

# Pro Xp<sup>®</sup> Electrostatic Spray Guns

Expert Performance, Durability and Flexibility for Your Production Needs



## **Pro Xp Air Spray**

- **1. Define** your application.
- 2. Choose the gun model that fits your needs.

## **General Gun Models**

Equipped with standard aircap, fluid tube, nozzle and electrode.

Part Number	Power Supply kV	Display Type	Nozzle Size	Recommended Coating Type
L40M10	40	Smart	1.5 mm (0.055 in)	
L40T10	40	Std	1.5 mm (0.055 in)	
L40T12	40	Std	1.2 mm (0.047 in)	
L60M10	60	Smart	1.5 mm (0.055 in)	
L60M12	60	Smart	1.2 mm (0.047 in)	
L60T10	60	Std	1.5 mm (0.055 in)	
L60T12	60	Std	1.2 mm (0.047 in)	Standard and Specialty Coatings
L60T21	60	Std	1.0 mm (0.039 in)	
L85M10	85	Smart	1.5 mm (0.055 in)	
L85M12	85	Smart	1.2 mm (0.047 in)	
L85T10	85	Std	1.5 mm (0.055 in)	
L85T12	85	Std	1.2 mm (0.047 in)	
L85T50*	85	Std	1.5 mm (0.055 in)	

<sup>\*</sup> Equipped with a quick-adjust fan valve

## **High Conductivity Gun Models**

Equipped with a longer High Conductivity fluid tube for spraying lower resistivity material. Models are also equipped with high wear electrode, precision high wear nozzle, and standard air cap.

Part Number	Power Supply kV	Display Type	Nozzle Size	Recommended Coating Type
L40M16	40	Smart	1.5 mm (0.055 in)	
L40T13	40	Std	1.5 mm (0.055 in)**	
L40T16	40	Std	1.5 mm (0.055 in)	
L40T26	40	Std	1.2 mm (0.047 in)	
L60M16	60	Smart	1.5 mm (0.055 in)	
L60M26	60	Smart	1.2 mm (0.047 in)	
L60T13	60	Std	1.5 mm (0.055 in)**	Abrasive and Metallic Coating
L60T16	60	Std	1.5 mm (0.055 in)	Abiasive and inetallic coating
L60T26	60	Std	1.2 mm (0.047 in)	
L85M16	85	Smart	1.5 mm (0.055 in)	
L85M26	85	Smart	1.2 mm (0.047 in)	
L85T16	85	Std	1.5 mm (0.055 in)	
L85T26	85	Std	1.2 mm (0.047 in)	
L85T56*	85	Std	1.5 mm (0.055 in)	

<sup>\*</sup> Equipped with a quick-adjust fan valve

### **kV Booster Gun Models**

The 40 kV Booster provides the transfer efficiency of a 60 kV gun in a smaller, more compact size. Equipped with standard aircap.

Part Number	Power Supply kV	Display Type	Nozzle Size	Recommended Coating Type
L40M14	40	Cmart	1.5 mm (0.055 in)	General
L40M15	40	Smart	1.5 mm (0.055 in)	High Conductivity *
L40T14	40	C+4	1.5 mm (0.055 in)	General
L40T15	40	Std	1.5 mm (0.055 in)	High Conductivity ▲

A High Conductivity gun models include a High Conductivity Fluid Tube, High Wear Nozzle and High Wear Electrode.

## **Round Spray Gun Models**

Equipped with round spray nozzle and air cap. Standard fluid tube, nozzle and electrode.

Part Number	Power Supply kV	Display Type	Nozzle/Aircap	Pattern Size
L40T31	40			
L60T31	60		Small Pattern	4 in (102 mm)
L85T31	85			
L40T32	40	Std		
L60T32	60		Medium Pattern	6 in (152 mm)
L85T32	85			
L60T11	60		Large Pattern	8 in (203 mm)

## **Soft Spray Gun Models**

Equipped with soft spray air cap, standard fluid tube, nozzle and electrode.

Part Number	Power Supply kV	Display Type	Nozzle Size	Recommended Coating Type
L40T71	40	Std	1.0 mm (0.039 in)	
L60M71	60	Smart	1.0 mm (0.039 in)	
L60T71	60	Std	1.0 mm (0.039 in)	Chandard Coatings on
L60M72	60	Smart	1.2 mm (0.047 in)	Standard Coatings on small lightweight parts
L60T72	60	Std	1.2 mm (0.047 in)	Siliali lightweight parts
L85M71	85	Smart	1.0 mm (0.039 in)	
L85T71	85	Std	1.0 mm (0.039 in)	

## Aerospace Gun Models

Equipped with aerospace air cap, high wear electrode, and precision high wear nozzlo

Part Number	Power Supply kV	Display Type	Nozzle Size	Recommended Coating Type
L85T73	85		1.2 mm (0.047 in)	High polide and
L85T75	85	Std	1.5 mm (0.055 in)	High solids and aerospace coatings
L85T78	85		1.8 mm (0.071 in)	derospace coatings

## Fixed Fluid Flow Gun Models

Equipped with ES On-Off and Fixed Fluid Valve, which extends electrode and nozzle life. For applications with abrasive, metallic, and extremely abrasive materials. Models are also equipped with standard air cap and precision high wear nozzle.

Part Number	Power Supply kV	Display Type	Nozzle Size	Electrode	Fluid Tube
L60T98	60	Std	1.5 mm (0.055 in)	Short	Standard
L60T99	60		1.5 mm (0.055 in)	Short	High Conductivity
L85T90	85		1.5 mm (0.055 in)	High Wear	Standard
L85T96	85		1.5 mm (0.055 in)	High Wear	High Conductivity

## High Air Flow Gun Models

Equipped with ES On-Off with Air Restrictor and Fluid Adjustment Valve, which limits air flow to the turbine. For applications that require high air flow at the air cap. Models are also equipped with standard air cap, fluid tube, nozzle and electrode.

Part Number	Power Supply kV	Display Type	Nozzle Size	Recommended Coating Type
L60M57	60	Smart	1.5 mm (0.055 in)	
L60T57	60	Std	1.5 mm (0.055 in)	Standard and specialty coatings
L85M57	85	Smart	1.5 mm (0.055 in)	Standard and Specially coalings
L85T57	85	Std	1.5 mm (0.055 in)	

#### **HVLP Gun Models**

Equipped with HVLP air cap, standard fluid tube, nozzle and electrode

Part Number	Power Supply kV	Display Type	Nozzle Size	Recommended Coating Type
L40M77	40	Smart	1.5 mm (0.055 in)	
L40T77	40	Std	1.5 mm (0.055 in)	
L60M77	60	Smart	1.5 mm (0.055 in)	Standard
L60T77	60	Std	1.5 mm (0.055 in)	Standard
L85M77	85	Smart	1.5 mm (0.055 in)	
L85T77	85	Std	1.5 mm (0.055 in)	

<sup>\*\*</sup> Equipped with standard nozzle

## **Pro Xp Air Spray**

#### **Aircap Selection Chart**

Part Number (color)	Pattern Shape	Length in (cm)	Recommended Fluid Viscosity cp at 70°F (21°C)	Recommended Production Rates
24N477 (black)	Round end	15-17 (381-432)	Light to medium (20-70 cp)	Up to 15 oz/min (450 cc/min)
24W279 (green)	Round end	15-17 (381-432)	Light to medium (20-70 cp)	Up to 15 oz/min (450 cc/min)
24N438 (black)	Round end	15-17 (381-432)	Light to medium (20–70 cp)	Up to 15 oz/min (450 cc/min)
24N376 (black), 24N276 (blue) 24N277 (red), 24N278 (green)	Tapered end	17-19 (432- 483)	Light to medium (20–70 cp)	Up to 15 oz/min (450 cc/min)
24N274 (black)	Tapered end	12-14 (305-356)	Light to medium (20–70 cp)	Up to 15 oz/min (450 cc/min)

- Distance to target: 10 in (254 mm)
- Inlet air pressure: 50 psi (3.4 bar, 34 kPa)
- Fan air: adjusted for maximum width
- Fluid flow rate: 10 oz/min (300 cc/min)

#### **Specialty Pattern Air Cap Selection Chart**

Part Number (color)	Description	Pattern Shape	Length in (cm)	Recommended Fluid Viscosity cp at 70°F (21°C)	Recommended Production Rates
24N275 (black)	Aerospace	Tapered end	14-16 (356-406)	Light to heavy (20–360 cp), high solids (360+)	Up to 25 oz/min (750 cc/min)
24N279 (black)	High Solids	Round end	14-16 (356-406)	Medium to heavy (70–360 cp), high solids (360+)	Up to 15 oz/min (450 cc/min)
24N439 (black)	High Flow	Tapered end	11-13 (279-330)	Medium to heavy (70–360 cp), high solids (360+)	Up to 20 oz/min (600 cc/min)
25E670 (black)	Soft Spray	Round end	10-12 (254-305)	Light to medium (20–70 cp)	Up to 10 oz/min (300 cc/min)
25E671 (black)	HVLP	Round end	11-13 (279-330)	Light to medium (20–70 cp)	Up to 15 oz/min (450 cc/min)



**Round Spray Air Cap** 

#### Round Spray Pattern Air Cap Selection Chart

Part Number	Pattern Shape	Description	Nominal Pattern Diameter in. (mm)	Recommended Fluid Viscosity cp at 70°F (21°C)	Recommended Production Rates
25N836	Small Pattern	Dual inner and outer atomizing air design for improved atomization at low air flows	4 (102)	Light to medium (20–70 cp)	100 cc/min to 300 cc/min (3 oz/min to 10 oz/min)
25N837	Medium Pattern	Dual inner and outer atomizing air design for improved atomization at low air flows	6 (152)	Light to medium (20–70 cp)	100 cc/min to 300 cc/min (3 oz/min to 10 oz/min)
24N318	Large Pattern	Conventional round pattern design for larger patterns	8 (203)	Light to medium (20–70 cp)	100 cc/min to 300 cc/min (3 oz/min to 10 oz/min)



#### **Nozzles Selection Chart**

Color Coded Fluid Nozzle for Standard Materials

Part Number	Color	Orifice Size - mm (inch)
24N619	Black	0.55 (0.022)
24N613	Black	0.75 (0.029)
25N895	Green	1.0 (0.042)
25N896	Gray	1.2 (0.047)
24N616	Black	1.5 (0.055)
25N897	Brown	1.8 (0.070)
24N618	Black	2.0 (0.080)

## High Wear Fluid Nozzle (HW) for Abrasive Materials hardened ceramic seat, for abrasives and metallics

Part Number Orifice Size - mm (inch) Color 24N620 Blue 0.75 (0.029) 24N621 Blue 1.0 (0.042) 24N622 Blue 1.2 (0.047) 24N623 Blue 1.5 (0.055) 24N624 Blue 1.8 (0.070) 24N625 Blue 2.0 (0.080)

## Precision high wear nozzles (PHW) for Abrasive Materials

hardened SST seat and damage resistant SST tip; for standard coatings, abrasives, and metallics

Part Number	Color	Orifice Size - mm (inch)
25N831	Green	1.0 (0.042)
25N832	Gray	1.2 (0.047)
25N833	Black	1.5 (0.055)
25N834	Brown	1.8 (0.070)

#### High Wear Fluid Nozzles (color coded)







#### Precision High Wear Fluid Nozzles (color coded)









## **Electrode Selection Chart**

Part Number	Color	Description	Guidelines for Use
24N651	Gray	Standard	Electrode assembly with a flexible snap-back wire.
25N856	Gray	Short	Electrode assembly with a short snap-back wire. Extends wear life of the electrode wire in extremely abrasive materials.
24N704	Blue	High wear (HW)	Electrode assembly with a hard wire. Extends wear life of the wire with abrasive materials.
25N857	Brown	Hardened	Electrode assembly with a hardened carbide wire. Extends wear life of the wire with extremely abrasive materials.









Electrodes

## **Air Assist Gun Models**

## Air Assist Gun Models

Part Number	Power Supply kV	Recommended Coating Type	Display Type
H85T10	85	Standard	Standard
H85M10	85	Standard	Smart
H60T10	60	Standard	Standard
H60M10	60	Standard	Smart
H85T57*	85	Standard	Standard
H85M57*	85	Standard	Smart

All gun models include AEM or AEF tip of choice.

#### **AEF Fine Finish Pre-Orifice Spray Tips**

Recommended for high finish quality applications at low and medium pressures. AEF tips have a pre-orifice that assists in atomizing sheer thinning materials. Order desired tip, Part No. AEFxxx, where xxx = 3-digit number from the matrix below.

	Fluid Output fl oz/min (l/min)							
Orifice Size inch (mm)	at 600 psi			8-10 (200-250)	10-12 (250-300)	12-14 (300-350)	14-16 (350-400)	16-18 (400-450)
	(41 bar, 4.1 MPa)   (70 bar, 7.0 MPa)		Spray Tip					
0.008 (0.203)	8.5 (0.25)	11.0 (0.32)				608		
0.010 (0.254)	9.5 (0.28)	12.5 (0.37)	310	410	510	610	710	810
0.012 (0.305)	12.0 (0.35)	16.0 (0.47)	312	412	512	612	712	812
0.014 (0.356)	16.0 (0.47)	21.0 (0.62)	314	414	514	614	714	814
0.016 (0.406)	20.0 (0.59)	26.5 (0.78)	_	416	516	616	716	-

<sup>\*</sup> Tips are tested in water.

Fluid output (Q) at other pressures (P) can be calculated by this formula: Q = (0.041) (QT)  $\sqrt{P}$  where QT = fluid output (fl oz/min) at 600 psi from the above table for the selected orifice size.

#### **AEM Spray Tips**

Recommended for high finish quality applications at low and medium pressures.

Order desired tip, Part No. AEMxxx, where xxx = 3-digit number from the matrix below.

Fluid Output fl oz/min (I/min)			Maximum Pattern Width at 12 inches (305 mm) inches (mm)							
Orifice Size inch (mm)	at 600 psi (41 bar,	at 1000 psi (70 bar,	2-4 (50-100)	4-6 (100-150)	6-8 (150-200)	8-10 (200-250)	10-12 (250-300)	12-14 (300-350)	14-16 (350-400)	16-18 (400-450)
	4.1 MPa)	7.0 MPa)				Spra	y Tip			
0.007 (0.178)	4.0 (0.1)	5.2 (0.15)	107	207	307	-	-	-	-	-
0.009 (0.229)	7.0 (0.2)	9.1 (0.27)	-	209	309	409	509	609		-
0.011 (0.279)	10.0 (0.3)	13.0 (0.4)	-	211	311	411	511	611	711	-
0.013 (0.330)	13.0 (0.4)	16.9 (0.5)	_	213	313	413	513	613	713	813
0.015 (0.381)	17.0 (0.5)	22.0 (0.7)	-	215	315	415	515	615	715	815
0.017 (0.432)	22.0 (0.7)	28.5 (0.85)	-	217	317	417	517	617	717	-
0.019 (0.483)	28.0 (0.8)	36.3 (1.09)	-	_	319	419	519	619	719	-
0.021 (0.533)	35.0 (1.0)	45.4 (1.36)	-	_	_	421	521	621	721	821
0.023 (0.584)	40.0 (1.2)	51.9 (1.56)	-	_	_	423	523	623	723	823
0.025 (0.635)	50.0 (1.5)	64.8 (1.94)	-	_	_	425	525	625	725	825
0.029 (0.736)	68.0 (1.9)	88.2 (2.65)	-	-	-	_	_	_	_	829
0.031 (0.787)	78.0 (2.2)	101.1 (3.03)	_	_	-	431	_	631	_	831
0.033 (0.838)	88.0 (2.5)	114.1 (3.42)	-	-	-	-	-	-	-	833
0.037 (0.939)	108.0 (3.1)	140.0 (4.20)	_	_	-	_	_	_	737	
0.039 (0.990)	118.0 (3.4)	153.0 (4.59)	_	_	_	_	539	_	_	_

<sup>\*</sup> Tips are tested in water

Fluid output (Q) at other pressures (P) can be calculated by this formula:  $Q = (0.041) (QT) \sqrt{P}$  where QT = fluid output (fl oz/min) at 600 psi from the above table for the selected orifice size.



#### **Air Assist Round Spray Tips**

Part #24N319 — Round Spray Conversion Kit can be used to convert a standard air assist spray gun to a round spray aircap. A tip from the below chart is required.

Part Number	Size Number	Approximate FI	ow Rates for Light to Medium Vis (20–40 centipoise)*	scosity Coatings
	Mullibel	300 psi (2.1MPa, 21 bar)	600 psi (4.2 MPa, 42 bar)	1200 psi (8.4 MPa, 84 bar)
236836	4A	2.5 oz/min (73 cc/min)	4.1 oz/min (120 cc/min)	5.7 oz/min (170 cc/min)
236837	6A	2.9 oz/min (86 cc/min)	5.1 oz/min (150 cc/min)	7.4 oz/min (220 cc/min)
236838	7A	3.2 oz/min (95 cc/min)	5.4 oz/min (160 cc/min)	7.8 oz/min (230 cc/min)
236839	5B	5.4 oz/min (160 cc/min)	7.8 oz/min (230 cc/min)	11.0 oz/min (330 cc/min)
236840	7B	7.1 oz/min (210 cc/min)	9.1 oz/min (270 cc/min)	14.2 oz/min (420 cc/min)
236841	9B	8.8 oz/min (260 cc/min)	11.8 oz/min (350 cc/min)	17.9 oz/min (530 cc/min)
236842	11B	11.8 oz/min (350 cc/min)	16.2 oz/min (480 cc/min)	23.7 oz/min (700 cc/min)

<sup>\*</sup> Flows are based on white acrylic, enamel paint.

See Round Spray Kit manual 3A2499 for more information

#### Air Assist Gun Inline Fluid Filter Kits

Filter Kit Part No.	Filter Size	Quantity
238563	60 mesh (black)	3
238561	100 mesh (black)	3
224453	100 IIIesii (biack)	5
25N891	150 mesh (red)	1
25N892	130 mesn (reu)	3
25N893	200 mesh (yellow)	1
25N894	200 Illesti (yellow)	3



<sup>\*</sup> Equipped with ES on-off with air restrictor for limiting air flow to the turbine. For applications that require high air flow at the air cap.

## **Gun Model Accessories**

#### **Grounded Air Hoses (required for use)**

Length	Air Flex™	Air Flex with QD	Standard	Waterborne*
6 ft (1.8 m)	244963	_	223068	235068
15 ft (4.6 m)	244964	_	223069	235069
25 ft (7.6 m)	244965	24N736	223070	235070
36 ft (11 m)	244966	24N737	223071	235071
50 ft (15 m)	244967	24N738	223072	235072
75 ft (23 m)	244968	-	223073	235073
100 ft (30.5 m)	244969	-	223074	235074

Air Flex: EPDM rubber core and cover for extra flexibility.

Air Flex with QD: Hose includes Quick Disconnect coupling, part number 112534
Standard: Modified semi-conductive polyamide core, urethane cover for added durability.

#### **Air Hose Accessories**

Part Number	Description
24N642	Ball Swivel for gun air inlet. 1/4 npsm (left-handed thread).
112534	Air quick disconnect coupling
185493	Air Hose Adaptor. 1/4 npt (m) x 1/4 - 18 npsm (left-hand thread)
24A225	50 ft (15 m); air hose 0.375 in. (10 mm) ID; 3/8 npsm(f) x 1/4 npsm(f) left-hand thread
24A226	75 ft (23 m); air hose 0.375 in. (10 mm) ID; 3/8 npsm(f) x 1/4 npsm(f) left-hand thread
24N994	High conductivity hose. 25 ft length to replace 60 kV HC fluid tube kit.

#### **Operator Accessories**

Part Number	Description
117823	Conductive Gloves, box of 12 (small)
117824	Conductive Gloves, box of 12 (medium)
117825	Conductive Gloves, box of 12 (large)
24N603	Gun Covers. For 40 kV and 60 kV guns. Box of 10.
24N604	Gun Covers. For 85 kV guns. Box of 10.
24N758	Display Covers. Keeps Smart display clean. Package of 5.
24N520	Comfort Grip. Snap-on grip increases handle size to reduce operator fatigue. Medium size.
24N521	Comfort Grip. Snap-on grip increases handle size to reduce operator fatigue. Large size.
24P170	Metal trigger to replace standard trigger.
24P171	Four-finger Trigger Kit. To convert Pro Xp air spray guns to a four-finger trigger.

#### **Adjustment Knob Accessories**

Part Number	Description
25N919	Quick adjust fan valve with spring return
24P172	Quick Adjust Knob. For quick change of fan size
24N636	Low profile atomizing air control
26A160	ES On/Off Valve Air Restrictor for high atomizing air applications - Air Spray gun
26A294	ES On/Off Valve Air Restrictor for high atomizing air applications - Air Assist gun
24N632	ES On-Off and Fixed Fluid Valve

#### **Test Equipment**

Part Number	Description
241079	Megohmmeter. 500 V output, 0.01-2000 megohms. Use for ground continuity and gun resistance tests.
722886 722860	Paint Resistance Meter. Use for fluid resistivity test. Paint Probe. Use for fluid resistivity test. These two parts must be used together.
245277	Test Fixture. High Voltage Probe and kV meter. Use to test the electrostatic voltage of the gun and the condition of the alternator and power supply when being serviced.
24R038	Test fixture adaptor to change from Pro Xs to Pro Xp
25E919	HVLP Verification Kit. For use with HVLP air cap part #25E671

# **Technical Specifications**

## **Pro Xp Electrostatic Guns**

		Pro Xp40	Pro Xp60	Pro Xp85	Pro Xp60 AA	Pro Xp85 AA	Pro Xp WBx
Maximum Voltage Output		40 kV	60 kV	85 kV	60 kV	85 kV	40 kV
Maximum Working Fluid Pressure		100 psi (7 bar, 0.7 MPa)	100 psi (7 bar, 0.7 MPa)	100 psi (7 bar, 0.7 MPa)	3000 psi (210 bar, 21 MPa)	3000 psi (210 bar, 21 MPa)	100 psi (7 bar, 0.7 MPa)
Maximum Working Air Pressure		100 psi (7 bar, 0.7 MPa)					
Gun Weight (without hose)*		19.8 oz (560 g)	21 oz (600 g)	23.8 oz (675 g)	23 oz (660 g)	25.7 oz (728 g)	19.8 oz (560 g)
Gun Length		8.7 in (22 cm)	9.5 in (24 cm)	10.5 in (26.5 cm)	9.7 in (24.5 cm)	10.7 in (27 cm)	8.7 in (22 cm)
Recommended paint resistivity range	Standard	25 MΩ/cm to ∞	25 MΩ/cm to ∞	25 MΩ/cm to ∞	3 MΩ/cm to ∞	3 MΩ/cm to ∞	-
	High Cond.	1 to 25 MΩ/cm	1 to 25 MΩ/cm	1 to 25 MΩ/cm	-	-	-
	Waterborne	_	≤ 1 MΩ/cm	-	≤ 1 MΩ/cm	-	≤ 1 MΩ/cm
Fluid Inlet		3/8 npsm(m)	3/8 npsm(m)	3/8 npsm(m)	1/4-18 npsm(m)	1/4-18 npsm(m)	3/8 npsm(m)
Air Inlet		1/4 npsm(m) left handed thread					
Instruction Manual	Standard	3A2494	3A2494	3A2494	3A2495	3A2495	-
	Waterborne	_	3A2496	-	3A2497	-	3A4795

<sup>\*</sup>Standard gun model. For other models reference the instruction manual

#### Approvals for Pro Xp\* Guns

Approved for use in Class I, Division I locations spraying Group D Materials.

Approved for use in Group II, Category 2 locations spraying Group IIA materials.

\*Patent pending

All written and visual data contained in this document are based on the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.

Call today for product information or to request a demonstration.

877.84GRACO (1-877-844-7226) or visit us at www.graco.com/ProXp.



<sup>\*</sup>Waterborne (required for isolated waterborne applications): Conductive SST wire braid for grounding. Polyurethane tube and cover.