfer Roller** (1.75 diameter) - 154-8208 - PXS-A,B

**Transfer Roller** - 154-8608 - KK | ELT | STD | PXS-C

**Transfer Roller** - 158-8204 - XF



**Buffer Belt** - 154-9615 - ION-A,B | KP | KK | EP | ELT | STD | PXS-C

**Buffer Belt** - 153-9015 - PXS-A,B | PX-A,B | LW

**Buffer Belt** - 153-9817 - PX-C

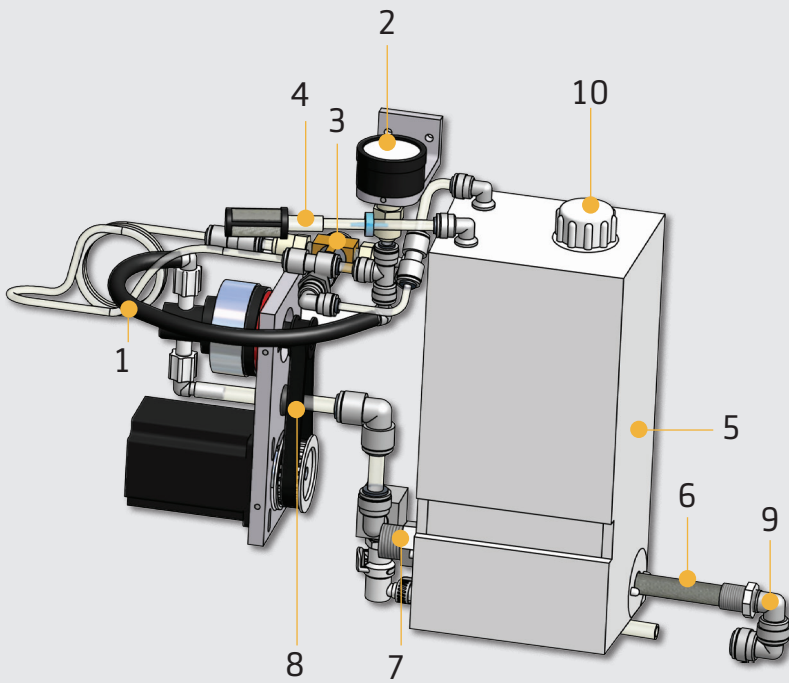
**Buffer Belt** - 158-9201 - XF

**Buffer Belt** - 158-9026 - KW | ION-D



**Head Drive Belt** - 154-9201  
Compatible with ALL applications.

## Fluid Metering Components



- 1. Pulse Suppression Assembly**  
164-8021 - FXW | FLX  
154-8660 - EP | ELT | STD | PXS-C  
154-8216K - PXS-A,B  
154-8816 - KW | ION | KP | KK
- 2. Pressure Gauge (60 psi) - 158-1613** (Replaces 154-1225)
- 3. Oil Control Valve (24V DC) - 154-1209**  
Oil Control Valve (24V DC - Extended Wires w/Fittings) - 154-8298  
Calibration Valve (115V AC) - 154-1210 - PXS-A,B (Not Pictured)
- 4. Vent Valve - 154-8817** (Electrical Vent Valve Discontinued)
- 5. Oil Tank Assembly with Fittings/Float**  
154-8682 - KW | ION | KP | EP | ELT | STD | PXS-C  
Oil Tank Assembly with Fittings  
154-8842 - KK
- 6. Oil Tank Filter - 154-0212**
- 7. Float Switch Assembly**  
154-1203 - XF  
154-8693 - KW | ION | KP | EP | ELT | PXS-C | PX-C  
154-8203 - PXS-A,B (3" Vertical for tank 154-8201C)  
154-8203A - ELT | STD (7" Vertical for tank 154-8615C)
- 8. Belt for Conditioner Pump Motor**  
154-9202A (60Hz)      154-9215 (50Hz)
- 9. Elbow  $\frac{3}{8}$ " Tube x  $\frac{1}{4}$ " NPT - 154-0225**
- 10. Oil Tank Cap Assembly**  
154-0832 - Complete  
154-0832C - Cap only  
154-0832G - Gasket only

## Tubing

### Conditioning System Tubing

(Sold by the Inch)

$\frac{3}{16}$ " - 154-0202B

$\frac{1}{4}$ " - 154-0202C

$\frac{3}{8}$ " - 154-0202

### Conditioner Head Tip & Hose Holder Assembly (includes tubing)

**1-  $\frac{1}{4}$ " Tip Holder** (PXS only) - 154-8285

**3-  $\frac{1}{2}$ " Tip Holder** (Painted Machines with Transfer Roller) - 154-8883

**4-  $\frac{1}{2}$ " Tip Holder** (Painted Machines with Transfer Brush) - 154-8851

**5-  $\frac{1}{4}$ " Tip Holder** (Upgraded Transfer Brush Models) - 154-8896

**Retaining Spring for Head** - 153-2713

**Oil Pencil Tip** (Black Molded) - 154-6832

## Replacement Felt

**Felt ( $\frac{1}{8}$ " x 3")** - (Sold by the Inch) - 154-0228S

**Felt Strip on Splash Guard Tank** - 154-8333 - PX-C Only

**Felt Kit for Transfer and Spray Jet Wall**

154-8669 - KK | ELT | STD | PXS-C

**Felt for LDS Splash Guard**

154-8690 - Painted Sanction Technology™ Machines

**Felt Strip for Transfer Wall** - 154-8669A - KW | ION | KP | EP

**Graduated Cylinder (25ml)** - 154-0215

**Felt for Graduated Cylinder (25ml)** - 154-0210

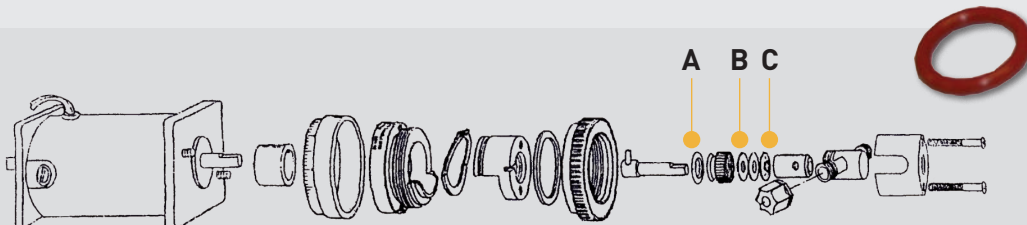
**Graduated Cylinder (50ml)** - 154-0215A

**Felt for Graduated Cylinder (50ml)** - 154-0210A

**Oil Funnel with 3" Hose** - 153-0052A

**Funnel with Connecting Stem for Conditioner Tank (Small)** - 154-8648

**Fluid Metering Oil Pump**  
154-1214



- A. O-Ring for Fluid Metering Pump** (Orange) - 154-1214E
- B. Gland Seal for Fluid Metering Pump** (White) - 154-1214D
- C. Lip Seal for Fluid Metering Pump** (Red) - 154-1214A

# Wicks



## Glueless Wick Plate Assembly

- 3" - 153-8103A Replacement for glued wicks
- 3.125" - 153-8123 Only Compatible with PX-C
- 3.125" - 158-8223 Only Compatible with XF



- 5" - 153-8105A Replacement for glued wicks
- 5.125" - 153-8125 Only Compatible with PX-C
- 5.125" - 158-8225 Only Compatible with XF



- 7" - 153-8107A Replacement for glued wicks
- 7.125" - 153-8127 Only Compatible with PX-C
- 7.125" - 158-8227 Only Compatible with XF

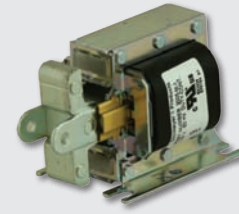
- 10" - 153-8110A Replacement for glued wicks
- 10.125" - 158-8230 Only Compatible with XF

Not Pictured

- 45" Wick Material for Glued Wicks - 153-0005 (4")
- 45" Wick Material for Glueless Wicks - 153-0005B (5")
- Wick Material Stock for Glueless Wicks - 153-0005D  
(Custom cut to be purchased by the inch)



- Wick Spring (0.438 OD x 2.75) - 153-2095
- Wick Spring (XF Only) - 153-2740



- Solenoid (115V) - 153-1027
- Solenoid (220V) - 153-1627
- Solenoid Cable Assembly 7.625" - 153-8812 (PX-A,B)
- Solenoid Cable Assembly 8.25" - 153-8812A (PX-C)

## Pattern Smoothing Pads

- Pattern Smoothing Assembly - 154-8617
- Velcro for Smoothing Pad - 154-8617V (10 per pack)
- Smoothing Pad Spring - 153-2540A

# PLC



- 1
- 2
- 3
- 4

## C200HS Components

1. Input Module ID212 - 153-1816
2. Output Module OC221 - 153-1814
3. Output Module OC222 - 153-1815
4. Mounting Rack C200H - 153-1811

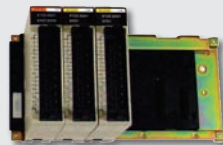
Not Pictured

Keypad with Cable - 153-1002C

PLCs No Longer Available:

SP-16 PLC / C28H PLC / C200HS PLC

Call 863-734-0200 for more information.



- 1
- 2
- 3

## C200HG Items

1. Input Module ID212 - 153-1816
2. Output Module OC222 - 154-8231 (With 24VDC Relay)
3. Mounting Rack C200HW - 154-1201B



C200HG PLC  
154-1201



Power Supply  
C200HG - 154-1201P

## Twido® PLCs (Crossfire Only)

Programmable Logic Controller  
Please contact KEGEL for correct part number for your model.

- Real Time Clock - 158-1201C
- Connector (RS485 Mini-DIN) - 158-1201D
- Output Module - 158-1202
- Keypad Cable - 158-1203C
- Keypad Assembly - 158-8209
- Twido® PLC Battery - 155-1246



# PLC



## Touchscreen Components

Touchscreen Display - 158-8671 - KW C,D | ION C,D

Touchscreen Display - 164-8011 - FXW | FLX

Touchscreen Protector - 158-1612



## PLC Components

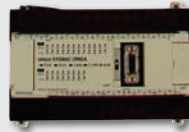
CP1 PLC - 158-1610P

Serial Port Converter for CP1 - 158-1610S

Analog Output - 164-1217 - FXW | FLX

Communication Cable - 158-1610D - FXW | FLX

Communication Cable - 158-1610CC - KW C,D | ION C,D



## CPM2A PLC

154-1801 (115VAC / 230VAC)

158-1423 (24VDC)

Not Pictured

154-1801M - PX-C Expansion Module

## Omron® PLC Battery

153-1001C - C28H | C200H

154-1804 - CPM2A

## Keypad

154-8806 - ION | KP | KK

154-8806C - XF (Omron®)

154-8807 - PX-C

154-8808 - Firebird

## Keypad Overlay Decal

158-0802 - KW-B

154-0801 - ION | KP | KK

154-0251 - ELT | STD | PXS

158-0204 - XF (Twido®)

154-0801K - XF (Omron®)

153-0844 - PX-C

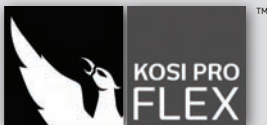
153-0844F - Firebird

153-0801 - PX

153-0025 - LCM | LW

Keypad Cable - 154-1803

# KOSI Kegel Online Support Interface



## KOSI Pro Kit for FLEX - 154-8781

USB to Serial Converter

KOSI Cable (32 or 64 bit)

USB Drive



## KOSI PRO Software

## KOSI Pro Kit for Kustodian - 154-8771

USB to Serial Converter

KOSI Cable (32 or 64 bit)

KOSI Software CD

## KOSI Pro Kit for C200H PLC - 154-8771A

USB to Serial Converter

RS232 Converter Module for KOSI Cable

(for Omron® C200HG & C200HS)

KOSI Cable (32 or 64 bit)

KOSI Software CD

KOSI PRO UPDATE (7.x) - 154-8771U

KOSI PRO UPGRADE (5.x/6.x to 7.x) - 154-8771C

## KOSI Communication Kit - 154-8771B

USB to Serial Converter

KOSI Cable (32 or 64 bit)



USB to Serial Converter

157-1057



USB Drive

154-8781U



RS232 Converter Module  
for KOSI Cable

(for Omron® C200HG & C200HS) 154-1614



KOSI Cable

(32 or 64 bit) - 154-8724

# Batteries & Chargers



## Kegel K2 Energy® Lithium Batteries

158-1634C (51.2 Ah)

158-1634B (38.4 Ah)

158-1634 (25.6 Ah)



**ProNautic®  
Chargers**



**ProTech®  
Chargers**

Chargers		
Machine Type	115V	230V
ION-A,B (AGM)	158-8470	158-8470
ION-A,B (Lithium)	158-8472	158-8472
ION-C,D	164-8471P	164-8471PE
FXW   FLX   KW	164-8471	164-8471E

Charger Replacement DC Cables	Description
158-8474	ProTech DC power cord assembly - 1 FT Internal
158-8475	ProTech DC power cord assembly - 6 FT External
164-8475	ProNautic DC power cord assembly - 6 FT External
158-1407	Battery Disconnect Housing - Red
158-1408	Battery Disconnect Housing - Blue

Batteries				
Machine Type	Lanes Per Charge	KEGEL Charger Being Used	Battery Available	Kit Needed
ION-A,B	Up to 32	Any	158-8651 (AGM)	None
	Up to 40	ProTech	158-1634 (Lith)	158-8654
	Up to 62	Any	158-1634B (Lith)	158-8654
KW-A,B	Up to 32	Any	158-8651/158-8651C (AGM)	None
	Up to 40	ProTech/ProNautic	158-1634 (Lith)	158-8655
	Up to 62	Any	158-1634B (Lith)	158-8655
KW   ION-C,D	Up to 32	Any	158-8651 (AGM)	None
	Up to 40	ProTech/ProNautic	158-1634 (Lith)	158-8655
	Up to 60	Any	158-8652 (AGM)	None
	Up to 62	Any	158-1634B (Lith)	158-8655
	Up to 90	Any	158-1634C (Lith)	158-8655
FXW   FLX	Up to 40	ProNautic	158-1634 (Lith)	None
	Up to 62	ProNautic	158-1634B (Lith)	None
	Up to 90	ProNautic	158-1634C (Lith)	None

## Replacement Batteries & Accessories



### Odyssey® PC680 Batteries

(Sold in Pairs) - 158-8650

### Odyssey® PC925 Batteries

(Sold in Pairs) - 158-8651

### Odyssey® PC1200 Batteries

(Sold in Pairs) - 158-8652

### DC Voltage Regulator - 158-8417

Smart Charger (IQ-4) - 158-1452 for IOTA® Battery Chargers

LCD Amp Gauge Assembly - 158-8410 KW | ION

NOTE: Battery voltage must be closely matched on both batteries for best performance.

# Electrical Components

## Omron® Brand Relays



**LY2 Relay**  
153-1016D (24V DC Coil)  
**LY2 Relay**  
153-1016 (115V)  
153-1616 (230V)



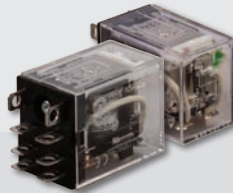
**LY3 Relay**  
153-1018 (115V)  
153-1618 (230V)



**LY4 Relay**  
153-1406 (115V)  
154-1611 (230V)



**MY4 Relay**  
(24V DC)  
158-1427

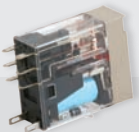


**DPDT 10A**  
158-1462



**PLC Output Relay (Short)**  
153-1032 (for Output Module OC221/OC222)  
**PLC Output Relay (Tall)**  
154-1215 (24V DC Coil - for Output Module OC222 only)

## Omron® Relays for Sport Edition / FLEX Model



**24VDC DPDT**  
158-1458



**Solid State**  
158-1460



**Super MY4 24V DC**  
(with Diode)  
158-1463

## Phoenix® Brand Relays



**Secondary Relay Assembly**  
(24V DC)  
154-1835 - KP | KK



**2 Pole**  
(10A - 24V DC)  
158-1420G



**2 Pole**  
(15A - 24V DC)  
158-1413

## Automation Direct® Relays

## Other Electrical Components



**Duster Switch (Large)**  
154-1603  
FXW | FLX | KW | ION | KP |  
KK | EP | ELT | PXS-C | PX-C



**Duster Switch (Small)**  
153-1202  
XF | PXS-A,B | PX-A,B



**Brush Switch**  
153-1203  
for ALL Machines



**Squeegee Switch (Large)**  
154-1015  
KK | ELT | STD | PXS-C |  
PX-C



**Squeegee Switch (Small)**  
153-1203  
FXW | FLX | KW | ION | XF |  
KP | EP | PXS-A,B | PX-A,B



**Pass-Through Sensor**  
153-1031A



**Sensor Plug and Cable**  
153-1031B



**Proximity Sensor**  
154-1220  
**Proximity Sensor**  
158-1208 - XF-A



**Contactor 24V DC**  
158-1465  
(Used for Sport Edition Vacuum  
& Auto Shutdown Relay)



**Red Push Button**  
(Normally Open)  
153-1408



**Horsepower Resistor**  
**0.025  $\Omega$**  - 153-1015A  
**Horsepower Resistor**  
**0.050  $\Omega$**  - 153-1015



**Arc Suppressor**  
158-1438

## VOLTMETER TIPS



### VOLTMETER SYMBOLS



**Alternating Current**  
**V AC**  
All 115V and 230V machines  
that utilize a power cord



**Direct Current**  
**V DC**  
All battery operated  
machines / also used to  
drive AC powered machines.



**Continuity Check**  
Used to inspect fuses and  
circuitry. A beep will sound  
when fuse or circuit is  
closed.

### BASIC VOLTMETER OPERATIONS

To check voltage:

1. Turn dial on the voltmeter to desired test.
2. Place each probe into the wires of the component you are testing and turn component on.

To check continuity:

1. Touch both probes together to inspect the voltmeter for proper function.
2. Place the test probes at each end of the circuit to be tested.
3. Voltmeter will sound if circuit is not broken. No sound if there is a break in the line.

### TECH TIP:

Always inspect power cord ends and battery connections when electrical problems occur.



# Electrical Components

## Power Cord Components

Description	115V AC	230V AC
Power Cord PX-A,B	153-8810	153-8811A
Power Cord PXS-A,B	154-8229A	154-8230
Power Cord EP   ELT   STD   PXS-C	154-8629	154-8630
Power Cord ION   XF   KP   KK   PX-C	154-8829	154-8830
Male Plug End (15A)	153-1025	153-1625
Male Plug End (20A)	153-1825	N/A
Female Twistlock Plug (15A)	153-1024	153-1624
Female Twistlock Plug (20A)	153-1822	153-1824
25' Charging Cord Assembly KW   ION-A,B	158-8425	158-8425E
Velcro Strap For Cord	154-0242	154-0242

## Push Button Replacements

Handle Button Replacement Assembly - 164-8013 - FLX

Handle Wire without Connector - 153-8424A

Handle Wire with Kill Plugs - 153-8424C - PXS-A,B | PX-A,B

Handle Wire - 154-8893B - ION | KP

Handle Wire - 154-8624 - ELT | STD | PXS-C

Head Motor 6.0 $\mu$ F Capacitor

154-1208 - KP | KK | EP | ELT | STD | PXS

Oil Pump Motor 1.5 $\mu$ F Capacitor

154-1208B - KP | KK | EP | ELT | STD | PXS

## Breakers



Circuit Breaker 8A - 153-1810

Circuit Breaker 10A - 153-1030

Circuit Breaker 20A (24V DC) - 158-1451



Rocker Breaker 15A - 154-1610

Rocker Breaker 10A - 154-1272



2008 E-Stop (2-Hole Pattern) - 154-1250A

Breaker for E-Stop (2008 and later) - 154-1251A



FLEX E-Stop Assembly - 164-1223  
(black box sold separately)

FLEX E-Stop Breaker - 164-1223B

## Fuses

Panel Mount Fuse Holder (115V) - 153-1028

Fuse 0.5A (UL) - 154-1261

Fuse 0.75A (UL) - 154-1262

Fuse 1.8A (UL) - 154-1265

Fuse 2.25A (UL) - 154-1266

Fuse 3.2A (UL) - 154-1267

Fuse 4A (UL) - 154-1268C

Fuse 7.5A (UL) - 154-1270

Fuse 8A (UL) - 154-1270C

Fuse 10A (UL) - 154-1273

Fuse 20A (UL) Ceramic - 154-1274C

Fuse 20A (UL) - 154-1274

Fuse 25A (MDA) Ceramic - 164-1222

Panel Mount Fuse Holder (230V) - 153-1028E

Fuse 315mA (IEC - 230V) - 154-1260E

Fuse 1A (IEC - 230V) - 154-1264E

Fuse 1.6A (IEC - 230V) - 154-1265E

Fuse 4A (IEC - 230V) - 154-1267E

Fuse 6.3A (IEC - 230V) - 154-1269C

## Blade Type Fuses

Fuse 25A - 158-1439 for CVR - KW | ION

Fuse 30A - 164-1214 for CVR on VB Upgrade and Pro Nautic<sup>®</sup> Charger - FXW | FLX

Fuse 40A - 158-1440 for IOTA<sup>®</sup> Battery Chargers

Maxi-Fuse 40A (for Fuse Link) - 158-1454 - ION

Fuse Link Assembly - 158-8421

# Upgrades

## DUO Transfer System

Old Style Transfer Brush System to DUO System

158-8430F

Smoother Pad Transfer System to DUO System

158-8430N - All painted machines only



Complete Squeegee Cartridge Assembly

164-8038

Handle Reinforcement Kit

154-8284 - for ALL machines except FXW | KW | LCM | LW

## Crossfire Upgrades

Complete Upgrade - Includes 8 Wicks with Cam

Roller and Large Conditioner Supply Tank

158-8241 (115V) | 158-8241E (230V)

Conditioner Tank Upgrade

158-8215 (115V) | 158-8215E (230V)

8 Pad Wick & Cam Kit - 158-8214

TWIDO® to OMRON® PLC Conversion Kit

158-8253

## Proximity Upgrades

Lane Distance Sensor (LDS)

Upgrade with Proximity Sensor

LDS (Right) PXS-A,B 154-8291

LDS (Center) PXS-A,B | PX-A,B 154-8292

LDS (Center) STD 154-8672

Tach (Internal) PXS-A,B 154-8289

Tach (External) STD | PXS-A,B 154-8290

Head Timing STD | PXS-A,B 154-8673

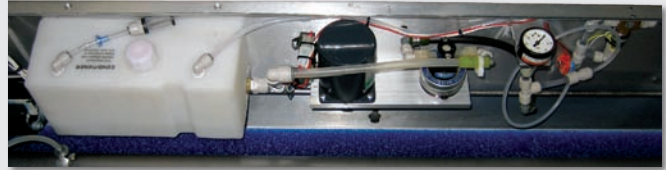
LED Light Upgrade Kit for Supply Tanks

Easily monitor the level of supplies on any machine with plastic molded tanks with this light that automatically illuminates when the splash guard is opened.

158-8672 KW | ION | KP-A,B

Oil Tank Upgrade Kit for PXS-A,B - 154-8841

This upgrade will allow the operator to change the microliter per board setting without the hassle of lifting the machine. Best of all, the new durable plastic molded tank is "see through" so it is easy to check the oil level and perform preventive maintenance.



## Wheel Upgrades



6" Front Wheel Upgrade

Large 6" front wheel helps the lane machine transition on and off the lane with ease.

158-8733 ION | KP-B

3" Caster Upgrade

Dual 3" rear casters allow for better machine transition on and off the lane.

158-8731 KW | ION-C,D

158-8732 ION-A,B | KP-B

Transport Caster Upgrade - 154-8281 PXS-A,B | PX



Power Button Relocation Kit

Relocate the power button to the splash guard allowing for easy access to turn the unit on.

158-8673 KW-D | ION-D

## Kustodian Proximity and Relay Upgrades

Kustodian Model A to C Upgrade Kit - 154-8870

Serial Number: KK-0600 through KK-0810

Kustodian Model B to C Upgrade Kit - 154-8871

Serial Number: KK-0811 through KK-0987



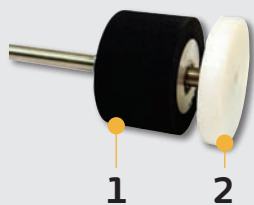
BEFORE



AFTER

# Miscellaneous

## LDS Shaft Assembly



1. Wheel - 153-7002AA
2. Kick Up Wheel - 153-7401

## Tune Up Kits



- FXW | FLX - 164-8030
- KW - 158-8628
- ION - 158-8428
- KP | EP (115V) - 154-8686
- KP | EP (230V) - 154-8687
- KK | ELT | PXS-C | PX-C (115V) - 154-8888
- STD (115V) - 154-8688
- PX-B (115V) - 153-8888
- PXS-A,B (115V) - 154-8288

## Non-Adjustable Guide Rollers

- Guide Roller - 153-8410
- Guide Roller - 153-8310 - LCM | LW
- Guide Roller Shoulder Bolt - 153-2407
- Guide Roller Mounting Bar - 153-6417
- Guide Roller Spring - 153-2401
- SHCS 1/4-20 x 2-3/4" - 153-2211

## Adjustable Guide Rollers

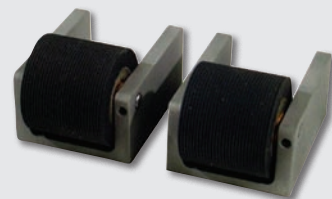


- Complete Front Assembly - 158-8643
- Front Wheel Only - 158-8637
- Complete Rear Assembly - 158-8642
- Rear Wheel Only - 158-8636
- Compression Spring - 153-2978

## Whiskers

- Whisker Spring - 153-2946 - KW
- Black Vinyl Cap - 153-2941 - KW
- Complete Assembly - 158-8623 - KW
- Whisker Assembly - 164-8660 - FXW

## Momentary Wheel Assembly



- Wheel - 153-7005R
- Shaft - 153-6006
- Housing - 153-6029

## Caster Wheels

- Lane to Lane Caster 2" - 153-0812 (Heavy Duty)
- Transport Caster



- 3" Dual Wheel (Black) - 153-0001BK
- 3" Dual Wheel (Gray) - 153-0001
- 2" Single Wheel - 153-0002



- FLEX Whisker Upgrade - 158-8624

## Lid & Component Assemblies



- Middle Slide Latch - 154-0005



- Flush Mount Lid Latch (Without Lock) - 153-2232A



- Straight Quarter-turn Lid Latch (With Slot) - 154-0804



- Push Latch with Key - 154-0881



- Flush Mount Lid Latch (With Lock) - 153-2232L



- Flange Quarter-turn Lid Latch - 154-0805



- Rubber Bumper - 154-0006A



- Foam (Sold by the Inch) - 153-0036



- Lid Pin - 164-2002

# Fittings



**Elbow**  
1/4" Tube x 1/4" Tube - 154-0243



**Elbow**  
3/8" x 3/8" - 154-0256



**Elbow**  
3/8" NPT x 1/4" Tube - 154-0412  
3/8" NPT x 3/8" Tube - 154-0803



**Elbow**  
3/8" Tube x 1/4" NPT - 154-0225  
1/4" Tube x 1/4" NPT - 154-0223



**Elbow**  
1/4" Stem x 1/4" Hose Barb  
154-0226



**Elbow**  
1/4" Stem to 5/16" Hose Barb  
154-0227



**Elbow**  
3/8" Stem to 5/16" Hose Barb  
154-0239



**Elbow**  
3/8" Stem x 3/8" Tube - 154-0258  
3/8" Stem x 1/4" Tube - 158-1214



**Elbow**  
1/4" Stem x 1/4" Tube  
154-0222



**Elbow**  
1/8" NPT x 3/16" Tube  
154-0613



**Male Swivel Elbow**  
1/4" Tube x 1/4" NPT - 153-0818



**Compression Fitting**  
1/4" x 3/8" MPT - 153-0212



**Reducing Union**  
1/4" x 3/16" - 154-0248



**Bulkhead Union**  
3/8" x 3/8" - 154-0285



**Union**  
1/4" x 1/4" - 154-0241



**Union Tee**  
1/4" Tube - 153-0815



**Reducing Union**  
3/8" to 1/4" - 154-0244



**Male Connector**  
1/4" Tube x 1/8" NPT - 154-0224



**Female Connector**  
1/4" Tube x 1/8" FPT - 154-0257



**Union Tee**  
3/8" Tube - 154-0815



**Oil Fill Stem - PX**  
3/8" x 3/8" - 153-1055



**In-line Coupler**  
1/8" - 154-0230



**Stem Adapter**  
1/4" NPT x 1/4" Stem  
154-0243S



**Male Connector**  
1/2" Tube x 1/2" NPT (Drilled)  
154-0232D  
1/4" x 1/4" MPT - 153-0209



**Tank Plug**  
1/4" - 154-0245  
3/8" - 153-1054  
1/2" - 154-0231



**O-Ring for Fitting**  
1/4" - 154-0287A  
3/8" - 154-0287B  
1/2" - 154-0287C



**Male Luer**  
1/8" Hose Barb - 154-0863



**Cleaner Tip with  
Check Valve**  
164-0012M



# Motors & Speed Controls

COMPONENTS	PXS-A,B	PXS-C STD AC	KK KP	KW-A,B ION-A,B	KW-C,D ION-C,D	STD SE ELT   EP	FLX	FXW
Blower Motor (115V AC)	153-8801	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blower Motor (230V AC)	153-8802	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Buffer Motor (115V AC)	153-8016A	154-8616A	154-8616A	N/A	N/A	154-8616B	N/A	N/A
Buffer Motor (230V AC)	153-8616	154-8616E	154-8616E	N/A	N/A	154-8616E	N/A	N/A
Buffer Motor (24V DC) - Standard	N/A	N/A	N/A	158-8414	158-8414	N/A	158-8414	158-8414
Buffer Motor (24V DC) - Variable Speed Upgrade	N/A	N/A	N/A	N/A	N/A	N/A	164-8014	164-8014
Buffer Motor Brushes (24V DC)	N/A	N/A	N/A	158-1406B	158-1406B	N/A	158-1406B	158-1406B
Buffer Motor Contactor (115V AC)	153-1004	153-1004A	153-1004A	N/A	N/A	153-1004A	N/A	N/A
Buffer Motor Contactor (230V AC)	153-1604	153-1604A	153-1604A	N/A	N/A	153-1604A	N/A	N/A
Circuit Board w/Speed Relays (115V AC)	154-8210	154-8312	154-8810	N/A	N/A	N/A	N/A	N/A
Circuit Board w/Speed Relays (230V AC)	154-8210	154-8644	154-8811	N/A	N/A	N/A	N/A	N/A
Circuit Board w/Speed Relays (24V DC)	N/A	N/A	N/A	158-8409	N/A	N/A	N/A	N/A
Conditioner Pump Motor (115V AC)	154-8234	154-8604	154-8604	N/A	N/A	154-8604	N/A	N/A
Conditioner Pump Motor (230V AC)	154-8234	154-8604E	154-8604E	N/A	N/A	154-8604E	N/A	N/A
Conditioner Pump Motor (24V DC)	N/A	N/A	N/A	158-8401A	158-8632	N/A	158-8632	158-8632
Cond. Pump Motor Brushes (24V DC) BISON	N/A	N/A	N/A	158-1422B	N/A	N/A	N/A	N/A
Cond. Pump Motor Brushes (24V DC) GROSCHOPP	N/A	N/A	N/A	158-1422G	N/A	N/A	N/A	N/A
Drive Motor (90V DC)	153-8065	153-8065 - STD	154-8865	N/A	N/A	153-8065 - STD	N/A	N/A
Drive Motor (90V DC)	N/A	154-8365 - PXS-C	N/A	N/A	N/A	154-8365 - ELT EP	N/A	N/A
Drive Motor (24V DC)	N/A	N/A	N/A	158-8406 - ION	N/A	N/A	N/A	N/A
Drive Motor (24V DC) Long Shaft	N/A	N/A	N/A	158-8602 - KW	158-8602	N/A	158-8602	158-8602
Duster Motor (115V AC)	153-8403	153-8403	153-8403	N/A	N/A	153-8403	N/A	N/A
Duster Motor (230V AC)	153-8803H	153-8803H	153-8803H	N/A	N/A	153-8803H	N/A	N/A
Duster Motor (24V DC)	N/A	N/A	N/A	158-8403	158-8403	N/A	158-8403	158-8403
Head Drive Motor (115V AC)	154-8232	154-8232	154-8232	N/A	N/A	154-8232	N/A	N/A
Head Drive Motor (230V AC)	154-8232	154-8632	154-8632	N/A	N/A	154-8632	N/A	N/A
Head Drive Motor (24V DC)	N/A	N/A	N/A	158-8405	158-8632	N/A	164-8032	164-8032
Head Drive Motor Brushes (24V DC)	N/A	N/A	N/A	158-1404B	N/A	N/A	N/A	N/A
Isolator Analog Card 115V AC Drive Assembly	N/A	N/A	N/A	N/A	N/A	154-8633	N/A	N/A
Isolator Analog Card 230V AC Drive Assembly	N/A	N/A	N/A	N/A	N/A	154-8634	N/A	N/A
Isolator Analog Card 115V AC Buffer Assembly	N/A	N/A	N/A	N/A	N/A	154-8635	N/A	N/A
Isolator Analog Card 230V AC Buffer Assembly	N/A	N/A	N/A	N/A	N/A	154-8636	N/A	N/A
Isolator Analog Card Only	N/A	N/A	N/A	N/A	N/A	154-1413	N/A	N/A
Speed Control Assembly (24V DC-Buffer/Drive)	N/A	N/A	N/A	N/A	N/A	N/A	164-8010	164-8010
Speed Control Assembly (24V DC-Drive)	N/A	N/A	N/A	158-8412	158-8412	N/A	N/A	N/A
Speed Control Assembly (24V DC-Cleaner Pump)	N/A	N/A	154-8848 KP	158-8415	158-8415	N/A	158-8415	158-8415
Speed Control Assembly (Oil/Cleaner Head)	N/A	N/A	N/A	N/A	158-1605	N/A	158-1605	158-1605
Speed Control Board Only (115V AC)	153-1012	153-1012	153-1012	N/A	N/A	153-1012	N/A	N/A
Speed Control Board Only (230V AC)	153-1812	153-1812	153-1812	N/A	N/A	153-1812	N/A	N/A
Speed Control Board Only (24V DC)	N/A	N/A	N/A	158-1410	158-1410	N/A	158-1410	158-1410
Squeegee & Brush Lift Motor (115V AC)	153-8207	153-8207	153-8207	N/A	N/A	153-8207	N/A	N/A
Squeegee & Brush Lift Motor (230V AC)	153-8807H	153-8807H	153-8807H	N/A	N/A	153-8807H	N/A	N/A
Squeegee & Brush Lift Motor (24V DC)	N/A	N/A	N/A	158-8402	158-8402	N/A	158-8402	158-8402

COMPONENTS	PXS-A,B	PXS-C STD AC	KK KP	KW-A,B ION-A,B	KW-C,D ION-C,D	STD SE ELT   EP	FLX	FXW
*Transfer Roller Motor (115V AC)	154-8206	154-8206	154-8206*	N/A	N/A	154-8206*	N/A	N/A
*Transfer Roller Motor (230V AC)	154-8206A	154-8206A	154-8206A*	N/A	N/A	154-8206A*	N/A	N/A
Vacuum Motor (115V AC)	153-8205	154-8805	154-8805	N/A	N/A	154-8805	N/A	N/A
Vacuum Motor Brushes (115V AC Pair)	153-0204B	153-0204B	153-0204B	N/A	N/A	153-0204B	N/A	N/A
Vacuum Motor (230V AC)	153-8805	154-8805E	154-8805E	N/A	N/A	154-8805E	N/A	N/A
Vacuum Motor Brushes (230V AC Pair)	153-0204C	153-0204C	153-0204C	N/A	N/A	153-0204C	N/A	N/A
Vacuum Motor (24V DC)	N/A	N/A	N/A	158-8407	158-8407	N/A	158-8407	158-8407
Vacuum Brushes (24V DC Pair)	N/A	N/A	N/A	158-1421B	158-1421B	N/A	158-1421B	158-1421B

\* Not used on Kustodian PLUS or Elite PLUS

COMPONENTS	PX-A,B	PX-C	XF
Blower Motor (115V AC)	153-8801	N/A	N/A
Blower Motor (230V AC)	153-8802	N/A	N/A
Buffer Motor (115V AC)	153-8016A	154-8616A	154-8616A
Buffer Motor (230V AC)	153-8616	154-8616E	154-8616E
Buffer Motor Contactor (115V AC)	153-1004	153-1004A	153-1004A
Buffer Motor Contactor (230V AC)	153-1604	153-1604A	153-1604A
Circuit Board w/Speed Relays (115V AC)	N/A	154-8330	N/A
Circuit Board w/Speed Relays (230V AC)	N/A	154-8331	N/A
Drive Motor (90V DC)	153-8065	154-8865	154-8865
Duster Motor (115V AC)	153-8403	153-8403	153-8403
Duster Motor (230V AC)	153-8803H	153-8803H	153-8803 H
Speed Control Assembly (115V AC 3-Speed)	153-8822	N/A	N/A
Speed Control Assembly (230V AC 3-Speed)	153-8823	N/A	N/A
Speed Control Assembly (115V AC 4-Speed)	153-8842	N/A	N/A
Speed Control Assembly (230V AC 4-Speed)	153-8843	N/A	N/A
Speed Control Assembly (115/230V AC 3-Speed)	N/A	N/A	158-8211
Speed Control Board Only (115V AC)	153-1012	153-1012	158-1212R
Speed Control Board Only (230V AC)	153-1812	153-1812	158-1212R
Squeegee & Brush Lift Motor (115V AC)	153-8207	153-8207	153-8207
Squeegee & Brush Lift Motor (230V AC)	153-8807H	153-8807H	153-8807
Transfer Roller Motor (115V AC)	153-8828	154-8332	153-8828
Transfer Roller Motor (230V AC)	153-8829	154-8332E	153-8829
Vacuum Motor (115V AC)	153-8205	154-8805	158-8208
Vacuum Motor Brushes (115V AC Pair)	153-0204B	153-0204B	153-0204B
Vacuum Motor (230V AC)	153-8805	154-8805E	158-8208E
Vacuum Motor Brushes (230V AC Pair)	153-0204C	153-0204C	153-0204C

**For Dayton® Drive Motor - 153-8065**

Rear Seal - 153-1057R
Gasket - 153-1057F
Front Seal - 153-1057S
Drive Motor Brushes (90V DC Pair) - 153-1057H

**For ALL Baldor® Drive Motors**

Drive End Rear Seal - 154-1809D
Housing End Front Seal - 154-1809E
Drive Motor Brushes (24V DC Pair) - 158-1405B
Drive Motor Brushes (90V DC Pair) - 154-1809B

# PRODUCTS & PARTS

2014-15

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