

SaniForce™ Electro-Pneumatic (EP) Controls

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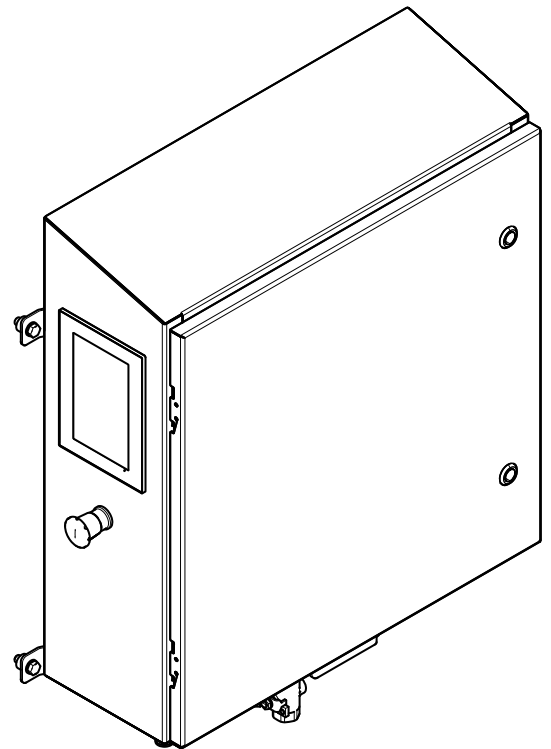
Electro-Pneumatic Controls for use with Graco Hygienic Unloader Systems. For professional use only.



Important Safety Instructions

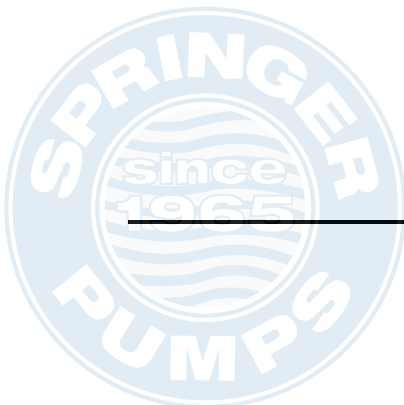
Read all warnings and instructions in this manual and the system manuals. **Save all instructions.**

*Maximum Working Air Pressure: 100
psi (0.7 MPa, 6.9 bar)*



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PROVEN QUALITY. LEADING TECHNOLOGY.



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Related Manuals

Manual Number	Title
3A5402	SaniForce Drum Unloader (SDU), Operation
3A5404	SaniForce Drum Unloader (SDU), Repair/Parts
3A5416	SaniForce Tote Unloader (STU), Operation
3A5417	SaniForce Tote Unloader (STU), Repair/Parts

Models

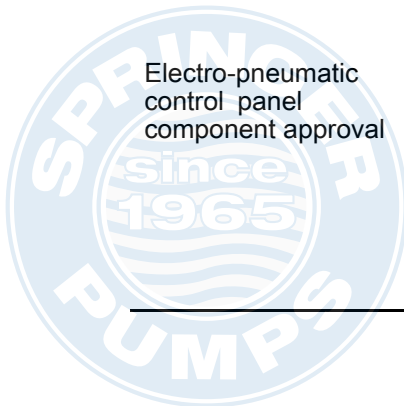
Model Number	Kit Number	Description
25D009*	25P263	Electro-pneumatic control panel, STU using 5:1 or 12:1 pumps
	25P264	Electro-pneumatic control panel, STU using 1:1 diaphragm pumps
25D057*	25P258†	Electro-pneumatic control panel, SDU using 5:1 pump
	25P259†	Electro-pneumatic control panel, SDU using 6:1 or 12:1 pump
	25P260†	Electro-pneumatic control panel, SDU using 1:1 diaphragm pump

* These part number are not for sale.

† If purchased as an upgrade from a pneumatic control panel, kit 25P306 is also required.



Intertek
9902741
Conforms to UL STD 508A
Certified to CSA STD C22.2 No. 14



Pressure Relief Procedure



Follow the Pressure Relief Procedure whenever you see this symbol.

WARNING				
<p>This equipment stays pressurized until pressure is relieved manually. To help prevent serious injury from injection, pinching, or crushing, follow the Pressure Relief Procedure before you clean, check, or service the equipment.</p>				

1. Follow the Pressure Relief Procedure in the system operation manual where this control panel is installed to place the system in a safe maintenance position before servicing the equipment.
2. Turn off all air supply valves located on the bottom of the control panel.

Software Updates




Contact Graco technical assistance to receive software updates. Software will be sent via email.

WARNING				
ELECTRIC SHOCK HAZARD				
<p>To prevent injury, such as electric shock, turn off power at main switch before servicing the equipment.</p>				
NOTICE				
<p>If power is lost during the update, indeterminate results will occur and the system may not be able to operate when power is restored.</p>				

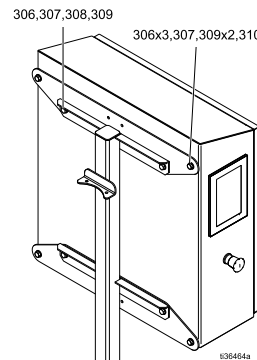
1. Prior to loading update, record recipes and settings. This must be done manually.
2. On a computer, unzip the software zip file. Do not change the names on any of the unzipped files or directories. Copy all files and directories in the unzipped file onto the root level of a USB flash drive.
3. Lower the ram to its lowest position.
4. Remove power to the control panel.
5. Inside the control panel, install the USB flash drive into the USB port on the bottom of the display unit.
6. Close the panel door.
7. Apply power to the control panel and observe the display screen. Various information will be displayed during the software update. When the automatic run screen is displayed, the update has successfully completed.
NOTE: If the automatic screen is not displayed within 10 minutes, the update may have failed. Cycle power to the control panel to restart the update again.
8. Remove power to the control panel and remove the USB flash drive and close the control panel.
9. Verify that settings and recipes have been retained. If they were not retained, enter the recorded settings and recipes.



Electro-Pneumatic Control Installation

! WARNING				
				
<p>ELECTRICAL SHOCK HAZARD This equipment must be grounded. Improper grounding, setup, or usage of the system can cause electric shock.</p> <ul style="list-style-type: none"> • If replacing, turn off and disconnect power at the main switch before servicing or installing equipment. • Connect only to a grounded power source • All electrical wiring must be done by a qualified electrician and comply with all local codes and regulations 				
NOTICE				
<p>The electro-pneumatic control panel is only intended for use in permanently mounted systems.</p>				

2. Label all tubing attached to the bottom of the pneumatic control panel.
3. Disconnect all tubing from the bottom of the pneumatic control panel.
4. Inside the pneumatic control panel, remove the nuts (309) and washers (306, 307) and retain for re-use.
5. Remove the pneumatic control panel from the SDU.
6. Move the screws (310), nuts (309) and washers (306, 307) from the stanchion to the outermost holes on the brackets (302). Ensure the hardware assembly order is the same as it was when mounted on the stanchion.
7. Using the kit screws (308), washers (306, 307), and nuts (309), attach the brackets to the stanchion.
8. Using the washers (306, 307) and nuts (309), mount the electro-pneumatic control panel on the brackets (302).



Drum Unloader EP control installation

When the SDU electro-pneumatic control is purchased as an upgrade from the pneumatic control, bracket kit 25P306 is required to attach the control panel to the stanchion. The Ref numbers shown below relate to the Ref numbers used in the SDU repair manual. The bracket kit contains:

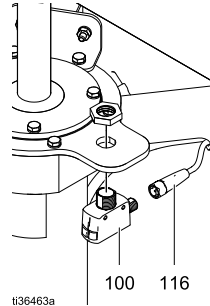
Ref	Part/Kit	Description	Qty
100	17Y665	LASER, position	1
302	17V409	BRACKET, panel mount	2
306*	112914	WASHER, flat	4
307*	103975	WASHER, lock	4
308	17V628	SCREW, hex, 3/8 x 3/4 long	4
309*	112913	NUT, hex	4

* These parts are also used to attach the pneumatic control panel to the stanchion. Retain for re-use when removing the pneumatic panel.

1. Refer to the system operation manual for steps to place the SDU in a safe maintenance condition and pressure relief, prior to shutting off any facility supply air to the control panel.

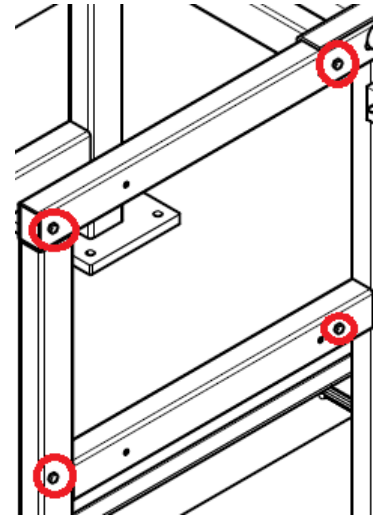
9. Attach tubing disconnected from the pneumatic control panel to the correct locations on the electro-pneumatic control panel.
10. Refer to the system operation manual for information regarding where to attach facility supply air to the appropriate locations on the electro-pneumatic control panel.
11. Refer to the system operation manual for information regarding the installation of AC power and grounding to the electro-pneumatic control panel.

12. Locate the laser (100) mounting hole near the top of the air cylinder furthest from the control panel. Route the laser cable (116) through the crossover brace between the air cylinders and attach the cable to the laser and electro-pneumatic control panel.



NOTE: The laser emits a dot onto the underside of the crossbar. After electro-pneumatic control panel power up, and before attempting to run the system, verify that the dot remains visible on the underside of the crossbar during the entire vertical travel of the ram.

5. Move the sealing screws near the four frame mounting points for the pneumatic control panel to the holes where the pneumatic control panel was attached to the STU frame. The sealing screws are located to the left of the left side mounting holes and to the right of the right side mounting holes.



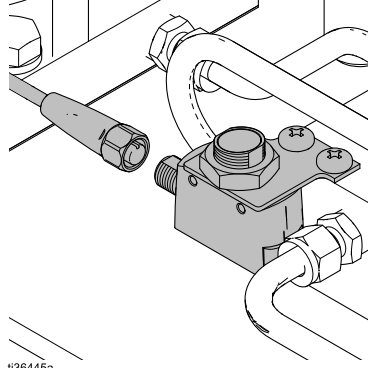
Tote Unloader EP Control Installation

1. Refer to the system operation manual for steps to place the STU in a safe maintenance condition and pressure relief, prior to shutting off any facility supply air to the control panel.
2. Label all tubing attached to the pneumatic control panel.
3. Disconnect all tubing from the pneumatic control panel.
4. Remove the screws, washers, and spacers attaching the pneumatic control panel to the frame of the STU and remove the pneumatic control panel. Retain for re-use.
6. Using the screws, washers, and spacers from the pneumatic control panel, mount the electro-pneumatic control panel to the frame.
7. Attach tubing disconnected from the pneumatic control panel to the correct locations on the electro-pneumatic control panel.
8. Refer to the system operation manual for information regarding where to attach facility supply air to the appropriate locations on the electro-pneumatic control panel.
9. Refer to the system operation manual for information regarding the installation of AC power and grounding to the electro-pneumatic control panel.



Electro-Pneumatic Control Installation

10. Locate the laser mounting bracket on top of the air cylinder air distribution manifold (Ref 21 in manual 3A5417). Mount the laser in the bracket. Route the laser cable from the electro-pneumatic control panel to the laser so that it does not interfere with system operation.

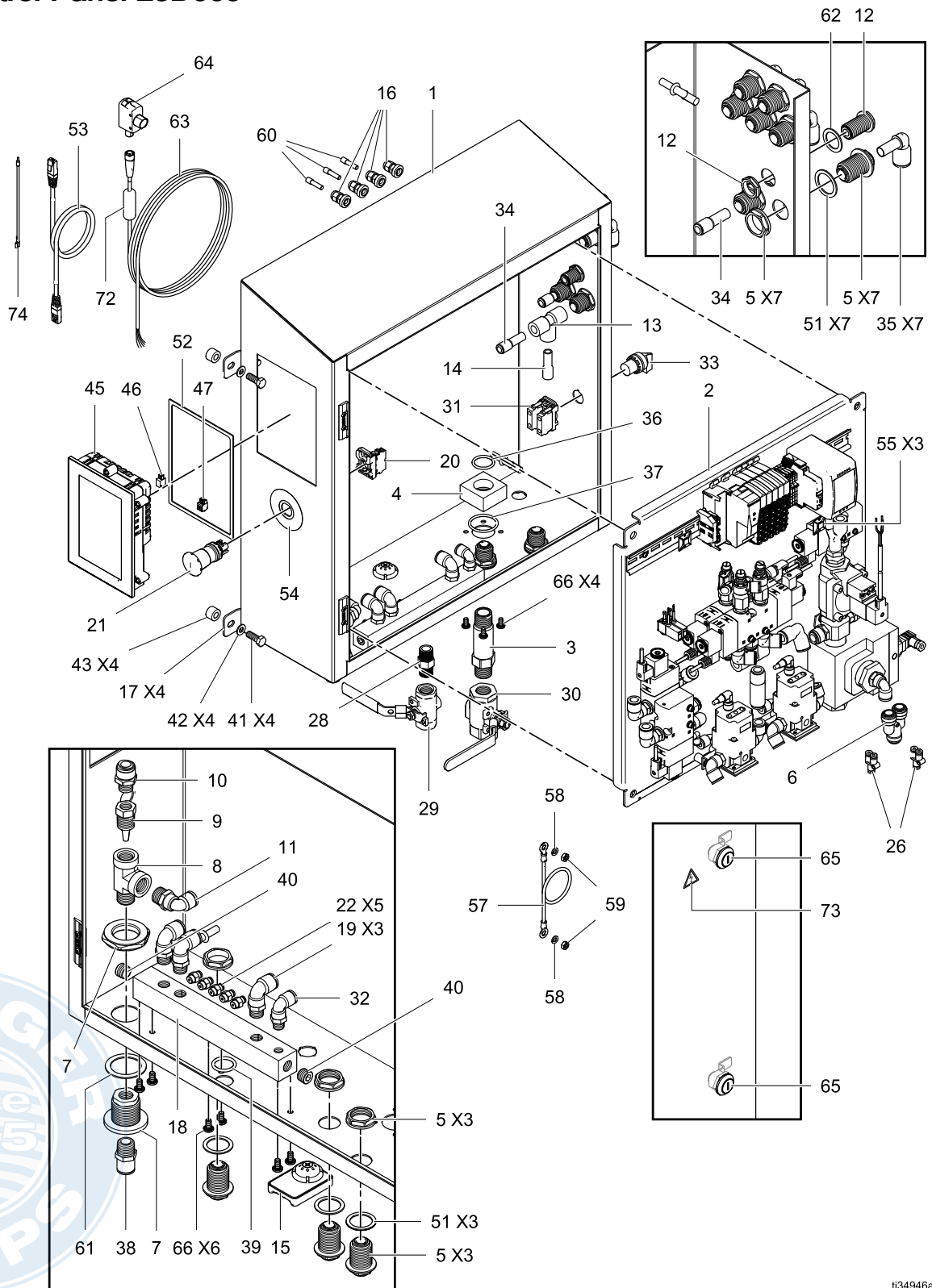


NOTE: The laser emits a dot onto the underside of the pump support plate. After electro-pneumatic control panel power up, and before attempting to run the system, verify that the dot is visible on the underside of the pump support plate and remains uninterrupted by hoses and cables during the entire vertical travel of the ram.



25D009 Parts

Control Panel 25D009



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Tel: 866-777-6060
Fax: 866-777-6383

Springer Pumps, LLC

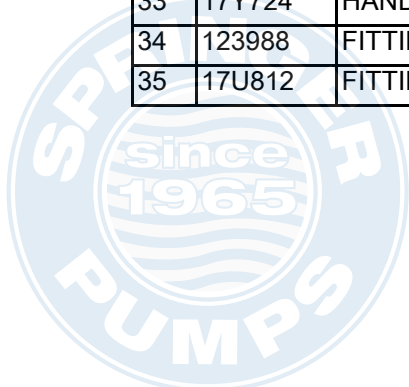
Website: www.springerpumps.com
Int'l: +001 267 404 2910

Control Panel 25D009

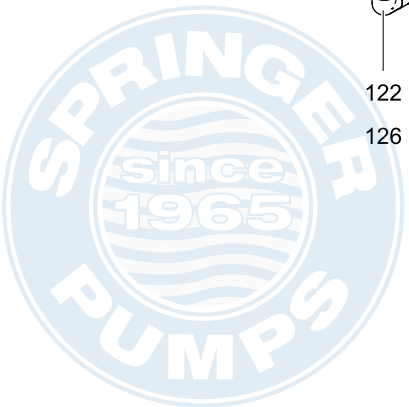
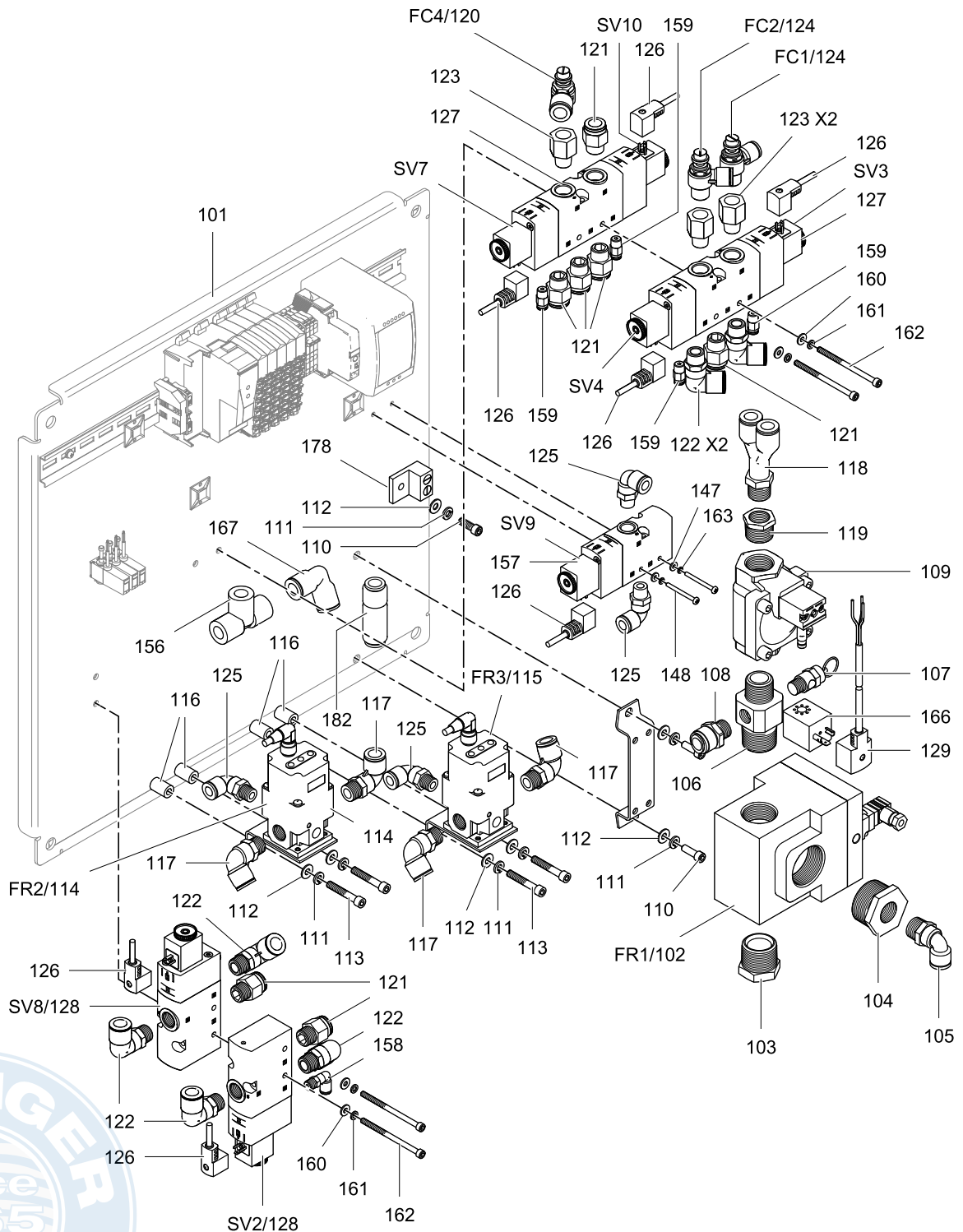
Ref.	Part/Kit	Description	Qty.
1	17T172	ENCLOSURE	1
2	25D010	PANEL, see page 6	1
3	17S085	FITTING, straight	1
4	17S086	BLOCK, control	1
5	16Y995	FITTING, bulkhead union	10
6	16Y998	FITTING, tee, 1/2 tube	1
7	16Y981	FITTING, bulkhead union	1
8	124844	FITTING, tee	1
9	17S738	NOZZLE, venturi	1
10	17T103	FITTING, straight, 1/2 tube	1
11	15V204	FITTING, elbow, 1/2 tube	1
12	17P903	BULKHEAD, 3/8 tube	1
13	513226	FITTING, tee, 1/2 tube	1
14	17A244	FITTING, reducer, 1/2 to 1/4	1
15	17T405	VENT, breather	1
16	111987	STRAIN RELIEF	4
17	17T422	BRACKET, pkg of 4	1
18	17T495	MANIFOLD	1
19	121212	FITTING, elbow, swivel	3
20	17T404	BLOCK, contact	1
21	17T401	BUTTON, stop	1
22	114263	FITTING, 5/32 tube	5
23	17Y408	TUBE, 5/32 O.D.	6 ft
24	17Y406	TUBE, 3/8 O.D.	6 ft
25	17X407	TUBE, 1/2 O.D.	6 ft
26	112189	FITTING, Y	2
28	17X974	FITTING, nipple	1
29	18A938	VALVE, ball, vented, 1/2	1
30	18A937	VALVE, ball, vented, 3/4	1
31	17Y725	BLOCK, contact	1
32	121141	FITTING, elbow, swivel, 3/8	1
33	17Y724	HANDLE, selector switch	1
34	123988	FITTING, reducer, 1/2 to 3/8	2
35	17U812	FITTING, elbow, 1/2 tube	8

Ref.	Part/Kit	Description	Qty.
36	119008	O-RING, #216 UL	1
37	119006	O-RING, #222 UL	1
38	17T093	FITTING, straight, 1/2 tube	1
39	119007	O-RING, #213 UL	1
40	101754	PLUG	2
41	102471	SCREW	4
42	104034	WASHER, flat	4
43	17T873	SPACER	4
45	26C929	KIT, HMI/PLC	1
46	17V140	BLOCK, HMI power	1
47	17V139	BLOCK, cage clamp	1
48	125423	FITTING, reducer, 5/32 to 1/4	1
51	17Y196	GASKET	10
52	17Y197	GASKET, HMI	1
53	18A068	CABLE, CAT 6	1
54	17W415▲	LABEL, e-stop	1
55	— — —	MOUNT, cable tie	3
57	18A097	CABLE, grounding, door	1
58	104123	WASHER, lock, spring	2
59	104121	NUT	2
60	125424	FITTING, plug	3
61	17Y817	GASKET	1
62	17Y195	GASKET	1
63	18A046	CABLE, M12-5P, F, 5M	1
64	17Y665	SENSOR, position	1
65	17U123	LATCH, key	1
66	17T272	SCREW, sealing	10
70	17Z061	SOFTWARE, control, STU	1
72	125835	CLIP, ferrite bead	1
73	189930▲	LABEL, caution	1
74	18A592	CABLE, HMI ground	1

▲ Safety labels available free of charge from Graco.

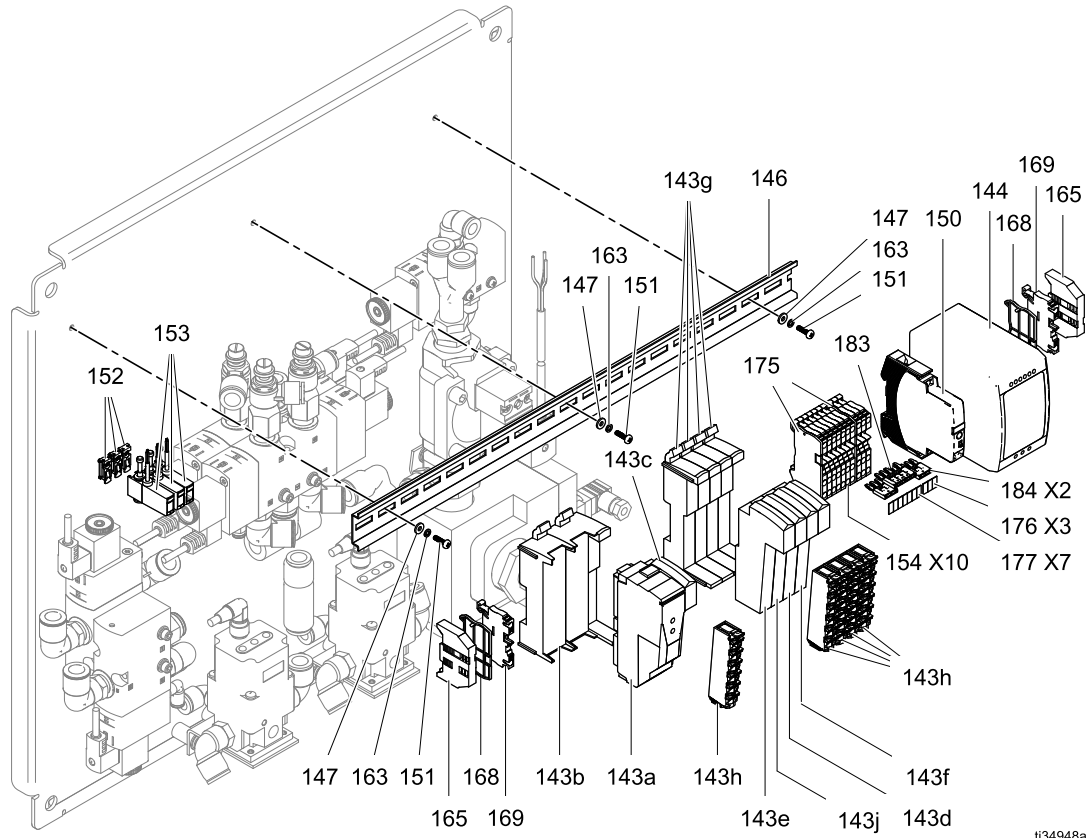


Sub Panel 25D010



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25D009 Parts



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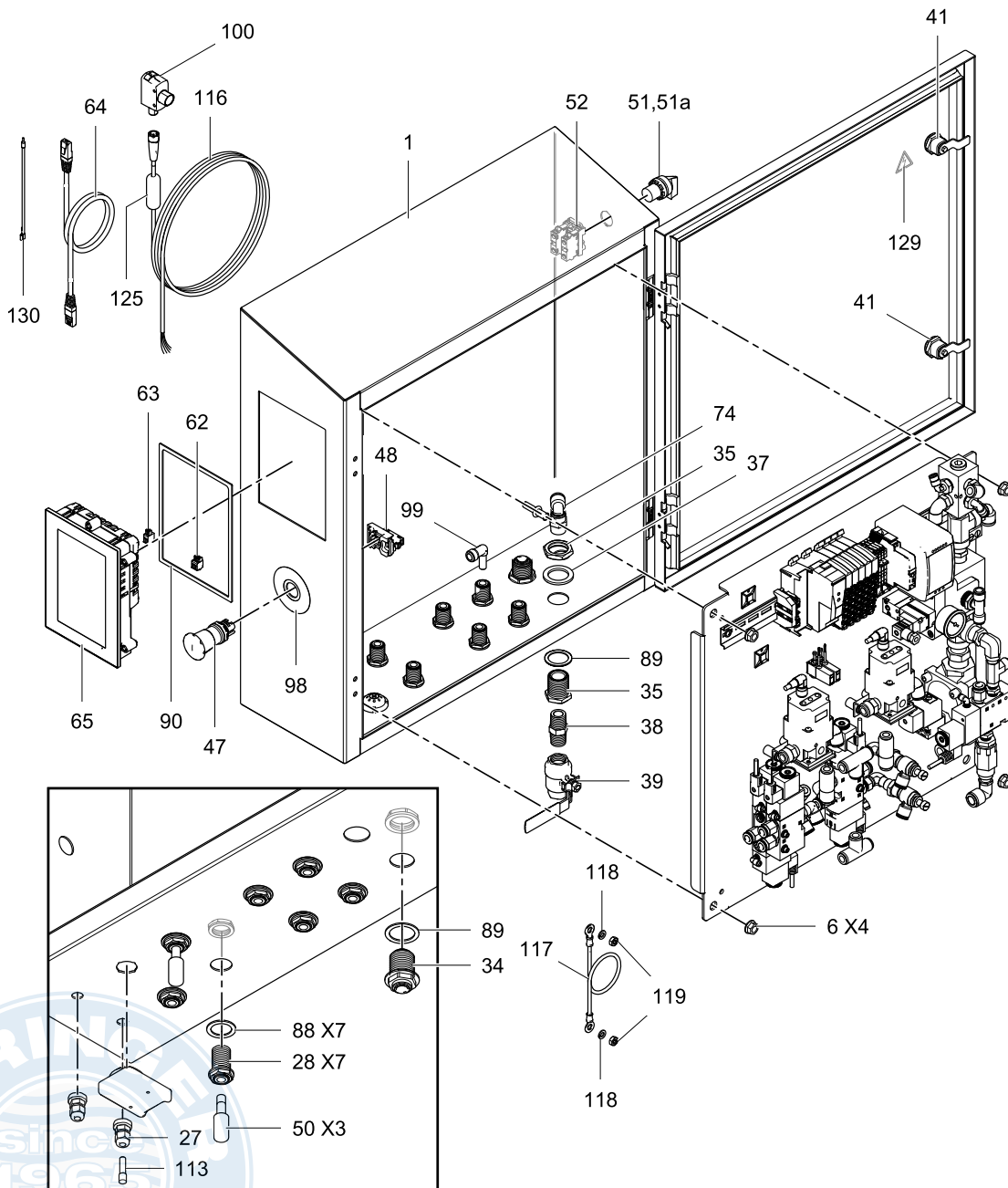
Sub Panel 25D010

Ref	Part/Kit	Description	Qty
101	17T171	PANEL	1
102	17T174	REGULATOR	1
103	158586	FITTING, bushing	1
104	C19660	FITTING, 1-1/4x1/2	1
105	15V204	FITTING, elbow, 1/2 npt x 1/2 tube	1
106	17T256	MANIFOLD	1
107	120306	VALVE, safety	1
108	17T103	FITTING, straight	1
109	17T167	VALVE, 2 way	1
110	100644	SCREW, cap	3
111	100016	WASHER, lock	7
112	100086	WASHER, flat	7
113	565074	SCREW, shcs 1/4-20 x 1.5	4
114	17T204	REGULATOR, 24V, 130 psi	1
115	17T164	REGULATOR, 24V, 72 psi	1
116	17T494	SPACER	4
117	121212	FITTING, elbow, swivel	4
118	17U989	FITTING, Y, 1/2 tube	1
119	100896	FITTING, bushing	1
120	17T099	VALVE, flow control, 1/2 tube	1
121	17T412	FITTING, straight, 1/2 tube	7
122	17T413	FITTING, elbow, swivel	6
123	17T436	FITTING, straight adapter	3
124	17T395	VALVE, flow control, 3/8 tube	2
125	121141	FITTING, elbow, swivel, 3/8	4
126	17V077	CABLE	7
127	17T257	VALVE, 5 way	2
128	17T285	VALVE, 3 way	2
129	17V075	CABLE	1
143	25D576	KIT, PLC, includes 143a-143j	1
143a	17U988	CONTROL, bus b&r	1
143b	17U261	MODULE, bus b&r	1
143c	17U264	MODULE, power	1
143d	18A042	MODULE, analog out	1
143e	18A043	MODULE, mixed	1

Ref	Part/Kit	Description	Qty
143f	18A044	MODULE, digital out	1
143g	17U263	MODULE, bus b&r	4
143h	17U981	BLOCK, terminal	5
143j	18A045	MODULE, I/O link	1
144	17U986	POWER SUPPLY, 24V	1
146	17B225	RAIL, DIN	1
147	151395	WASHER, flat	5
148	117683	SCREW	2
150	17U992	CIRCUIT BREAKER	1
151	117831	SCREW	3
152	17Y959	BRACKET, pressure sensor	3
153	17Y955	SENSOR, pressure	3
154	18A033	BLOCK, terminal	10
156	513226	FITTING, tee, 1/2 tube	1
157	17T492	VALVE, 3 way	1
158	17T497	FITTING, elbow, 5/32	1
159	17T498	FITTING, straight, 5/32	5
160	102360	WASHER, flat	4
161	100020	WASHER, lock	4
162	116575	SCREW	4
163	100068	WASHER, lock, spring	5
165	18A039	BRACKET	2
166	17V076	COIL	1
167	17V092	FITTING, elbow, 1/2 tube	1
168	18A036	COVER, end	2
169	18A034	BLOCK, terminal ground	2
175	18A035	COVER, end	2
176	18A040	LABEL, marking, 1060	3
177	18A041	LABEL, 1061	7
178	117666	TERMINAL, ground	1
182	18A069	VALVE CHECK	1
183	18A038	BRIDGE	1
184	18A037	BRIDGE	2

25D057 Parts

Control Panel 25D057



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Control Panel 25D057

Ref.	Part/Kit	Description	Qty.
1	17T379	ENCLOSURE	1
2	25D056	PANEL	1
3	17B225	RAIL, DIN	1
4	102360	WASHER	3
5	112380	SCREW	3
6	112958	NUT	4
7	17T165	REGULATOR	1
8	100527	WASHER	2
9	100214	WASHER, lock	2
10	558673	SCREW, 5/16-18 x 0.75	3
11	124844	FITTING, tee	2
12	196142	FITTING, adapter, 1/2 TO 3/4	1
13	118574	FITTING, reducer	1
14	123249	FITTING, elbow, 1/4 npt	1
15	556420	FITTING, tee	1
16	100721	PLUG, pipe	1
16a	120306	VALVE, safety, instead of Ref 16 85 psi, for 5:1 pumps	1
16b	103347	100 psi, for 6:1 or 12:1 pumps	
16c	114003	130 psi, 1:1 AODD pumps	
17	128005	FITTING, adapter	4
18	17T167	VALVE, 2 way	1
19	100896	FITTING, bushing	1
20	17T166	VALVE, 3 way	2
21	503080	VALVE, flow control	1
22	121459	FITTING, elbow, 1/2 tube	1
23	158491	FITTING, nipple, 1/2 npt	1
24	17Y103	MANIFOLD	1
25	100361	PLUG, pipe	1
26	117666	TERMINAL, ground	1
27	111987	CONNECTOR	2
28	17P903	BULKHEAD	7
29	17T494	SPACER	4
30	17T164	REGULATOR	2
31	100086	WASHER	4
32	100016	WASHER, lock	4
33	565074	SCREW	4
34	16Y995	FITTING, bulkhead, 1/2	1
35	17P901	BULKHEAD	1

Ref.	Part/Kit	Description	Qty.
37	17P900	WASHER	1
38	114373	FITTING, 1/2 npt	1
39	17X891	VALVE, ball, vented, 1/2	1
40	17T168	VALVE, 5 way	2
41	17U123	LATCH, keyed	1
42	100020	WASHER	4
43	C19977	SCREW	2
44	120103	SCREW	2
45	127379	GAUGE	1
46	250576	KIT, PLC, includes 46a-46j	1
46a	17U988	CONTROL, bus b&r	1
46b	17U261	MODULE, bus b&r	1
46c	17U264	MODULE, power	1
46d	18A042	MODULE, analog out	1
46e	18A043	MODULE, mixed	1
46f	18A044	MODULE, digital out	1
46g	17U263	MODULE, bus b&r	4
46h	17U981	BLOCK, terminal	5
46j	18A045	MODULE, I/O link	1
47	17T401	BUTTON, e-stop	1
48	17T404	BLOCK, contact	1
49	17T405	VENT, breather	1
50	17T407	MUFFLER	3
51	17Y724	HANDLE, selector switch	1
51a	18A618▲	LABEL, power	1
52	17Y725	BLOCK, contact	1
53	17V077	CABLE	6
54	17Y955	SENSOR, pressure	2
55	17V076	COIL	1
56	17V075	CABLE	1
57	18A039	BRACKET, end	2
58	17U986	POWER SUPPLY, 24V	1
60	17U992	CIRCUIT BREAKER	1
61	17Y959	BRACKET	2
62	17V139	BLOCK, cage clamp	1
63	17V140	BLOCK, HMI power	1
64	18A068	CABLE, CAT 6	1
65	26C928	KIT, HMI/PLC	1
66	18A081	VALVE, ball check	2
67	18A036	COVER, end	2
69	17G678	FITTING, tee, 1/2 tube	1

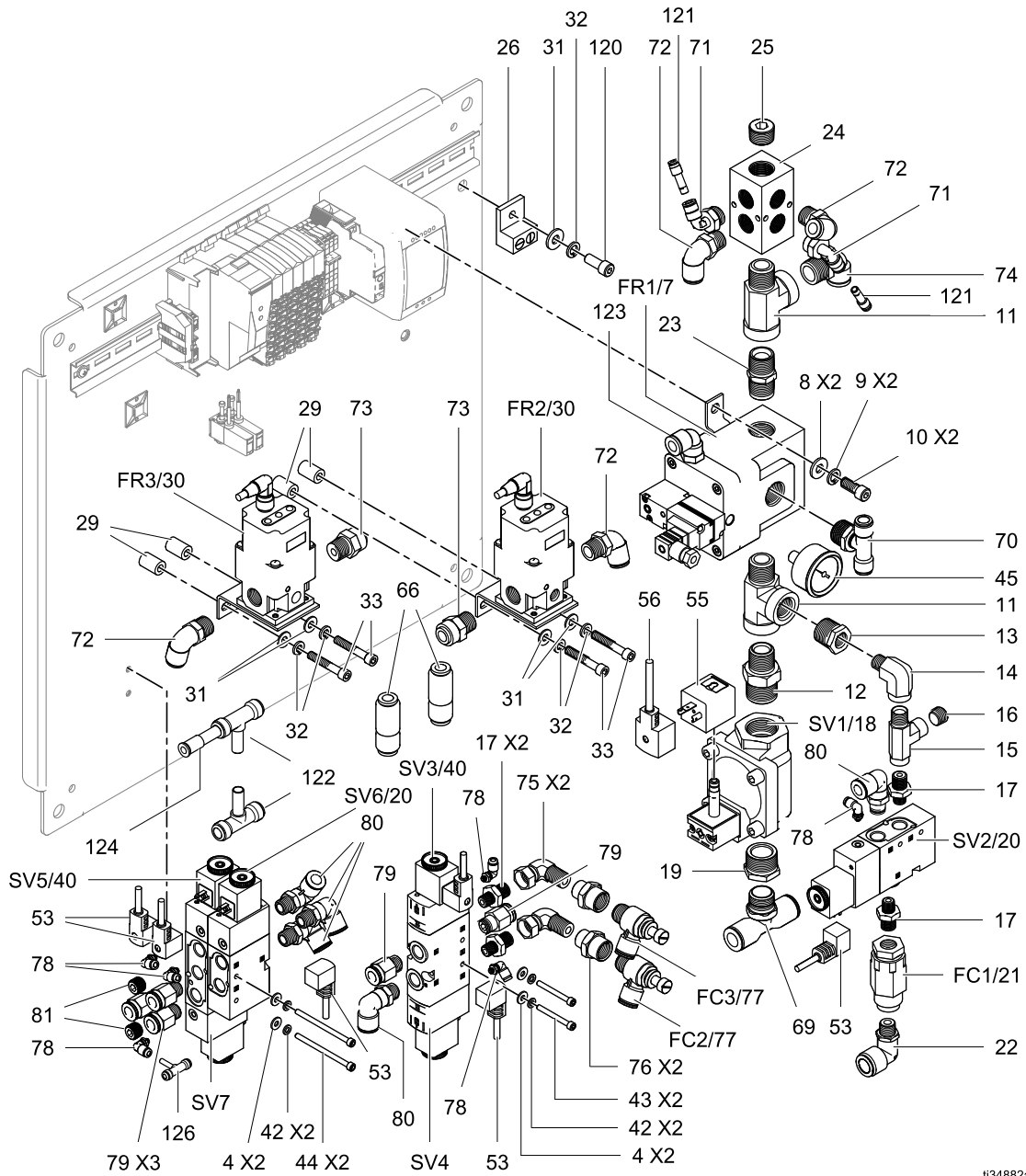
25D057 Parts

Ref.	Part/Kit	Description	Qty.
70	17Y098	FITTING, tee	1
71	114153	FITTING, elbow, swivel, 1/4	2
72	C19394	FITTING, elbow, 3/8 tube	4
73	115240	FITTING, tube	2
74	15V204	FITTING, elbow, 1/2 tube	2
75	155541	FITTING, swivel, 1/4 npt	2
76	C19704	COUPLING, reducer	2
77	17T008	VALVE, flow control	2
78	17T003	FITTING, elbow, 5/32 tube	6
79	17Y095	FITTING, straight, 3/8 tube	6
80	17Y096	FITTING, elbow, 3/8 tube	4
81	17Y097	PLUG	2
82	18A035	COVER, end	2
84	054760	TUBE, 1/2 O.D.	3
85	054941	TUBE, 3/8 O.D.	20
87	054734	TUBE, 5/32 O.D.	4
88	17Y195	GASKET	7
89	17Y196	GASKET	2
90	17Y197	GASKET, HMI	1
91	18A034	BLOCK, terminal	2
92	18A041	LABEL, 1061	7
93	18A040	LABEL, 1060	3
95	18A033	BLOCK, terminal	10

Ref.	Part/Kit	Description	Qty.
96	---	MOUNT, cable tie	3
98	17W415▲	LABEL, e-stop	1
99	17T017	FITTING, elbow, 3/8	7
100	17Y665	SENSOR, position	1
113	125424	FITTING, plug	1
114	18A038	BRIDGE, 5 position	1
115	18A037	BRIDGE, 3 position	2
116	18A046	CABLE, M12-5P, 5M	1
117	18A097	CABLE, grounding, door	1
118	104123	WASHER, lock, spring	2
119	104121	NUT	2
120	100644	SCREW, 1/2-20	1
121	125423	ADAPTER, 1/4 to 5/32	2
122	17C480	FITTING, tee, 3/8	2
123	121141	FITTING, elbow, 3/8	1
124	617569	ADAPTER, 3/8 to 1/4	1
125	125835	CLIP, ferrite bead	1
126	17V626	FITTING, tee, 5/32	5
128	17X703	SOFTWARE, control, SDU	1
129	189930▲	LABEL, caution	1
130	18A592	CABLE, HMI ground	1

▲ Safety labels available free of charge from Graco.





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Tel: 866-777-6060
Fax: 866-777-6383

Springer Pumps, LLC

Website: www.springerpumps.com
Int'l: +001 267 404 2910

Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

FOR GRACO CANADA CUSTOMERS

The Parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés, à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

Graco Information

For the latest information about Graco products, visit www.graco.com.
For patent information, see www.graco.com/patents.

To place an order, contact your Graco Distributor or call to identify the nearest distributor.

Phone: 612-623-6921 **or Toll Free:** 1-800-328-0211 **Fax:** 612-378-3505

All written and visual data contained in this document reflects the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.
Original Instructions. This manual contains English. MM 3A6102

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