

DOCUMENTATION

**AIRMIX® BACK PRESSURE
FLUID REGULATOR**

120 - 10 / 120

Manual : 582.160.110-UK - 2002

Date: 20/02/20

Supersede :

Modif.:

TRANSLATION FROM THE ORIGINAL MANUAL

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

THE PICTURES AND DRAWINGS ARE NON CONTRACTUAL. WE RESERVE THE RIGHT TO MAKE CHANGES WITHOUT PRIOR NOTICE.

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INSTRUCTION MANUAL

PRESSURE REGULATOR
for fluid or semi-fluid materials

Manual : 2002 573.008.212

Date : 11/02/20 - Supersede : 03/03/14

Modif. : Update

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The specifications of the regulator - features and maintenance - are available in a documentation enclosed to the manual.

Dear Customer,

You are the owner of our new SAMES KREMLIN pressure regulator and we would like to take this opportunity to thank you.

To make sure your investment will provide full satisfaction, special care has been taken by SAMES KREMLIN during all designing and manufacturing processes.

To obtain the best result, safe and efficient operation of your equipment, we advice you to read and make yourself familiar with this instruction and service manual. Indeed, the non-compliance with instructions and precautions stated in this manual could reduce the equipment working life, result in operating trouble and create unsafe conditions.

1. GENERAL SAFETY INSTRUCTIONS



WARNING : Any misuse of the equipment or accessories can damage them, result in serious body injury, fire or explosion hazard and reduce the equipment working life. Read, understand and comply with the safety instructions hereafter.

The personnel involved in operating and servicing this equipment must be aware of all safety requirements stated in this manual. The workshop supervisor must be certain that the personnel has perfectly understood the safety instructions and complies with them.

Read all instruction manuals as well as the tags of the equipments before operating the equipment.

Refer to local safety instructions and comply with them.

■ INSTALLATION REQUIREMENTS

➔ **Ground the equipments.**

Use the equipment only in a well-ventilated area to prevent from serious body injuries, fire and explosion hazards. Do not smoke in the spray area.

Never stock paints and solvents in the spray area. Always close the pots and the tins.

Always keep the spray area clean and free from debris (solvent, rags,...).

Read paint and solvent manufacturer's technical instructions.

Spraying of some materials may result in hazardous working conditions. To protect the operator, respirator mask, hand cream, glasses and hearing protective earplug are required (Refer to chapter " Safety equipment" of SAMES KREMLIN selection guide).

■ EQUIPMENT REQUIREMENTS

The operating pressure of these equipments are particularly high. Consequently, some precautions must be taken in order to prevent from accidents and from unsafe working conditions.

➔ **Never exceed the components maximum pressure of the equipment.**

HOSES

Do not use hoses with a maximum burst-proof pressure less than four times the maximum service pressure of the pump (see data sheet).

Be certain the hoses are not crimped, leaking and not unrolled.

Be certain hoses are in good conditions and showing no evidence of damage.

➔ **Use only air hose with static conductor to connect the pump with the spray gun.**

All fittings must be tight and in good condition.

PUMP

➔ **Ground the equipment (use the connection on the pump).**

Do not use any product or solvent incompatible with the pump components.

Use the appropriate solvent for the material being sprayed to increase the equipment working life.

GUN

Never wipe the end of the tip with the fingers.

Always depressurize air and hoses before carrying out any servicing on the gun.

Never point the spray gun at anyone or at any part of the body.

PRESSURE REGULATOR

➡ **Assemble conductive hoses upstream and downstream of the regulator.**

■ MAINTENANCE REQUIREMENTS

Guards (air motor cover, coupling shields, housings ...) have been designed for safe use of the equipment.

The manufacturer will not be held responsible for bodily injury or failure and / or damage to property due to removal or partial removal of the guards.

➡ **Never modify these equipments.**

Check them daily, keep them in a good condition and replace the worn parts **only with SAMES KREMLIN parts.**

Before cleaning or removing components of the equipment, it is compulsory :

- to stop the pump by shutting off the compressed air supply,
- to open the pump drain valve,
- to press the gun trigger to depressurize the hoses.

2. DESCRIPTION

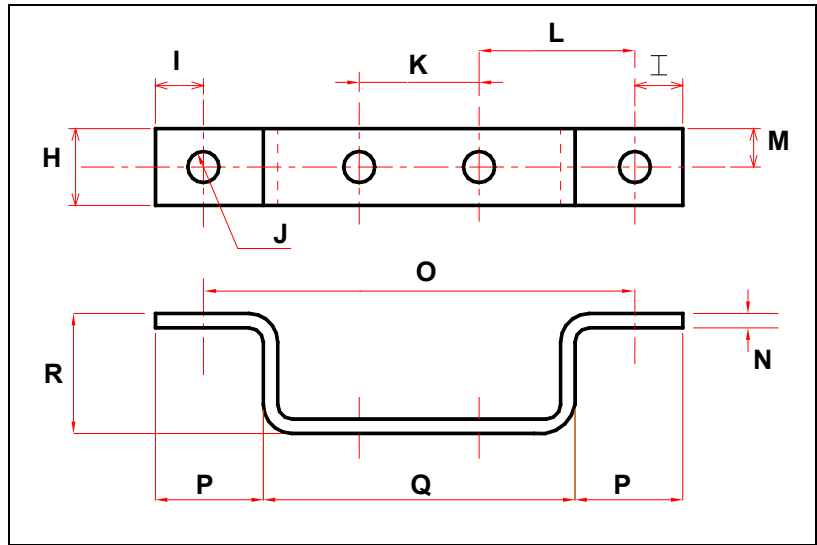
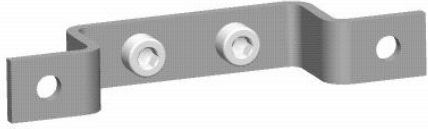
The pressure regulator enables to adjust the fluid pressure into the circuits of low and medium pressure.

The pressure regulator is mounted on the fluid circuit between the pump fluid outlet and the gun fluid inlet. It enables to refine the pressure of the gun. It exists a spring operated model and an air operated model.

The back pressure regulator is mounted on the back fluid circuit. It enables to regulate a constant pressure and to ensure at the same time a fluid circulation into the hoses.

3. MOUNTING

Support (optional)

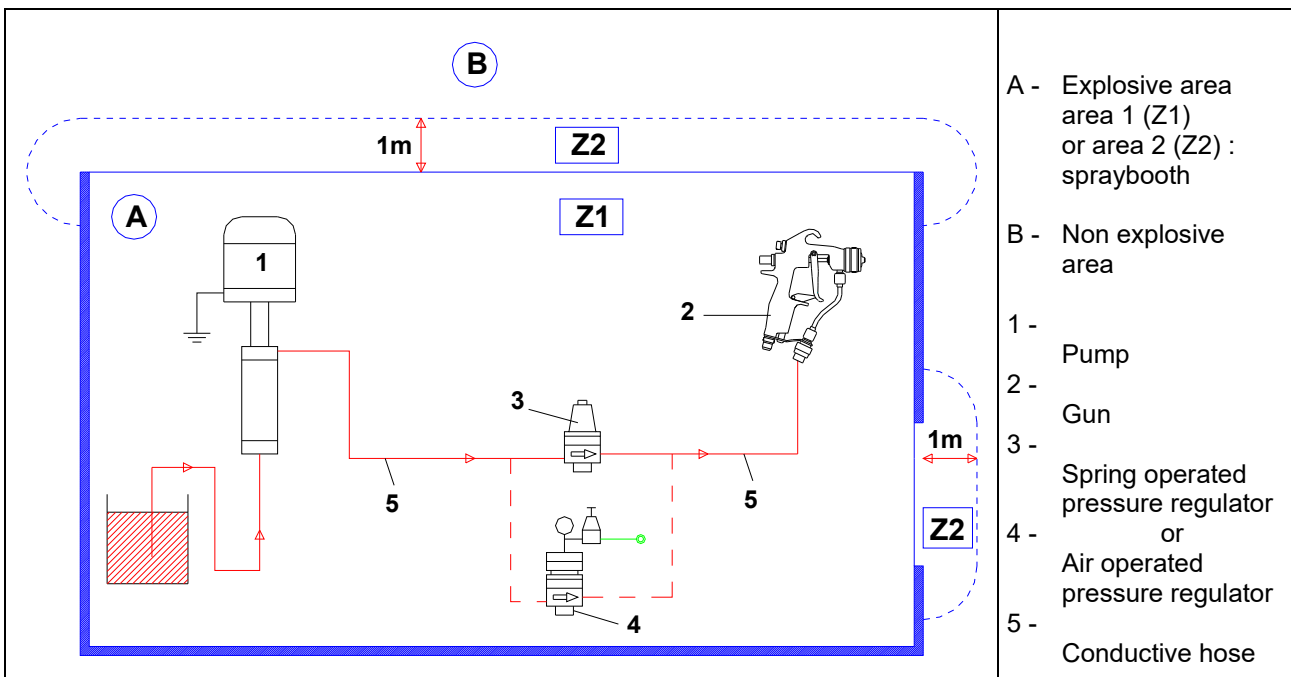


Ind.	mm	"	Ind.	mm	"	Ind.	mm	"	Ind.	mm	"
H	16	0.63	I	10	0.4	J	Ø 6.5	Ø 0.25	K	25	0.98
L	20	0.79	M	8	0.31	N	3	0.12	O	90	3.54
P	22.5	0.88	Q	65	2.56	R	25	0.98			

4. INSTALLATION

The pressure regulators are designed to be installed in a spraybooth.

■ INSTALLATION DIAGRAM WITHOUT CIRCULATING



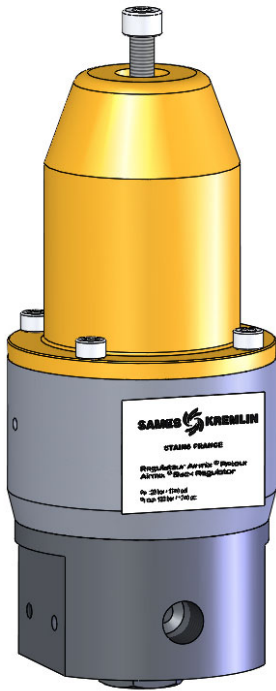
7. TROUBLESHOOTING CHART

■ PRESSURE REGULATOR (AIR OR SPRING OPERATED)

TROUBLE	CAUSE	SOLUTION
Overpressure at the regulator outlet	Adjustment screw or adjustment knob of the regulator turned clockwise (full closed)	Unscrew adjustment screw or knob.
	Air pilot pressure too high	Decrease pilot pressure.
	Bad tightness of seat and ball	Clean or replace.
No material coming out from the regulator	Adjustment screw or knob turned counter-clockwise (full open)	Screw adjustment screw or knob.
	Air pilot pressure insufficient	Increase pilot air pressure.
	Ball blocked on the seat, needle broken	Clean and reinstall or change.
Irregular flow rate	Too much pulsation in the fluid network	Adjust inlet pressure.
	Improper proofness of seat, ball and spring	Clean or replace.
	Regulator in horizontal position	Mount the regulator in vertical position
Leakage at the upper part of the regulator	Defective fluid diaphragm	Replace it.
	Screws improperly tightened on the lower body	Tighten up the screws.

■ BACK PRESSURE REGULATOR

DEFECT	CAUSE	SOLUTION
Overpressure upstream of the regulator	Adjustment screw or knob turned clockwise (full closed)	Turn the adjustment screw or knob counter-clockwise.
	Pressure too high in the fluid circuit (or circulating)	Decrease pressure.
Pressure drop upstream of the regulator	Adjustment screw or knob turned counter-clockwise (full open)	Screw the adjustment screw or knob.
	Improper fluid proofness of seat and ball	Clean and reinstall.
Irregular circulation	Too important pulsation in the fluid network	Check and adjust inlet pressure.
	Improper proofness of seat and ball	Clean or replace.
Material leakage at the upper body of the regulator	Defective fluid diaphragm	Replace it.
	Loosened screws on the upper body	Tighten up the screws.



SPECIFICATIONS

STAINLESS STEEL AIRMIX® BACK PRESSURE FLUID REGULATOR

Model : 120 - 10 / 120

Manual : 2002 573.042.212

Date : 11/02/20 - Supersede : 03/03/14

Modif. : Update

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ADDITIONAL DOCUMENTATIONS

SPARE PARTS : AIRMIX® back pressure fluid regulator

(Doc. 573.343.050)

SAMES KREMLIN SAS

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www.sames-kremlin.com

SPECIFICATIONS

**STAINLESS STEEL AIRMIX® BACK PRESSURE FLUID
REGULATOR**

Manual control

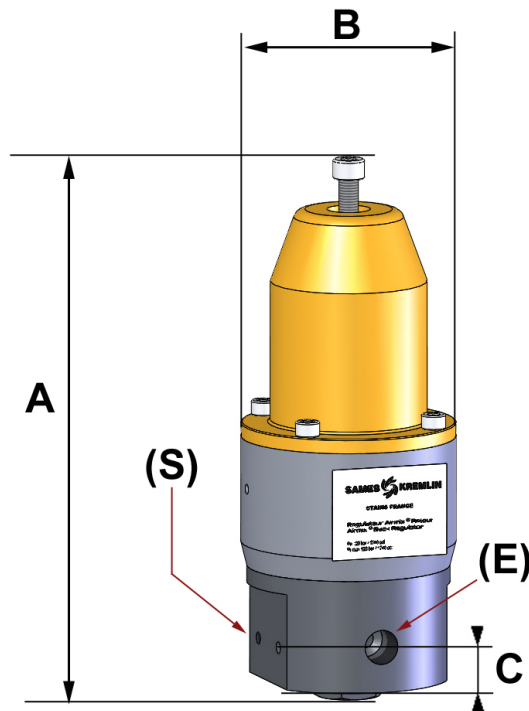
Model : 120 - 10 / 120

1. TECHNICAL FEATURES

The AIRMIX® back pressure fluid regulator is used on installations that drive fluid or semi thick materials. It is in stainless steel and designed for easy flushing.

The fluid pressure adjustment is carried out at the regulator outlet by screwing or unscrewing the adjustment screw (with the wrench n° 6).

An arrow marked on the body indicates the fluid inlet and the fluid outlet.



Ind.	mm	"	Ind.	mm	"	Ind.	mm	"
A	225	8.85	B	Ø 89	Ø 3.5	C	16	0.6

Type	Manual control regulator (by screws)
Version	120 - 10 / 120
Pressure range : - Inlet pressure - Outlet pressure	Maximum 120 bar / 1740 psi
	From 10 to 120 bar / from 145 to 1740 psi
Fittings : - Fluid inlet (E) - Fluid outlet (S)	F 3/8 NPS
	F 3/8 NPS
Wetted parts	Stainless steel, PTFE, carbide
Weight	3.6 kg / 7.9 lb
Maximum temperature	50°C / 122°F

■ **HOSES WITH FITTINGS RECOMMENDED**

You must choose the hose according to the material viscosity and to the length. Make sure the hose has a larger diameter for higher length or important viscosity.

Airmix® regulator	Fluid material		Semi thick material	
	Fitting	AIRMIX® hose	Fitting	AIRMIX® hose
Inlet (E)	M 3/8 NPT - M 1/2 JIC	∅ 4,8mm int. (1/4")	M 3/8 NPT - M 3/4 JIC	∅ 4,8 mm int. (3/16") or 6,35 mm int. (1/4")
Outlet (S)	M 3/8 NPT - M 1/2 JIC	∅ 4,8 mm int. (3/16") or 6,35 mm int. (1/4")	M 3/8 NPT - M 1/2 JIC	∅ 4,8 mm int. (3/16") or 6,35 mm int. (1/4")



NOTA :

To ensure a larger lifetime of your equipment and to obtain the best flow rate possible, you must mount the regulator in vertical position.

2. MAINTENANCE



WARNING : Before any action on the installation, shut off the compressed air supply and depressurize the systems by triggering the spray gun.

■ **REPLACEMENT OF THE SEAT (23)**

Removal :

Unscrew the 4 screws (18) and remove the lower body (10).
Unscrew the plug (27). Remove the guide bush (21).
Push on the seat (23) to remove it from the lower body (10).
Clean the parts or replace with new parts.

Reassembly :

Change the 2 seals (26), the seat (23).
Remount the seat (23), the guide bush (21) and the plug (27).
Remount the lower body (10) and fix it via the 4 screws (18) Respect the screwing torque.

■ REPLACEMENT OF THE PIN-BALL ASSEMBLY (11) OR OF THE DIAPHRAGMS (13 & 14)

Removal :

Unscrew the 4 screws (18) and remove the lower body (10).

Unstick the diaphragms from the upper body (19).

Pull carefully the diaphragms to remove the pin-ball assembly (11), the piston (16) and the nut (17).

Do not pull the ball. This would damage the parts.

Unscrew the nut (17) to remove the piston (16).

Remove the black diaphragm (13) and the white washer support (14).

Clean the parts or replace with new parts.

Reassembly :

Replace the seal (15), placed on the pin-ball assembly (11) and the seal (20).

Place the black diaphragm (13) to the air side, the white washer support (14) to the fluid side, and the piston (16).

Place the pin (11) into a vice and tighten at the 2 flats.

Glue with a coating of glue the axis threading (11).

Screw the nut (17) on the pin-ball assembly without using tools, then screw it slightly with a wrench n° 8.

Install the assembly into the upper body (19).

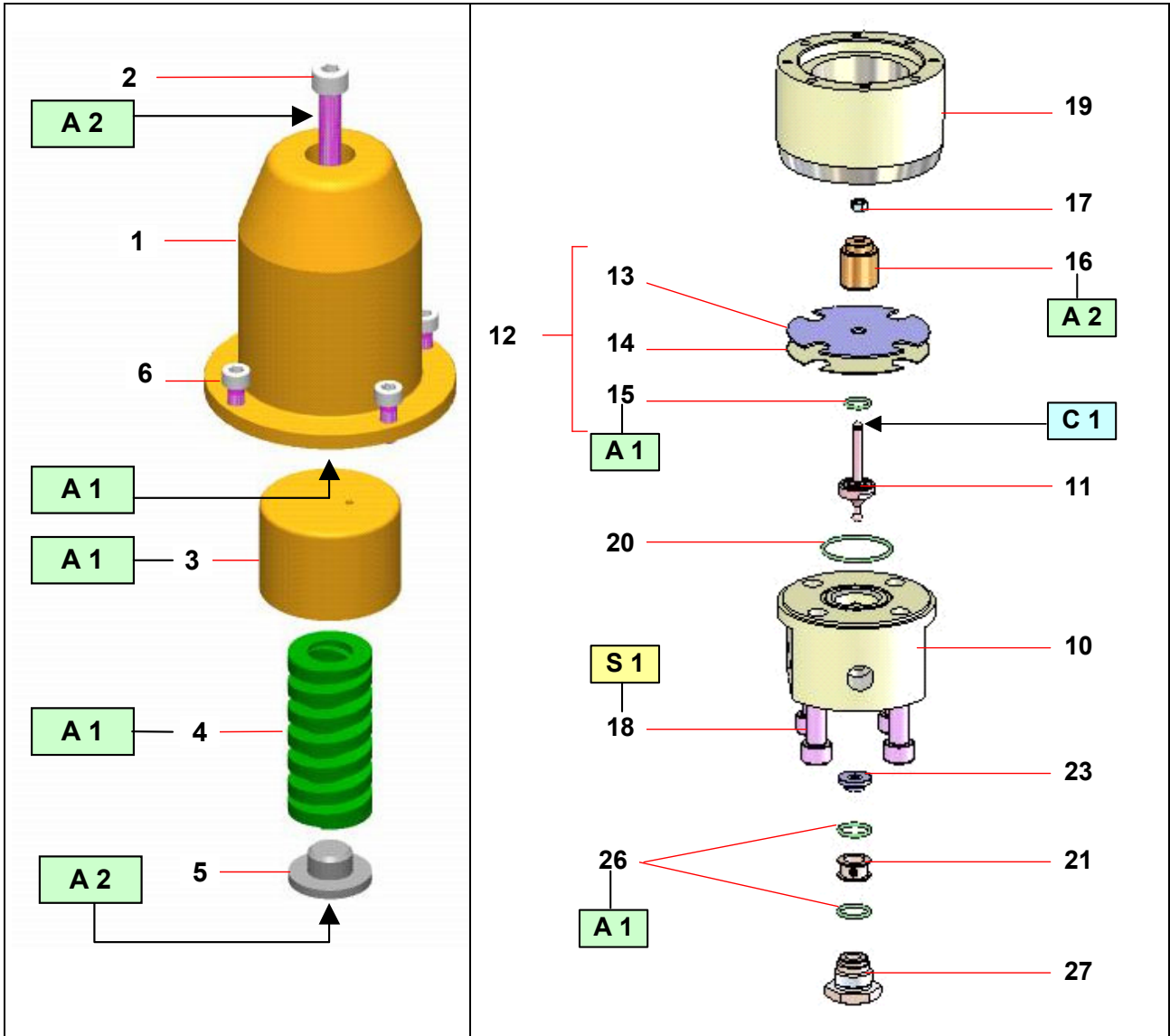
Remount the lower body (10) with the seat (23) and fix it via the 4 screws (18). Respect the screwing torque.

➔ IMPORTANT : when reassembling, the ball of the pin-ball assembly (11) must be on the central port of the seat (23).

Before reassembling the different components :

- Clean the parts with the appropriate cleaning solvent.
- Install new parts if necessary after having lubricated them with PTFE grease.
- Install new parts if necessary.

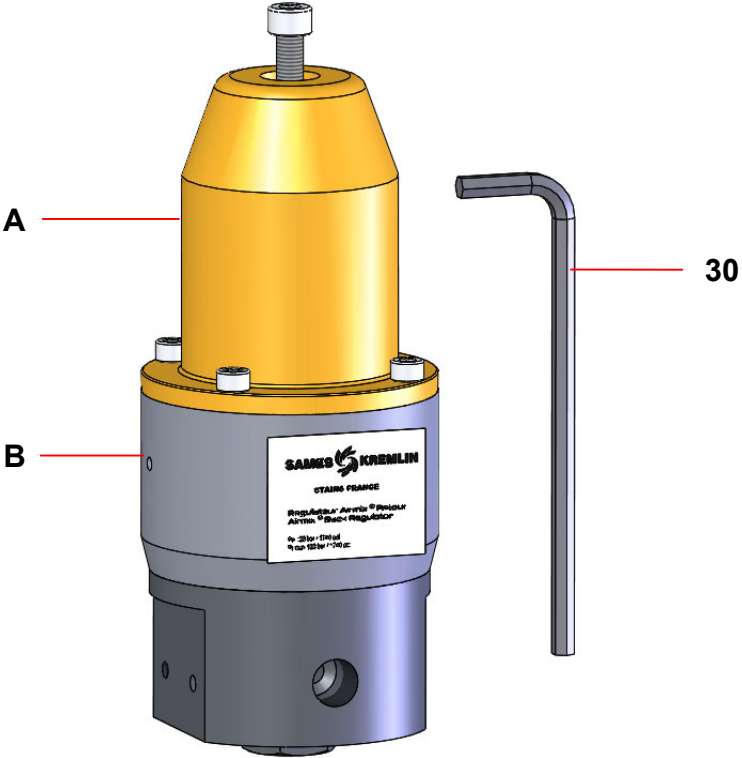
■ ASSEMBLY INSTRUCTIONS



Index	Instruction	Description	Part number
A 1	PTFE grease	'TECHNILUB' grease (10 ml / 0.0026 US gal)	560.440.101
A 2	Anti-seize grease	Grease box (450 g / 0.99 lb)	560.420.005
C 1	Medium strength Aneorobic Pipe sealant	Loctite 577 (250 ml / 0.066 US gal)	554.180.015
S 1	Screwing torque : 20 Nm / 14.75 ft/lbs		

Doc. 573.343.050 Date/Datum/Fecha : 11/02/20 Annule/Cancel/ Ersetzt/Anula : 11/10/13	Modif. / Änderung : Mise à jour / Update / Aktualisierung / Actualización	Pièces de rechange Spare parts list Ersatzteilliste Piezas de repuesto
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REGULATEUR DE PRESSION DE RETOUR AIRMIX®	AIRMIX® BACK PRESSURE FLUID REGULATOR
AIRMIX®-MATERIAL-RÜCKDRUCKREGLER	REGULADOR DE PRESION DE RETORNO AIRMIX®

<p style="text-align: center;">REGULATEUR A COMMANDE MANUELLE</p> <p style="text-align: center;">MANUAL CONTROL REGULATOR</p> <p style="text-align: center;">DRUCKREGLER MIT HANDSTEUERUNG</p> <p style="text-align: center;">REGULADOR CON MANDO MANUAL</p>	
<p>Modèle / Model / Modell / tipo : 120 - 10 / 120</p> <p style="text-align: center;"># 155.271.835</p>	

B	PARTIE PRODUIT / PRODUCT PART / MATERIALTEIL / PARTE PRODUCTO					
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Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
10	055 271 801	Corps inférieur	Body, lower	Körper, Unterteil	Cuerpo inferior	1
11	155 271 805	Ensemble axe-bille	Pin-ball assembly	Achse-Kugel kpl.	Conjunto eje-bola	1
*12	155 271 902	Membrane équipée	Diaphragm assembly	Membraneinheit	Membrana equipada	1
13	NC / NS	▪ Membrane	▪ Diaphragm	▪ Luftmembran	▪ Membrana	1
14	NC / NS	▪ Contre membrane	▪ Washer support	▪ Materialmembran	▪ Contra membrana	1
15	150 040 332	▪ Joint torique, PTFE (pochette de 10)	▪ O-Ring, PTFE (pack of 10)	▪ PTFE-Dichtung (10 St.)	▪ Junta O-Ring, PTFE (bolsa de 10)	1
*16	055 271 709	Piston	Piston	Materialkolben	Pistón	1
17	953 010 014	Ecrou HM5	Nut, HM5	Mutter, HM5	Tuerca, HM5	1
18	88 173	Vis CHc M 10 x 50	Screw, CHc M 10 x 50	Schraube, CHc M 10 x 50	Tornillo CHc M 10 x 50	4
19	055 271 710	Entretoise de guidage	Body, upper	Körper, Oberteil	Cuerpo guía	1
20	150 040 309	Joint torique, PTFE (pochette de 10)	O-Ring, PTFE (pack of 10)	PTFE-Dichtung (10 St.)	Junta O-Ring, PTFE (bolsa de 10)	1
21	055 271 802	Bague de guidage	Guide bush	Führungsbuchse	Anillo de dirección	1
23	055 271 210	Siège	Seat	Sitz	Asiento	1
26	150 040 314	Joint torique, PTFE (pochette de 10)	O-Ring, PTFE (pack of 10)	PTFE-Dichtung (Satz mit 10 St.)	Junta O-Ring, PTFE (bolsa de 10)	2
27	055 271 703	Bouchon	Plug	Stopfen	Tapón	1

*	155 271 905	Pochette de maintenance (ind. 11, 12, 20, 23, 26 (x2))	Servicing kit (ind. 11, 12, 20, 23, 26 (x2))	Servicekit (Pos. 11, 12, 20, 23, 26 (2x))	Bolsa de reparación (ind. 11, 12, 20, 23, 26 (x2))	1
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* Pièces de maintenance préconisées.

* Preceding the index number denotes a suggested spare part.

* Bezeichnete Teile sind empfohlene Ersatzteile.

* Piezas de mantenimiento preventivas.

N C : Non commercialisé.

N S : Denotes parts are not serviceable separately.




N S : bezeichnete Teile gibt es nicht einzeln, sondern nur komplett.

N C : no suministrado.

ACCESSOIRES - ACCESSORIES - ZUBEHÖR - ACCESORIOS						
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Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
30	906 300 213	Clé de 6	Wrench	Inbusschlüssel, Größe 6	Llave	1

OPTION - ON REQUEST - OPTIONAL - OPCIÓN

	#	Désignation	Description	Bezeichnung	Denominación
	155 484 010	Support pour régulateur	Support, regulator	Wandhalterung für Regler	Soporte para regulador
	155 271 790	Manomètre à membrane équipé (0-250 bar)	Diaphragm pressure gauge (0-250 bar / 0-3625 psi)	Manometer mit Membran-Druckmittler (0-250 bar)	Manómetro con membrana equipado (0-250 bar)
	910 010 802	Manomètre (Ø 63, 0-120 bar, M 1/4" BSP)	Gauge (Ø 63, 0-120 bar / 0-1740 psi, M 1/4"BSP)	Manometer (Ø 63, 0-120 bar, AG 1/4"BSP)	Manómetro (Ø 63, 0-120 bar, M 1/4"BSP)

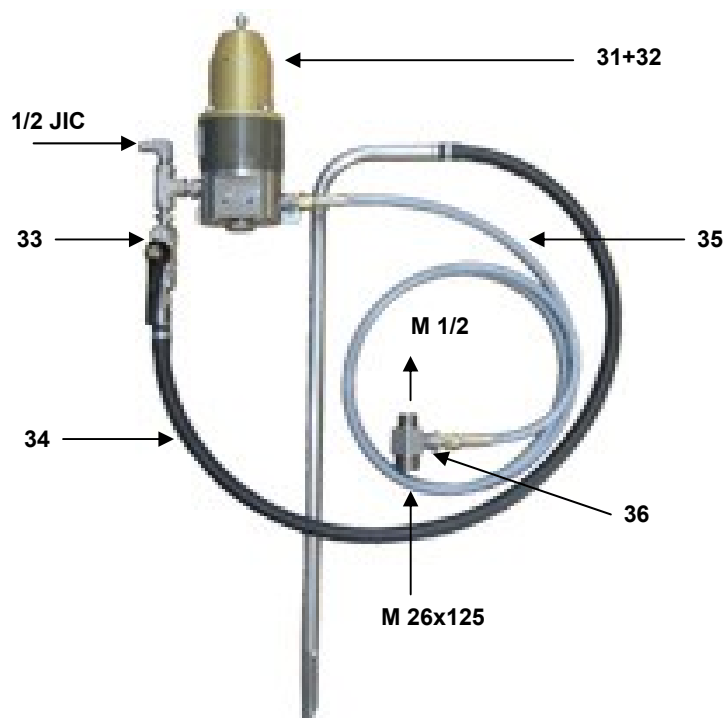
Régulateur de retour AIRMIX® équipé pour montage à l'aspiration des pompes

AIRMIX® back pressure regulator - Pre-equipped for pump inlet mounting

AIRMIX® Rückdruckregler ausgerüstet für die Montage in den Ansaug der Pumpe

Regulador de retorno AIRMIX® equipado para su montaje a la aspiración de las bombas

051.314.030



Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
31	155 271 835	Régulateur de retour Airmix®	Airmix® back pressure regulator	Airmix®-Rückdruckregler	Regulador de presión Airmix®	1
32	155 484 010	Support pour régulateur	Support, regulator	Wandhalterung	Soporte para regulador	1
33	000 750 040	Robinet HP 3/8 NPT	HP valve, 3/8" NPT	HD-Hahn 3/8" NPT	Grifo AP 3/8" NPT	1
34	049 596 000	Canne de purge	Flushing rod	Umlaufschlauch, kpl	Caña de purga	1
35	050 450 704	Tuyau Airmix®, Ø 1/4", longueur 2 m	Airmix® hose, Ø 1/4", length : 2 m / 6.6 ft	Airmix®-Schlauch, Ø 1/4", Länge 2m	Tubería Airmix®, Ø 1/4", longitud 2m	1
36	051 314 013	Raccord d'aspiration (MM 1/2" - 26x125)	Pump inlet fitting (1/2" male - 26x125 male)	Anschlußnippel (AG 1/2" - AG M 26x1,25)	Racord de aspiración montado (MM 1/2" - 26x125)	1