

Schematics - PS2020

Appendix B - Replacing PS2020 Oven Components

Replacing Oven Components



WARNING: Before removing or replacing any oven component, thoroughly read the safety instructions found at the front of this manual and *Oven Systems* (pages 23-26). Adhere to all precautions and warnings outlined in these sections, as failure to do so could result in serious injury or death.

Part Details...			Locate the Part Here...		
Item	Part Number	Qty. Per Oven	Outside of End Bells (Page B-4)	Left End Bell (Page B-6)	Right End Bell (Page B-8)
Air Filter	MMC-7393	2	✓		
Back Panel, Display	MMC-7448	1	✓		
Back Panel, Tail	MMC-7454	1	✓		
Blower Motor Assembly - North and South America	HCT-3022	2		✓	✓
Blower Motor Assembly - Europe/Asia-Pacific	HCT-3022-2	2		✓	✓
Blower Motor Controller	CON-7013	2		✓	✓
Cable, Display, Power, 2-Pin	C0410	1			✓
Cable, Display, Ribbon	NGC-1530	1			✓
Cable, Smart Card Reader	100182	1			✓
Chain, Conveyor	HCT-4143	1*	✓		
Chainguard, Right	HCT-4041	1	✓		
Channel	HCT-4076	1	✓		
Control Board	CON-3012-X**	1			✓
Conveyor Controller	HHC-6670-2	1*		✓	✓
Conveyor Motor	HHC-4120	1*		✓	✓
Conveyor (Single Belt)	MMC-9520	1	✓		
Cooling Fan	TC3-0433	2	✓		
Crumb Tray	MMC-7710	2	✓		
Display, VFD	NGC-3023	1			✓
Distribution Block	HCT-4141	1		✓	
EMI Filter	105455	2		✓	✓
Eyelid	MMC-7630	2	✓		
Fuse, 20 Amp, Class CC	100599	2		✓	
Fuse Block	103548	1		✓	
Hanger	HCT-4148	1	✓		
Hatch, with Logo	MMC-9510	1	✓		
Hatch Latch	100777	2	✓		
Heater	HCS-3009	2	✓		

* Quantities will differ depending on conveyor type.

** See Service Parts Price List for details.

Master list continued on page B-2.

B-2 APPENDIX B- REPLACING PS2020 OVEN COMPONENTS

Part Details...			Locate the Part Here...		
Item	Part Number	Qty. Per Oven	Outside of End Bells (Page B-4)	Left End Bell (Page B-6)	Right End Bell (Page B-8)
Heater Cover	HCT-4032	1	✓		
Jetplate	HCT-4099	2	✓		
Keypad	MMC-9524	1	✓		
Leg	105518	4	✓		
Plenum	HCT-4020	2	✓		
Power Cord	Contact Factory	1		✓	
Power Cord Retainer	I5-9211	2	✓		
Power Supply	105190	1			✓
Power Supply Bracket	HCT-4103	1			✓
Relay, Mechanical, K6	101279	1		✓	
Relay, Mechanical, K7	101279	1			✓
Relay, Solid State, K4/K5	HCT-4354	1		✓	
RTD	HHC-6595	1			✓
Smart Card Reader	100506	1			✓
Speaker	CON-3003	1			✓
Support, Top Plenum	HCT-4169	1	✓		
Thermostat, Cooling Fan	102086	2		✓	✓
Thermostat, High Limit	102075	1		✓	
Voltage Sensor	100783	1			✓
Wire Harness, EMI to Fan Control, Conveyor Control	HCT-4086-7	1			
Wire Harness, EMI to Fan Control, Power Supply, Conveyor Control	HCT-4086-5	1			
Wire Harness, Fuse Block to EMI	HCT-4086-6	1			
Wire Harness, Fuse Block to High Limit	HCT-4086-3	1			
Wire Harness, Fuse Block to SSR, 4" LG	HCT-4086-9	1			
Wire Harness, Fuse Block to SSR, 4.25" LG	HCT-4086-8	1			
Wire Harness, High Limit to Distribution Block	HCT-4086-4	1			
Wire Harness, High Voltage, Main	HCT-4086-1	1			
Wire Harness, LOV	HCT-4163-1	1			
Wire Harness, SSR to Distribution Block	HCT-4086-2	1			

HCT-4400-1 Line Voltage, EMI Output, Non-Display End
HCT-4400-2 Line Voltage, EMI Output, Display End
HCT-4400-4 Line Voltage, Main Harness

*This page intentionally
left blank.*

Replacing Items - Outside of End Bells

⚠ WARNING: Before removing or replacing any oven component, thoroughly read the safety instructions found at the front of this manual and *Oven Systems* (pages 23-26). Adhere to all precautions and warnings outlined in these sections, as failure to do so could result in serious injury or death.

⚠ CAUTION: Before removing/installing any component, make sure it is disconnected from the wire harness (where applicable).

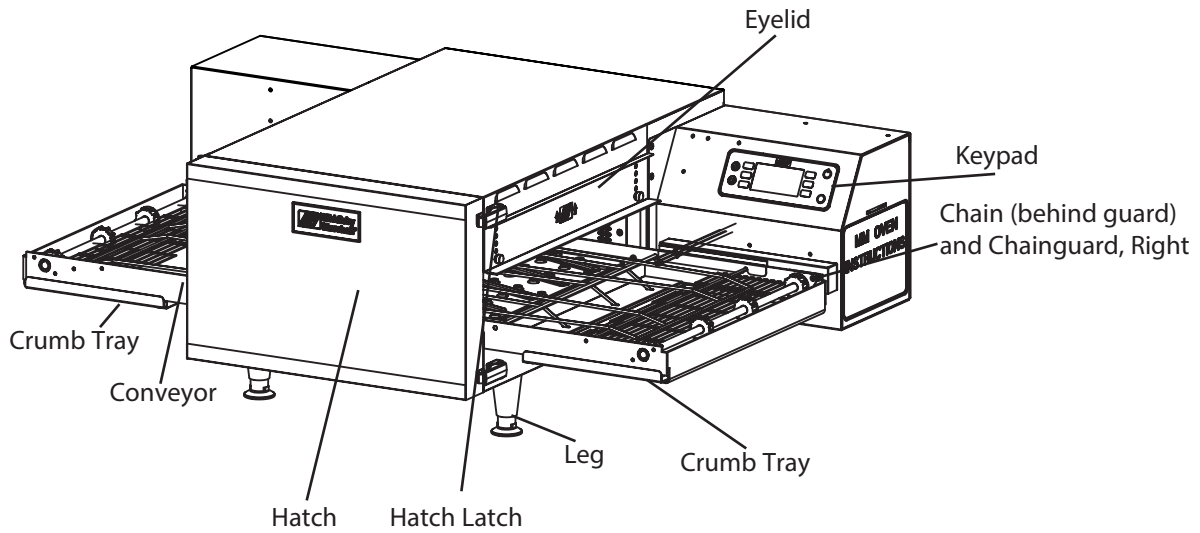


Figure B-1: Front Oven Components

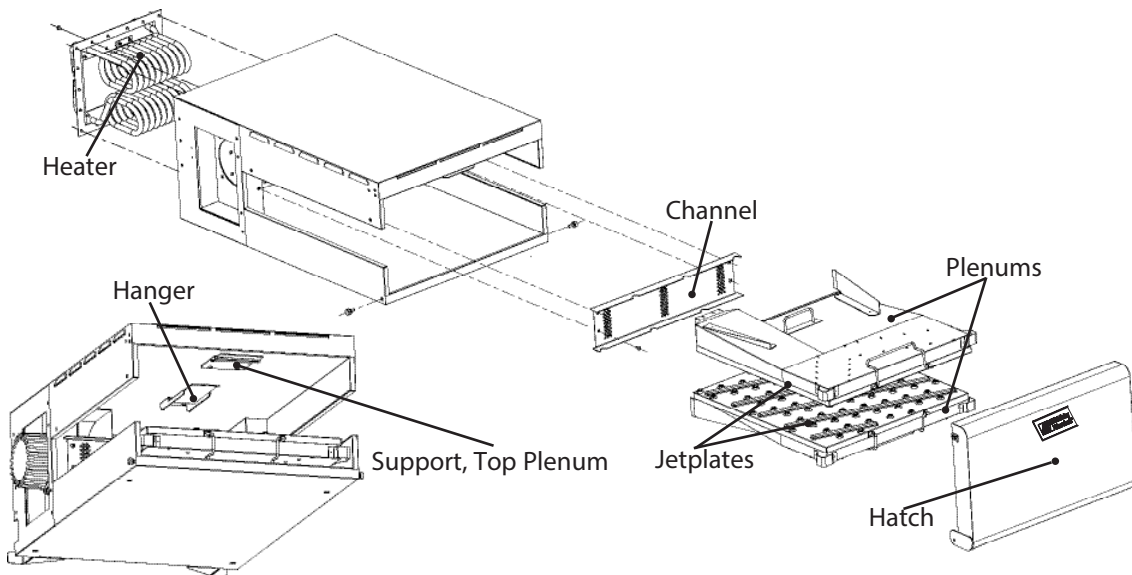


Figure B-2: Inner Oven Components

NOTE: If replacing round heaters (not pictured above), HCT-3016 must be used.

Item	Part Number	Hardware Description	Hardware Part Number(s)
Air Filter	MMC-7393	None	None
Back Panel, Display	MMC-7448	Screw, #10-32 x .5, PPH, INT Tooth, SS	101460 (x2)
Back Panel, Tail	MMC-7454	Screw, #10-32 x .5, PPH, INT Tooth, SS	101460 (x2)
Chain, Conveyor	HCT-4143	None	None
Chainguard, Right	HCT-4041	None	None
Channel	HCT-4076	Screw, SH MTL, #8 x 1/2 Serrated PHTRH	101688 (x4)
Conveyor, Single	MMC-9520	Chain, #35, 52 Links, With Master Link, Endless	HCT-4143
Cooling Fan	TC3-0433 (x2)	Nut, KEPS Hex, #6-32, EXT Tooth, CRES Screw, SH MTL, #8 x 1/2 Serrated PHTRH	102961 (x4) 101688 (x4)
Crumb Tray	MMC-7710 (x2)	None	None
Eyelid	MMC-7630 (x2)	Screw, Thumb w/W HD, #1/4-20x1/2", SS	101752 (x2)
Hanger	HCT-4148	Screw, SH MTL, #8 x 1/2 Serrated PHTRH	101688 (x4)
Hatch, with Logo	MMC-9510	None	None
Hatch Latch	100777 (x2)	Screw, SH MTL, #8 x 1/2 Serrated PHTRH	101688 (x3)
Heater	HCS-3009 (x2)	Screw, SH MTL, #8 x 1/2 Serrated PHTRH	101688 (x2)
Heater Cover	HCT-4032	Screw, SH MTL, #8 x 1/2 Serrated PHTRH	101688 (x14)
Jetplate	HCT-4099 (x2)	None	None
Keypad	MMC-9524	None	None
Leg	105518 (x4)	None	None
Plenum	HCT-4020 (x2)	None	None
Power Cord Retainer	I5-9211 (x2)	Screw, SH MTL, #8 x 1/2 Serrated PHTRH	101688 (x2)
Support, Top Plenum	HCT-4169	Screw, SH MTL, #8 x 1/2 Serrated PHTRH	101688 (x4)

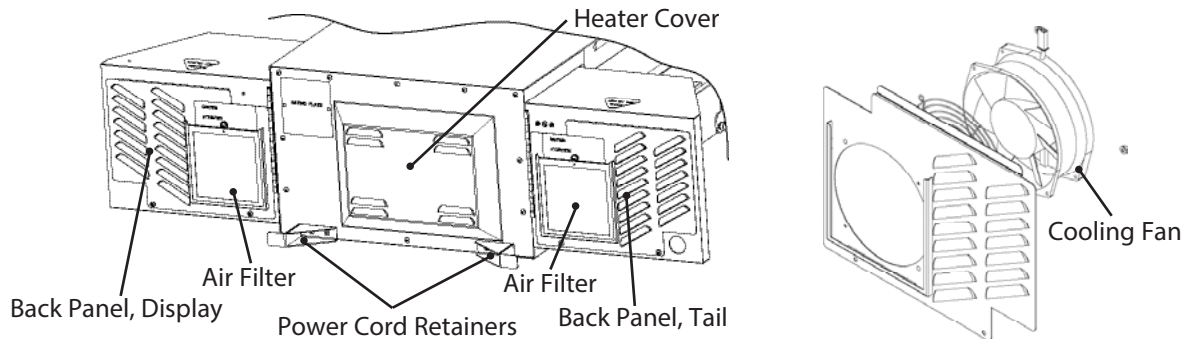


Figure B-3: Rear Oven Components

Replacing Items - Left End Bell

⚠ **WARNING:** Before removing or replacing any oven component, thoroughly read the safety instructions found at the front of this manual and *Oven Systems* (pages 23-26). Adhere to all precautions and warnings outlined in these sections, as failure to do so could result in serious injury or death.

⚠ **CAUTION:** Before removing/installing any component, make sure it is disconnected from the wire harness (where applicable).

NOTE: Single belt ovens will not have a *Conveyor Motor* in this location. Instead, the *Gear Motor Cover* will be installed (see page B-4).

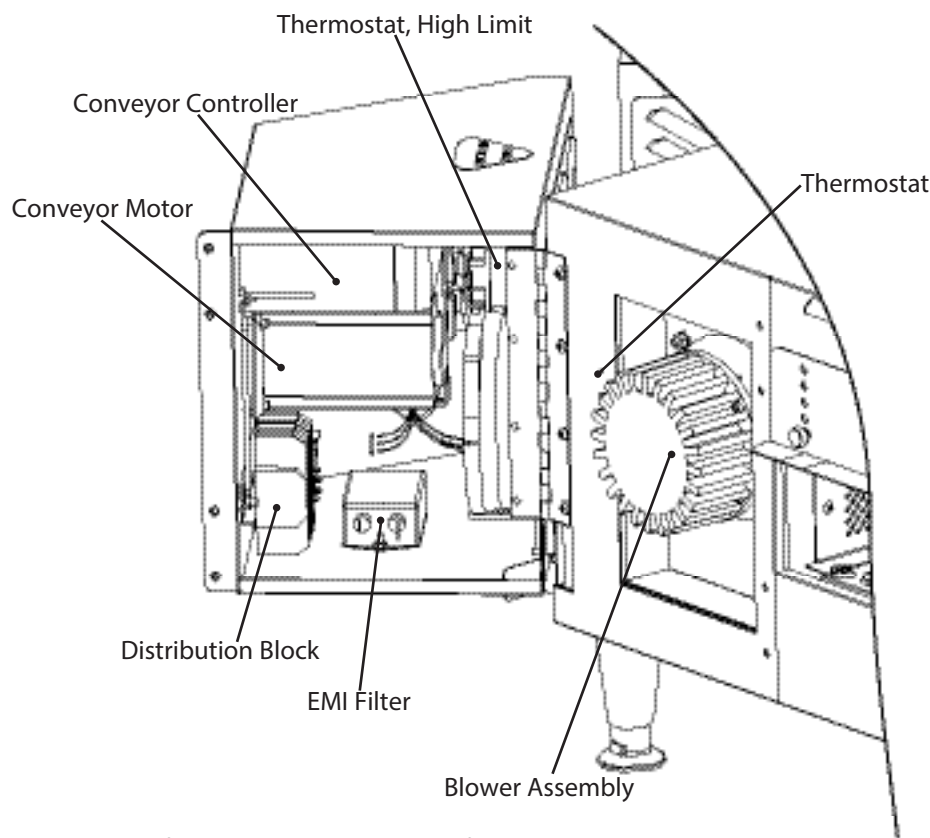


Figure B-4: Left End Bell Components, Left End Bell Open

Item	Part Number	Hardware Description	Hardware Part Number(s)
Blower Motor Assembly - North and South America*	HCT-3022	Nut, 1/4-20, Serrated HEX Flange, Plated Steel Screw, #10-32 x 5/8, SKT HD, PLT Standoff, #10-32 x 1, F/F, 3/8 HEX, PLT Spacer, #10 (.192) x 3/8 OD X 7/16, AL Screw, #10-32 x 1", PHTRHD, SS	100906 (x4) 104104 (x4) 104105 (x4) 104111 (x4) 102941 (x4)
Blower Motor Assembly - Europe/Asia-Pacific*	HCT-3022-2	Nut, 1/4-20, Serrated HEX Flange, Plated Steel Screw, #10-32 x 5/8, SKT HD, PLT Standoff, #10-32 x 1, F/F, 3/8 HEX, PLT Spacer, #10 (.192) x 3/8 OD X 7/16, AL Screw, #10-32 x 1", PHTRHD, SS	100906 (x4) 104104 (x4) 104105 (x4) 104111 (x4) 102941 (x4)
Blower Motor Controller*	CON-7013	Nut, KEPS HEX, #6-32, EXT Tooth, CRES	102961 (x4)
Conveyor Controller*	HHC-6670-2	Nut, KEPS HEX, #6-32, EXT Tooth, CRES	102961 (x4)
Conveyor Motor*	HHC-4120	Nut Plate, 1/4-20 Screw, 1/4-20 x 3/4 HEX Washer HD Serrated, CRES Sprocket, Chain 035 .5" Bore 10 T	HCT-4107 (x2) 101396 (x4) 103562
Distribution Block	HCT-4141	Nut, #10-32, SERR HEX FLNG, SS	100903 (x2)
EMI Filter*	105455	Nut, KEPS HEX, #6-32, EXT Tooth, CRES	102961 (x2)
Fuse, 20 Amp, Class CC	100599 (x2)	None	None
Fuse Block	103548	Nut, #8-32, HEX, SS	101000
Relay, Mechanical, K6	101279	Nut, KEPS HEX, #6-32, EXT Tooth, CRES	102961 (x2)
Relay, Solid State, K4/K5	HCT-4354	Screw, #8 x 3/8 PH MOD TRUSS CRES	101682 (x2)
Thermostat, Cooling Fan*	102086	Screw, #6 x 1/2, PPHD, DRL-PT, SS	101687 (x2)
Thermostat, High Limit	102075	Screw, M4X 0.7 x 8, PPHD, INT Tooth, SS	101672 (x2)
Power Cord	Contact Factory	None	None

* These items are included in both the right and left endbells.

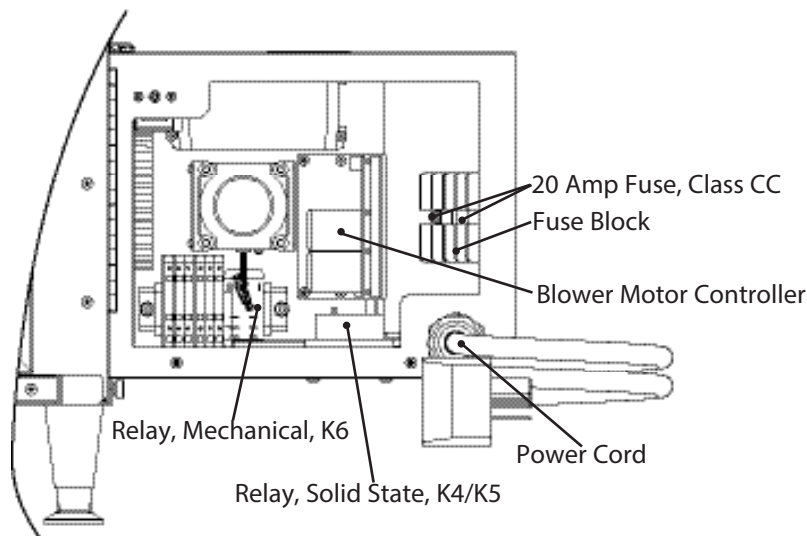


Figure B-5: Left End Bell Components, Back Panel Removed

Replacing Items - Right End Bell

⚠ WARNING: Before removing or replacing any oven component, thoroughly read the safety instructions found at the front of this manual and *Oven Systems* (pages 23-26). Adhere to all precautions and warnings outlined in these sections, as failure to do so could result in serious injury or death.

⚠ CAUTION: Before removing/installing any component, make sure it is disconnected from the wire harness (where applicable).

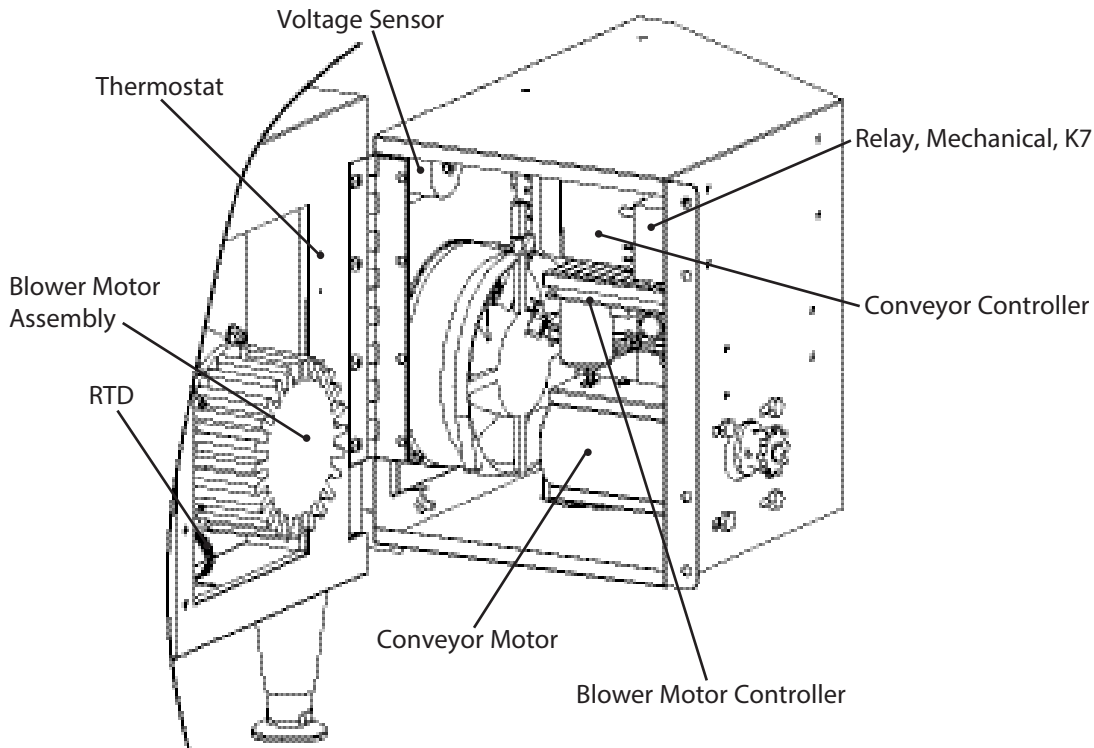


Figure B-6: Right End Bell Components, Right End Bell Open

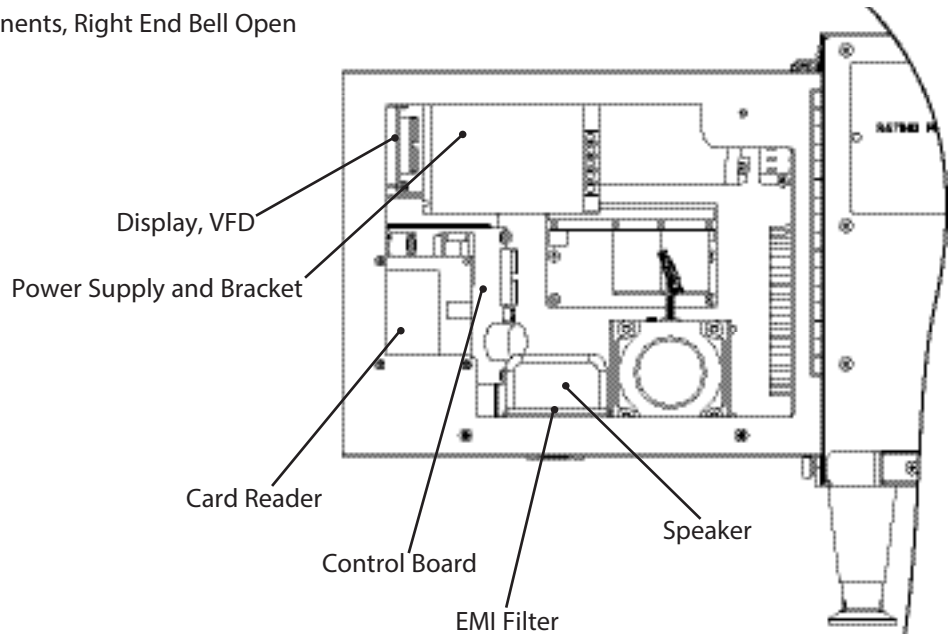


Figure B-7: Right End Bell Components, Back Panel Removed

Item	Part Number	Hardware Description	Hardware Part Number(s)
Blower Motor Assembly - North and South America*	HCT-3022	Nut, 1/4-20, Serrated HEX Flange, Plated Steel Screw, #10-32 x 5/8, SKT HD, PLT Standoff, #10-32 x 1, F/F, 3/8 HEX, PLT Spacer, #10 (.192) x 3/8 OD X 7/16, AL Screw, #10-32 x 1", PHTRHD, SS	100906 (x4) 104104 (x4) 104105 (x4) 104111 (x4) 102941 (x4)
Blower Motor Assembly - Europe/Asia-Pacific*	HCT-3022-2	Nut, 1/4-20, Serrated HEX Flange, Plated Steel Screw, #10-32 x 5/8, SKT HD, PLT Standoff, #10-32 x 1, F/F, 3/8 HEX, PLT Spacer, #10 (.192) x 3/8 OD X 7/16, AL Screw, #10-32 x 1", PHTRHD, SS	100906 (x4) 104104 (x4) 104105 (x4) 104111 (x4) 102941 (x4)
Blower Motor Controller*	CON-7013	Nut, KEPS HEX, #6-32, EXT Tooth, CRES	102961 (x4)
Cable, Display, Power, 2-Pin	C0410	None	None
Cable, Display, Ribbon	NGC-1530	None	None
Cable, Smart Card Reader	100182	None	None
Control Board	CON-3012-X**	Nut, KEPS HEX, #6-32, EXT Tooth, CRES Standoff, #6 x 1/2 long, Thru Round	102961 (x4) 101869 (x4)
Conveyor Controller*	HHC-6670-2	Nut, KEPS HEX, #6-32, EXT Tooth, CRES	102961 (x4)
Conveyor Motor*	HHC-4120	Nut Plate, 1/4-20 Screw, 1/4-20 x 3/4 HEX Washer HD Serrated, CRES Sprocket, Chain 035 .5" Bore 10 T	HCT-4107 (x2) 101396 (x4) 103562
Display, VFD	NGC-3023	Nut, KEPS HEX, #4-40 EXT Tooth Standoff, Round, .12 ID, .25 OD x .50 long	102960 (x4) 101954 (x4)
EMI Filter*	105455	Nut, KEPS HEX, #6-32, EXT Tooth, CRES	102961 (x2)
Power Supply	105190	Screw, M3 x 8mm long, PPHD, SS	101668 (x3)
Power Supply Bracket	HCT-4103	Nut, KEPS HEX, #6-32, EXT Tooth, CRES	102961 (x2)
Relay, Mechanical, K7	101279	Nut, KEPS HEX, #6-32, EXT Tooth, CRES	102961 (x2)
RTD	HHC-6595	Screw, SH MTL, #8 x 1/2 Serrated PHTRH	101668
Smart Card Reader	100506	Nut, #6-32, Serrated Hex Flange Screw, 6-32 x .38, PFH, 100DEG, SS Standoff, #6-32 x 1/2, M/F, Hex, Zinc	100902 (x3) 101430 (x3) 101941 (x3)
Speaker	CON-3003	Clip, Speaker Mounting Screw, #8 x 3/8 PH MOD TRUSS CRES	HCT-4104 101682 (x2)
Thermostat*	102086	Screw, #6 x 1/2, PPHD, DRL-PT, SS	101687 (x2)
Voltage Sensor	CON-7100	Screw, #6-32 x 1/4 LG, PPH, SS Spacer, #6 x 3/8 LG, 44 Round, AL Standoff, #6-32 x 1/2 Hex, M/F, Zinc Standoff, #6-32 x 5/8 LG, F/F, 1/4 Hex	101560 (1) 101869 (2) 101941 (1) 101951 (1)

* These items are included in both the right and left endbells.

** See Service Parts Price List for details.

**For service or information:
Customer Support at 1-877-346-8367**



Global Operations
1400 Toastmaster Drive
Elgin, IL 60120
1-847-741-3300

Customer Support:
1-877-346-8367
www.middlebymarshall.com