

AIRSPRAY GUN

M22

TECHNICAL FEATURES

ORIGINAL MANUAL

IMPORTANT : before assembly and start-up, Please read and clearly understand all documents relating to this equipment (professional use only).

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1. M 22 BASIK

1.1. Description

Robust, multi-purpose gun for intensive works.

There are 3 versions of the M22 BasiK gun : gravity, suction and pressure.

1.2. Technical features

FEATURES	M 22 G BasiK (BA 5 aircap)	M 22 A BasiK (BA 2 aircap)	M 22 P BasiK (BA 3 aircap)
Version	HPA gravity gun	HPA suction gun	HPA pressure gun
Air supply maximum pressure (network)	6 bar / 87 psi		
Air pressure at the gun handle	From 2 to 4 bar / from 29 to 58 psi		
Air flow rate (m ³ /h) (at 3 bar)	28 m ³ /h / 16.5 c.f.m	24 m ³ /h / 14.1 c.f.m	30 m ³ /h – 17.7 c.f.m
Fluid supply maximum pressure	Gravity cup (0.6 l)	SM 6 suction cup (1 l)	Maximum 6 bar / 87 psi
Weight	690 g / 1.5 lb	1000 g / 2.2 lb	530 g / 1.1 lb
Transfer rate (EN 13966-1 Standard) (α)	65 % ± 2	62 % ± 2	63 % ± 2
Wetted parts	Stainless steel	Stainless steel	Stainless steel
Nozzle / Needle	Stainless steel / Treated stainless steel		
Cup	Poyacetale	aluminium	-
Fluid maximum temperature	50°C / 122° F		

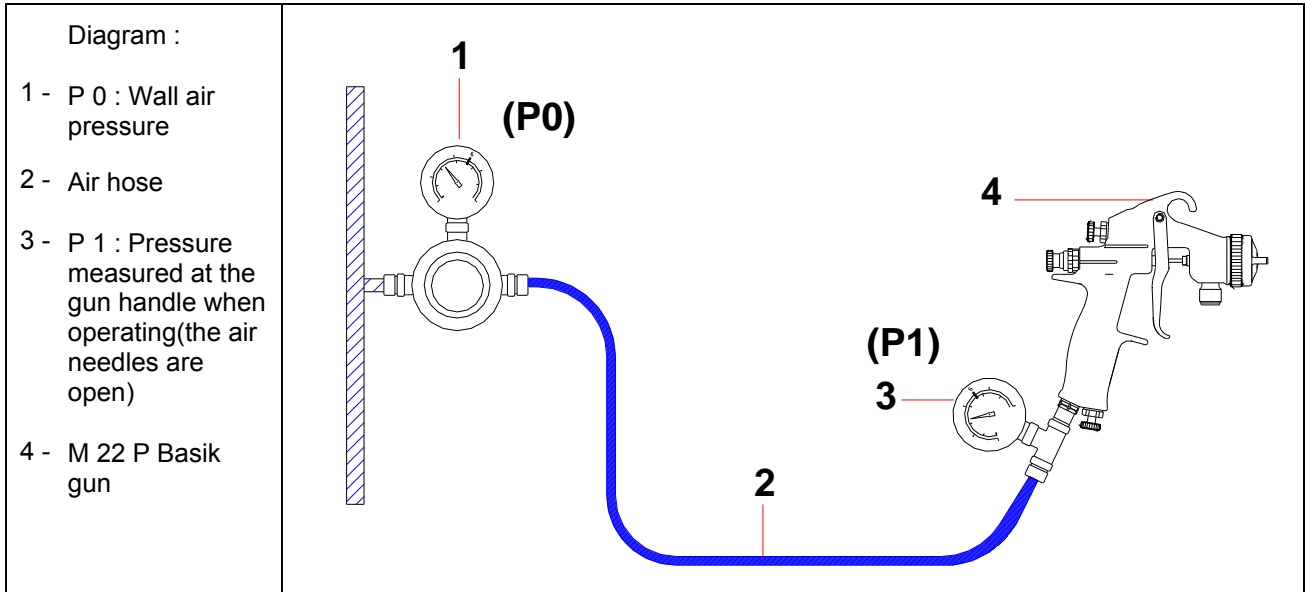
(α) : Paint viscosity : 20 s CA n° 4 - 20°C / Gun aircap distance - surface to be painted : 20 cm / 8"

■ AIR AND FLUID CONNECTIONS

Gun	Fluid	Air
M 22 G BasiK	Poyacetale gravity cup (0.6 liter / 0.16 US gal) (white colour) for water based or solvented paints	Gun fitting : M 1/4 NPS (+ fitting, model double male 1/4 BSP not mounted) ⇒ Air hose (non static quality) minimum 7 mm / 1/4" ID (for a 7.5 m / 25 ft length)
M 22 A BasiK	Gun fitting : M 3/8 NPS + SM6 suction cup (1 liter, aluminium)	
M 22 P BasiK	Gun fitting : M 3/8 NPS ⇒ Fluid hose : minimum 7 mm / 1/4" ID (for a 7.5 m / 25 ft length)	

▪ **PRESSURE AND AIR CONSUMPTION OF THE GUNS**

Adjustment of the air pressure with or without gauge at the gun handle



M 22 G Basik gun + BA 5 aircap + hose, model 7 mm / 1/4" ID, 7.5 m / 25 ft length	M 22 P Basik gun + BA 3 aircap + hose, model 7 mm / 1/4" ID, 7.5 m / 25 ft length
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P 0 wall pressure		P 1 handle pressure		P 0 wall pressure		P 1 handle pressure	
(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	(bar)	(psi)
3,2	46	2	29	3,2	46	2	29
3,8	55	2,5	36	4	58	2,5	36
4,5	65	3	43,5	4,5	65	3	43,5
5	72	3,5	50	5	73	3,5	50
5,5	79.8	4	58	5,5	79.8	4	58

Gravity gun : M 22 G BASIK with 18 BA 5 projector

Air pressure (P1)		Air flow rate		Paint flow rate (1)		Fan width (1)	
bar	PSI	m3/h	CFM	g/mn	oz/mn	cm	"
3	43.5	28	16.5	280	9.9	31	12.2

Suction gun : M 22 A Basik with 15 BA 2 projector

Air pressure (P1)		Air flow rate		Paint flow rate (1)		Fan width (1)	
bar	PSI	m3/h	CFM	g/mn	oz/mn	cm	"
3	43.5	24	14.1	220	7.8	24,5	9.6

Pressure gun : M 22 P Basik with 9 BA 3 projector

Air pressure (P1)		Air flow rate		Paint flow rate (1)		Fan width (1)	
bar	PSI	m3/h	CFM	g/mn	oz/mn	cm	"
3	43.5	30	16.7	250	8.8	31	12.2

(1) Paint viscosity : 20 s CA n° 4 (= 40 centipoises)

Gun aircap distance - surface to be painted : 20 cm / 8"

2. M 22 HTi – HPA (A & P)

2.1. Description

Guns recommended to spray varnishes, lacquers, shades, polyurethanes, two components...

The HTi guns are pneumatic guns with a high transfer efficiency. Two projectors, models EP 3 and E 3 KHVLP can be fitted on the same gun.

The guns, model HPA, with high spraying quality, enable to spray any kind of materials (low or high viscosity). Two projectors, models EN 2 (for M 22, suction version) and EN 3 (for M 22, pressure version) can be fitted on the same on the gun.

2.2. Technical features

FEATURES	HTi		HPA	
	+ E 3 KHVLP aircap	+ EP 3 aircap	+ EN 3 aircap	+ EN 2 aircap
Version	pressure	pressure	pressure	suction
Maximum air supply pressure (network)	6 bar / 87 psi			
Air pressure at the gun handle	From 1,5 to 2,5 bar / from 22 to 36 psi	From 1,5 to 2,5 bar / from 22 to 36 psi	From 2,5 to 3,5 bar / from 36 to 50.7 psi	From 2,5 to 3,5 bar / from 36 to 50.7 psi
Air flow (m3/h)	From 23 to 33	From 20,2 to 29	From 28 to 36,1	From 23 to 29,7
Fluid supply maximum pressure	6 bar /87 psi	6 bar /87 psi	6 bar /87 psi	SM 6 cup (1 liter)
Weight	530 g / 1.17 lb			
Shades and hydro or solvent based varnishes				
- low viscosity	***	**	***	***
- middle viscosity	***	***	***	***
- high viscosity	**	**	***	***
Transfer rate (EN 13966-1 standard)	74 % ± 2 %	72 % ± 2 %		
Maximum fluid temperature	50°C / 120° F			
Nozzle, needle, fluid passage	Stainless steel			
Needle	Treated stainless steel			

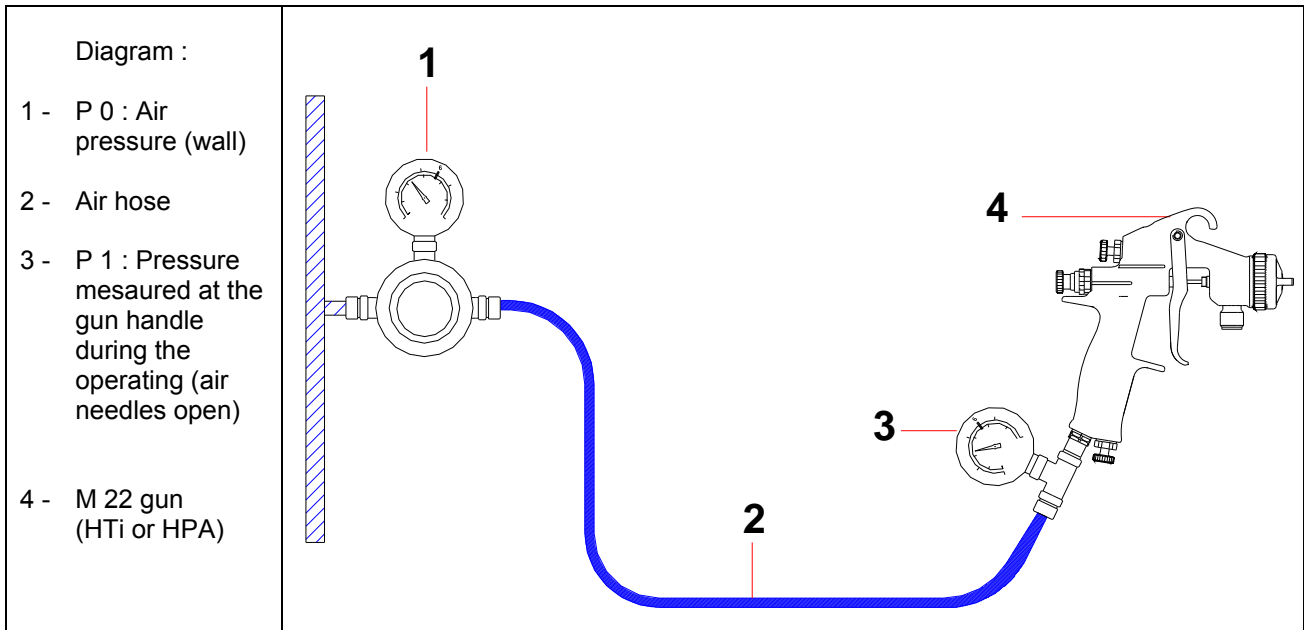
Note : For HVLP compliance, the maximum inlet air pressure at the gun handle must not exceed 29 psi (2 bar) to maintain 10 psi (0,68 bar) or less at the air cap. Testing for HVLP compliance was performed using the specified HVLP test air cap, the fan control fully open and a pressure gauge on the air inlet fitting at the gun handle. It may also be a requirement of some regulatory agencies that users have the appropriate test air cap available on site to verify that the gun is being operated within the regulatory limitations.

▪ **AIR AND FLUID SUPPLY**

M 22 gun, model HTi & HPA	Fittings mounted on the gun	Air and fluid supply
Air	Male 1/4 NPS	Air hose (non-static hose) HTi : minimum 8 mm ID (for a 7.5 m / 24.6 ft length) HPA : minimum 7 mm ID (for a 7.5 m / 24.6 ft length)
Fluid	Male 3/8 NPS	For pressure gun (HTi & HPA) : Fluid hose : minimum 7 mm ID (for a 7.5 m / 24.6 ft length) For HPA suction gun : SM 6 cup (1 liter)

▪ **PRESSURE AND AIR CONSUMPTION OF THE GUNS**

Air pressure adjustment with or without gauge at the gun handle



HTi gun + E 3 K HVLP aircap + hose Ø 8 mm
(7.5 m / 24.6 ft length)

HPA gun + EN 3 aircap + hose Ø 7 mm
(7.5 m / 24.6 ft length)

P 0		P 1		P 0		P 1	
(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	(bar)	(psi)
2,2	32	1,5	22	2,6	38	1,5	22
3	44	2	29	3,2	46	2	29
3,5	51	2,5	36	4	58	2,5	36
4,1	60	3	44	4,5	65	3	44
4,7	68	3,5	51	5	73	3,5	51

HTi with projector, model 9 E 3 KHVLP

Air pressure (P 1)		Air flow rate	
bar	PSI	m3/h	CFM
1,5	21.75	23	13.5
2	29	28	16.5
2,5	36	33	19.4
3	43.5	38	22.4
3,5	50	42,6	25

Fluid flow (2)		Fan width (3)	
g/mn	oz/mn	cm	"
250	8.8	33	13
250	8.8	34	13.4
250	8.8	35	13.8

HTi with projector, model 9 EP 3

Air pressure (P 1)		Air flow rate	
bar	PSI	m3/h	CFM
1,5	21.75	20,2	11.9
2	29	24,5	14.4
2,5	36	29	17
3	43.5	33,2	19.5
3,5	50	37,3	22

Fluid flow (2)		Fan width (3)	
g/mn	oz/mn	cm	"
250	8.8	31	12.2
250	8.8	30,5	12
250	8.8	30,5	12
300	10.6	32	12.6
300	10.6	32	12.6


HPA pressure version with projector, model 9 EN 3

Air pressure (P 1)		Air flow rate	
bar	PSI	m3/h	CFM
2	29	23,8	14
2,5	36	28	16.5
3	43.5	32,2	18.9
3,5	50	36,1	21.2

Fluid flow (2)		Fan width (3)	
g/mn	oz/mn	cm	"
300	10.6	29,5	11.6
300	10.6	29,5	11.6
300	10.6	27,5	10.8

HPA suction version with projector, model 15 EN 2

Air pressure (P 1)		Air flow rate		Fluid flow (2)		Fan width (3)	
bar	PSI	m3/h	CFM	g/mn	oz/mn	cm	"
1,5	21.75	16	9.4	107	3.8	19,5	7.7
2	29	19,5	11.5	188	6.6	23	9
2,5	36	23	13.5	198	7	24,5	9.6
3	43.5	26,4	15.5	218	7.7	27,5	10.8
3,5	50	29,7	17.5	207	7.3	28,5	11.2

(2)	Fluid viscosity : 20 s CA n° 4 (= 40 centipoises)
(3)	Distance gun aircap - surface to be painted : 20 cm
	Optimum fan adjustment

3. M 22 HTI – HPA (G)

3.1. Description

Guns recommended to spray varnishes, lacquers, shades, polyurethanes, two components...

The HTI guns are pneumatic guns with a high transfer efficiency. Two projectors, models EP 5 and E 5 K HVLP can be fitted on the same gun.

The guns, model HPA, with high spraying quality, enable to spray any kind of materials (low or high viscosity).

3.2. Technical features

FEATURES	HTi (E 5 K HVLP aircap)	HTi (EP 5 aircap)	HPA (EN 5 aircap)
Maximum air supply pressure (network)	6 bar / 87 psi		
Air pressure at the gun handle	From 1,5 to 2,5 bar / from 22 to 36 psi	From 2 to 3 bar / from 29 to 44 psi	From 2 to 4 bar / from 29 to 58 psi
Air flow	27,2 m3/h to 2 bar / 16 CFM to 29 psi	20,2 m3/h to 2,5 bar / 11.9 CFM to 36 psi	26,5 m3/h to 2,5 bar / 15.6 CFM to 36 psi
Fluid supply	Gravity cup (0,6 liter)		
Weight (gun without cup)	530 g / 1.17 lb		
Weight (gun with cup)	690 g / 1.52 lb		
Shades and hydro or solvent based varnishes			
- low viscosity	* * * *	* * *	* * *
- middle viscosity	* * * *	* * * *	* * * *
- high viscosity	* *	* * *	* * * *
Minimum transfer rate (EN 13966-1 standard)	76 % ± 2 %	74 % ± 2 %	-
Maximum fluid temperature	50° C / 120° F		
Nozzle, needle, fluid passage	Stainless steel / Stainless steel / anodized aluminium		
White cup (acetale resin)	For hydro and solvent based paints		
Grey cup (PEHD)	For PU and pre catalysed materials		

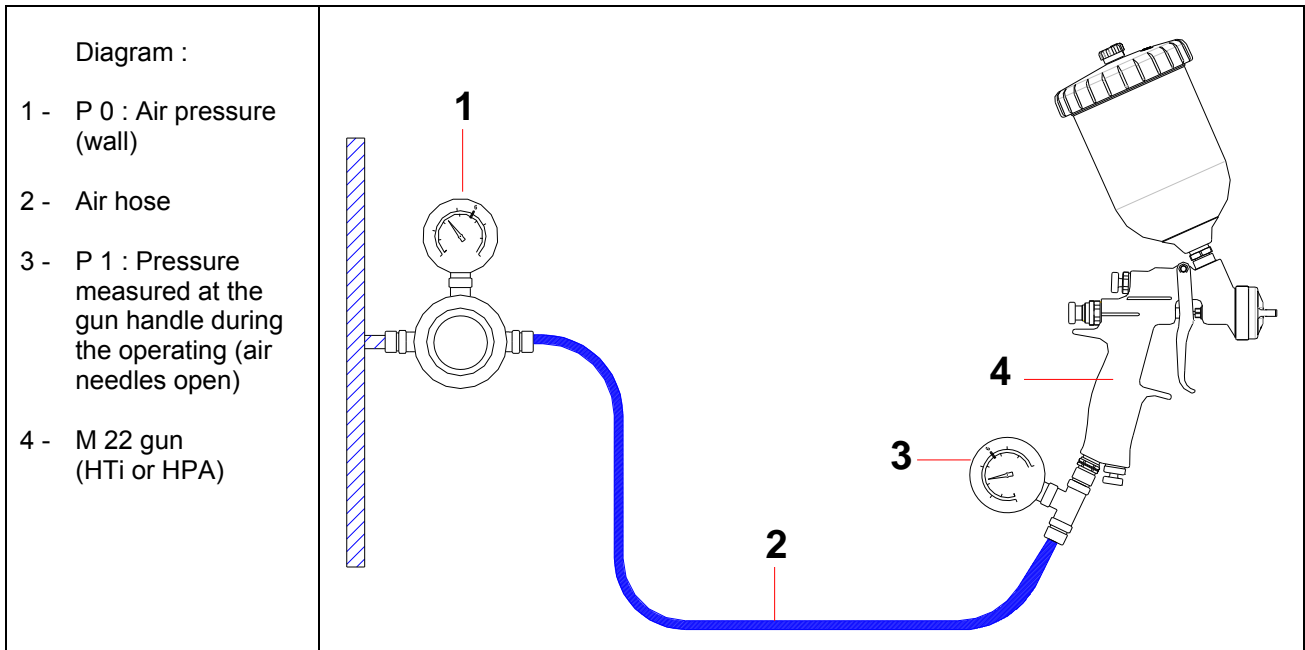
Note : For HVLP compliance, the maximum inlet air pressure at the gun handle must not exceed 29 psi (2 bar) to maintain 10 psi (0,68 bar) or less at the air cap. Testing for HVLP compliance was performed using the specified HVLP test air cap, the fan control fully open and a pressure gauge on the air inlet fitting at the gun handle. It may also be a requirement of some regulatory agencies that users have the appropriate test air cap available on site to verify that the gun is being operated within the regulatory limitations.

▪ **AIR AND FLUID SUPPLY**

M 22 guns, model HTi & HPA	Elements mounted on the spray gun (depending on model)	Air and fluid supply
Air	Fitting : M 1/4 NPS (+ MM 1/4 BSP not mounted)	Air hose (non-static hose) HTi : minimum 8 mm int. ID (for a 7.5 m / 24.6 ft length) HPA : minimum 7 mm ID (for a 7.5 m / 24.6 ft length)
Fluid	White or grey gravity cup (0,6 liter)	Option : white cup (0,25 liter)

▪ **PRESSURE AND AIR CONSUMPTION OF THE GUNS**

Air pressure adjustment with or without gauge at the gun handle.



HTi gun + E5 K HVLP aircap + hose Ø 8 mm (7.5 m / 24.6 ft length)	HPA gun + EN 5 aircap + hose Ø 7 mm (7.5 m / 24.6 ft length)
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P 0		P 1		P 0		P 1	
(bar)	(psi)	(bar)	(psi)	(bar)	(psi)	(bar)	(psi)
2,25	33	1,5	22	2,5	36	1,5	22
3	44	2	29	3,2	46	2	29
3,5	51	2,5	36	3,8	55	2,5	36
4,2	61	3	44	4,5	65	3	44
4,75	69	3,5	51	5	72	3,5	51

HTi + E 5 (K HVLP) aircap	HTi + EP 5 aircap	HPA + EN 5 aircap
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Air pressure (P 1)	Air flow rate					
	(m3/h)	(CFM)	(m3/h)	(CFM)	(m3/h)	(CFM)
1,5 bar / 21.75 psi	21,5	12.7	14	8.2	-	-
2 bar / 29 psi	27,2	16	17	10	22,8	13.4
2,5 bar / 36 psi	32,9	19.4	20,2	11.9	26,5	15.6
3 bar / 43.5 psi			23	13.6	30,2	17.8
3,5 bar / 50.8 psi			26	15.3	36,9	21.7
4 bar / 58 psi					40,6	23.9

Nozzle	Fluid flow (*)					
	(cm3/mn)	(oz/mn)	(cm3/mn)	(oz/mn)	(cm3/mn)	(oz/mn)
13	170	6	173	6.1	210	7.4
14	200	7	214	7.6	238	8.4
15	245	8.6	229	8.1	256	9
18	260	9.2	275	9.7	282	10
22	284	10	342	12.1	345	12.2

Distance gun aircap - surface to be painted	Fan width with nozzle 14 (*)					
	(cm)	(")	(cm)	(")	(cm)	(")
15 cm	30	12	25	10	26	10
20 cm	33	13	28	11	28	11
25 cm	39	15	32	13	30	12

(*)	Fluid viscosity : 20 s CA n° 4 (= 40 centipoises) For HTi + E 5 K HVLP : P 1 = 2 bar / 29 psi For HTi + EP 5 : P 1 = 2,5 bar / 36 psi For HPA + EN 5 : P 1 = 2,5 bar / 36 psi
	Optimum fan adjustment

4. AIR AND FLUID SUPPLY

There are 3 kinds of manual airspray guns : suction, gravity, pressure.

Fluid supply :

Suction : 1 liter or 0.75 l metallic cup depending on the model.

Gravity : plastic cup 0.6 liter or 0.25 liter.

Pressure : by means of a fluid hose fitting on the pressure drum or the low pressure pump to the gun (maximum fluid pressure : 6 bar / 87 psi).

Air supply :

By means of a grounded air hose connecting the gun to the air regulator (clean air - maximum pressure : 6 bar / 87 psi).

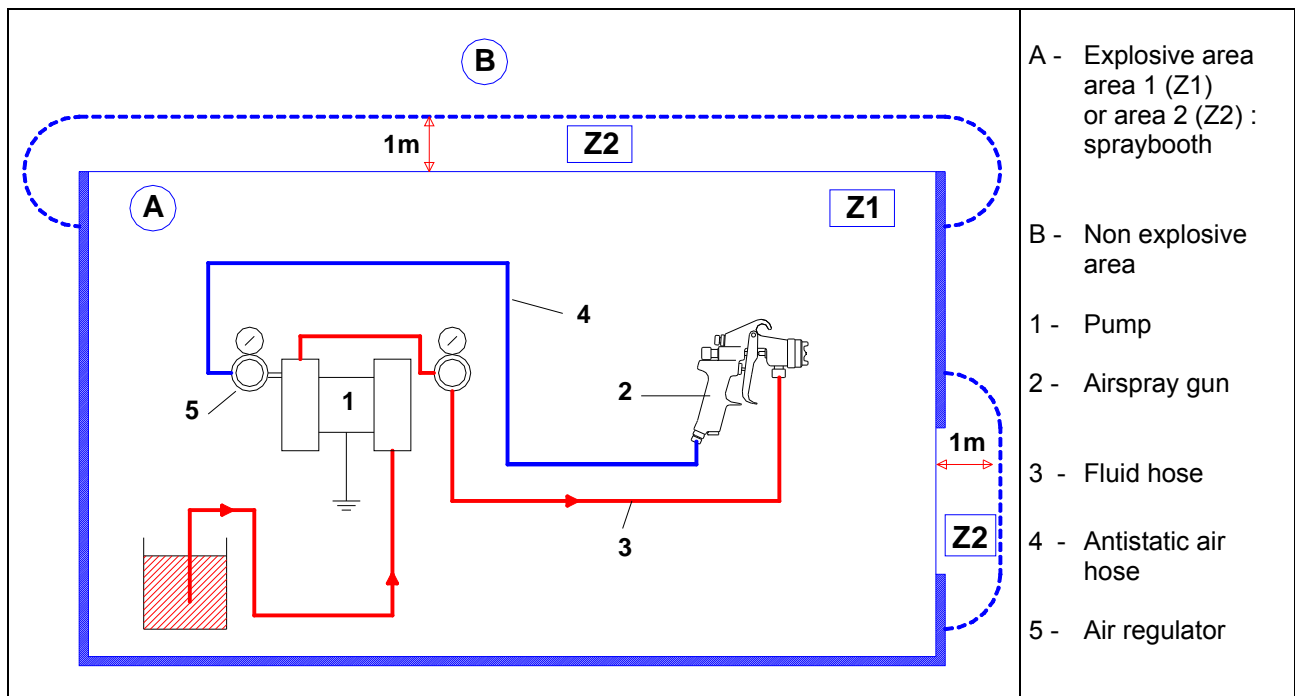
5. INSTALLATION

■ **DESCRIPTION DU MARQUAGE**

Marking defined by the ATEX directive

KREMLIN STAINS FRANCE	Name and address of the manufacturer	On the trigger
03	Manufacture year (eg : 03 for 2003)	
Ex II 2 G	II : group II 2 : class 2 Surface equipment meant to area where explosive atmospheres due to gas, vapours, mists are liable to appear from time to time in usual operating. G : gas	
P air : 6 bar / 87 psi	Gun air supply maximum pressure	
TYPE xx	Gun version	On the body

■ **INSTALLATION DIAGRAM**



- 1 - By means of a grounded air hose, connect the gun to an air regulator that can supply at least 3 bar / 43.5 psi.
- 2 - By means of a fluid hose, connect the gun fluid fitting to the pump. Tighten firmly the fittings.



Nota : In some particular cases, if the air hose (4) is not conductive, the fluid hose (3) must be conductive.

One of the 2 gun hoses (air or fluid) must be conductive.