

# 3A3164EN-D24Z902固瑞克e-Xtreme Sprayer电动泵操作说明书

## Operation, Repair, and Parts



### e-Xtreme® Sprayer

3A3164D  
EN

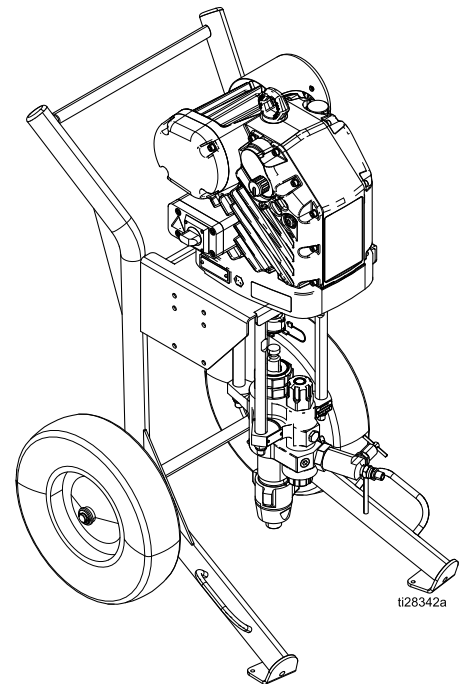
Electric high pressure sprayer packages for application of protective coatings.  
For professional use only.



#### Important Safety Instructions

Read all warnings and instructions in this manual and in the e-Xtreme Driver manuals. **Save all instructions.**

*See page 3 for model information. See Technical Specifications for maximum working pressure.*



固瑞克中国大区 配件耗材销售服务中心 13584444067

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# Related Manuals

Part	Description
3A3165	e-Xtreme Driver Installation
3A5124	e-Xtreme Driver Operation, Repair and Parts
311619	Pump Mounting Kit Manual
311762	Xtreme Lower Manual
312145	XTR Gun Manual

# Model Information

Model	Description	Package		Filter		Lower Pump
		Complete* (Hose and Gun) Maximum Fluid Temperature: 160° F (71° C)	Bare (No Hose or Gun) Maximum Fluid Temperature: 180° F (82° C)	Integrated Filter	No Filter	
24Y901*	e-Xtreme Ex45, Cart*	✓		✓		145cc
24Y902	e-Xtreme Ex45, Cart		✓	✓		
24Y903*	e-Xtreme Ex45, Cart	✓			✓	
24Y904	e-Xtreme Ex45, Cart		✓		✓	
24Y905*	e-Xtreme Ex45, Cart with Hopper	✓		✓		
24Y906	e-Xtreme Ex45, Cart with Hopper		✓	✓		
24Y907*	e-Xtreme Ex45, Cart with Hopper	✓			✓	
24Y908	e-Xtreme Ex45, Cart with Hopper		✓		✓	
24Y909*	e-Xtreme Ex45, Wall Mount	✓		✓		
24Y910	e-Xtreme Ex45, Wall Mount		✓	✓		
24Y911*	e-Xtreme Ex45, Wall Mount	✓			✓	
24Y912	e-Xtreme Ex45, Wall Mount		✓		✓	
24Z901*	e-Xtreme Ex35, Cart	✓		✓		180cc
24Z902	e-Xtreme Ex35, Cart		✓	✓		
24Z903*	e-Xtreme Ex35, Cart	✓			✓	
24Z904	e-Xtreme Ex35, Cart		✓		✓	
24Z905*	e-Xtreme Ex35, Cart with Hopper	✓		✓		
24Z906	e-Xtreme Ex35, Cart with Hopper		✓	✓		
24Z907*	e-Xtreme Ex35, Cart with Hopper	✓			✓	
24Z908	e-Xtreme Ex35, Cart with Hopper		✓		✓	
24Z909*	e-Xtreme Ex35, Wall Mount	✓		✓		
24Z910	e-Xtreme Ex35, Wall Mount		✓	✓		
24Z911*	e-Xtreme Ex35, Wall Mount	✓			✓	
24Z912	e-Xtreme Ex35, Wall Mount		✓		✓	

For maximum working pressure, see [Technical Specifications, page 32](#).

\* Lower Fluid temperature due to XTR5 gun.

**NOTE:** See the e-Xtreme Driver Installation manual for driver approvals information.

## Parts List

Ref.	Part	Description	Qty.
1	255143 (includes 5, 6)	BRACKET, wall mount, painted (Models 24Y909, 24Y910, 24Y911, 24Y912, 24Z909, 24Z910, 24Z911, 24Z912)	1
	24Y078 (includes 14, 20, 21, 22)	CART, heavy duty, painted (Models 24Y901, 24Y902, 24Y903, 24Y904, 24Y905, 24Y906, 24Y907, 24Y908, 24Z901, 24Z902, 24Z903, 24Z904, 24Z905, 24Z906, 24Z907, 24Z908)	1
4	24X901 (includes 2x 31 Oil jugs, part 16W645)	DRIVER, e-Xtreme	1
5	100133	WASHER, lock, 3/8	4
6	100101	SCREW, cap, hex hd	4
7	15H392	ROD, adapter Xtreme	1
8	257150	ROD, tie, 14 1/4 long	3
9	L145CN (includes 9a)	LOWER, Xtreme, 145, nf, xseal, disk (Models 24Y903, 24Y904, 24Y907, 24Y908, 24Y911, 24Y912)	1
	L145CL (includes 9a)	LOWER, Xtreme, 145, w/filt, xseal (Models 24Y901, 24Y902, 24Y905, 24Y906, 24Y909, 24Y910)	1
	L180CN (includes 9a)	LOWER, Xtreme, 180, nf, xseal, disk (Models 24Z903, 24Z904, 24Z907, 24Z908, 24Z911, 24Z912)	1
	L180CL (includes 9a)	LOWER, Xtreme, 180, w/filt, xseal (Models 24Z901, 24Z902, 24Z905, 24Z906, 24Z909, 24Z910)	1
9a	258962	HOUSING, rupture disc, assembly	1
10	101712	NUT, lock	3
11	244820	CLIP, hairpin (w/ lanyard)	1
12	244819	COUPLING, assembly, 145-290 Xtreme	1
13	197340	COVER, coupler	1
14	113361	CAP, tube, round (Models 24Y901, 24Y902, 24Y903, 24Y904, 24Y905, 24Y906, 24Y907, 24Y908, 24Z901, 24Z902, 24Z903, 24Z904, 24Z905, 24Z906, 24Z907, 24Z908)	2
17*	17L151	FITTING, elbow (Models 24Y905, 24Y906, 24Y907, 24Y908, 24Z905, 24Z906, 24Z907, 24Z908)	1
20	113362	WHEEL, semi-pneumatic (Models 24Y901, 24Y902, 24Y903, 24Y904, 24Y905, 24Y906, 24Y907, 24Y908, 24Z901, 24Z902, 24Z903, 24Z904, 24Z905, 24Z906, 24Z907, 24Z908)	2
21	154628	WASHER (Models 24Y901, 24Y902, 24Y903, 24Y904, 24Y905, 24Y906, 24Y907, 24Y908, 24Z901, 24Z902, 24Z903, 24Z904, 24Z905, 24Z906, 24Z907, 24Z908)	2
22	113436	RING, retaining (Models 24Y901, 24Y902, 24Y903, 24Y904, 24Y905, 24Y906, 24Y907, 24Y908, 24Z901, 24Z902, 24Z903, 24Z904, 24Z905, 24Z906, 24Z907, 24Z908)	2
24	116746	FITTING, barbed, plated	1
25	116750	TUBE, nylon	1
31‡	16W645	KIT, oil (1 quart Bottle)	
41	206994	FLUID, TSL 8 oz	1
	206995 (not included)	FLUID, TSL 1 quart (not shown)	
	206996 (not included)	FLUID, TSL 1 gallon (not shown)	
	206997 (not included)	FLUID, TSL 12 quarts (not shown)	
44a	H42506	HOSE, cpld, 4500 psi, 0.25 ID, 6 ft (Models 24Y901, 24Y903, 24Y905, 24Y907, 24Y909, 24Y911, 24Z901, 24Z903, 24Z905, 24Z907, 24Z909, 24Z911)	1
44b	164856	FITTING, nipple, reducing (Models 24Y901, 24Y903, 24Y905, 24Y907, 24Y909, 24Y911, 24Z901, 24Z903, 24Z905, 24Z907, 24Z909, 24Z911)	1

Parts

Ref.	Part	Description	Qty.
44c	H43850	HOSE, cpld, 4500 psi, 0.375 ID, 50 ft (Models 24Y901, 24Y903, 24Y905, 24Y907, 24Y909, 24Y911, 24Z901, 24Z903, 24Z905, 24Z907, 24Z909, 24Z911)	1
47	XTR504	GUN, XTR5, 1 in. hnd, 4 fng, xhdrc (Models 24Y901, 24Y903, 24Y905, 24Y907, 24Y909, 24Y911, 24Z901, 24Z903, 24Z905, 24Z907, 24Z909, 24Z911)	1
55	25C189 (1/2 in. NPT for Integrated filter Lowers)	VALVE, subassembly (Models 24Y901, 24Y902, 24Y905, 24Y906, 24Y909, 24Y910, 24Z901, 24Z902, 24Z905, 24Z906, 24Z909, 24Z910)	1
	127631 (3/4 in. NPT for No filter lowers)	VALVE, subassembly (Models 24Y903, 24Y904, 24Y907, 24Y908, 24Y911, 24Y912, 24Z903, 24Z904, 24Z907, 24Z908, 24Z911, 24Z912)	1
55a	245143	VALVE, pressure, bleed	1
58	17A411	LABEL, instructions	1
64	162505	FITTING, union, swivel	1
71*	C19024	FITTING, elbow, swivel (Models 24Y905, 24Y906, 24Y907, 24Y908, 24Z905, 24Z906, 24Z907, 24Z908)	1
74	24Z274	HOSE, suction, 1 in. npt x 3 ft L (Models 24Y901, 24Y902, 24Y903, 24Y904, 24Z901, 24Z902, 24Z903, 24Z904)	1
81*	17D554	BRACKET, hopper, upper (Models 24Y905, 24Y906, 24Y907, 24Y908, 24Z905, 24Z906, 24Z907, 24Z908)	1
82*	17C474	BRACKET, hopper (Models 24Y905, 24Y906, 24Y907, 24Y908, 24Z905, 24Z906, 24Z907, 24Z908)	1
83*	112395	SCREW, cap, flng hd (Models 24Y905, 24Y906, 24Y907, 24Y908, 24Z905, 24Z906, 24Z907, 24Z908)	4
84*	16U537	COVER, complete (Models 24Y905, 24Y906, 24Y907, 24Y908, 24Z905, 24Z906, 24Z907, 24Z908)	1
85*	17E114	HOPPER, weldment, Xtreme (Models 24Y905, 24Y906, 24Y907, 24Y908, 24Z905, 24Z906, 24Z907, 24Z908)	1
86*	120307	FITTING, hose adapter, male (Models 24Y905, 24Y906, 24Y907, 24Y908, 24Z905, 24Z906, 24Z907, 24Z908)	1
87*	120308	FITTING, hose adapter, female (Models 24Y905, 24Y906, 24Y907, 24Y908, 24Z905, 24Z906, 24Z907, 24Z908)	1
87a*	120781 (PTFE Encapsulated Viton)	GASKET, quick coupler (Models 24Y905, 24Y906, 24Y907, 24Y908, 24Z905, 24Z906, 24Z907, 24Z908)	1
87b*	17C453 (Buna-N 6-pack) (not included with 87)	GASKET, quick coupler (6-PACK) (Models 24Y905, 24Y906, 24Y907, 24Y908, 24Z905, 24Z906, 24Z907, 24Z908) (not shown)	1
88*	17L152	FITTING, swivel (Models 24Y905, 24Y906, 24Y907, 24Y908, 24Z905, 24Z906, 24Z907, 24Z908)	1
89*	112958	NUT, hex, flanged (Models 24Y905, 24Y906, 24Y907, 24Y908, 24Z905, 24Z906, 24Z907, 24Z908)	4
101▲	17J476	LABEL, warning (English/French/Spanish)	1
	17K430	LABEL, warning, bag (Dutch/German/Swedish, Polish/Russian, Italian/Turkish)	1
* Included in Hopper Accessory Kit 25C188			
▲ Additional Warning labels are available at no cost.			
‡ The driver gear box is shipped from the factory pre-filled with oil. Additional oil must be purchased separately.			

1 Torque to 145–155 ft-lb (196–210 N•m).

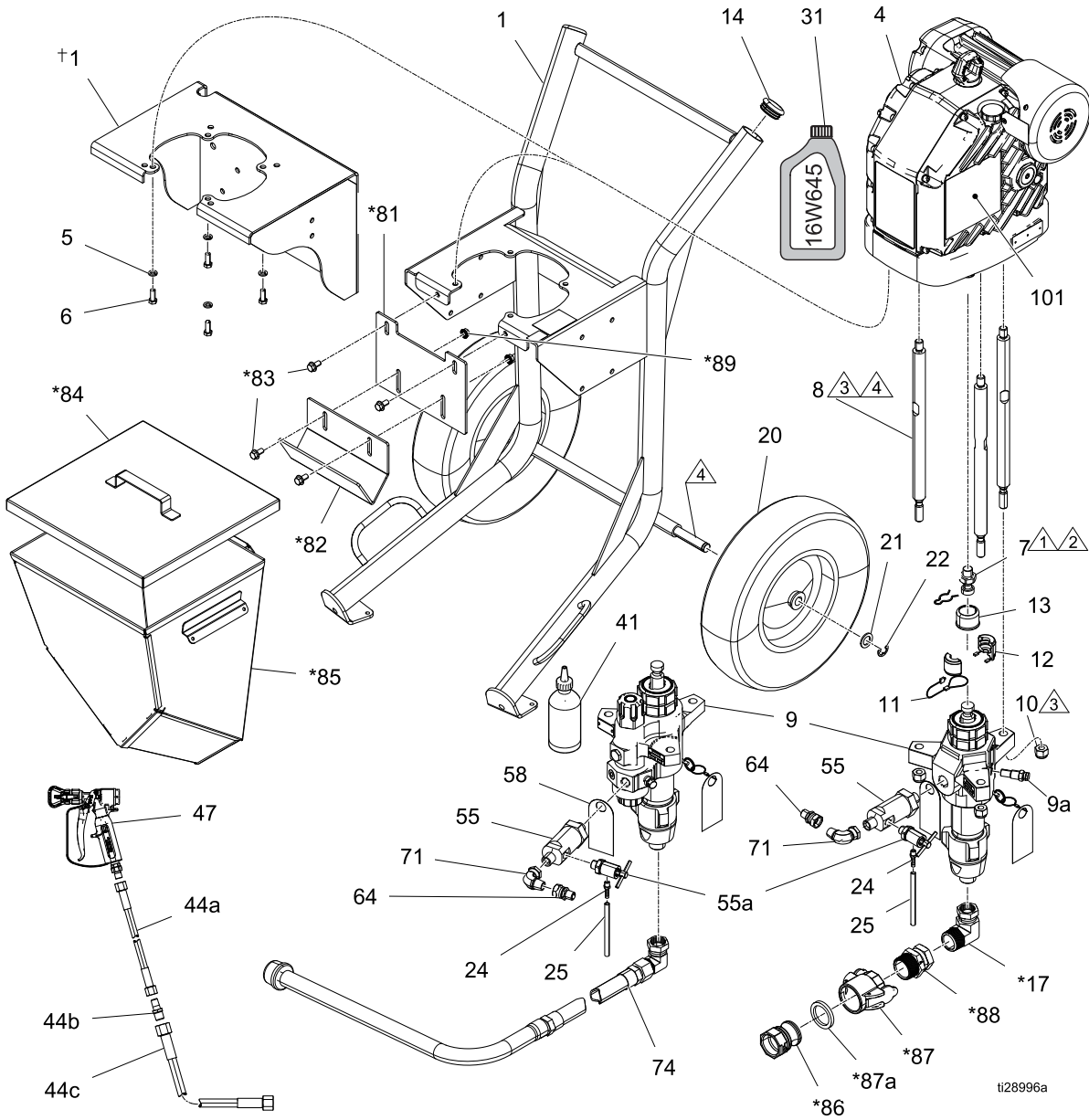
3 Torque to 56–60 ft-lb 68–81 N•m).

2 Apply thread locker.

4 Apply lithium grease lubricant.

# Parts

## Parts Drawing



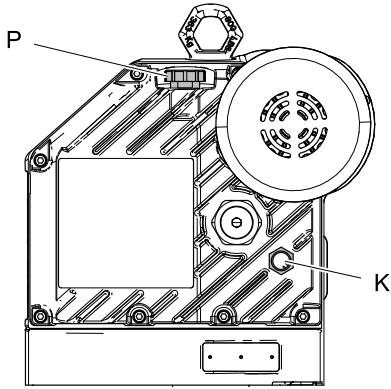
For information on Warning Labels, see Driver Operation/Repair manual.

Quick Start Guide 3A3067 (not shown) is available upon request.

† Wall mount sprayers only.

## Check Oil Level

Check the oil level in the sight glass (K). The oil level should be near the halfway point of the sight glass when the sprayer is not running. If oil is low, open the fill cap (P) and add Graco Part No. 16W645 silicone-free ISO 220 synthetic EP gear oil.



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The oil capacity is approximately 1.0–1.2 quarts (0.9–1.1 liters). **Do not overfill.**

**NOTE:** The driver gear box is shipped from the factory pre-filled with oil. The temporary unvented cap (PX) prevents oil leaks during shipment. This temporary cap must be replaced with the supplied vented oil cap (P) before use.

### NOTICE

Only use oil with Graco part number 16W645. Any other oil may reduce the life of the gears.

## Corrosion Protection

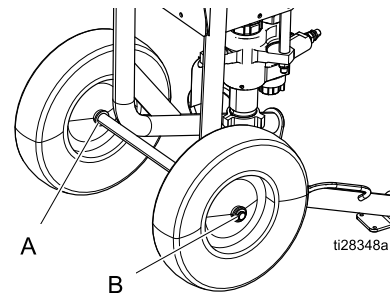
Always flush the pump before fluid dries on the displacement rod. Never leave water or water-based fluid in the pump overnight. First, flush with water or a compatible solvent, then with a rust inhibitor, such as mineral spirits. Perform [Pressure Relief Procedure, page 12](#), but leave rust inhibitor in pump to protect parts from corrosion.

## Flushing

- Flush before changing fluids, before fluid can cure in the equipment, at the end of the day, before storing, and before repairing equipment.
- Flush at the lowest pressure possible. Check connectors for leaks and tighten as necessary.
- Flush with a fluid that is compatible with the fluid being dispensed and the equipment wetted parts.

## Cart Maintenance

Periodically lubricate the axle between points A and B with lightweight oil (see below).



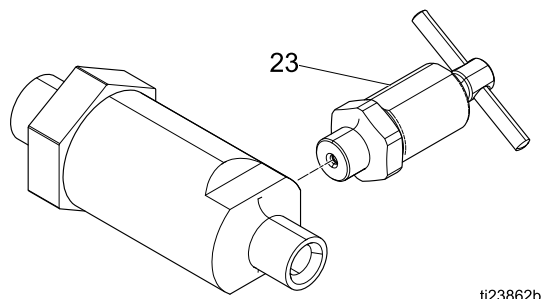
Keep the cart clean by wiping up spills daily, using a compatible solvent.

Problem	Cause	Solution
Erratic or accelerated pump speed	Fluid supply is exhausted	Refill the fluid supply and prime the pump.
	Clogged suction	Clean the suction tube.
	Open or worn piston valve packings	Clear the piston valve. Replace the packings.
	Open or worn intake valve	Clear or service the intake valve.
	Clogged gun, hose, outlet, etc.	Clear the gun, hose, outlet, etc.
	Open or worn outlet check valve	Clear or service the outlet check valve.
Cycles or fails to hold pressure at stall	Worn intake or piston valve or seals	Service the pump lower (see Lower manual 311762).
Air bubbles in fluid	Loose suction line	Tighten suction line connections. Use compatible liquid thread sealant or PTFE tape on connections.
	Agitator/mixer is not submerged	Submerge the agitator/mixer.
	Agitator/mixer RPM is too high	Lower the agitator/mixer RPM.
Poor finish or irregular spray pattern	Incorrect fluid pressure at gun	See the gun manual. Read the fluid manufacturer's recommendations.
	Fluid is too thin or too thick	Adjust the fluid viscosity. Read the fluid manufacturer's recommendations.
	Dirty, worn, or damaged spray gun	Service the spray gun (see spray gun manual).
Driver does not turn over and LED is off	Over voltage (greater than 300 V)	Check the power supply.
	No power to the control board	Contact your Graco distributor or Tech Service for more information.
Driver does not turn over and LED is on	Encoder fault	Cycle power. Recalibrate the encoder following the procedure listed in the e-Xtreme Driver Operation/Repair manual. Contact your Graco distributor or Tech Service for more information.
Oil is leaking	Oil was over-filled	Drain and refill oil as stated in <a href="#">Check Oil Level, page 17</a> .
	Drain plug is not tightened properly	Torque to 18–23 ft-lb (25–30 N•m).
	Seal cartridge o-ring missing or damaged	Replace the shaft bearing assembly.

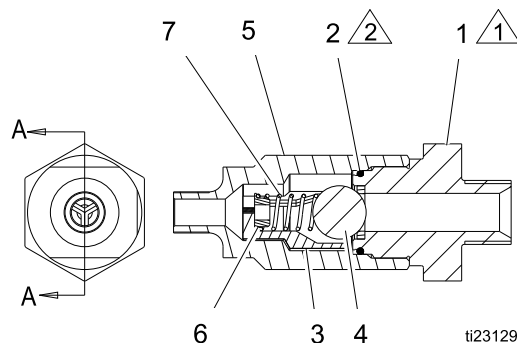
\* To determine if the fluid hose or gun is obstructed, follow the [Pressure Relief Procedure, page 12](#). Disconnect fluid hose and place a container at pump fluid outlet to catch any fluid. Turn pressure adjustment knob just enough to start the pump. If the pump starts, the obstruction is in the fluid hose or gun.



## Outlet Check Valves Parts



ti23862b



ti23129c

### Outlet Check Valves Parts List:

127631 (3/4 in. male npt inlet)  
25C189 (1/2 in. male npt inlet)

Ref.	Part	Description	Qty.
1	127882	NUT, seat (includes 2* and 4) for 187631 version	1
	25C190	NUT, seat (includes 2* and 4) for 25C189 version	1
2*	102595	PACKING, o-ring	1
3	181492	GUIDE, ball	3
4	102972	BALL, metallic	1
5	17A091	HOUSING, ball, check	1
6	181535	RETAINER, spring	1
7	108361	SPRING, compressor	1
23	245143	VALVE, pressure bleed	1

\* If the outlet check valve is disassembled, the o-ring (2) must be replaced. The o-ring is designed to be crushed, and not reused.

### Parts Specifications:

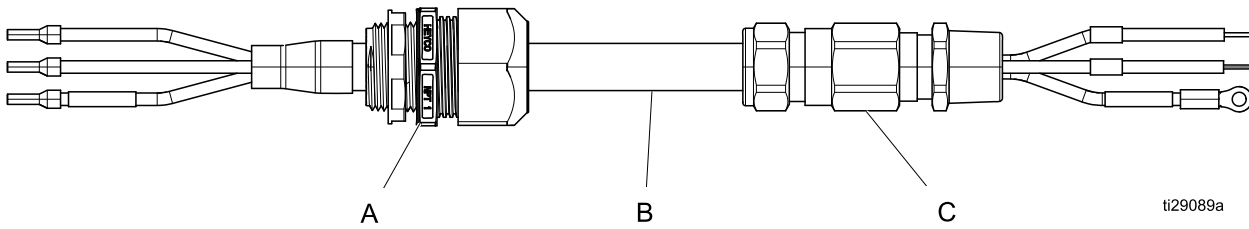
Ref.	Instruction
1	Torque to 101–108 N•m (75–80 ft-lb)
2	Apply lubricant

### Accessories:

Part	Description
17B291	MIXER, jiffy, PS-1
24Z266	KIT, suction set, 1 in. npt x 6 ft L
24Z274	KIT, suction set, 1 in. npt x 3 ft L
24Z270	KIT, suction, drum, 1 in. npt x 10 ft L
17M677	Software Update Token**
25C188	KIT, hopper (see Parts List for contents)

\*\* See the Driver Operation/Repair manual for "Software Token Update" procedure.

**ATEX/Hazardous Location-Rated Power Cord Kits (1-gland cable shown)**



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ATEX/Hazardous Location-Rated Power Cords:		A – Cord Grip	B – Cable	C – Cable Gland
24Z267*	KIT, power cable, 1 gland, 8M	1	1	1
24Z268*	KIT, power cable, 1 gland, 15M	1	1	1
24Z269*	KIT, power cable, 1 gland, 30M	1	1	1
24Z271	KIT, power cable, 2 gland, 8M	—	1	2
24Z272	KIT, power cable, 2 gland, 15M	—	1	2
24Z273	KIT, power cable, 2 gland, 30M	—	1	2

\* Only one end has ATEX/Hazardous location cable gland. Power Supply must be outside of ATEX/Hazardous location for ratings to apply.

**A: Cord Grip (ordinary location)**

Power Supply must be outside of ATEX/Hazardous location for ratings to apply.

**B: Cable**

**MOR® Polyrad® XT-125 Armored and Sheathed Cable (125° C Temperature Rating)**

Manufacturer: General Cable  
 Manufacturer P/N: 279220

**UL 1309 Type X110 (UL Listed File No. E85994)**

**IEEE 1580 Type P**

**CSA C22.2 No. 245 Type X110**

**IEC 60092 – 350**

**API-RP14F\*\*\***

\*\*\*Per manufacturer General Cable, suitable for use in Class I, Division 1, and Zone 1 Hazardous Locations when installed in accordance with API-RP14F. Cable gland ratings may have an effect on overall ratings and must also be considered.

For other ratings, listings and installation instructions see manufacturer’s website: <http://www.generalcable.com/>

**C: Cable Gland – for driver, with ratings**

**CROCLOCK® Cable Gland**

Manufacturer: Peppers Cable Glands  
 Manufacturer P/N: CR-3B/NP/20/075NPT

**Certificate No.**

**ABS: 09-LD463991-PDA (American Bureau of Shipping)**

**CSA: 1356011**

- Ex d IIc / Ex e II Class I Zone 1
- Class I Division 2, Groups A, B, C and D

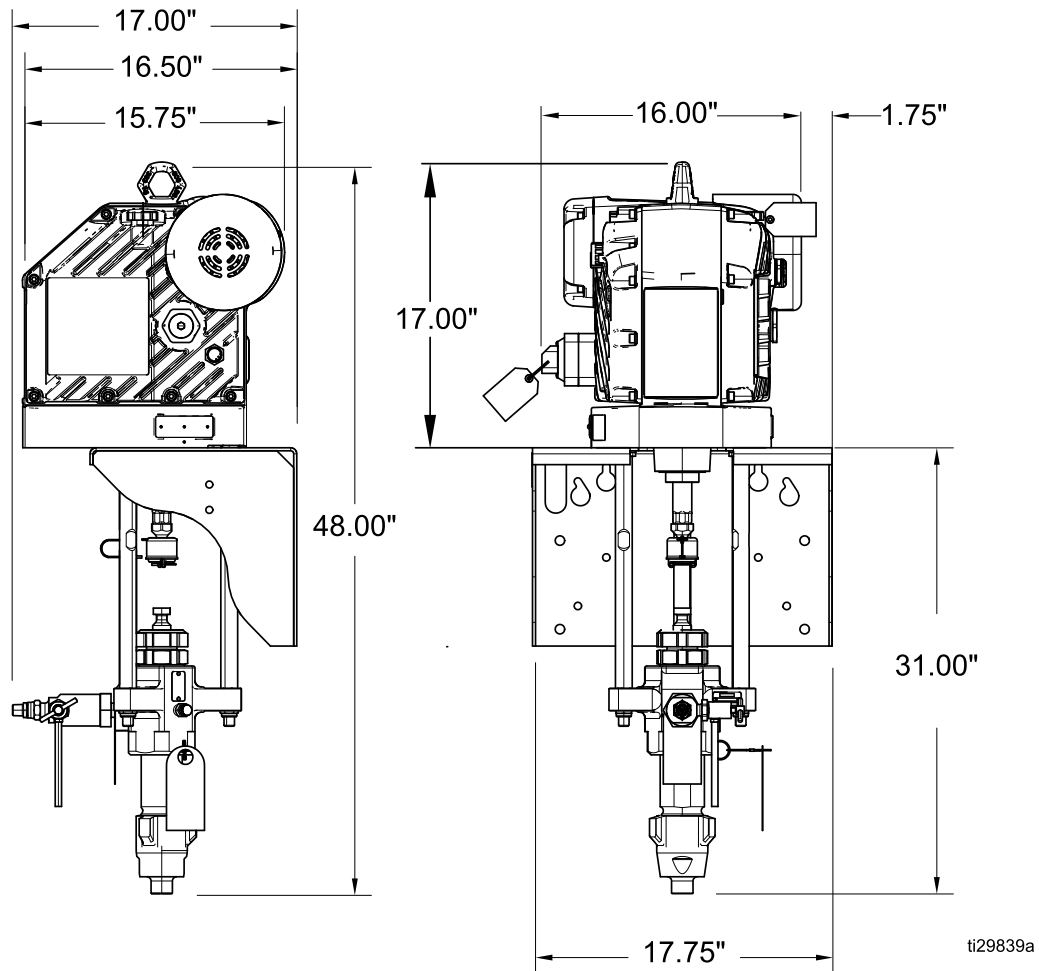
**ATEX: BAS 01ATEXT2271X**

**IECEX: SIR 07.0099X**

For additional certificates/listings and installation instructions, see manufacturer’s website: <http://peppersamerica.com/>

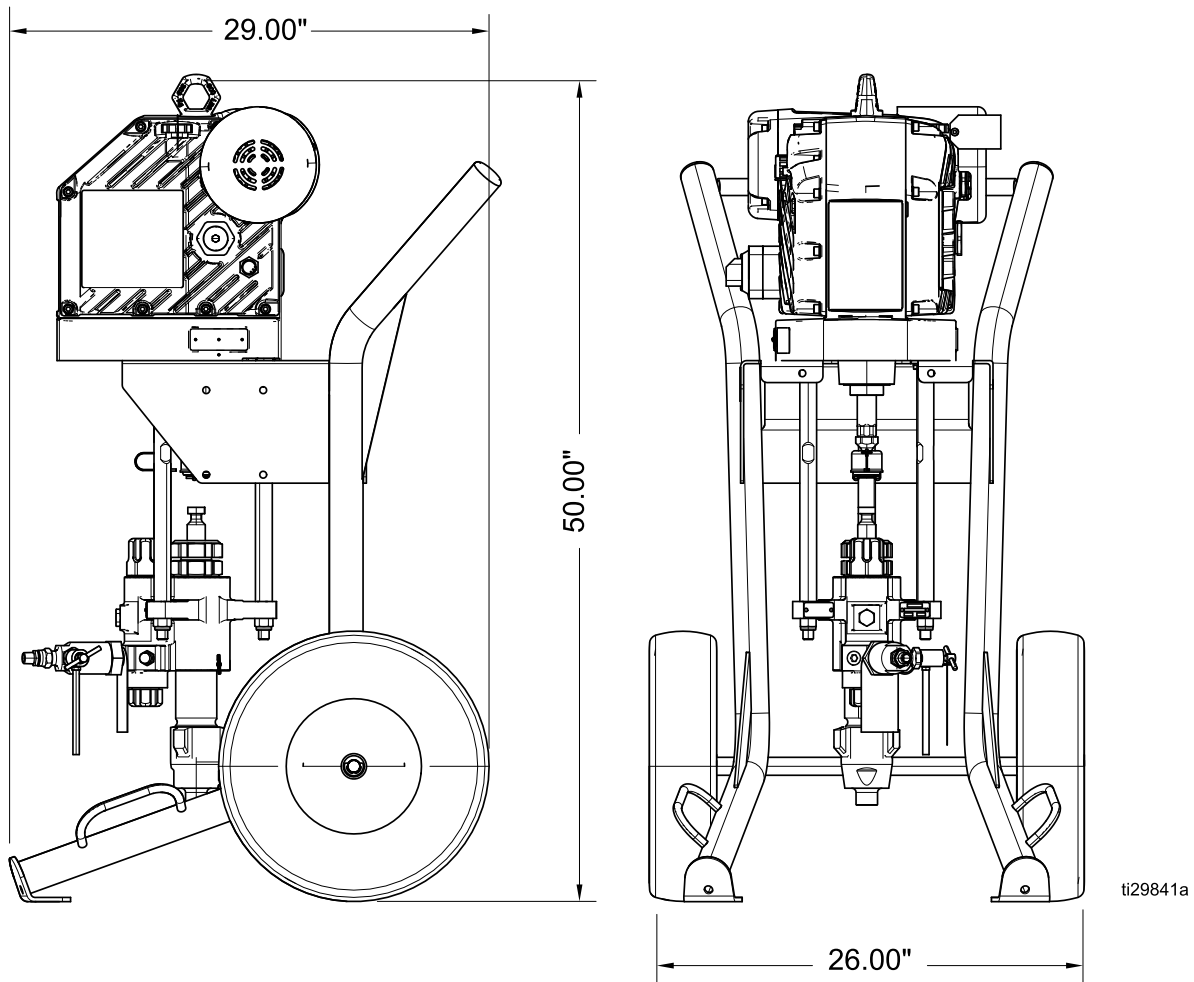
# Dimensions

## Wall Mount Systems

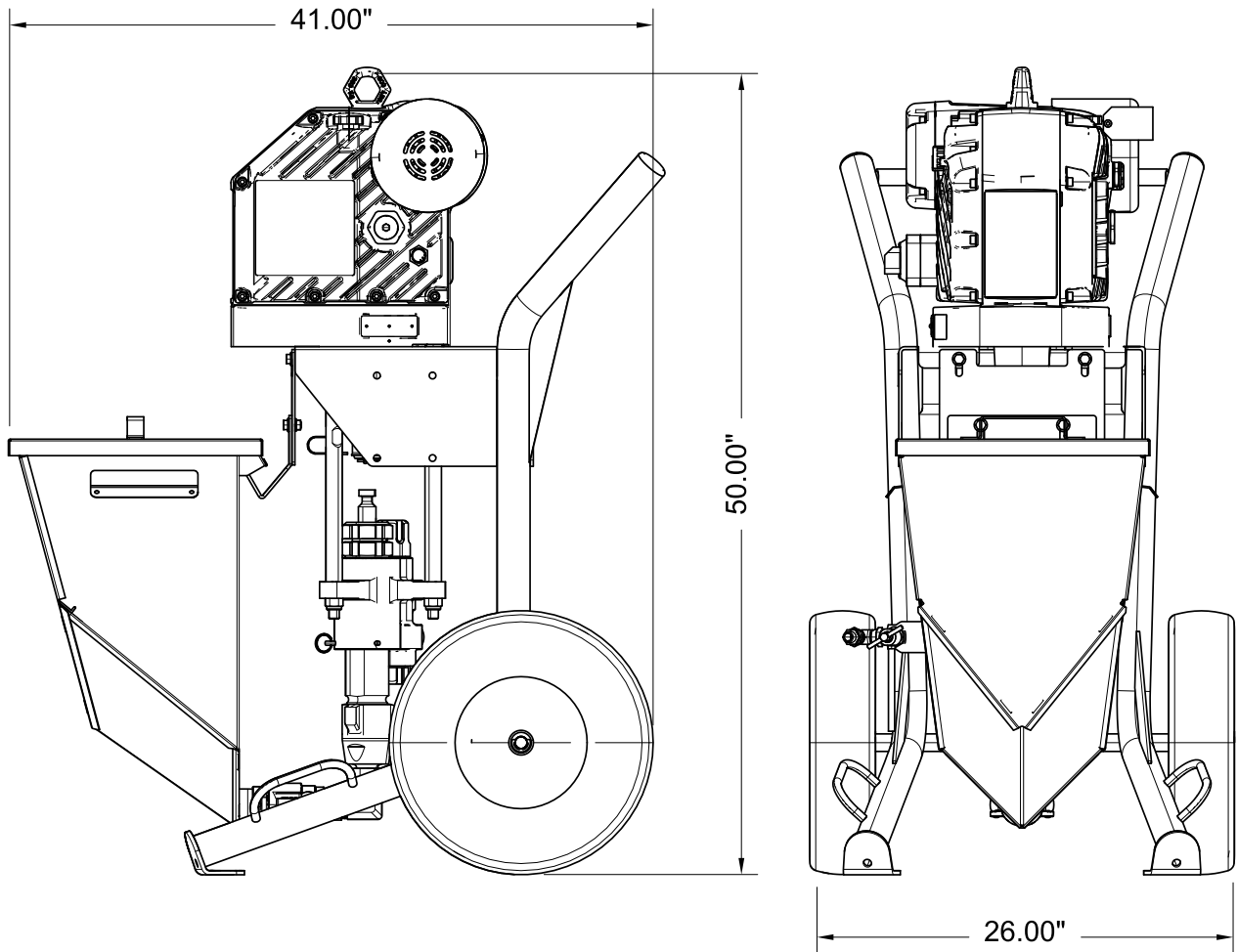


*Dimensions*

**Cart Systems**



Hopper Systems



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# Technical Specifications

<b>Ex35 e-Xtreme Sprayers</b>		
	<b>U.S.</b>	<b>Metric</b>
Maximum fluid working pressure	3500 psi	240 bar, 24.0 MPa
Stroke length	4.75 in.	120 mm
Maximum continuous cycle rate	44 cycles per minute	
Tip Size	.023 in.	
Weight	295 lb	135 kg
Wetted parts	Carbon Steel, Alloy Steel, 304, 440 and 17-PH Grades of Stainless Steel, Zinc and Nickel Plating, Ductile Iron, Tungsten Carbide, PTFE; Leather, Aluminum	
Operating temperature range	23° to 120° F	-5° to 50° C
Maximum fluid temperature	See Models information in Operation/Repair manual.	
Input voltage	200–240 VAC, single phase, 50/60 Hz	
Input power	2.5 kVA	
Minimum Recommended generator size	5 kW	
Oil capacity	1.0–1.2 quarts	0.9–1.1 liters
Oil specification	Graco part number 16W645 silicone-free ISO 220 synthetic EP gear oil	
<b>Inlet / Outlet Sizes</b>		
Fluid inlet size	1 in. npt(m) [also includes 1 in. nps(swivel) to 1 in. npt(m) adapter elbow]	
Fluid outlet size	1/2 npt(m) [also includes 1/2 npt(f) to 3/8 npt(m) adapter]	
<b>Hose Requirements</b>		
Minimum pressure	The minimum hose pressure rating should be equal to or greater than the maximum fluid working pressure of sprayer	
Minimum length	50 ft.	15 m
Minimum ID	3/8 in.	10mm
Maximum resistance per ISO 8028	9,100 ohms/ft	30,000 ohms/m
<b>Sound Emissions (per ISO 9614) for Normal Operation (Spraying @ 20 cpm)</b>		
Sound Pressure LpA Average	70.2 dBA	
Sound Power LwA Total Power	76.7 dBA	
<b>Sound Emissions (per ISO 9614) for Maximum Speed (Flushing @ 44 cpm)</b>		
Sound Pressure LpA Average	77.4 dBA	
Sound Power LwA Total Power	85.1 dBA	

<b>Ex45 e-Xtreme Sprayers</b>		
	<b>U.S.</b>	<b>Metric</b>
Maximum fluid working pressure	4500 psi	310 bar, 31.0 MPa
Stroke length	4.75 in.	120 mm
Maximum continuous cycle rate	44 cycles per minute	
Tip Size	.021 in.	
Weight	295 lb	135 kg
Wetted parts	Carbon Steel, Alloy Steel, 304, 440 and 17-PH Grades of Stainless Steel, Zinc and Nickel Plating, Ductile Iron, Tungsten Carbide, PTFE; Leather, Aluminum	
Maximum fluid temperature	See Models information in Operation/Repair manual.	
Operating temperature range	23° to 120° F	-5° to 50° C
Input voltage	200–240 VAC, single phase, 50/60 Hz	
Input power	2.5 kVA	
Minimum Recommended generator size	5 kW	
Oil capacity	1.0–1.2 quarts	0.9–1.1 liters
Oil specification	Graco part number 16W645 silicone-free ISO 220 synthetic EP gear oil	
<b>Inlet / Outlet Sizes</b>		
Fluid inlet size	1 in. npt(m) [also includes 1 in. nps(swivel) to 1 in. npt(m) adapter elbow]	
Fluid outlet size	1/2 npt(m) [also includes 1/2 npt(f) to 3/8 npt(m) adapter]	
<b>Hose Requirements</b>		
Minimum pressure	The minimum hose pressure rating should be equal to or greater than the maximum fluid working pressure of sprayer	
Minimum length	50 ft.	15 m
Minimum ID	3/8 in.	10mm
Maximum resistance per ISO 8028	9,100 ohms/ft	30,000 ohms/m
<b>Sound Emissions (per ISO 9614) for Normal Operation (Spraying @ 20 cpm)</b>		
Sound Pressure LpA Average	70.2 dBA	
Sound Power LwA Total Power	76.7 dBA	
<b>Sound Emissions (per ISO 9614) for Maximum Speed (Flushing @ 44 cpm)</b>		
Sound Pressure LpA Average	77.4 dBA	
Sound Power LwA Total Power	85.1 dBA	

