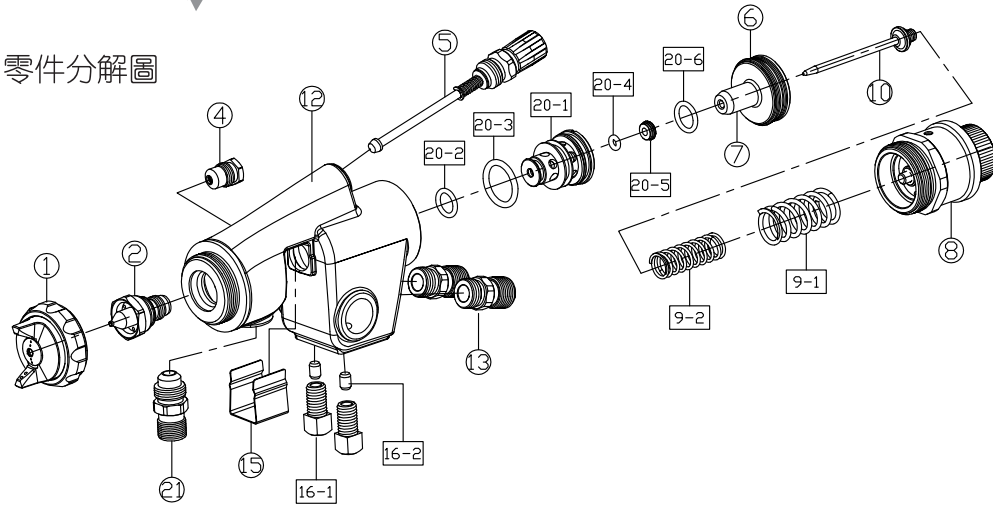


RA(L)-130/230 自動噴槍

使用說明書

零件分解圖

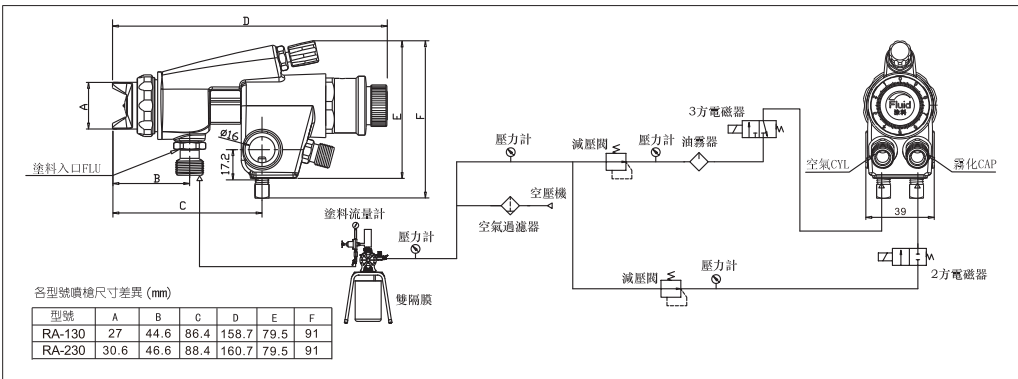


序號	名稱	數量
1	噴蓋組	1
2	噴嘴	1
4	頂針迫緊螺帽組	1
5	噴調組	1
6	頂針導座迫緊	1
7	頂針導座	1
8	塗料旋鈕導座組	1
9-1	頂針彈簧1	1

序號	名稱	數量
9-2	頂針彈簧2	1
10	頂針組	1
12	本體	1
13	空氣接頭	2
15	防護蓋	1
16-1	固定螺絲	2
16-2	固定螺絲壓塊	2
20-1	空氣閥座	1

序號	名稱	數量
20-2	O型環 (P9)	1
20-3	O型環 (P16)	1
20-4	O型環 (P3)	1
20-5	迫緊壓塊	1
20-6	O型環 (P10)	1
21	塗料接頭	1

使用連接圖



使用前請先認真閱讀以下操作說明

本自動噴槍只可當做風動工具使用，不可以移作它用，以免危害到操作人員或其他在場人員的人身安全。

空氣過濾器及空氣調壓閥在系統中的連接請參考左頁下圖。使用前請檢查各連接管是否有磨損或者其他的損壞，及時更換磨損的接管或配件后再繼續使用。連接空氣霧化管到空氣霧化接頭處 (CAP)，連接空氣管到空氣接頭處 (CYL)，連接塗料管到塗料接頭處 (FLU)。閥門內的兩通或三通電磁閥最少為Φ4毫米 (0.157英寸)。操作空氣軟管應該保持在10米內，其半徑不小於6毫米 (0.236英寸)，以免延遲運作或造成其他的失敗操作。調節操作壓力3-4巴 (43-57psi)。通常調節RA-130/230霧化或空氣壓力2.2-2.7巴 (31-38psi)。

推薦RA-130噴塗距離為15-20公分 (5.9-7.9英寸)，RA-230噴塗距離為20-25公分 (7.9-9.8英寸)。

推薦塗料的粘度為15-23秒/福特#4，根據塗料的性質和噴塗條件的變化而變化。塗料在使用前應該先用60-90目過濾網過濾。

安全

1. 未接受訓練之人員，不可操作噴槍。
2. 不可將噴槍朝自己或他人。溶劑會對人的眼睛及皮膚造成傷害。
3. 若要修理噴槍時，請事先將空氣塗料關閉。
4. 當您在進行噴塗工作時，絕不可點火或抽煙。

維修

1. 每一次使用畢，請務必將噴槍加以清洗，但請勿將整支噴槍浸在稀釋劑或溶劑中。
2. 請勿使噴蓋組、噴嘴及頂針受到損傷。噴蓋組及噴嘴之洞孔，不可使用金屬器物清洗。
3. 可使用沾有稀釋劑之刷子清洗噴嘴組、噴蓋組及其他零件。
4. 請用稀釋劑噴洗噴槍通道內的塗料。
5. 重新組裝噴槍前將零件清洗乾淨。
6. 不可將頂針迫緊螺帽轉到底，否則頂針@會不能移動。只需將它轉至不會滴漏塗料即可。
7. 若將塗料旋鈕@，依逆時針方向轉得太松，會減弱頂針彈簧的彈性，如此會造成噴嘴前滴漏塗料。

型式	塗料供給方式	塗料噴嘴口徑 Ø mm(in)	使用空氣噴蓋型式	空氣壓力 kg/cm <sup>2</sup> (Mpa)	空氣使用量		塗料噴出量		噴幅大小±20	重量 g(lbs)
					l/min	ml/min	mm(in)	mm(in)		
RA-130-P08(W)	壓送	0.8(0.031)	E2P	2.5-3.0 (0.24-0.29)	270	150	190(7.48)	518 (1.14)		
RA-130-P10(W)		1.0(0.039)	E2P		270	200	220(8.66)			
RA-130-P10(W)		1.0(0.039)	E1		90	100	140(5.51)			
RA-130-P13(W)		1.3(0.051)	H2		260	250	230(9.06)			
RA-130-P15(W)		1.5(0.059)	H2		260	270	245(9.65)			
RA-130-P18(W)		1.8(0.070)	N2		190	310	230(9.06)			
RA-130R-P05(W)		0.5(0.020)	G5R		40	85	35(1.57)			
RA-230-P12(W)		1.2(0.047)	O2P		530	500	400(15.75)			
RA-230-P15(W)		1.5(0.059)	K2		270	560 (1.23)				
RA-230-P18(W)		1.8(0.070)			330		340(13.39)			
RA-230-P20(W)	2.0(0.079)	360		320(12.60)						
RA-230-P25(W)	2.5(0.098)	500		330(13.00)						
RA-230-20ZP(W)	2.0(0.079)	R2	500	760	370(14.57)					
RA-230-25ZP(W)	2.5(0.098)									
RAL-130-P08(W)	壓送	0.8(0.031)	E1	2.0-3.0 (0.2-0.29)	430	140	200(7.87)	508 (1.12)		
RAL-130-P10(W)		1.0(0.039)			150					
RAL-130-P12(W)		1.2(0.047)			530	350			270(10.62)	
RAL-230-P08(W)		0.8(0.031)			530	300(10.81)				
RAL-230-P10(W)	1.0(0.039)									
RAL-230-P12(W)	1.2(0.047)	500	500							

RA/RAL-130 吹付距離200mm (7.87in)，塗料粘度20±1秒/RV-2，壓送的塗料壓力為0.8kg/cm<sup>2</sup>，塗料入口、空氣入口及CYL入口為1/4PF。  
RA-230 吹付距離250mm (9.84in)，塗料粘度20±1秒/RV-2，壓送的塗料壓力為0.8kg/cm<sup>2</sup>，塗料入口3/8PF，空氣入口及CYL入口為1/4PF。  
RAL-230 吹付距離200mm (7.87in)，塗料粘度20±1秒/RV-2，壓送的塗料壓力為0.8kg/cm<sup>2</sup>，塗料入口3/8PF，空氣入口及CYL入口為1/4PF。

問題排除

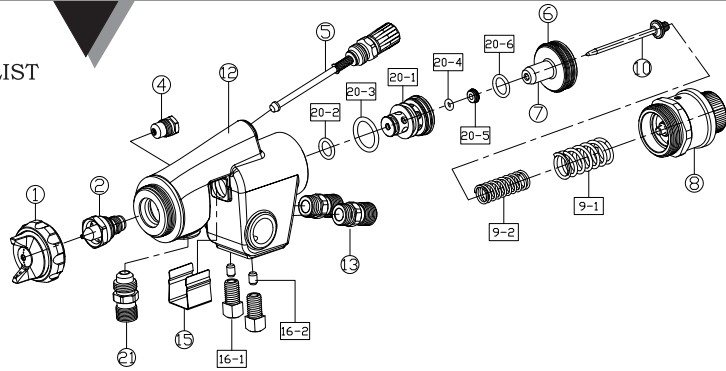
欠妥的噴形	原因	排除方法
塗料時有時無	a. 漆杯內塗料太少 b. 頂針迫緊螺帽或磨損 c. 噴嘴鬆馳或損壞	a. 添加塗料 b. 潤滑或更換頂針迫緊 c. 鎖緊或更換噴嘴
噴面呈新月形	a. 塗料積存在噴蓋上	a. 用適當物品清洗噴蓋上阻塞的空氣孔，但絕不可用金屬物品清洗
噴面一邊較重	a. 塗料積存在噴蓋上 b. 噴嘴翹曲或損壞	a. 清洗或更換噴蓋 b. 清洗或更換噴嘴
噴面分離	a. 塗料太稀或不足 b. 空氣壓力太高	a. 增加塗料粘度 b. 降低空氣壓力
噴面中間較重	a. 塗料太濃或太多 b. 空氣壓力太低	a. 降低塗料粘度 b. 增加空氣壓力
塗料自噴嘴流出	a. 噴嘴或頂針附著異物 b. 噴嘴或頂針磨損	a. 用溶劑清洗頂針或噴嘴 b. 更換零件
塗料自頂針迫緊螺帽流出	a. 頂針迫緊螺帽鬆馳 b. 頂針迫緊螺帽或損壞	a. 鎖緊頂針迫緊螺帽但要讓頂針能滑動 b. 潤滑或更換零件

### RA(L)-130/230

### AUTOMATIC SPRAY GUN

### OPERATING INSTRUCTIONS

#### PARTS LIST



No.	Description	Q' ty
1	Air cap set	1
2	Fluid nozzle	1
4	Fluid needle packing screw set	1
5	Pattern adjusting set	1
6	Fluid needle guide packing	1
7	Fluid needle guide	1
8	Fluid adjusting knob guide set	1
9-1	Needle spring 1	1

No.	Description	Q' ty
9-2	Needle spring 2	1
10	Fluid needle set	1
12	Gun body	1
13	Air connector	2
15	Protective cover	1
16-1	Fixed bolt	2
16-2	Fixed bolt holder	2

No.	Description	Q' ty
20-1	Air valve seat	1
20-2	O ring (P9)	1
20-3	O ring (P16)	1
20-4	O ring (P3)	1
20-5	Packing holder	1
20-6	O ring (P10)	1
21	Fluid connector	1

Prior to operation read the operating instructions carefully.

#### OPERATION

Connect atomizing air hose to atomizing air connector (CAP marked) and operating air hose to operating air connector (CYL marked) tightly. Connect fluid hose to fluid connector tightly.

Valve orifice inside three-way solenoid valve should be minimum  $\Phi 4\text{mm}$  (0.157 in) and the operating hose should be within 10 m (32.8 ft) and the inside diameter must be not less than 6mm (0.236 in) to avoid delayed operation and any failure.

The recommended operating air pressure is 3-4 bar (43-57 psi) with RA-130/230 and RAL-130/230. When pattern adjusting set is fully opened, atomizing air pressure to pull the gun piston is recommended to adjust 3-4 bar (43-57 psi) with RA-130/230, and adjust 2.7 bar (38 psi) with RAL-130, 2.0 bar (29 psi) with RAL-230. So the gun will atomize at 0.7 bar (10 psi) inside air cap. The recommended spray distance to object is 15-20 cm (5.9-7.9 in) with RA-130; 10-20 cm (3.9-7.9 in) with RAL-130. And 20-25 cm (7.9-9.8 in) with RA-230; 10-20 cm (3.9-7.9 in) with RAL-130/230.

Beyond the recommended spray distance may fail to obtain good finishing.

Material viscosity 15-23 seconds/Ford#4 is recommended.

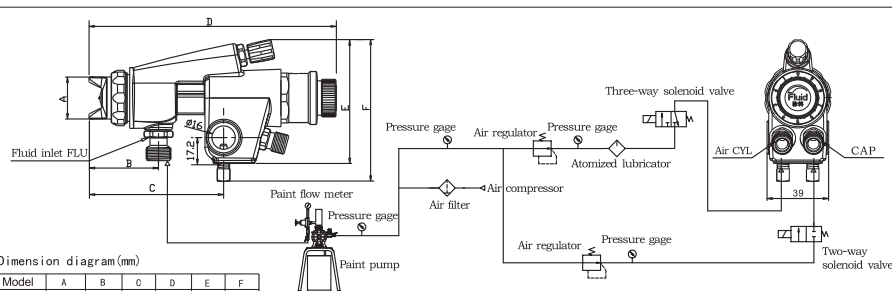
It varies according to material property and spraying conditions. Material should be filtered through 60-90 mesh filter before use.

Whenever possible there should be air filters and air regulators in the system as diagram. Replace any worn items before continuing to operate. The AUTOMATIC SPRAY GUN has been designed as an AIR OPERATED TOOL, and in the interests of safety must only be used for the purpose for which it has been designed. The tool should in no account be used for any other purpose for whatever reason, this could result in danger to the operator and those within the immediate working area.

Ensure the material and air supply are disconnected before effecting any work on the Automatic Spray Gun.

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Model	A	B	C	D	E	F
RA-130	27	44.6	86.4	158.7	79.5	91
RA-230	30.6	46.8	88.4	160.7	79.5	91

#### SERVICING

- Clean air cap set, fluid nozzle and fluid needle with brush after each operation.
- Do not submerge complete automatic spray gun in solvents.
- Do not damage holes of air cap set and fluid nozzle.
- Flush the gun material passage with a compatible solvent.
- Ensure the material and air supply are disconnected before effecting any work on the Automatic Spray Gun.

#### PERSONAL PROTECTIVE EQUIPMENT

The use of breathing mask is recommended at all times when spraying. The noise level may exceed 85 dB (A) when the spray gun is being used, a sound absorber protection is also recommended. Always wear goggles and gloves

#### SAFETY

Never allow untrained or unauthorized persons to operate this automatic spray gun. Never exceed the recommended air pressure. Never use matches, smoke or operate a spray gun in the vicinity of a naked flame. Do not spray food or chemicals through the automatic spray gun. Use only original spare parts. Do not use the following solvents: 1,1,1-Trichloroethane and Methylene Chloride. These solvents can chemically react with aluminium used in automatic spray guns possibly causing an explosion. Do not use these solvents for equipment cleaning or flushing. Automatic spray gun should never be stored in acid laden cleaners. If in doubt consult the material supplier.

Model	Type of Feed	Fluid Nozzle Orifice		Air Cap	Air Pressure kg/cm <sup>2</sup> (Mpa)	Air Consumption l/min	Fluid Output		Pattern Width $\pm 20$ mm(in)	Weight g(lbs)
		$\Phi$ mm(in)					ml/min			
RA-130-P08(W)	Pressure	0.8(0.031)		E2P	2.5-3.0 (0.24-0.29)	270	150	190(7.48)	518 (1.14)	
RA-130-P10(W)		1.0(0.039)		E2P		270	200	220(8.66)		
RA-130-P13(W)		1.0(0.039)		E1		90	100	140(5.51)		
RA-130-P15(W)		1.3(0.051)		H2		260	250	230(9.06)		
RA-130-P18(W)		1.5(0.059)		H2		260	270	245(9.65)		
RA-130R-P05(W)		1.8(0.070)		N2		190	310	230(9.06)		
RA-230-P12(W)	Pressure	0.5(0.020)		O5R	2.5-3.0 (0.24-0.29)	40	85	35(1.57)	560 (1.23)	
RA-230-P15(W)		1.2(0.047)		G2P		530	500	400(15.75)		
RA-230-P18(W)		1.5(0.059)		K2		330	270	340(13.39)		
RA-230-P20(W)		1.8(0.070)				330	330	320(12.60)		
RA-230-P25(W)		2.0(0.079)		R2		360	400	330(13.00)		
RA-230-20ZP(W)		2.5(0.098)		W2		500	760	370(14.57)		
RAL-130-P08(W)	Pressure	0.8(0.031)		E1	2.0-3.0 (0.2-0.29)	430	140	200(7.87)	508 (1.12)	
RAL-130-P10(W)		1.0(0.039)				430	150	200(7.87)		
RAL-130-P12(W)		1.2(0.047)				530	350	270(10.62)		
RAL-230-P08(W)		0.8(0.031)				530	400	300(10.81)		
RAL-230-P10(W)		1.0(0.039)				500	500	300(10.81)		
RAL-230-P12(W)		1.2(0.047)				R1Z	500	760		370(14.57)

RA/RAL-130 Spray Distance: 200mm (7.87in). Fluid Viscosity:  $20 \pm 1$  seconds/RV-2. Coating Pressure:  $0.8\text{kg/cm}^2$ . Fluid, Air and CYL Intake: 1/4 PF/NPF.

RA-230 Spray Distance: 250mm (9.84in). Fluid Viscosity:  $20 \pm 1$  seconds/RV-2. Coating Pressure:  $0.8\text{kg/cm}^2$ . Fluid Intake: 3/8 PF/NPF, Air and CYL Intake: 1/4 PF/NPF.

RAL-230 Spray Distance: 250mm (9.84in). Fluid Viscosity:  $20 \pm 1$  seconds/RV-2. Coating Pressure:  $0.8\text{kg/cm}^2$ . Fluid Intake: 3/8 PF/NPF, Air and CYL Intake: 1/4 PF/NPF.

RAL-230 Spray Distance: 250mm (9.84in). Fluid Viscosity:  $20 \pm 1$  seconds/RV-2. Coating Pressure:  $0.8\text{kg/cm}^2$ . Fluid Intake: 3/8 PF/NPF, Air and CYL Intake: 1/4 PF/NPF.

#### TROUBLE - SHOOTING

TROUBLE	CAUSE	SOLUTION
Fluttering	a. Insufficient material in cup. b. Dry or worn fluid needle packing set or loose fluid needle packing screw. c. Loose or damaged fluid nozzle.	a. Refill material. b. Lubricate or replace fluid needle packing set or tighten fluid needle packing screw. c. Tighten or replace fluid nozzle.
Crescent	a. Material store-up on air cap.	a. Clean air cap with proper objects. b. Clogged air holes must not be cleaned with metal objects.
Heavy top or bottom	a. Material store-up on air cap. b. Dirty or damaged fluid nozzle.	a. Clean or replace air cap. b. Clean or replace fluid nozzle.
Split	a. Material too thin or not enough. b. Atomizing air pressure too high.	a. Increase material viscosity. b. Reduce air pressure.
Heavy center	a. Material too thick or too much. b. Atomizing air pressure too low.	a. Reduce material viscosity. b. Increase air pressure.
Material drips from fluid nozzle	a. Obstructions between fluid nozzle and fluid needle. b. Worn fluid nozzle or needle.	a. Clean fluid needle and fluid nozzle in thinner. b. Replace parts.
Material leaks from needle packing screw	a. Loose fluid needle packing screw. b. Dry or worn fluid needle packing.	a. Tighten fluid needle packing screw, check fluid needle for free movement. b. Lubricate or replace needle packing.