

Alpha Plus Spray Guns

High pressure air-assisted guns designed to effectively atomize today's materials with excellent transfer efficiency and improved ergonomics.

Stainless steel

Constructed for use with waterborne, high solids and plural component coatings

Flat Tip

For applications with additional in-line filtration

Curved Handle

Improves operator comfort and reduces fatigue

Available with HVLP Air Cap

Meets environmental regulations



Smooth Fluid Passages

Designed for easy flushing



Reverse-A-Clean Tip Design

Reduces downtime caused by frequent tip plugging

Typical Applications

- Aircraft finishing and maintenance
- Fabricated metal finishing
- Farm and construction equipment finishing
- Rail car finishing
- Truck and trailer finishing

Typical Fluids Handled

- Enamels
- High solids
- Plural component epoxies and urethanes
- Primers
- Waterborne materials

Technical Specifications

Maximum working fluid pressure	.4000 psi (280 bar, 28 MPa)
Maximum working air pressure	.100 psi (7 bar, 0.7 MPa)
Maximum compliant inbound air pressure*	.16 psi (1.1 bar, 0.1 MPa)
Maximum working fluid temperature	.120°F (49°C)
Fluid inlet	.1/4-18 npsm
Air inlet	.1/4-18 npsm (R1/4-10) compound male thread
Sound pressure at 30 psi (2.1 bar, 0.2 MPa)**	.86.2 dBA
Sound power at 30 psi (2.1 bar, 0.2 MPa)**	.90.2 dBA
Weight	.20.1 oz (570 g)
Dimensions	.6.7 in x 7.65 in (170 mm x 194 mm)
Wetted parts	.SST, carbide or engineered plastic, UHMWPE, acetal, PTFE
Instruction manual	.309117

* All readings were taken with the fan valve closed (full fan size) at 20 psi (1.4 bar, 0.1 MPa).

Sound pressure was tested to CAGI-PNUEROP-1969. Sound power was tested to ISO 3744-1981.

** All readings were taken with the fan valve closed (full fan size) at 30 psi (2.1 bar, 0.2 MPa).

Sound pressure was measured at 1 meter from the unit. Sound power was tested in accordance with ISO 9614-2.

Accessories

ALPHA

- 241812 Fluid Hose, 3/16 in ID x 25 ft (7.6 m)**
Anti-static polyurethane cover with fabric braid and nylon tubing. SST wetted parts. 1/4-18 npsm(fbe). Max. working pressure: 3500 psi (24 MPa, 242 bar).
- 115898 Fluid Swivel Connector**
Max. working pressure: 5800 psi (40 MPa, 400 bar). To ease movement of the gun and fluid hose. 1/4-18 npsm. 17-4 PH SST wetted parts.
- 241882 Accessory Air Cap**
For use with low viscosity fluids and low fluid flow rates.
- 241563 Alpha AA HVLP Air Cap**
Converts standard gun to HVLP compliancy. Requires HVLP Verification Kit.
- 241804 Tip Filter Kit**
Package of 10. 150 mesh. Comes standard with tip sizes 0.007 inch, 0.009 inch and 0.011 inch. Fits other tip sizes when tip gasket is removed (order separately).
- 238563 Gun Inlet Fluid Filter Kit**
Package of 3. 60 mesh (0.009 gap spacing) to replace the standard 100 mesh (0.005 gap) filter for coarser filtering.
- 241616 Plastic Conversion/Replacement Kit**
Converts models 241508 and 241509 to a plastic needle ball and seat. Includes needle assembly and seat assembly.
- 241617 Carbide Conversion/Replacement Kit**
Converts models 241510 and 241511 to a carbide needle ball and seat. Includes needle assembly and seat assembly.
- 241644 HVLP Verification Kit**
For use in checking air cap air pressures at various supply air pressures. **Do not use for actual spraying.** To be compliant, the atomizing air pressure must not exceed 10 psi (70 kPa, 0.7 bar).
- 241603 Plastic Needle Assembly and Seat Gasket**
- 241604 Carbide Needle Assembly and Seat Gasket**
- 241618 Plastic Seat Replacement Kit (Quantity of 5)**
- 243653 Accessory Kit—Replacement Seats**
Package of 5. Delrin®. Recommended for non-acid-catalyzed and low viscosity, non-abrasive materials.
- 241619 Gun Repair Kit**
Does not include needle assembly or seat assembly. Must be ordered separately.

ALPHA PLUS

- 239898 Alpha Plus HVLP Air Cap**
Converts standard Alpha Plus users to HVLP compliancy. To be compliant, atomizing air pressure must not exceed 10 psi (70 kPa, 0.7 bar) at the air cap. Requires 16 psi (1.1 bar, 110 kPa) maximum inlet air pressure.
- 243581 HVLP Verification Kit**
For use with 239898 air cap only, to determine air pressure behind the air cap. **Do not use for actual spraying.** To be compliant, atomizing air pressure must not exceed 10 psi (70 kPa, 0.7 bar) at the air cap.
- 243790 Reverse-A-Clean Conversion Kit**
Converts 243573 gun with standard spray tip, tip guard and air cap to 243576 gun with the Alpha Plus RAC assembly.
- 243588 Ruby Ball/Needle Kit**
For use with acid-catalyzed finishes at high pressure. Use with 243564 diffuser seat only. Not recommended for use with Alpha Plus RAC tips.
- 243585 3/32 in (2.4 mm) Carbide Needle Kit**
For replacement of needle assembly. 3/32 in (2.4 mm) carbide ball. Use with 243565 diffuser seat only.
- 243586 1/8 in (3.2 mm) Carbide Needle Kit**
For replacement of needle assembly. 1/8 in (3.2 mm) carbide ball. Use with 243566 diffuser seat only.
- 189018 Fluid Swivel Connector**
Maximum working pressure: 5800 psi (40 MPa, 400 bar). 1/4-18 npsm.
- 241619 Gun Repair Kit**
Does not include needle assembly or seat assembly. Must be ordered separately.
- 210500 In-Line Fluid Filter**
Maximum working pressure: 5000 psi (350 bar, 35 MPa). For additional filtering at the gun inlet. 100 mesh (149 micron).

ALPHA AND ALPHA PLUS

- 241811 Air Hose, 1/4 in (6 mm) x 25 ft (7.6 m)**
Polyurethane. 1/4-18 npsm(fbe). Max. working pressure: 100 psi (0.7 MPa, 7 bar).
- Air Line, Quick-Disconnect**
- 208536** Coupling, female, 1/4 npt(f)
- 169967** Stem, male, 1/4 npt(f)
- 111265 Lubricant**
One 4 oz (113 gram) tube sanitary (non-silicone) lubricant for fluid seals and wear areas.
- 101892 Brush**
For cleaning the gun
- Air Whip Hoses**
Maximum working pressure: 100 psi (7 bar, 0.7 MPa), 1/4-18 npsm, polyurethane with SST braid.
- 238759** 3 ft (0.9 m) hose
- 236873** 6 ft (1.8 m) hose

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.

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ALPHA & ALPHA PLUS

Manual Air-Assisted Guns



Excellent Transfer Efficiency
and Improved Ergonomics

Manual Air-Assisted Gun Features and Benefits

Alpha

- Tip design offers smooth and superior finish
- Excellent transfer efficiency at high production speeds
- Small, lightweight and well-balanced for operator comfort
- Stainless steel construction for acid-catalyzed and waterborne materials

Alpha Plus

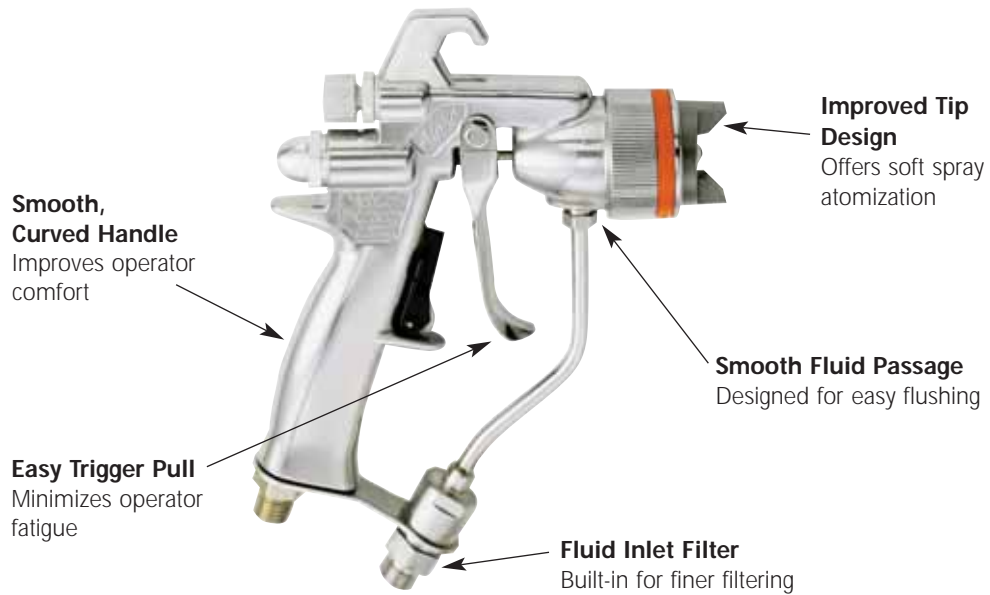
- 4000 psi (280 bar, 28 MPa) fluid pressure rating for atomizing high solid coatings
- Curved handle reduces operator fatigue
- Stainless steel passages for use with waterborne or two component coatings
- Reverse-A-Clean® (RAC) tip reduces downtime caused by frequent tip plugging

INDUSTRIAL

PROVEN QUALITY. LEADING TECHNOLOGY.

Alpha Spray Guns

An air-assisted gun designed to meet the wood customer's needs for fine finish, excellent transfer efficiency and improved ergonomics.



Typical Applications

- Custom wood finishing
- Fabricated metal finishing
- Wood furniture manufacturing and finishing

Typical Fluids Handled

- Polyurethanes
- Primers
- Stains
- Topcoat lacquers and catalyzed varnishes
- Waterborne materials

Technical Specifications

Maximum working fluid pressure	1500 psi (103 bar, 10.3 MPa)
Maximum working air pressure	100 psi (7 bar, 0.7 MPa)
Maximum compliant inbound air pressure	16 psi (1.1 bar, 0.1 MPa)
Maximum working fluid temperature	120°F (49°C)
Fluid inlet	1/4-18 npsm
Air inlet	1/4-18 npsm (R1/4-10) compound male thread
Sound pressure at 20 psi (1.4 bar, 0.14 MPa)*	63.8 dBA
Sound power at 20 psi (1.4 bar, 0.14 MPa)**	74.9 dBA
Weight	20.4 oz (578 g)
Dimensions	6.25 in x 8 in (159 mm x 203 mm)
Wetted parts	SST, carbide or engineered plastic, UHMWPE, acetal, PTFE
Instruction manual	308993

* All readings were taken with the fan valve closed (full fan size), at 20 psi (1.4 bar, 0.1 MPa).

Sound pressure was tested to CAGI-PNUEROP-1969. Sound power was tested to ISO 3744-1981.

** All readings were taken with the fan valve closed (full fan size), at 30 psi (2.1 bar, 0.2 MPa).

Sound pressure was measured at 1 meter from the unit. Sound power was tested in accordance with ISO 9614-2.

Spray Tip Selection Chart

Orifice Size in (mm)	Fan Width at 12 in (300 mm) in (mm)	Viscosity		Alpha Part No.	Alpha Plus Part No.	Alpha Plus Reverse-A-Clean Part No.
		Lt to Med* oz/min (l/min)	Heavy oz/min (l/min)			
0.007 (0.178)	2-4 (50-100)	4.0 (0.1)		—	GG4107	—
	4-6 (100-150)			GGW207**	GG4207	—
	6-8 (150-200)			GGW307**	GG4307	—
0.009 (0.229)	2-4 (50-100)	7.0 (0.2)		—	GG4109	—
	4-6 (100-150)			GGW209**	GG4209	—
	6-8 (150-200)			GGW309**	GG4309	—
	8-10 (200-250)			GGW409**	GG4409	—
	10-12 (250-300)			GGW509**	GG4509	—
0.011 (0.279)	2-4 (50-100)	10.0 (0.3)		GGW111**	GG4111	—
	4-6 (100-150)			GGW211**	GG4211	—
	6-8 (150-200)			GGW311**	GG4311	242311
	8-10 (200-250)			GGW411**	GG4411	242411
	10-12 (250-300)			GGW511**	GG4511	242511
	12-14 (300-350)			GGW611**	GG4611	—
0.013 (0.330)	4-6 (100-50)	13.0 (0.4)		GGW213	GG4213	242213
	6-8 (150-200)			GGW313	GG4313	242313
	8-10 (200-250)			GGW413	GG4413	242413
	10-12 (250-300)			GGW513	GG4513	242513
	12-14 (300-350)			GGW613	GG4613	242613
	14-16 (350-400)			GGW713	GG4713	—
0.015 (0.381)	4-6 (100-150)	17.0 (0.5)		GGW215	GG4215	242215
	6-8 (150-200)			GGW315	GG4315	242315
	8-10 (200-250)			GGW415	GG4415	242415
	10-12 (250-300)			GGW515	GG4515	242515
	12-14 (300-350)			GGW615	GG4615	242615
	14-16 (350-400)			GGW715	GG4715	—
	16-18 (400-460)			GGW815	GG4815	—
0.017 (0.432)	4-6 (100-150)	22.0 (0.7)	17.0 (0.5)	GGW217	GG4217	242217
	6-8 (150-200)			GGW317	GG4317	242317
	8-10 (200-250)			GGW417	GG4417	242417
	10-12 (250-300)			GGW517	GG4517	242517
	12-14 (300-350)			GGW617	GG4617	242617
	14-16 (350-400)			GGW717	GG4717	—
	16-18 (400-460)			GGW817	GG4817	—
	18-20 (457-508)			GGW917	GG4917	—
0.019 (0.483)	4-6 (100-150)	28.0 (0.8)	21.0 (0.6)	—	GG4219	242219
	6-8 (150-200)			GGW319	GG4319	242319
	8-10 (200-250)			GGW419	GG4419	242419
	10-12 (250-300)			GGW519	GG4519	242519
	12-14 (300-350)			GGW619	GG4619	242619
	14-16 (350-400)			GGW719	GG4719	—
	16-18 (400-460)			GGW819	GG4819	—
	18-20 (457-508)			GGW919	GG4919	—
0.021 (0.533)	4-6 (100-150)	35.0 (1.0)	27.0 (0.8)	—	—	242221
	6-8 (150-200)			—	GG4321	242321
	8-10 (200-250)			GGW421	GG4421	242421
	10-12 (250-300)			GGW521	GG4521	242521
	12-14 (300-350)			GGW621	GG4621	242621
	14-16 (350-400)			GGW721	GG4721	—
	16-18 (400-460)			GGW821	—	—
	18-20 (457-508)			GGW921	GG4921	—
0.023 (0.584)	8-10 (200-250)	40.0 (1.2)	34.0 (0.97)	—	GG4423	242423
	10-12 (250-300)			—	GG4523	—
	12-14 (300-350)			—	GG4623	242623
	14-16 (350-400)			—	GG4723	—
	18-20 (457-508)			—	GG4923	—
0.025 (0.635)	8-10 (200-250)	50.0 (1.5)	42.0 (1.2)	—	GG4425	—
	10-12 (250-300)			—	—	242525
	12-14 (300-350)			—	GG4625	242625
	14-16 (350-400)			—	GG4725	—
	16-18 (400-460)			—	GG4825	—

* Fluid output at 600 dpi (41 bar, 4.1 MPa)

** Includes a 150 mesh tip filter in housing. Order #241804 to replace tip filters (package of 10).

Spray Tip Selection Chart, continued

Orifice Size in (mm)	Fan Width at 12 in (300 mm) in (mm)	Viscosity		Alpha Part No.	Alpha Plus Part No.	Alpha Plus Reverse-A-Clean Part No.
		Lt to Med* oz/min (l/min)	Heavy oz/min (l/min)			
0.027 (0.686)	8-10 (200-250)	58.5 (1.7)	50.0 (1.4)	—	—	242427
	10-12 (250-300)			—	GG4527	—
	12-14 (300-350)			—	GG4627	—
	16-18 (400-460)			—	GG4827	—
0.029 (0.737)	10-12 (300-350)	68.0 (1.9)	59.0 (1.7)	—	—	242529
	12-14 (300-350)			—	GG4629	—
0.031 (0.787)	8-10 (200-250)	78.0 (2.2)	69.0 (2.0)	—	GG4431	—
	10-12 (250-300)			—	—	242531
	12-14 (300-350)			—	GG4631	242631
0.033 (0.838)	12-14 (300-350)	88.0 (2.5)	79.0 (2.3)	—	GG4633	—
	16-18 (400-460)			—	GG4833	—
0.035 (0.889)	8-10 (200-250)	98.0 (2.8)	89.0 (2.5)	—	GG4435	—
0.037 (0.940)	14-16 (350-400)	108.0 (3.1)	99.0 (2.8)	—	GG4737	—
0.039 (0.991)	10-12 (250-300)	118.0 (3.4)	109.0 (3.1)	—	GG4539	—
	12-14 (300-350)			—	GG4639	—
	16-18 (400-460)			—	GG4839	—
Sealer Tips						
0.025 (0.635)	—	50.0 (1.5)	42.0 (1.2)	—	GG4025	—
0.029 (0.737)	—	50.0 (1.5)	42.0 (1.2)	—	GG4029	—
0.031 (0.787)	—	50.0 (1.5)	42.0 (1.2)	—	GG4031	—
0.035 (0.889)	—	50.0 (1.5)	42.0 (1.2)	—	GG4035	—

* Fluid output at 600 psi (41 bar, 4.1 MPa).

Note for Alpha Plus RAC Spray Tips:

- Alpha Plus RAC spray tip features a one-piece plastic fluid seat
- The air separator must be removed when using the Alpha Plus RAC
- Alpha Plus RAC conversion kit is available (Part No. 243790)
- Fluid needle 243586 and diffuser seat 243566 must be used with tips larger than 0.025 in (0.64 mm)

Note for Alpha Plus Sealer Tips:

- Fluid needle (243586 and diffuser seat 243564) must be used with tips larger than 0.025 in (0.64 mm)
- Fluid output (Q) at other pressures (P) can be calculated by this formula:

$$Q = (0.041) (QT) (\sqrt{P})$$
 Where QT = fluid output (oz/min) from the above table for the selected orifice size

Ordering Information *Spray tip of choice included. Reference Tip Selection Charts above for available sizes.*

ALPHA

Carbide models recommended for pigmented, waterborne and higher-viscosity materials.

Plastic models recommended for acid-catalyzed materials and low-viscosity lacquers and stains.

Standard Alpha Spray Gun

241508 Carbide Model

Includes spray gun with carbide ball/seat, air cap, GGW tip of choice and in-line 100 mesh fluid filter.

241510 Plastic Model

Includes spray gun with plastic ball/seat, air cap, GGW tip of choice and in-line 100 mesh fluid filter.

HVLP Alpha Spray Gun

241509 Carbide Model

Includes spray gun with carbide ball/seat, HVLP air cap, GGW tip of choice and in-line 100 mesh fluid filter.

241511 Plastic Model

Includes spray gun with plastic ball/seat, HVLP air cap, GGW tip of choice and in-line 100 mesh fluid filter.

ALPHA PLUS

243573 Alpha Plus Spray Gun

Includes spray gun, standard GG4 spray tip of choice, air cap and tip guard.

243574 Alpha Plus Hi-Flow Spray Gun

Includes spray gun with the hi-flow fluid needle and diffuser-seat, standard GG4 spray tip of choice, air cap and tip guard. Recommended with tips larger than 0.025 in (0.64 mm) and other high flow applications.

243575 Alpha Plus HVLP Spray Gun

Includes standard spray gun, HVLP compliant air cap, standard GG4 spray tip of choice and tip guard. To be compliant, atomizing air pressure must not exceed 10 psi (0.7 bar, 70 kPa,) at the air cap. Requires 16 psi (1.1 bar, 110 kPa) maximum inlet air pressure.

243576 Alpha Plus Reverse-A-Clean (RAC) Spray Gun

Reduces downtime caused by frequent tip plugging. Includes spray gun with Alpha Plus Reverse-A-Clean tip of choice and air cap assembly.

243577 Alpha Plus Reverse-A-Clean (RAC) Hi-Flow Spray Gun

Recommended with tips larger than 0.025 in (0.64 mm) and other high flow applications. Includes spray gun with hi-flow fluid needle and diffuser seat, Alpha Plus Reverse-A-Clean tip of choice and air cap assembly.