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ClarkeTM



SPRAY GUN

MODEL NO: PRO12C/PRO14C/PRO18C

PART No: 3090005/3090010/3090015

OPERATION & MAINTENANCE INSTRUCTIONS



SPECIFICATIONS

PRO SPRAY GUNS

Professional spray guns with external paint mix and 1 litre syphon cup for cellulose, enamels, polyurethane, acrylics, metallics and all similar viscosity finishes

SPECIFICATIONS

	PRO-12C	PRO-14C	PRO-18C
Part No :.....	3090005	3090010	3090015
Cup Capacity :.....	1 Litre	1 Litre	1 Litre
Air Consumption :.....	8.0 CFM	8.5 CFM	9.75 CFM
Air Inlet Connector :.....	1/4" BSP	1/4" BSP	1/4" BSP
Nozzle :.....	1.2mm	1.4mm	1.8mm
Operating Pressure :.....	20 - 50 PSI	20 - 50 PSI	20 - 50 PSI
Maximum Pressure :.....	70 PSI	70 PSI	70 PSI
Fluid Connector:.....	3/8" BSP	3/8" BSP	3/8" BSP

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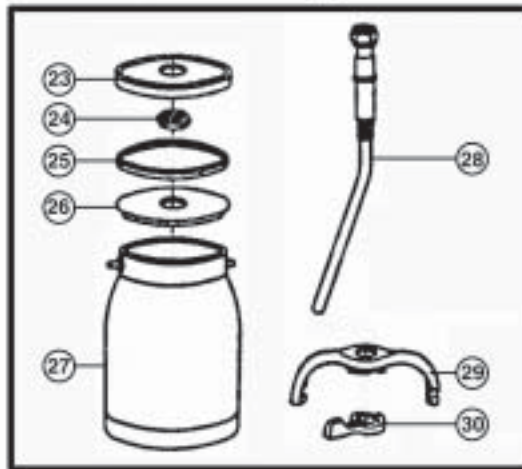
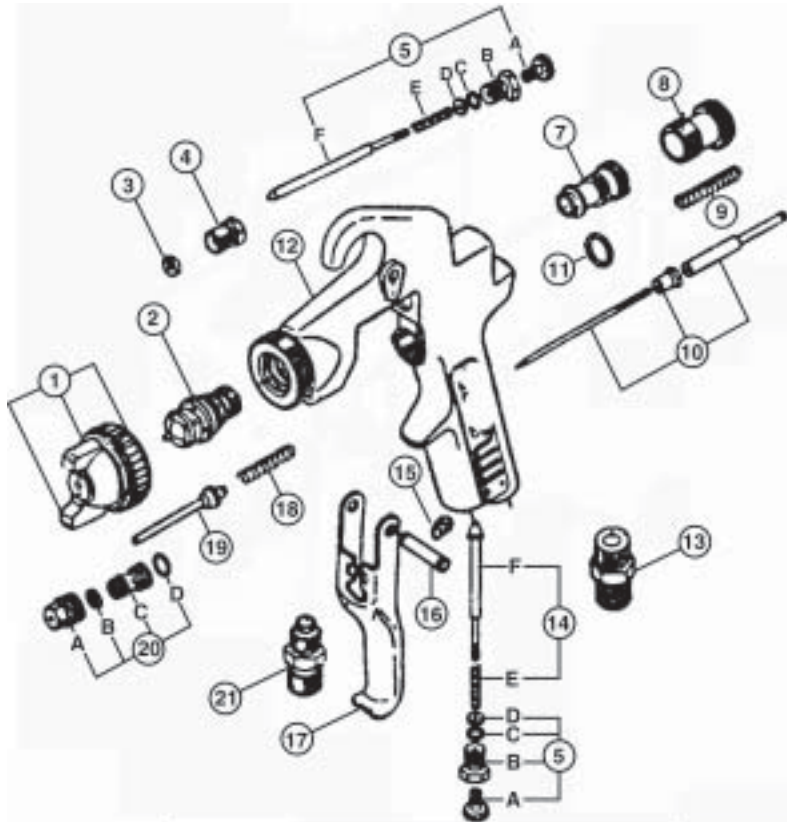
Please note that the details and specifications contained herein are correct at the time of going to print. However CLARKE International reserve the right to change specifications at any time without prior notice.

PARTS LIST

No	DESCRIPTION	PART NUMBER			Qty
		PRO12C	PRO14C	PRO18C	
1	Air Cap Set	NSPRO12C01	NSPRO14C01	NSPRO18C01	1
2	Fluid Nozzle	NSPRO12C02	NSPRO14C02	NSPRO18C02	1
3	Needle Valve Packing	NSPRO12C03	NSPRO12C03	NSPRO12C03	1
4	Valve Packing Seat	NSPRO12C04	NSPRO12C04	NSPRO12C04	1
5	Spreader Adj valve Set	NSPRO12C05	NSPRO12C05	NSPRO12C05	1
5a	Spreader Adj Knob	NSPRO12C05a	NSPRO12C05a	NSPRO12C05a	2
5b	Housing	NSPRO12C05b	NSPRO12C05b	NSPRO12C05b	2
5c	'O' Ring	NSPRO12C05c	NSPRO12C05c	NSPRO12C05c	2
5d	Brass Washer	NSPRO12C05d	NSPRO12C05d	NSPRO12C05d	2
5e	Spring	NSPRO12C05e	NSPRO12C05e	NSPRO12C05e	1
5f	Stem	NSPRO12C05f	NSPRO12C05f	NSPRO12C05f	1
7	Needle Valve Guide	NSPRO12C07	NSPRO12C07	NSPRO12C07	1
8	Fluid Adj Screw	NSPRO12C08	NSPRO12C08	NSPRO12C08	1
9	Needle Valve Spring	NSPRO12C09	NSPRO12C09	NSPRO12C09	1
10	Needle Valve	NSPRO12C10	NSPRO14C10	NSPRO18C10	1
11	'O' Ring	NSPRO12C11	NSPRO12C11	NSPRO12C11	1
12	Gun Body	NSPRO12C12	NSPRO12C12	NSPRO12C12	1
13	Inlet Connector	NSPRO12C13	NSPRO12C13	NSPRO12C13	1
14	Air Adj Valve Set	NSPRO12C14	NSPRO12C14	NSPRO12C14	1
14e	Spring	NSPRO12C14e	NSPRO12C14e	NSPRO12C14e	1
14f	Stem	NSPRO12C14f	NSPRO12C14f	NSPRO12C14f	1
15	Trigger Stopper	NSPRO12C15	NSPRO12C15	NSPRO12C15	1
16	Trigger Bearing Stud	NSPRO12C16	NSPRO12C16	NSPRO12C16	1
17	Trigger	NSPRO12C17	NSPRO12C17	NSPRO12C17	1
18	Air Valve Spring	NSPRO12C18	NSPRO12C18	NSPRO12C18	1
19	Air Valve	NSPRO12C19	NSPRO12C19	NSPRO12C19	1
20	Air Valve Set	NSPRO12C20	NSPRO12C20	NSPRO12C20	1
20a	Air Valve Packing Seat	NSPRO12C20a	NSPRO12C20a	NSPRO12C20a	1
20b	Air Valve Packing	NSPRO12C20b	NSPRO12C20b	NSPRO12C20b	1
20c	Valve Body	NSPRO12C20c	NSPRO12C20c	NSPRO12C20c	1
20d	'O' Ring	NSPRO12C20d	NSPRO12C20d	NSPRO12C20d	1
21	Fluid Joint	NSPRO12C21	NSPRO12C21	NSPRO12C21	1
23	Cup Top Assembly	NSPRO12C23	NSPRO12C23	NSPRO12C23	1
24	Nut	NSPRO12C24	NSPRO12C24	NSPRO12C24	1
25	Cup Gasket	NSPRO12C25	NSPRO12C25	NSPRO12C25	1
26	Baffle	NSPRO12C26	NSPRO12C26	NSPRO12C26	1
27	Cup	NSPRO12C27	NSPRO12C27	NSPRO12C27	1
28	Tube Assembly	NSPRO12C28	NSPRO12C28	NSPRO12C28	1
29	Yoke Assembly	NSPRO12C29	NSPRO12C29	NSPRO12C29	1
30	Lever	NSPRO12C30	NSPRO12C30	NSPRO12C30	1
#	Spanner	NSPRO12C31	NSPRO12C31	NSPRO12C31	1
#	Cleaning Brush	NSPRO12C32	NSPRO12C32	NSPRO12C32	1
#	Air Hose Joint Set	NSPRO12C33	NSPRO12C33	NSPRO12C33	1

Part not shown

PARTS DIAGRAM



SAFETY PRECAUTIONS

⚠ WARNING ⚠

Compressed air can be dangerous. Ensure that you are thoroughly familiar with all precautions relating to the use of compressors and compressed air supply.



For your personal safety and that of others around you. Follow these safety instructions carefully.

NOTE : products used in this spray gun may be covered by COSHH Regulations.

- **ALWAYS** check the manufacturer's data sheets on the products being sprayed for any particular hazards, and follow the manufacturer's instructions. Take particular care if spraying isocyanate paints.
- **ALWAYS** wear a suitable approved breathing mask when spraying, to protect against inhalation of paint spray or fumes. An air feed mask may be required when spraying some types of paint. If in doubt, check with the paint manufacturer.
- **ALWAYS** make sure there is adequate ventilation. Do not spray in confined or enclosed areas.
- **ALWAYS** disconnect the spray gun from the air supply when it is not in use, and before any disassembly.
- **ALWAYS** keep the spray nozzle in place when spraying.
- **ALWAYS** thoroughly clean the spray gun after use. See 'Maintenance'
- **NEVER** spray paint towards people or animals. In the case of injury, seek expert medical advice immediately.
- **NEVER** smoke while spraying or preparing paints, or spray near a naked flame, heat source and electric sparks. Many paints are flammable.
- **NEVER** allow children to use or play with this appliance.
- **NEVER** spray products containing halogenated hydrocarbons (such as trichloroethane or methylene chloride) with this gun as they can react chemically with aluminium or zinc to produce an explosion hazard.
- **NEVER** exceed the maximum input air pressure of 70 psi (4.8 bar).

PAINT SPRAYING HINTS Cont

To obtain best results, it is vital that the surface to be sprayed is well prepared. It must be clean, free from dust, dirt and grease. Mask any area that is not to be sprayed.

Paint Thinning

Thinning is particularly important when paint spraying. Most paints are supplied ready for brush application and need to be sufficiently diluted for spraying purposes. Always follow the paint manufacturers instructions. If in doubt, always consult the paint manufacturer.

A Viscous Cup (not supplied), will assist in determining the correct thickness of the paint. Ensure the paint is free from lumps or other matter, if necessary strain it through a coarse filter.

The ideal viscosity for most paints is given in the chart opposite.

Dip the cup into the paint and fill to the brim. Time how long it takes for the cup to empty.



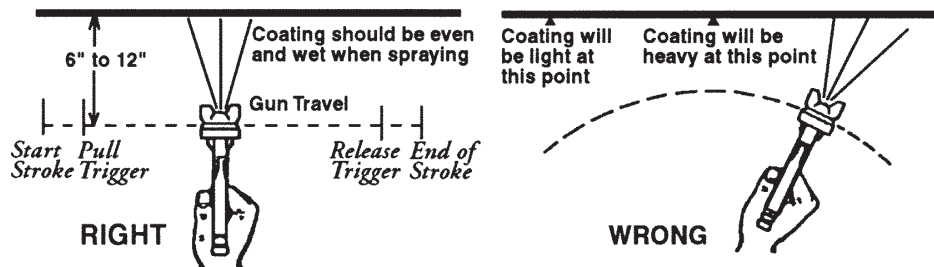
Water based paints	35 - 45 secs
Oil based paints	15 - 25 secs
Enamel paints	15 - 25 secs
Primers	20 - 30 secs
Varnishes	20 - 25 secs
Aluminium paints	15 - 25 secs
Wood preservatives	Do Not Dilute
Wood Stains	Do Not Dilute
Smooth Masonry paint....	dilute by 5 - 10%

Thin as required until times are achieved

Alternatively if a viscous cup is not available, the following information can be used as a rough guide.

Water based paints (emulsions) 10-20% water.
 Oil based paints (gloss) up to 10% thinners.
 Cellulose paints up to 50 % cellulose thinners.

IF IN ANY DOUBT, CONTACT THE PAINT MANUFACTURER



USING THE SPRAYGUN

Pro-Gun spray guns are fed with paint by a siphon (or suction) effect from the paint cup. The air flow through the air cap draws paint up the feed tube, into the nozzle assembly, where it is atomised and sprayed forward.

Mix the paint to the correct viscosity for spraying according to the manufacturers instructions, and strain it into the paint cup through a fine mesh filter. When mixing the paint, make sure that you have enough thinners left to clean the spray gun after use.

Do not fill the paint cup to more than 3/4 full. Make sure that the top edge of the cup and the cup sealing gasket are clean and free from damage before mounting the cup on the gun. The cup locking lever must be tightened firmly to prevent any leaks from around the cup rim.

Set the spray pattern and fluid flow using the adjustment screws on the spray gun. The spray pattern is variable between round and fan by adjusting the air flow through the air cap. Turn the fan control screw anticlockwise to increase flow and give a fan shaped spray pattern, turning clockwise to close off the air flow will give a circular pattern. The fan can be adjusted vertically or horizontally to suit your requirements by loosening the knurled locking ring and turning the wings to the desired position. Set the fluid flow according to the paint in use and the spray pattern by using the fluid control screw; anticlockwise to increase, and clockwise to reduce flow. As the width of the spray is increased, fluid flow will also need to be increased.

The air pressure needed will vary according to the paint in use, with thicker paints needing greater pressure. For most paints, a pressure of between 1.5 and 4.2 bar (approximately 22 - 60 psi) is adequate.

To reduce overspray and to obtain maximum transfer efficiency, always use the lowest possible air inlet pressure that produces an acceptable spray pattern.

The first requirement for a good resultant finish is the proper handling of the gun. The gun should be perpendicular to the surface being covered and moved parallel with it. The stroke should be started before the trigger is pulled and likewise released before the stroke is ended. This gives accurate control of the gun and material.

The distance between the gun and the surface to be covered should be 6 to 12 inches depending on the material and atomising pressure. The material deposited should always be even and wet. Lap each stroke over the preceding stroke to obtain a uniform finish.

NOTE: To reduce overspray and obtain maximum efficiency, always spray with the lowest possible atomising air pressure.

Damage to the fluid needle or nozzle, or any of the air ports, will result in a faulty spray pattern. Take care when cleaning or assembling these components.

When spraying, the gun should be held square to the surface being painted, at a distance of 6 to 12 inches depending on the paint and atomising pressure. Keep the gun parallel to the surface being sprayed, starting the stroke before pulling the trigger, and releasing the trigger before ending the stroke. Overlap each stroke over the preceding stroke to obtain an even finish. The paint cover should be even and wet when spraying.

If the gun is too far from the surface, or the paint is too thin, the paint will dry before hitting the work, resulting in a rough, sandy finish. Allowing overspray to fall on a finished area will also result in a rough finish. Too much paint feed or holding the gun too close to the work will lead to runs and sagging.

MAINTENANCE

WARNING

Disconnect the spray gun from the air supply, and relieve any pressure in the gun and hose, before any disassembly.

It is essential that the spray gun is kept clean. Dried paint in the nozzle assembly or airways will stop the gun from working. For the gun to perform at its best it must be cleaned and lubricated after every use.

After use, empty any remaining paint from the paint cup, wipe the cup clean with a dry, lint free rag, and fill with thinners. Spray the thinners through the spray gun until it is clean.

1. Immerse only the front end of the gun until solvent just covers the fluid connection.
NOTE : do not submerge the entire spray gun in solvent because :
 - a, the lubricant in the leather packings will dissolve and the packings will dry out.
 - b, the lubricant at wear surfaces will dissolve resulting in harder operation and premature wear.
 - c, residue from dirty solvent may clog the narrow air passages in the gun.
2. Use a small bristle brush and solvent to wash off accumulated paint.
3. Wipe down the outside of the gun with solvent dampened cloth.
4. Lubricate gun daily, using a light machine oil on :
 - a, fluid needle packing
 - b, air valve packing
 - c, side port control packing
 - d, trigger pivot point

Coat the fluid control spring with vaseline.

CAUTION : never use silicon based lubricants as this may cause paint finish defects.

DO NOT poke any of the holes in the air cap or nozzle with metal instruments. These holes are precision drilled, and can be damaged by probing with anything harder than a wooden toothpick.

Make sure that the air inlet vent to the paint cup is kept clean. Blockages in this vent will prevent an even material flow to the gun.

Do not mix components from spray guns, even those of the same type. Do not overtighten components, and be careful not to cross thread any parts on assembly.

Check the air supply hose regularly for any signs of damage, and replace it if necessary. Do not use damaged or leaking hoses.

PAINT SPRAYING HINTS

WARNING

*NEVER attempt to spray unless you are wearing suitable, approved respiratory and eye protection.
REMEMBER that some modern paints require specialist respiratory protection...always consult the paint manufacturers instructions.*

1. General Preparation

- a. Ensure that the area in which you will be spraying is clean and dust free.
- b. Connect spray gun to compressor via suitable flexible hose.
- c. With no paint in spray gun, test system for air leaks.
- d. Cover adjacent pieces of equipment to prevent overspray. Mask areas of the article not to be sprayed.
- e. Ensure surface to be painted is clean, dry and free from oil and dust. Check paint manufacturer's instructions for any special surface preparation required.

REMEMBER - TIME SPENT PREPARING SAVES TIME SPENT FINISHING

2. Paint Preparation

- a. Achieve the correct paint viscosity. This should be done according to paint manufacturer's instructions, and will vary according to type of paint, (see paint thinning on page 9).
- b. Having mixed the paint thoroughly in a separate container, pour into the spray gun paint container through a fine filter.
DO NOT OVERFILL SPRAY GUN PAINT CONTAINER - three quarters full is maximum
- c. It is usually best to experiment with a couple of practice spray coats on a piece of material with the same type of surface as the article you wish to spray, eg. metal for a car body panel, wood for a piece of furniture etc.
- d. Some common problems:

PROBLEM	CAUSE	CORRECTION
Paint does not atomise (comes out in blobs).	Paint is too thick. Air pressure is too low.	Add thinners. Increase air pressure.
Paint dries before hitting surface, leaving it dry with a rough texture.	Paint is too thin. Air pressure is too high.	Add more paint. Reduce air pressure.
Finish is pitted like Orange peel.	Air pressure too high or spray too close to work.	Reduce air pressure, increase distance between gun and work.