

DOCUMENTATION

ELECTRONIC MIXING SYSTEM

CYCLOMIX

MICRO / MICRO+ / MICRO+ PH / MICRO+ PH+

Manual : 582.079.110-UK - 2206

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Modif.: Update

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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<p style="text-align: center;">FR</p> <p>Pour une utilisation sûre, Il est de votre responsabilité de :</p> <ul style="list-style-type: none"> • Lire attentivement tous les documents contenus dans le CD joint avant la mise en service de l'équipement, • D'installer, d'utiliser, d'entretenir et de réparer l'équipement conformément aux préconisations de SAMES KREMLIN ainsi qu'aux réglementations nationales et/ou locales, • Vous assurez que les utilisateurs de cet équipement ont été formés, ont parfaitement compris les règles de sécurité et qu'ils les appliquent. 	<p style="text-align: center;">UK</p> <p>To ensure safe use of the machinery, it is your responsibility to:</p> <ul style="list-style-type: none"> • Carefully read all documents contained on the enclosed CD before putting the machinery into service, • Install, use, maintain and repair the machinery in accordance with SAMES KREMLIN's recommendations and national and/or local regulations, • Make sure that the users of the machinery have received proper training and that they have perfectly understood the safety rules and apply them. 	<p style="text-align: center;">DE</p> <p>Eine sichere Nutzung setzt voraus, dass Sie: :</p> <ul style="list-style-type: none"> • alle in der CD enthaltenen Dokumente vor der Inbetriebnahme der Anlage aufmerksam lesen, • die Anlage im Einklang mit den Empfehlungen von SAMES KREMLIN sowie mit den nationalen und/oder lokalen Bestimmungen installieren, verwenden, warten und reparieren, • sich vergewissern, dass die Nutzer dieser Anlage angemessen geschult wurden, die Sicherheitsbestimmungen verstanden haben und sie anwenden.
<p style="text-align: center;">ES</p> <p>Para una utilización segura, será de su responsabilidad:</p> <ul style="list-style-type: none"> • leer atentamente todos los documentos que se incluyen en el CD adjunto antes de la puesta en servicio del equipo, • instalar, utilizar, efectuar el mantenimiento y reparar el equipo con arreglo a las recomendaciones de SAMES KREMLIN y a la normativa nacional y/o local, • cerciorarse de que los usuarios de este equipo han recibido la formación necesaria, han entendido perfectamente las normas de seguridad y las aplican. 	<p style="text-align: center;">IT</p> <p>Per un uso sicuro, vi invitiamo a:</p> <ul style="list-style-type: none"> • leggere attentamente tutta la documentazione contenuta nel CD allegato prima della messa in funzione dell'apparecchio, • installare, utilizzare, mantenere e riparare l'apparecchio rispettando le raccomandazioni di SAMES KREMLIN, nonché le normative nazionali e/o locali, • accertarvi che gli utilizzatori dell'apparecchio abbiano ricevuto adeguata formazione, abbiano perfettamente compreso le regole di sicurezza e le applichino. 	<p style="text-align: center;">PT</p> <p>Para uma utilização segura, é da sua responsabilidade:</p> <ul style="list-style-type: none"> • Ler atentamente todos os documentos incluídos no CD em anexo antes de pôr o equipamento em funcionamento, • Proceder à instalação, utilização, manutenção e reparação do equipamento de acordo com as preconizações de SAMES KREMLIN, bem como com outros regulamentos nacionais e/ou locais aplicáveis, • Assegurar-se que os utilizadores do equipamento foram devidamente capacitados, compreenderam perfeitamente e aplicam as devidas regras de segurança.
<p style="text-align: center;">NL</p> <p>Voor een veilig gebruik dient u:</p> <ul style="list-style-type: none"> • alle document op de bijgevoegde cd aandachtig te lezen alvorens het apparaat in werking te stellen, • het apparaat te installeren, gebruiken, onderhouden en repareren volgens de door SAMES KREMLIN gegeven aanbevelingen en overeenkomstig de nationale en/of plaatselijke reglementeringen, • zeker te stellen dat de gebruikers van dit apparaat zijn opgeleid, de veiligheidsregels perfect hebben begrepen en dat zij die ook toepassen. 	<p style="text-align: center;">SE</p> <p>För en säker användning av utrustningen ansvarar ni för följande:</p> <ul style="list-style-type: none"> • Läs noga samtliga dokument som finns på den medföljande cd-skivan innan utrustningen tas i drift. • Installera, använd, underhåll och reparera utrustningen enligt anvisningarna från SAMES KREMLIN och enligt nationella och/eller lokala bestämmelser. • Försäkra er om att användare av denna utrustning erhållit utbildning, till fullo förstått säkerhetsföreskrifterna och tillämpar dem. 	<p style="text-align: center;">FI</p> <p>Käytön turvallisuuden varmistamiseksi velvollisuutesi on:</p> <ul style="list-style-type: none"> • Lukea huolella kaikki CD:llä olevat asiakirjat ennen laitteiston käyttöönottoa, • Noudataa laitteiston asennuksessa, käytössä, kunnossapidossa ja huollossa SAMES KREMLIN in suosituksia sekä kansallisia ja/tai paikallisia määräyksiä, • Varmistaa, että laitteiston käyttäjät ovat koulutettuja ja ymmärtävät täysin turvallisuusmääräykset ja miten niitä sovelletaan.
<p style="text-align: center;">PL</p> <p>Dla zapewnienia bezpiecznego użytkowania na użytkownika spoczywa obowiązek:</p> <ul style="list-style-type: none"> • Uważnego zapoznania się ze wszystkimi dokumentami znajdującymi się na załączonej płycie CD przed pierwszym uruchomieniem urządzenia, • Instalowania, użytkowania, konserwacji i naprawy urządzenia zgodnie z zaleceniami firmy SAMES KREMLIN oraz z przepisami miejscowymi, • Upewnienia, że wszyscy przeszkoleni użytkownicy urządzenia zrozumieli zasady bezpieczeństwa i stosują się do nich. 	<p style="text-align: center;">CS</p> <p>Pro bezpečné používání jste povinni:</p> <ul style="list-style-type: none"> • Před uvedením zařízení do provozu si pozorně přečtět veškeré dokumenty obsažené na přiloženém CD, • Nainstalovat, používat, udržovat a opravovat zařízení v souladu s pokyny firmy SAMES KREMLIN a s národními a/nebo místními legislativními předpisy, • Ujistit se, že uživatelé tohoto zařízení byli vyškoleni, že dokonale pochopili bezpečnostní pravidla a že je dodržují. 	<p style="text-align: center;">SL</p> <p>Za varno uporabo ste dolžni:</p> <ul style="list-style-type: none"> • natančno prebrati vse dokumente na CD pred zagonom stroja, • instalirati, uporabljati, vzdrževati in popravljati opremo po določilih SAMES KREMLIN in v skladu z veljavnimi nacionalnimi in/ali lokalnimi predpisi, • poskrbeti, da so uporabniki te opreme ustrezno usposobljeni, poznajo varnostne predpise in da jih upoštevajo.
<p style="text-align: center;">SK</p> <p>V záujme bezpečného je vašou povinnosťou:</p> <ul style="list-style-type: none"> • pozorne si prečítať všetky dokumenty obsiahnuté na priloženom CD predtým, ako zariadenie uvediete do prevádzky, • nainštalovať, používať, udržiavať a opravovať zariadenie v súlade s odporúčaniami spoločnosti SAMES KREMLIN a národnými a/alebo miestnymi predpismi, • uistiť sa, že používatelia tohto zariadenia boli zaškolení, riadne porozumeli pravidlám bezpečnosti a používajú ich. 	<p style="text-align: center;">HU</p> <p>A biztonságos használat érdekében az Ön felelőssége, hogy:</p> <ul style="list-style-type: none"> • a berendezés üzembe helyezésé előtt figyelmesen elolvassa a mellékelt CD által tartalmazott összes dokumentumot, • a berendezést a SAMES KREMLIN ajánlásainak valamint a nemzeti és/vagy helyi szabályozásoknak megfelelően helyezze üzembe, használja, tartsa karban és javítsa, • megbizonyosodjon róla, hogy a berendezés felhasználói képzettek, tökéletesen megértették és alkalmazzák a biztonsági előírásokat. 	<p style="text-align: center;">RO</p> <p>Pentru o utilizare sigură, este responsabilitatea dvs. să:</p> <ul style="list-style-type: none"> • Citiți cu atenție toate documentele de pe CD-ul anexat, înainte de punerea în funcțiune a echipamentului, • Instalați, utilizați, întrețineți și reparați echipamentul conform instrucțiunilor SAMES KREMLIN precum și reglementărilor naționale și/sau locale, • Vă asigurați că utilizatorii acestui echipament au fost instruiți, au înțeles perfect regulile de securitate și le aplică integral.

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SYSTEME DE DOSAGE ELECTRONIQUE / MIXING & DOSING SYSTEM
ELEKTRONISCHE 2-K- ANLAGE / SISTEMA DE DOSIFICACIÓN ELECTRÓNICA

CYCLOMIX™ MICRO
CYCLOMIX™ MICRO+
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Est conforme à la législation d'harmonisation de l'Union applicable suivante / Is in conformity with the relevant Union harmonisation legislation / Erfüllt die einschlägigen Harmonisierungsrechtsvorschriften der Union / es conforme con la legislación de armonización pertinente de la Unión / è conforme alla pertinente normativa di armonizzazione dell'Unione / in overeenstemming met de desbetreffende harmonisatiewetgeving van de Unie / med den relevanta harmoniserade unionslagstiftningen / on asiaa koskevan unionin yhdenmukaistamislainsäädännön vaatimusten mukainen / jest zgodny z odpowiednimi wymaganiami unijnego prawodawstwa harmonizacyjnego / Shoduje se s následující příslušnou evropskou harmonizační legislativou / V skladu s harmonizirano zakonodajo Unije / Je v súlade s uplatniteľnými harmonizačnými právnymi predpismi EÚ / Megfelel a következő alkalmazandó uniós harmonizációs szabályozásnak / Este conform cu legislația aplicabilă de armonizare de mai jos

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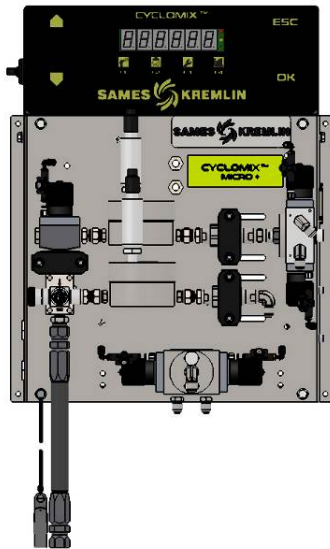
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INSTRUCTION MANUAL

**CYCLOMIX™
MICRO, MICRO+
MICRO+ PH,
MICRO+ PH+
MIXING SYSTEM**

155.660.9XX

Manual : 1903 573.191.112

Date : 27/03/19 - Cancels : 05/12/18

Modif.: Update

TRANSLATION FROM THE ORIGINAL MANUAL

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INSTRUCTION MANUAL
CYCLOMIX™ MICRO, MICRO+, MICRO+ PH, MICRO+ PH+
MIXING SYSTEM

TABLE OF CONTENTS

1. GENERAL SAFETY INSTRUCTIONS	3
■ INSTALLATION REQUIREMENTS	3
■ EQUIPMENT REQUIREMENTS	3
■ MAINTENANCE REQUIREMENTS.....	4
■ ENVIRONMENT	4
2. DESCRIPTION	5
3. OPERATING PRINCIPLE	7
4. TECHNICAL FEATURES	8
5. INSTALLATION	9
■ DESCRIPTION OF THE LABEL MARKINGS	9
■ INSTALLATION DIAGRAM	11
■ IMPLANTATION	12
■ CONNECTION OF THE CONTROL UNIT AND OF THE FLUID PART	14
6. OPERATING	15
■ DRIVING FROM THE CYCLOMIX™ MICRO	15
■ SWITCHING ON THE CYCLOMIX™ MICRO	15
7. FIRST SWITCHING ON	16
8. FIRST PLACING INTO OPERATION	18
■ FLUSHING OF THE PUMPS AND OF THE CYCLOMIX™ MICRO INTO SOLVENT.....	18
■ START-UP OF THE CYCLOMIX™ MICRO	18
9. APPLICATION PROGRAMMING (F3)	19
■ PASSWORD	19
■ PROCEDURE TO GET THE VERSION NUMBER OF THE ELECTRONIC CARD	19
■ PARAMETERS FOR CYCLOMIX™ MICRO <u>WITHOUT</u> CATALYST FLUSHING	20
■ PARAMETERS FOR CYCLOMIX™ MICRO <u>WITH</u> CATALYST FLUSHING.....	21
10. PRODUCTION (F1)	23
■ PROPORTIONING TEST	24
11. FLUSHING (F2)	24
12. CONSUMPTIONS / PRINT (F4)	26
13. DOWNLOADING DATA FROM CYCLOMIX MICRO TO A COMPUTER	27
14. INDICATIONS GIVEN BY THE LEDS	31
15. MAINTENANCE	31
■ TROUBLESHOOTING.....	33
■ DIAGNOSTICS	34
16. DISASSEMBLY - REASSEMBLY	36
■ MIXER.....	36
■ FLOWMETER	36
■ NEW MODULE INSTALLATION (OR MODULE REPLACEMENT)	37
■ PILOTED VALVES (FLUID VALVES AND TEST VALVES).....	38

ADDITIONAL DOCUMENTATIONS :

<u>Declaration</u>	EU declaration of conformity	Doc. 578.034.130
<u>Annexes</u>	Mixing ratio chart	Doc. 573.191.120
	Pneumatic & electric diagrams	055.660.999
<u>Spare parts</u>	Cyclomix™ micro	Doc. 573.359.050
	Color changer	Doc. 573.186.112 + 573.187.050 + 573.188.050
	Cyclomix™ : Flowmeters and sensors replacement	Doc. 573.705.070

Dear Customer, You are the owner of our new CYCLOMIX™ MICRO mixing system 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.

1. GENERAL SAFETY INSTRUCTIONS



The CYCLOMIX™ MICRO mixing system shall be installed outside the explosive area. It shall be installed in a safe area (non-explosive area according to the ATEX directive - refer to § 5).

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 carefully 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.

Read 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.

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 and glasses are required (Refer to chapter "Safety equipment" of SAMES KREMLIN selection guide).

■ EQUIPMENT REQUIREMENTS

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

➔ Never exceed the components maximum working 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 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 fluid hoses before carrying out any servicing on the gun.

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

CYCLOMIX™ MICRO

- ➔ Do not install the CYCLOMIX™ MICRO in an explosive area. It shall be in a safe area (non explosive area).
- ➔ Connect the display control unit to the mains supply fitted with a ground.
- ➔ The fluid module is fitted with a ground. Connect the ground cable to earth.
- ➔ Do not use any product or solvent incompatible with the components of the CYCLOMIX™ MICRO.
- ➔ Use the appropriate solvent for the material being sprayed to increase the equipment working life.
- ➔ Wear protective glasses to protect the operator from possible discharges during the handling of the CYCLOMIX™ MICRO test valves.
- ➔ Do not use electrostatic spraying for water-based paints with a resistivity lower than 5 MΩ.

■ MAINTENANCE REQUIREMENTS

Guards (air motor cover, coupling shields, connectors,...) 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 :

- 1 - to stop the air supply,
- 2 - to open the gun fluid circuit to depressurize the hoses,
- 3 - to shut off the CYCLOMIX™ MICRO electrical supply,
- 4 - to open the drain valves.

■ ENVIRONMENT



The equipment consists of a label plate with the name of the manufacturer, the equipment part number, the interesting informations to use correctly the equipment (pressure, voltage...) and the above pictogram.

The equipment is designed with and consists of high quality materials and components which can be re-used.

The 2012/19/UE European Directive covers all equipments with a crossed-out bin pictogram. Please inform yourself about the collection systems for electric and electronic equipments.

Please act according to local rules and **do not throw the old equipments with household wastes.** A correct disposal of the old equipment will help prevent negative consequences for the environment and health.

2. DESCRIPTION

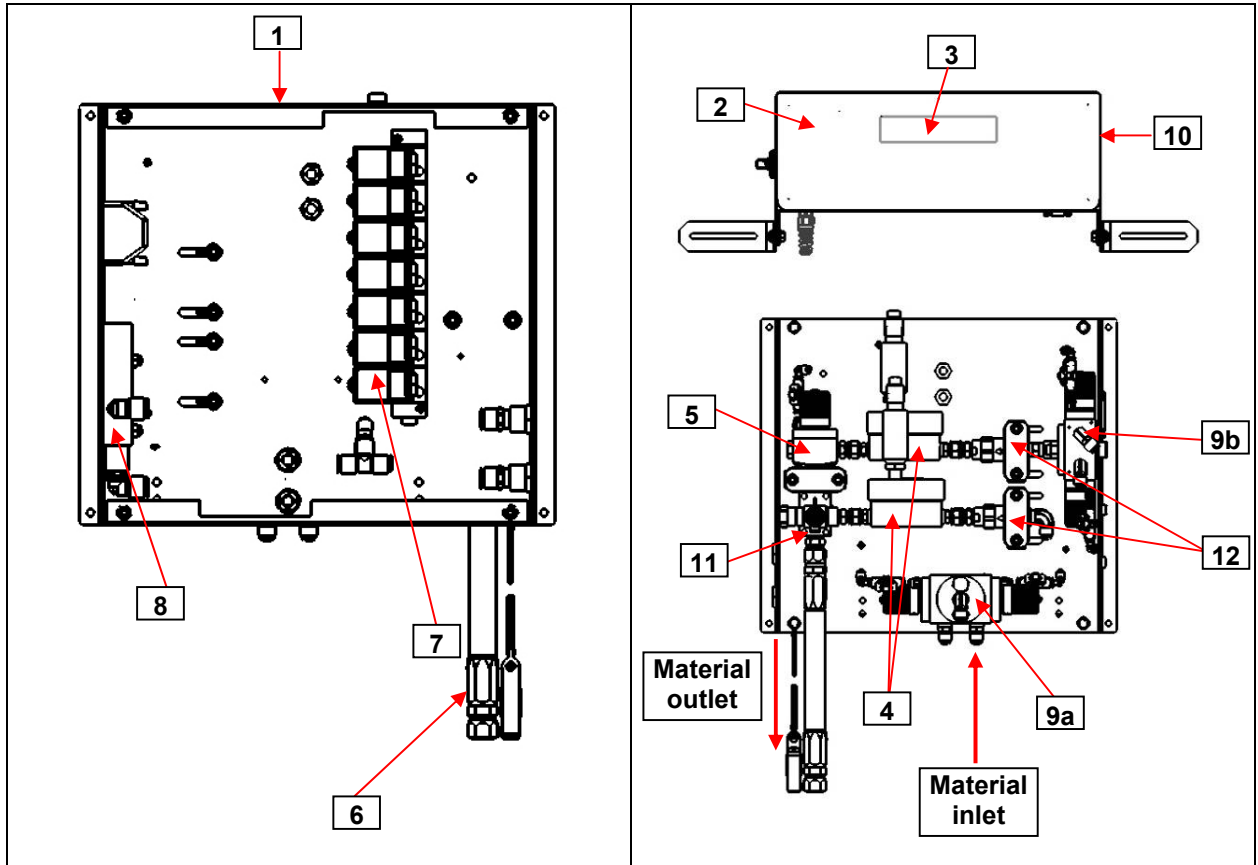
The CYCLOMIX™ MICRO mixing system is designed for applying two-component paints and varnishes (water-based or solvanted).

It is available for 2 technologies of application : pneumatic spraying, AIRMIX® spraying (maximum pressure : 172 bar / 2500 psi).

It comes in an independent form. It is only supplied with compressed air (maximum 6 bar / 87 psi) and a mains supply (115V / 230V).

It consists of :

- a control unit (2) with automaton and electromagnetic control components,
- a fluid module (1) that receives the volumetric meters, the automatic valves for materials and solvents and electropneumatic control components.

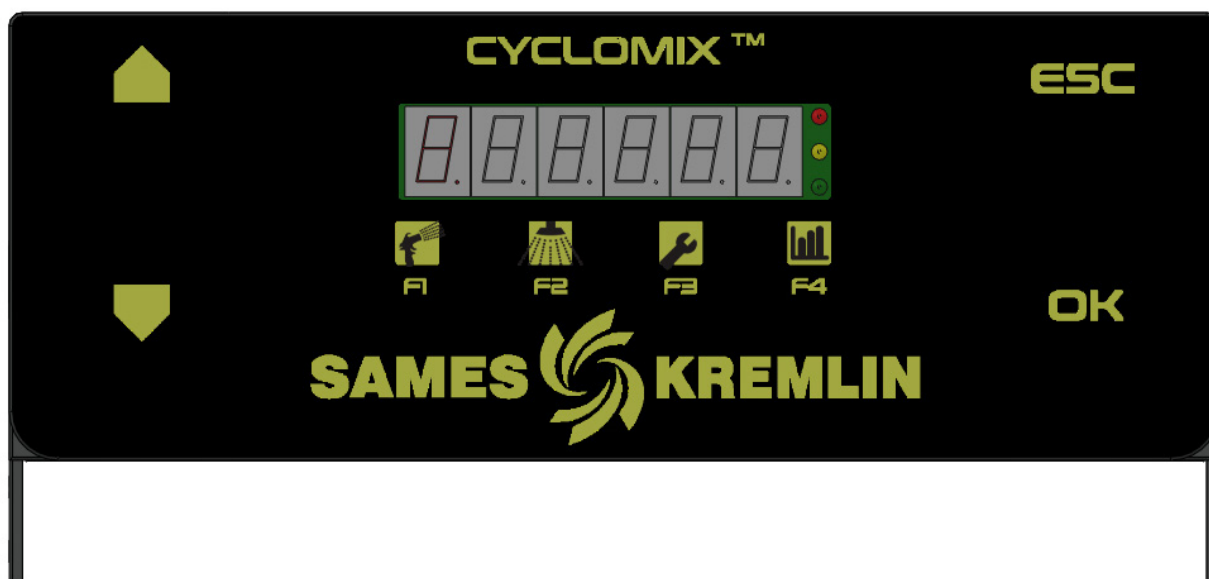


Captions :

1	Fluid module
2	Control unit
3	Display unit
4	Flowmeters
5	Automatic valve
6	Mixer

7	Electrovalves
8	Air flow switch
9	Color changer 9a : base CTM 9b : cata CTM
10	Protective housing
11	Three-way valve
12	Non-return valve

CONTROL UNIT FRONT PART



Ind.	Description	Function
-	Red LED	Fault
-	Orange LED	Operating (except production)
-	Green LED	Production

The CYCLOMIX™ MICRO is totally programmable via a man/machine interface. The screen indicates continuously by a simple identification, the statuses of the CYCLOMIX™ MICRO and enables to have access to the essential functionalities: ON / OFF - FLUSHING -PRODUCTION.

The informations relating to the operating of the CYCLOMIX™ MICRO (real-time display of the ratio, of the consumption...) can be read on the LCD screen.

The CYCLOMIX™ MICRO saves continuously the instantaneous consumptions of base, catalyst and solvent as well as the total consumptions and the emissions of Volatile Organic Compounds (VOC) during the operating of the equipment.

On the control unit, there is a cord grip. It enables to supply electricity to the CYCLOMIX™ MICRO via a safety isolating switch (115V / 230V).



Do not use electrostatic spraying for water-based paints or paints with a resistivity lower than 5 MΩ.

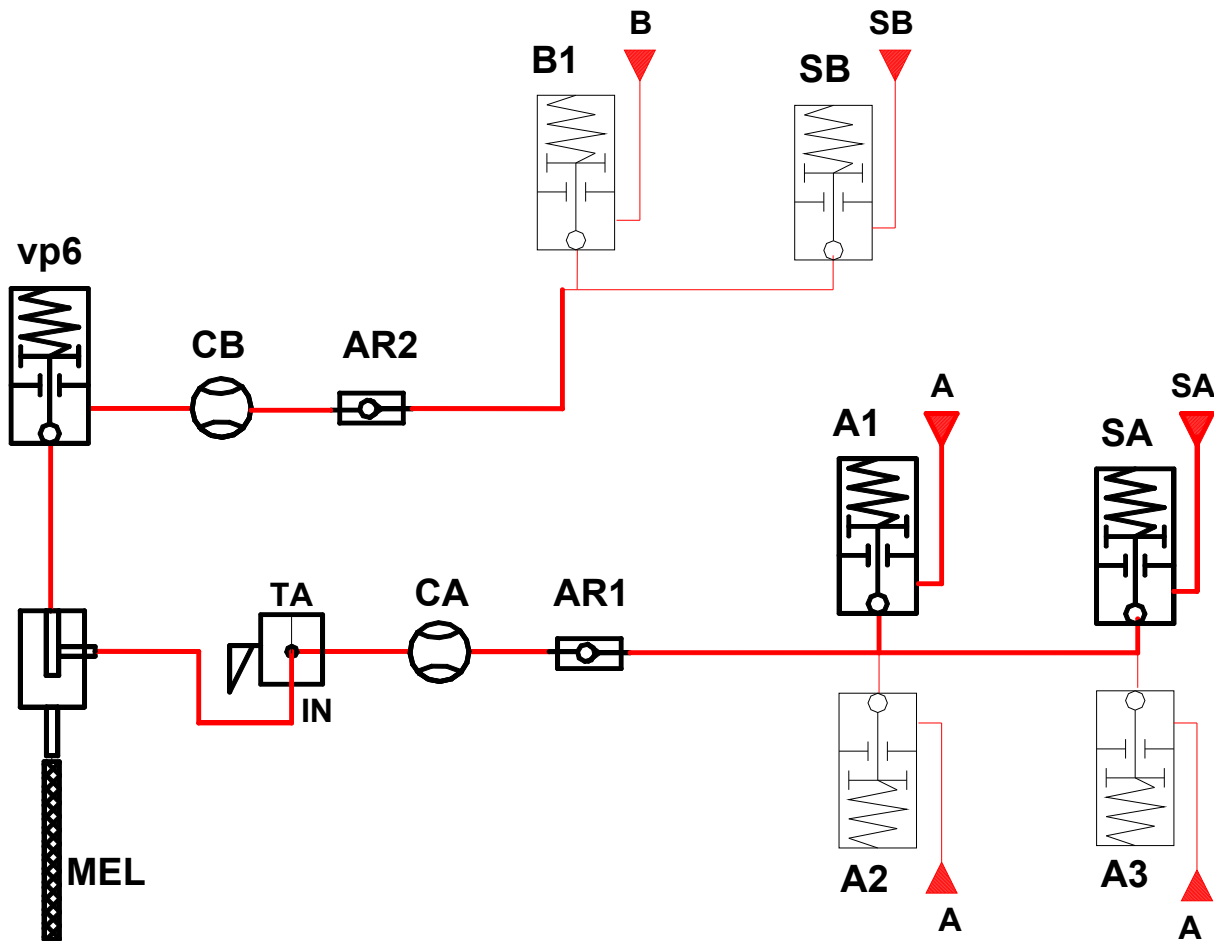
3. OPERATING PRINCIPLE

The 2 BASE and CATALYST materials are sent to the mixing system from 2 pumps or pressure tanks.

The base crosses a piloted valve (A1) and a meter (CA), the catalyst is directly sent to the meter (CB). The cycle begins with the opening of the BASE valve (A1). The 2 meters send their informations to the computer that shuts off the catalyst valve (VP6) when the computerized mixing ratio is reached.

The mixing process is based on a base constant flow. The catalyst flow is injected low under high frequency. The injection is made directly into the base flux at the mixer level.

The automaton checks continuously the mixing ratio and if it notices a fault that it cannot correct, an alarm is activated. The CYCLOMIX™ MICRO goes on safety mode.



A1	Base piloted valve (A)
SA	Base solvent piloted valve(SA)
A2	Base piloted valve (depending upon version)
A3	Base piloted valve (depending upon version)
B	Catalyst piloted valve (depending upon version)
SB	Cata solvent piloted valve (depending upon version)

IN	Three way-valve to mixer
TA	Sampling outlet for the base
CA	Base meter
CB	Cata meter
VP6	Injection piloted valve
MEL	Mixer

4. TECHNICAL FEATURES

<p>Number of colors : 1 or 3 Number of catalyst : 1</p> <p>Solvent paints compatibility Piloting via magnet on the control bay Print kit (connection to a printer)</p>	<p>Voltage : 230V / 115V - 10W Air pressure : minimum 4 bar / 58 psi; maximum 6 bar / 87 psi Fluid pressure: from 2 to 175 bar / from 29 to 2538 psi Weight : 25 kg / 55 lb Dimensions : - control unit : 370 mm x 172.5 mm x 110 mm / 14.6" x 6.8" x 4.3" - fluid module : 370 mm x 460 mm x 110 mm / 14.6" x 18.1" x 4.3" Fluid circuits (base and cata) made of stainless steel for the Cyclomix™ Micro and Micro+. CATALYST circuit made of 316 L stainless steel Circuit for the Cyclomix™ Micro+ PH. Adjustable mixing ratio : 1/0 and from 0,6/1 to 20/1 (BASE volume / CATALYST volume) (0% and from 166% to 5%) Measure precision : 1 % Mixed fluid flow : from 100 to 2000 cm3/mn Solvent flow : 7000 cm3/mn Fluid viscosity : from 30 to 5000 cps</p>
<p>Mixing permanent check Adjustable threshold alarm Adjustable pot-life indicator Automatic mixing control cycle Automatic flushing cycle (time) VOC display Total indicator for base, catalyst and solvent consumption</p>	<p>OPTION : *Auto-wash (gun support) You cannot go to production with the auto-wash, no connection to the CYCLOMIX™ MICRO. * Connecting cable (5 m). * Pickit 2 (Electronic programming kit) : the kit allows you to update the program on the electronic cards.</p>
<p>Connections : - Air : Inlet : F 1/4 BSP / Outlet : F 1/4 BSP - Material : Inlet : M 1/2 JIC / Outlet : M 1/2 JIC</p>	

NOTA : The version 2.82 is only compatible on electronic boards with version higher than V.2.32. Here after an overview of major versions :

Kinf of processor - Electronic card	Manufacturing date first units	Soft version	Presence of error 6	Soft compatibility with 2.82 latest version
PIC 18F4520	-	2.31	-	-
PIC 18F4620	09 Y 1001	2.32	-	Yes
	10 Y 1133	2.6	Yes	Yes
	14 Y 1152	2.82	Yes - Can be setup with P12	Yes

Different versions of the CYCLOMIX™ MICRO :

Configurations	BASE	CATALYST
CYCLOMIX™ MICRO	1 base + 1 solvent	1 cata
	3 bases + 1 solvent	1 cata
CYCLOMIX™ MICRO +	1 base + 1 solvent	1 cata + 1 solvent
	3 bases + 1 solvent	1 cata + 1 solvent
CYCLOMIX™ MICRO+ PH	1 base + 1 solvent	1 cata + 1 solvent
	3 bases + 1 solvent	1 cata + 1 solvent

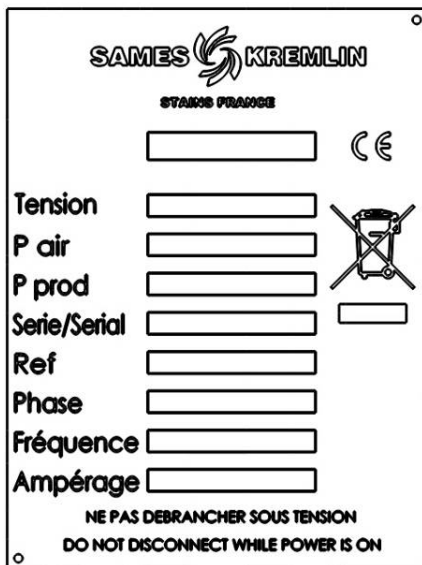
The control unit is the same for all the versions of the CYCLOMIX™ MICRO.

You can change the configuration displacing the shunt located on the μ card (J7 terminal) - (refer to "Annexes" - electric diagram).

5. INSTALLATION

■ DESCRIPTION OF THE LABEL MARKINGS

The CYCLOMIX™ MICRO is fitted with 2 label markings : a label marking on the control unit and the other one on the fluid module.




Marking label on the control unit
(bay located **outside** the spray booth in a safe area)




Marking label on the fluid module
(fluid module located **outside** the spray booth in a safe area)

CONTROL UNIT :

SAMES KREMLIN STAINS FRANCE	Name and address of the manufacturer
CE	European conformity
Tension	CYCLOMIX™ MICRO voltage
P air	Maximum air pressure
P prod	Maximum fluid pressure
Serie / Serial	Number given by SAMES KREMLIN. The two first numbers indicate the manufacturing year.
Ref	CYCLOMIX™ MICRO part number
Phase	Single phase
Fréquence	50-60Hz / Mains frequency
Ampérage	Maximum current used
NE PAS DEBRANCHER SOUS TENSION DO NOT DISCONNECT WHILE POWER ON	-
	Environmental Indication (refer to § 2 - Environment)

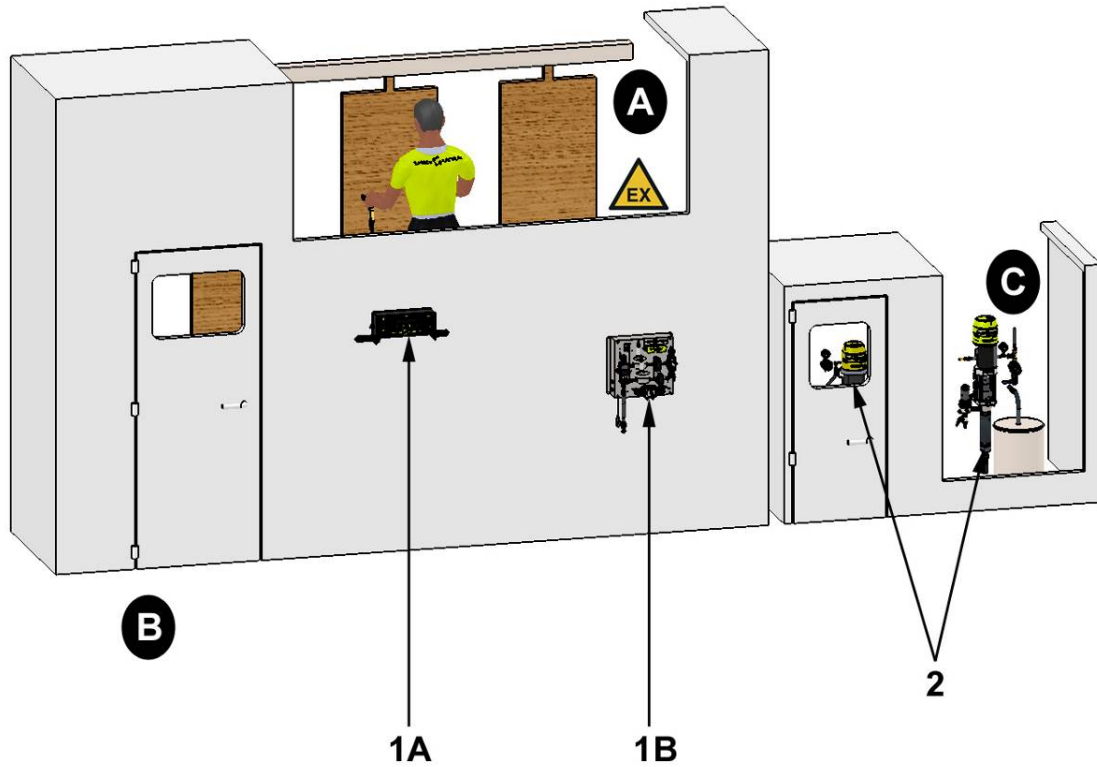
FLUID MODULE :

SAMES KREMLIN STAINS FRANCE	Name and address of the manufacturer
CE	European conformity
P air : 6 bar / 87 psi	Maximum air pressure
P prod : 175 bar / 2536 psi	Maximum fluid pressure
NE PAS DEBRANCHER SOUS TENSION DO NOT DISCONNECT WHILE POWER ON	-
	Environmental Indication (refer to § 2 - Environment)



Caution!
The CYCLOMIX™ MICRO mixing system must be installed outside the explosive area. It must be installed in a safe area (non explosive area according to the ATEX directive).
The control unit must be connected to a mains supply fitted with a ground.
The ground of the fluid module must be grounded.

■ INSTALLATION DIAGRAM



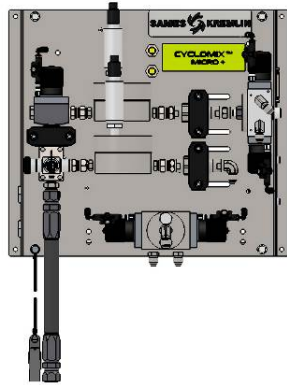
A	ATEX zone
B	Non explosive area (safe area)
C	ATEX zone
1A	CYCLOMIX™ MICRO control unit
1B	CYCLOMIX™ MICRO fluid module
2	Pumps + Accessories



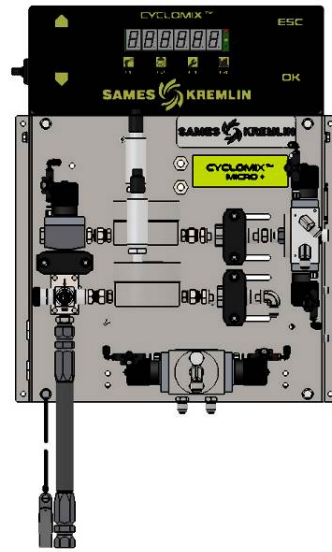
The user is liable for the delimitation of the zones which depends on the materials used, the material environment and the use conditions (refer to EN 60079 -10 standard).

■ IMPLANTATION

There are different ways to install the CYCLOMIX™ MICRO to answer to the majority of installations.



The display unit is not fixed to the fluid module.
The display unit and the fluid module are installed
in a safe area.



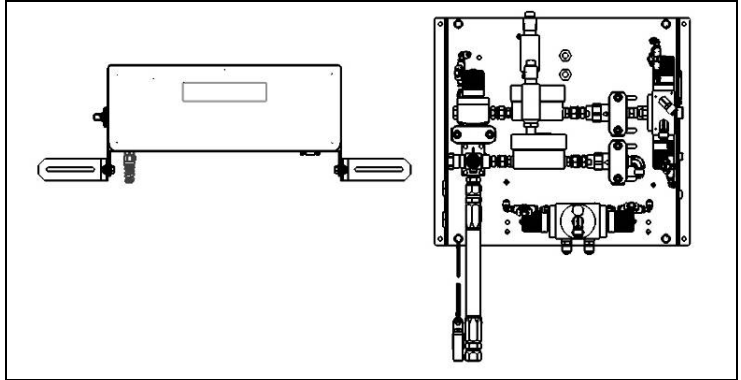
The display unit is fixed to the fluid module.
The display unit and/or the fluid module are
installed in the spraybooth.



Correct installation

Assembly for piloting outside the booth :

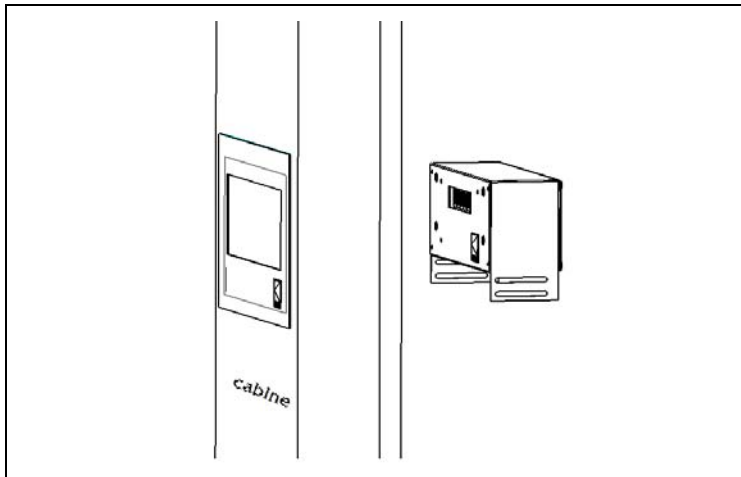
The CYCLOMIX™ MICRO gets two parts to enable the mismatch of the control part (5 m / 196.85 ft cable between the 2 components).



Assembly for piloting in the booth :

There is a control kit in booth (available in option).

That kit enables to fix the control box on the spray booth by means of a glass sheet and to pilot that one inside. The piloting is carried out thanks to a magnet provided with the CYCLOMIX™ MICRO. The distance between the control box and the fluid part is of 5 m / 196.85 ft (cable provided with the CYCLOMIX™ MICRO).



■ CONNECTION OF THE CONTROL UNIT AND OF THE FLUID PART

➡ The CYCLOMIX™ MICRO must be connected to a dry and clean compressed air (minimum 4 bar / 58 psi) and to a single phase electric supply (115 V / 230V) connected to an isolating switch. The network ground will be connected in the control bay on a contact provided.

⚠ Before connecting the CYCLOMIX™ MICRO, be certain the mains voltage is the same than the one of the CYCLOMIX™ MICRO (230 V).

If no, open the electric box removing the protective housing (10) and shift the staple (230V → 115V).

The air connection of the CYCLOMIX™ MICRO is Female 1/4 G (air inlet = R1 and air outlet = R2).

The connection between the control unit and the fluid module is carried out via the provided cable, length 5 m / 196.85 ft. For lengths up to 5 m / 196.85 ft connect the cables between them (male-female).

⚠ The connection between the two cables must not be in the explosive area. A valve fitted with fittings is supplied with the CYCLOMIX™ MICRO. It will be mounted on the gun air inlet : it enables to shut off quickly the fan air (priming, flushing stage).

Connection of the fluid inlets :

The fluid inlets are M 1/2 JIC.

➡ **We advice you to install AIRMIX filters on the fluid inlets (catalyst and base).**

The base(s) and the base solvent are connected on the color changer installed on the CYCLOMIX™ MICRO.

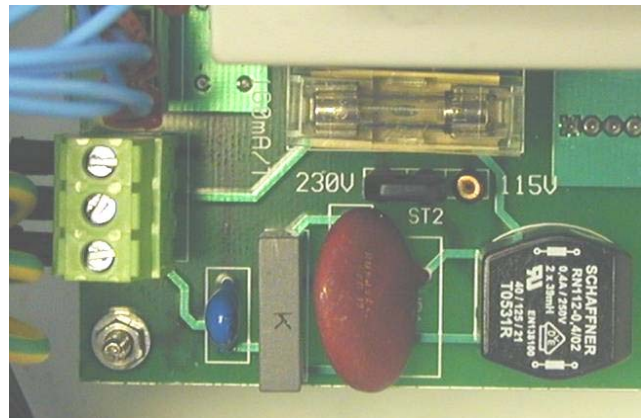
The catalyst is connected :

- directly on the elbow installed before the non-return valve,
- or on the color changer (cata and cata solvent) installed in the CYCLOMIX™ MICRO.

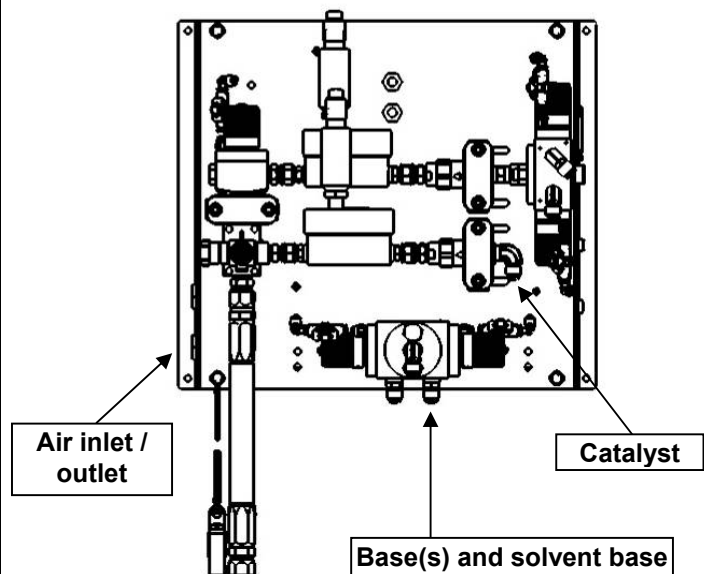
It depends upon the configuration of the CYCLOMIX™ MICRO.

The air connection is made on the two G 1/4 connecting parts.

**Fuse 160 mA
for CYCLOMIX™ MICRO
with serial number < to 09Y1080**



**Fuse 315 Ma
for CYCLOMIX™ MICRO
with serial number >to 09Y1080**





Assemble filters at the outlet of the BASE and CATA pumps.
Assemble pressure regulators at the outlet of the BASE and CATA pumps.

Install the fluid and air hoses between the pumps and the CYCLOMIX™ MICRO, and between the CYCLOMIX™ MICRO and the gun. When choosing the fluid hoses, comply with the pressures delivered by the pumps. For the air hoses, install **non-static** hoses.

Unscrew the regulators before supplying air to the installation.

Check that the three way-valve is in the IN fluid circuit sense and not in the TA circuit sense.

Nota : To connect the SOLVENT pump (CATA) to the CYCLOMIX MICRO :

- choose a CYCLOMIX™ MICRO set up with 1 catalyst and one cata solvent,
- or disconnect the CATA hose at non-return valve level (CATA) of the equipment and replace it connecting the SOLVENT hose (CATA).

6. OPERATING

■ DRIVING FROM THE CYCLOMIX™ MICRO

SCREEN

The different menus and the informations relating to the CYCLOMIX™ MICRO are displayed on the alphanumeric screen.

KEYBOARD

ESC	That key enables to quit the menus or the different modes (production, flushing, parameters).
	That key enables to enter in the different menus or to validate a value of parameter.
	That key enables to shift from a menu to another and to increase the value of a parameter during modifications of value.
	That key enables to shift from a menu to another and to decrease the value of a parameter during modifications of value.

The keyboard is used thanks to a magnet provided with the CYCLOMIX™ MICRO. That piloting mode enables to drive the CYCLOMIX™ MICRO inside the booth if the box is installed behind the booth glass. That technology enables the operator to save time and to carry out his work from the application place.

■ SWITCHING ON THE CYCLOMIX™ MICRO



The placing of the system into operation requires that the BASE, CATALYST and SOLVENT drums are full enough to ensure the production.
Connect the gun before placing the system into operation.

Supply air to the CYCLOMIX™ MICRO (minimum 4 bar / 58 psi).

Supply air to the air regulators of the pumps (BASE, CATALYST, SOLVENT).

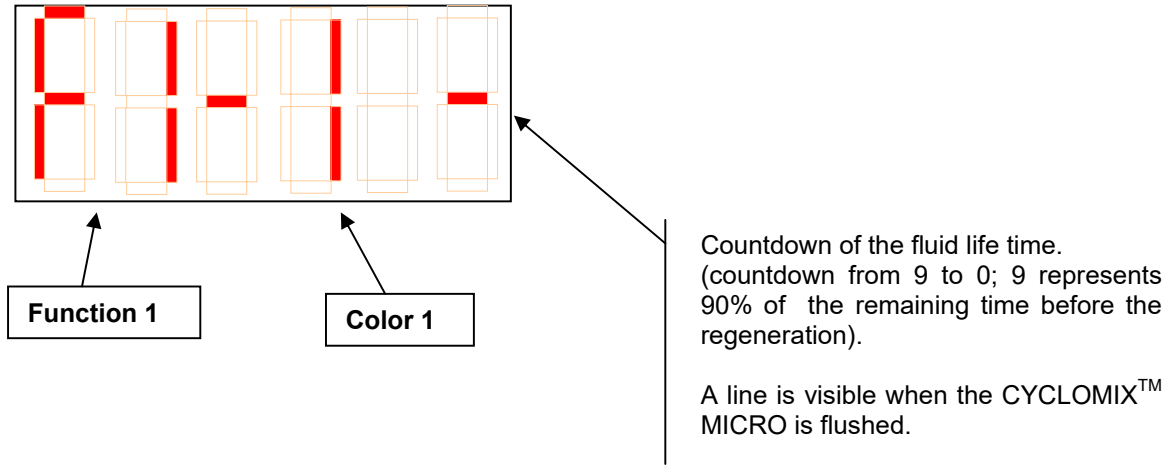
Switch on the control unit (switch located on the side of the unit).

When switching on the control unit, a menu is displayed on the screen.

Nota : Parameters have been programmed in the factory before the delivery of the CYCLOMIX™ MICRO. You must adapt the parameters to the use. They must be modified by an authorized person (refer to list of parameters).

7. FIRST SWITCHING ON

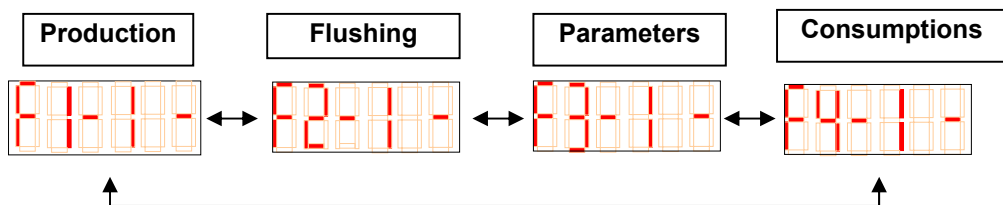
STANDARD MENU



When switching on, the CYCLOMIX™ MICRO is waiting. The 'F-1' menu corresponds to the shift to the production mode. There are 4 different menus : they enable to control the CYCLOMIX™ MICRO.

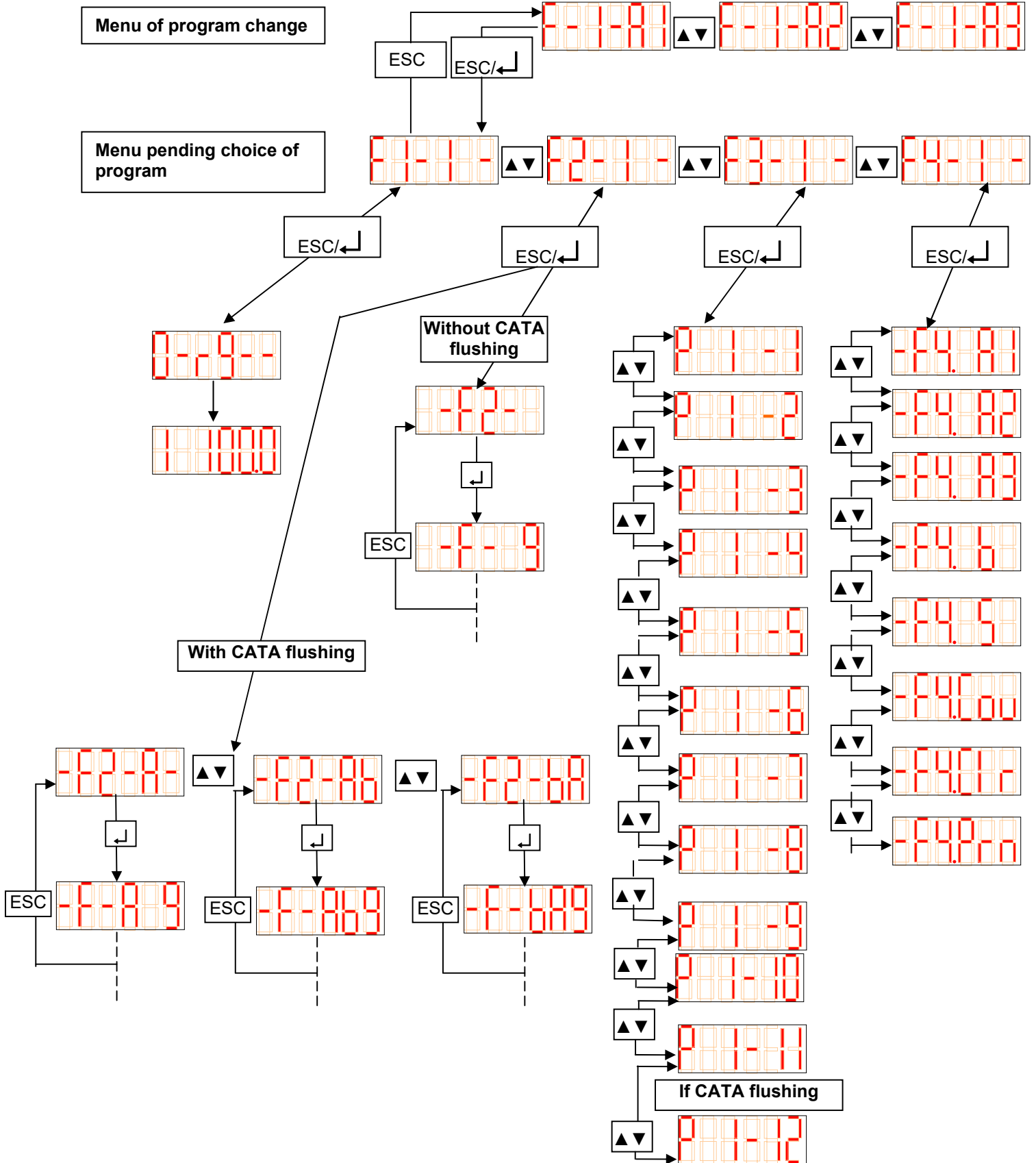
- F-1 : production
- F-2 : flushing
- F-3 : parameters
- F-4 : consumptions

To surf from a menu to another, you must move placing the magnet on the sensors indicated with '▲/▼'.
The menus scroll as follows :



Arborescence of the menus

3 color's
CYCLOMIX™ MICRO



8. FIRST PLACING INTO OPERATION



During that first placing into operation, it is compulsory to have all the pumps into solvent as well as the CYCLOMIX™ MICRO to ensure the good quality of the fluid get by the CYCLOMIX™ MICRO.

The fluid pressure must not exceed 20 bar / 290 psi.

We advice you to install the TB fitting (provided with the CYCLOMIX™ MICRO) instead of the mixer.

■ FLUSHING OF THE PUMPS AND OF THE CYCLOMIX™ MICRO INTO SOLVENT

- Carry out the connections indicated at § 5 (INSTALLATION).
- Check that the three way-valve is turned towards 'TA'.
- Remove the static mixer to install, instead of it, the adapter fitting (marked TB, F 3/4 JIC - F 1/4 G).
- Start the pumps with solvent and increase the fluid pressure to 1 bar / 14.5 psi.
- On the page of the display main menu, input "PRODUCTION MODE" (F-1 then ↵).
- Do not change the factory parameters for the moment.
- Make the CYCLOMIX™ MICRO mix until the solvent flows out clean. During that stage, the CYCLOMIX™ MICRO must be in fault due to air presence into hoses. In case of alarm, acquit, then go to production mode.
CAUTION : shut off air turning the valve that has been mounted to the gun air inlet (Cf. § 5)
- Quit the production mode passing to ESC.
- Repeat the 4 stages previously indicated, when using a 3 shades' CYCLOMIX™ MICRO, with all the shades (A2 and A3).

■ START-UP OF THE CYCLOMIX™ MICRO

- Check that the three way-valve is turned towards 'TA'.
- Start the pumps.
- Pass to production and let the fluid flow until it flows clean. In case of alarm, acquit then go to production.
CAUTION : shut off air turning the valve that has been mounted to the gun air inlet (Cf. § 5).
- Repeat the stages previously indicated, when using a 3 shades' CYCLOMIX™ MICRO, with all the shades (A2 and A3).
- Carry out a flushing before cleaning the 3 way-valve. As soon as the solvent is clean, pass to ESC.

From now on you can enter your parameters of application.



After that first placing into operation, you must carry out a flushing to clean the 3 way-valve. During the flushing, flush correctly the TA side of the valve, then turn the 3 way-valve to IN to flush the fitting at the outlet of the injector.

Once the first placing into operation and the flushing carried out, install the mixer and leave the 3 way-valve on IN.

9. APPLICATION PROGRAMMING (F3)

To alter the parameters of the CYCLOMIX™ MICRO, go to F3, then validate. To shift from a parameter to another, use the arrows ▲ or ▼.

Select the parameter to alter. Depress the key ←, then the arrows ▲ or ▼ to increase or decrease the value. Activate ← to validate the new value or ESC to cancel.

To quit a parameter, activate **ESC**.

To quit the PARAMETERS menu, activate **ESC**.

When using a 3 shades' CYCLOMIX™ MICRO, you must select the shade and alter later on the parameters.

The parameters are pre-programmed in the factory. They must be modified (by an authorized person) to adapt themselves to the material.

■ PASSWORD

When you start the CYCLOMIX™ MICRO for the first time the access code of the menu 'Parameters' is deactivated, everyone is able to modify the CYCLOMIX™ MICRO parameters.

To activate this access code you have to :

- enter in the parameter 0 of the menu F3 : F3 -- → « key ← » → P -- 0 → « key ← ». The code '0000' appears, it's the code present by default in the equipment.

- change the code by using the arrows ▲ or ▼ and the «key ←» for each digit which compose this code.

Once the access code was validated, the access is protected by the password. Only the people who know this password and those which know the administrator code '5555' will be able to reach the menu 'Parameters'.

Each time a user wants to enter in the menu 'Parameters' the password will be required: [0--- .

The user shall enter the password by using the arrows ▲ or ▼ and the «key ←» for each digit which compose this code :

- If the entered code is correct, the following fonts ----- appear.

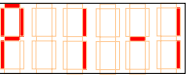
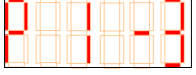
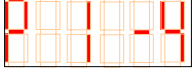
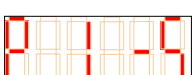
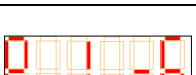


- If the entered code is incorrect, the word 'Error' appears and the CYCLOMIX™ MICRO allows you to enter the password again (Press 'Esc' to return to the principal menu).

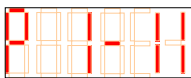
If you want to deactivate the password, you just have to parameterise the code '0000' again as access code.

■ PROCEDURE TO GET THE VERSION NUMBER OF THE ELECTRONIC CARD

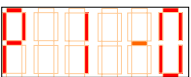
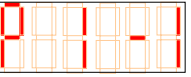
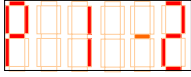
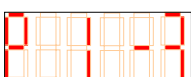
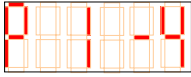
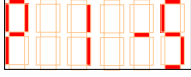
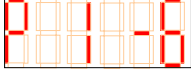
- Install the magnet on the **OK** key,
- Start the CYCLOMIX™ MICRO.

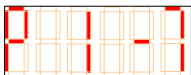
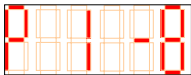
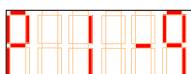

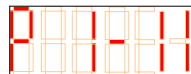

■ PARAMETERS FOR CYCLOMIX™ MICRO WITHOUT CATALYST FLUSHING

Parameters	Description	Factory adjustment For the 3 programs	Your adjustment Program 1	Your adjustment Program 2	Your adjustment Program 3
	Parameter of the password	0000			
	Mixing ratio parameter. Percentage of catalyst in the base, from 0% to 160%	50 %			
	Parameters of the mixed fluid life time Minimum value : 1min Maximum value : 480 min	100 min			
	Regeneration volume parameter in cubic centimetre Minimum value : 100 c.c Maximum value : 10 000 c.c	5000 c.c			
	Flushing volume during which the CYCLOMIX™ MICRO flushes with solvent Minimum value : 10 c.c Maximum value : 10 000 c.c	500 c.c			
	Mixing tolerance parameter to enable the CYCLOMIX™ MICRO to make an alarm. Minimum value : 1% Maximum value : 100%	5 %			
	Parameter of the fluid dry extract to count the VOC Minimum value : 0% Maximum value : 100%	55 %			
	Parameter of volume by tooth of base flowmeter. You must change that parameter when changing the flowmeter. Minimum value : 0.01 c.c Maximum value : 2.00 c.c	0.24 c.c (Value of origin)			
	Parameter of volume by tooth of catalyst flowmeter. You must change that parameter when changing the flowmeter. Minimum value : 0.01 c.c Maximum value : 2.00 c.c	0.24 c.c (Value of origin)			
	Parameter of time between the air opening and the fluid opening before fault Minimum value : 1 s Maximum value : 6 s	6 s (Value of origin)			
	Parameter of the proportioning test ↔: to activate this parameter	-			

Parameters	Description	Factory adjustment For the 3 programs	Your adjustment Program 1	Your adjustment Program 2	Your adjustment Program 3
	Handling of the error 6 in the operating of the CYCLOMIX™ MICRO during the production sequence (parameter available for CYCLOMIX™ MICRO with serial number > 14 V 1152). Minimum value : 0 pulse Maximum value : 5000 pulses	100 pulses (Value of origin)			

■ PARAMETERS FOR CYCLOMIX™ MICRO WITH CATALYST FLUSHING

Parameters	Description	Factory adjustment For the 3 programs	Your adjustment Program 1	Your adjustment Program 2	Your adjustment Program 3
	Parameter of the password	0000			
	Mixing ratio parameter. Percentage of catalyst in the base, from 0% to 160%	50%			
	Parameters of the mixed fluid life time Minimum value : 1min Maximum value : 480 min	100 min			
	Regeneration volume parameter in cubic centimetre Minimum value : 100 c.c Maximum value : 10 000 c.c	5000 c.c			
	BASE flushing volume during which the CYCLOMIX™ MICRO flushes with solvent Minimum value : 10 c.c Maximum value : 10 000 c.c	500 c.c			
	CATA flushing volume during which the CYCLOMIX™ MICRO flushes with solvent Minimum value : 10 c.c Maximum value : 10 000 c.c	500 c.c			
	Mixing tolerance parameter to enable the CYCLOMIX™ MICRO to make an alarm. Minimum value : 1% Maximum value : 100%	5 %			

Parameters	Description	Factory adjustment For the 3 programs	Your adjustment Program 1	Your adjustment Program 2	Your adjustment Program 3
	Parameter of the fluid dry extract to count the VOC Minimum value : 0% Maximum value : 100%	55 %			
	Parameter of volume by tooth of base flowmeter. You must change that parameter when changing the flowmeter. Minimum value : 0.01 c.c Maximum value : 2.00 c.c	0.24 c.c (Value of origin)			
	Parameter of volume by tooth of catalyst flowmeter. You must change that parameter when changing the flowmeter. Minimum value : 0.01 c.c Maximum value : 2.00 c.c	0.24 c.c (Value of origin)			
	Parameter of time between the air opening and the fluid opening before fault Minimum value : 1 s Maximum value : 10 s	6 s (Value of origin)			
	Parameter of the proportioning test ↔ : to activate this parameter	-			
	Handling of the error 6 in the operating of the CYCLOMIX™ MICRO during the production sequence (parameter available for CYCLOMIX™ MICRO with serial number > 14 V 1152). Minimum value : 0 pulse Maximum value : 5000 pulses	100 pulses (Value of origin)			

10. PRODUCTION (F1)



If the CYCLOMIX™ MICRO is not in mixed material, a regeneration is automatically carried out to bring the mixed material to the gun.

We advise you to shut off air during that stage.

When passing for the first time to production, the CYCLOMIX™ MICRO carries out a regeneration :

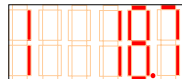


The control unit consists of a countdown that enables to know, in percentage (9 → between 90% and 100% of the volume), the pending volume flow according to the P3 parameter. At the end of that stage, the CYCLOMIX™ MICRO enters in production. You can also activate ESC during the fluid priming; we advise you not to start painting immediately.

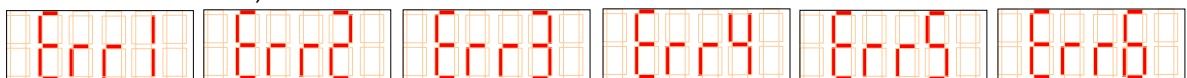
In production, as well as in regeneration, the CYCLOMIX™ MICRO injects little volumes of catalyst in a base constant flow. At the end of each injection, the CYCLOMIX™ MICRO checks the mixing and re-adjusts the volumes of injections considering the mixing difference.

In production, there are 3 main cases :

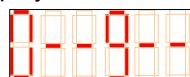
- the operator is spraying and the CYCLOMIX™ MICRO operates correctly. The real mixing ratio is displayed on the screen.



- the CYCLOMIX™ MICRO stops because of a dysfunction. The kind of breakdown is displayed on the screen, the CYCLOMIX™ MICRO emits a sound signal to inform the operator (cf § "TROUBLESHOOTINGS").



- The CYCLOMIX™ MICRO has reached the maximum life duration of the material and passes automatically in regeneration mode. The CYCLOMIX™ MICRO emits a sound signal to inform the operator. The following screen is displayed :

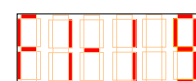


Open the gun until the regeneration ends.



You can stop the regeneration activating ESC. Then, the regeneration stops, but careful, the quality of the product can be inferior.

To exit from production : activate ESC. The following screen is displayed :



Potlife (9-0)

In the 3 shades' version, during the color change, the potlife is updated with the new parameters of the selected color. If you validate another color, the potlife in progress with the old color will remain until a flushing or a regeneration is carried out.

■ PROPORTIONING TEST



To carry out a mixing test, decrease a lot the pressure of the fluids (maximum 18 bar / 261 psi) to provide any projection of dangerous material. We advice you to wear protective glasses and gloves.

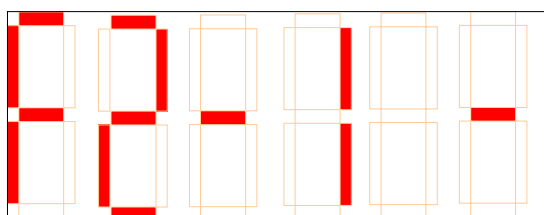
1. Turn the three way-valve to the TA index.
2. Remove the static mixer to install, instead of it, the adapter fitting (marked TB, F 3/4 JIC - F 1/4 G).
3. Place 2 beakers under the fluid outlets : TA and at the outlet of the TB mixer block.
4. Go in the menu F3 an then access to the parameter 10 (without catalyst flushing) or parameter 11 (with catalyst flushing) to activate the proportioning test.
5. When you have a sufficient sample volume, activate ESC.

Note : During the proportioning test, the error 6 is deactivated. The other errors are active only if the flow-switch is activated. We advice you to keep the error 6 active (P11 / P12 >0).



After that operation, you must carry out a flushing to clean the 3 way-valve. During the flushing, flush correctly the TA side of the valve, then turn the 3 way-valve to IN to flush the fitting at the outlet of the injector. Once the test ended and the flushing carried out, install the mixer and leave the 3 way-valve on IN.

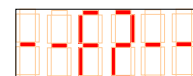
11. FLUSHING (F2)



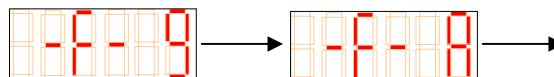
The menu is useful for the flushing. When you want to flush the CYCLOMIX™ MICRO, activate ← when you are on the F-2 menu.

For the CYCLOMIX™ MICRO without CATA flushing :

The CYCLOMIX™ MICRO asks for a confirmation to start flushing :



After confirming via ←, the CYCLOMIX™ MICRO opens the solvent valve, starts the counting of the volume and the buzzer sounds continuously. When you begin the flow, the buzzer sounds intermittently and a breakdown begins on the display unit :



When the breakdown has reached 0, the CYCLOMIX™ MICRO closes the solvent valve and the BASE flushing has ended.

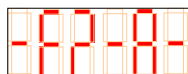
For a long duration shutdown without CATA flushing, flush the catalyst circuit :

You must disconnect the CATA hose and connect, instead of it, the SOLVENT hose (CATA). Pilot with air the VP6 valve until the solvent flows clean.

For the CYCLOMIX™ MICRO with CATA flushing :

That mode is only available for the CYCLOMIX™ MICRO+ and CYCLOMIX™ MICRO+ PH versions. A J7 shunt inside the electric box is also necessary - (refer to "Annexes" - electric diagram).



The CYCLOMIX™ MICRO suggests a BASE flushing :



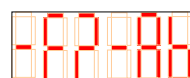
Choose :


- to confirm via  :

⇒ the CYCLOMIX™ MICRO opens the solvent valve, starts the counting of the BASE FLUSHING volume and the buzzer sounds continuously.



- Or to select the CATA FLUSHING (BASE side flushing, then CATA side flushing), via the  or  keys.

⇒ The CYCLOMIX™ MICRO suggests the CATA flushing :



Confirm via  :

⇒ the CYCLOMIX™ MICRO opens the BASE solvent valve, starts the counting of the BASE FLUSHING volume then opens the CATA solvent valve, starts the counting of the CATA FLUSHING volume and the buzzer sounds continuously.

- Or to select the CATA FLUSHING (CATA side flushing, then BASE side flushing), via the  or  keys.

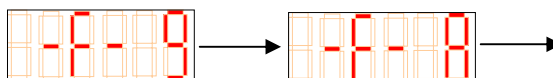
⇒ The CYCLOMIX™ MICRO suggests the CATA flushing :



Confirm via  :

⇒ the CYCLOMIX™ MICRO opens the CATA solvent valve, starts the counting of the CATA FLUSHING volume, then opens the BASE solvent valve, starts the counting of the BASE FLUSHING volume and the buzzer sounds continuously.

When you begin to flow, the buzzer sounds intermittently and a breakdown begins on the display unit.



The breakdown display evokes the kind of flushing in progress :

BASE : -F-A 9

or

BASE + CATA : -F-Ab9

or

CATA + BASE : -F-bA9

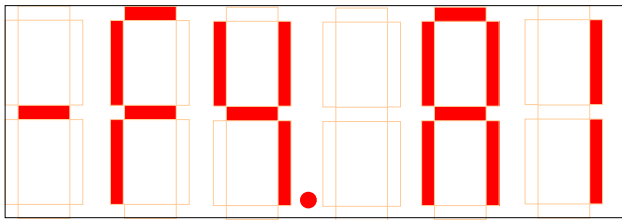
When the breakdown has reached 0, the CYCLOMIX™ MICRO closes the solvent valve and the flushing has ended.



You can stop flushing activating ESC but if so, the CYCLOMIX™ MICRO can be incorrectly flushed.

The volume of flushing with solvent starts when the flowmeter begins counting. It means that the time between the validation of the flushing and the opening of the gun is not taken into account.

12. CONSUMPTIONS / PRINT (F4)



The 'F-4' menu enables to view the consumptions of each material (color, catalyst, solvent, VOC in c.c.). You can also print the ratio of the consumptions as well as the parameters of the applications but, you must equip yourself with the 'print' option. The option consists of a connection cable with connectors to connect the printer (RS 232 connection) (printer not provided with the option).

	Consumption of the color 1		Consumption of the flushing solvent
	Consumption of the color 2 (for a 3 shades' CYCLOMIX™ MICRO)		Consumption of the VOC
	Consumption of the color 3 (for a 3 shades' CYCLOMIX™ MICRO)		Reset of the consumptions activating the key ↵
	Consumption of the catalyst		Enables to print the consumptions and the parameters activating the key ↵
	Consumption of the CATA solvent (depending upon version of the CYCLOMIX™ MICRO)		

13. DOWNLOADING DATA FROM CYCLOMIX MICRO TO A COMPUTER

Nota : The following procedure has some screenshots with the PU 3000 quote. The procedure is the same for the Cyclomix™ Micro.

Preamble / "Hyper Terminal" issue

This application is necessary. Two cases are to be considered :

- .PC under Windows XP/Vista/2000,
- .PC under Windows 7.

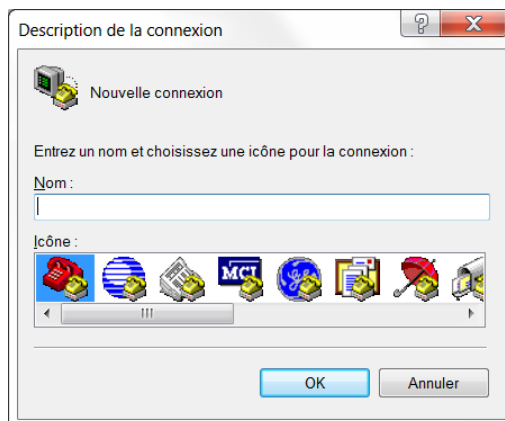
- **With Windows XP/Vista/2000**, "HyperTerminal" application is available with the following path :
Menu Start > All programs > Accessories > Communications > HyperTerminal

- **With Windows7**, you will need to download freeware "HyperTerminal" from some website.

For example : <http://www.01net.com/telecharger/windows/Bureautique/telephonie/fiches/5829.html>

Once it is downloaded and installed, carry out a simple test of opening and closing.

It should look like this whenever open :



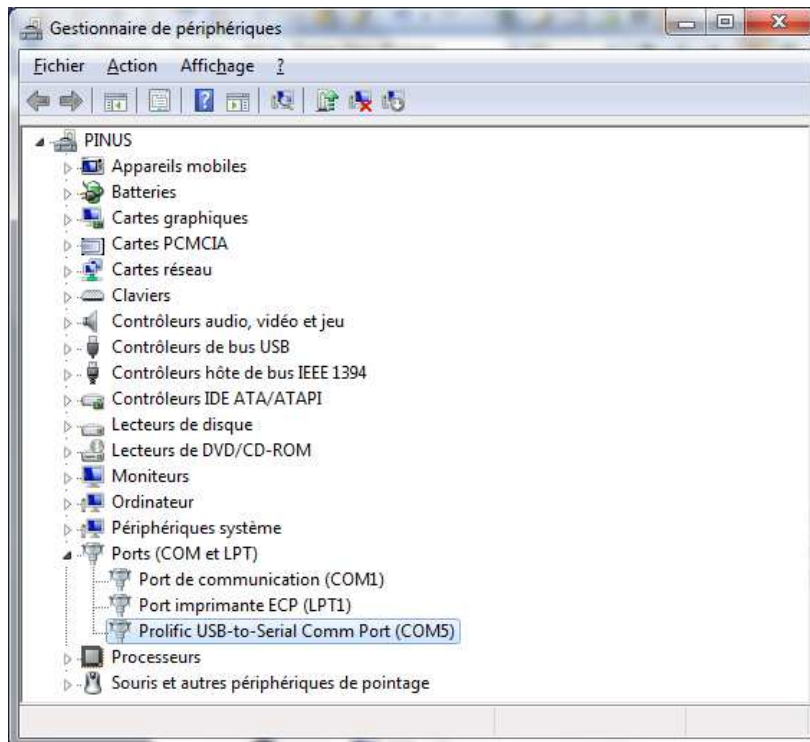
Switching of the control box

- Switch the control box.
- Link a "RS232 male / USB male" cable to the plug located below the Micro back frame, the other end to the USB plugs on the computer. Cable not supplied by KR.

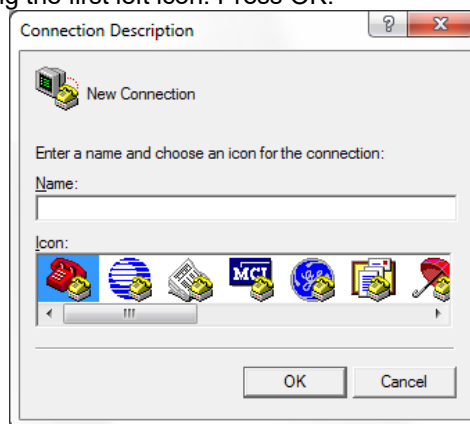


- According to the USB plug used a "port com" number appears in the "device manager" screen (Menu Start > Control panel > Device manager).

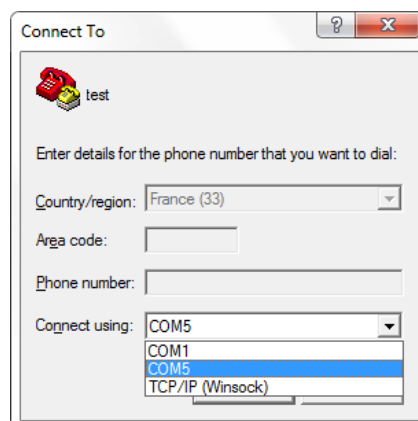
- After deployment of the "Ports" line, one of them indicates the cable pilot name ("Prolific USB" for example or else), followed by the "port com" number (COM5 in that display).



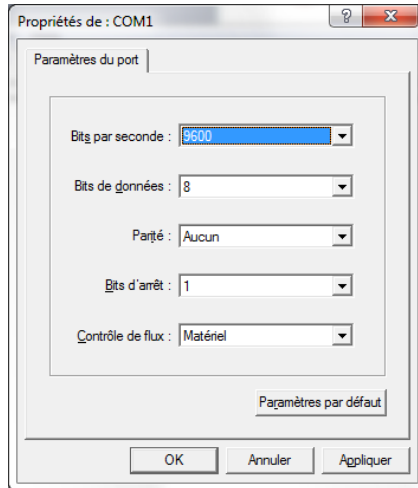
- Open "HyperTerminal" window.
- At the first connection, create a new connecting session, write a name in (order number or paint reference) by choosing the first left icon. Press OK.



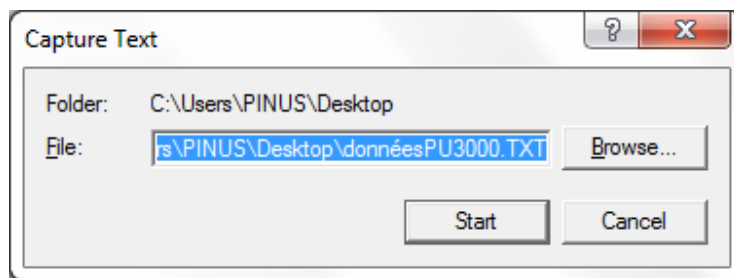
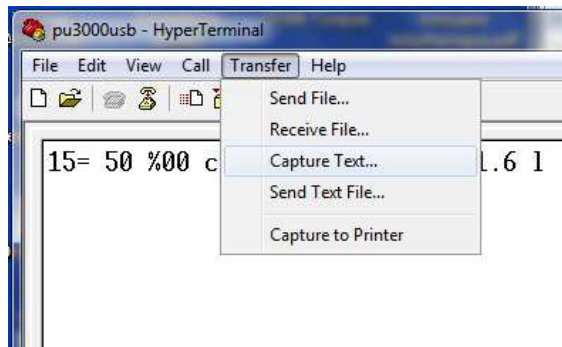
- This screen appears. Select the "port com" number previously noted during your connection. Press OK.



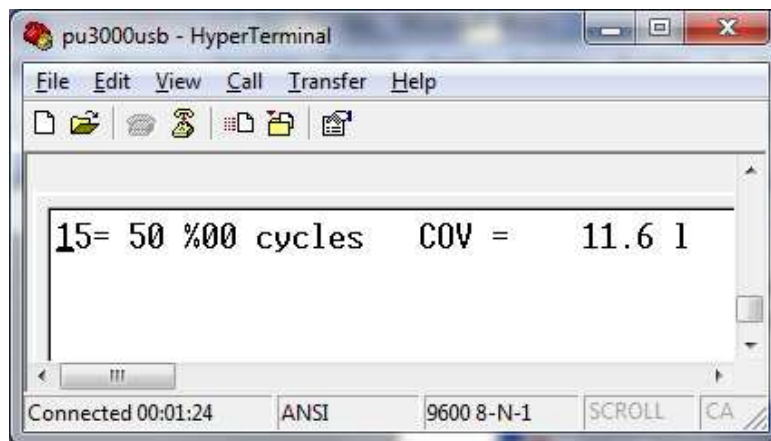
- That new screen will appears. Select band rate 9600 bits/s. Press OK.



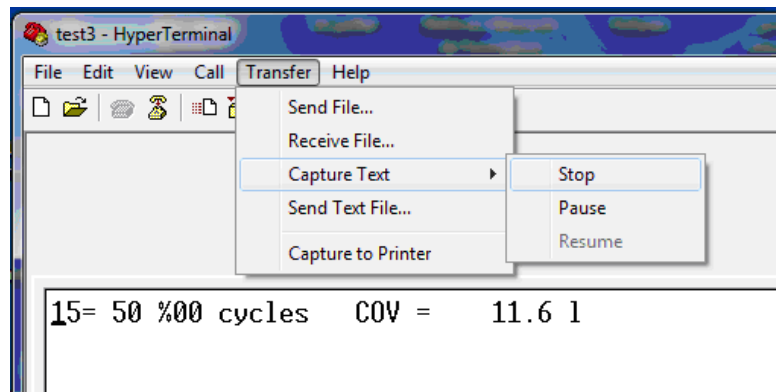
- A connection stopwatch gets activated. Leave the "Hyper Terminal" window open.
- If a session has already been created, opening the existing file is possible by going directly through the "File" menu, of the "HyperTerminal" menu, and by choosing it within the list of the *.ht files. (ex : PU3000usb).
- Create a .txt file through "transfer" (transfer > capture text), choose some file name as target (ex : dataPU3000.txt), with a location within the PC disk, and press "START" (the empty file is created / leave the HyperTerminal window always open) :



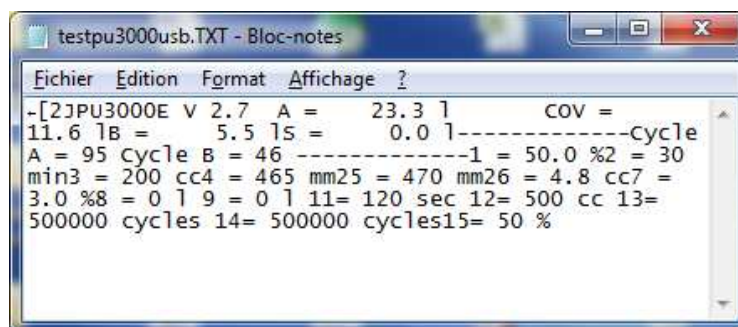
- Launch the data transfer from the control box (menu "F4. Prn" + OK), the data do appear (partially) in the display zone.



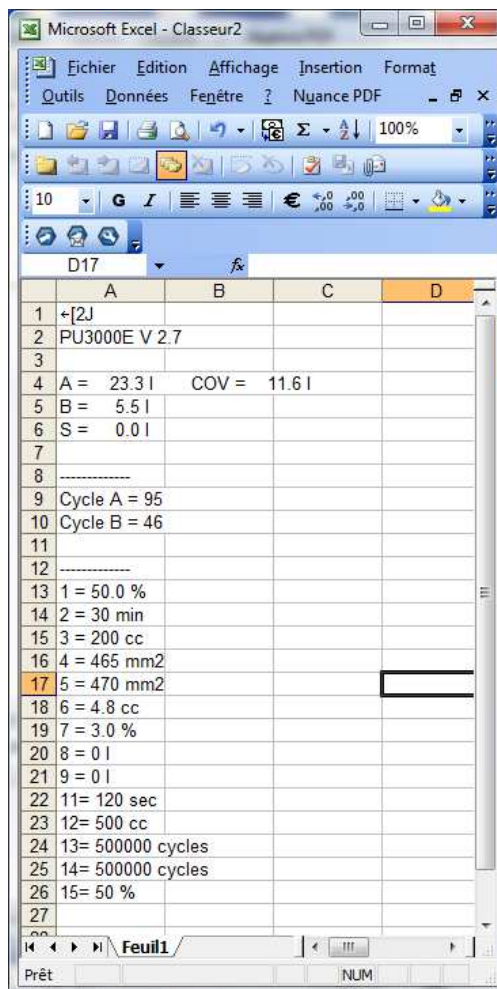
- Get back in the "transfer" menu (transfer > capture text) and press "Stop" :



- Data then become available when opening the previous created .txt file.



- From these displayed elements .txt (difficult to read up), make a simple "copy/paste" in an Excel file and data will appear as per that screen :



14. INDICATIONS GIVEN BY THE LEDS

Description	Function	Action
Red LED	Fault	The CYCLOMIX™ MICRO stops.
Orange LED	Working	Function other than production (flushing, pot-life alarm ...)
Green LED	Production	
Green + orange LED	Waiting	
LED switched off	Programming	

15. MAINTENANCE

Guards (air motor cover, coupling shields, connectors,...) 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 leave the mixed material in the CYCLOMIX™ MICRO. Properly adjust the pot life parameter to avoid hardening. Carry out a flushing when the work is over.

Flush when ending the work.

The life duration of the different elements depends on the features of the material used. The following maintenance plan is for information only and could not be taken into account when making a complaint.

SUBSET	ELEMENT	OPERATION TO CARRY OUT	TIME EXPECTED	PERIODICITY	MACHINE STATE	TOOLS	SPARE PARTS P.N°
Mixer	Mixer	Remove and install a new mixer	2 mn	1 year	stop		Mixer 155.660.080
Meter	Flowmeter	Remove and clean	5 mn	2 months	stop	Appropriate cleaning solvent	
		Remove and install a new flowmeter	5 mn	1 year	stop		Flowmeter 055.660.001
Pilot valve	Pilot valve	Remove and change the cartridge	10 mn	1 year	stop		Cartridge 155.535.140
		Change the piston packing	10 mn	1 year	stop		Piston packing 029.711.302
Color changer	Pilot valve	Remove and change the cartridge	10 mn	1 year	stop		Cartridge 155.535.140
		Change the piston packing	10 mn	1 year	stop		Piston packing 029.711.302
option AIRMIX® filter	Filter	Remove and clean the filter screen	5 mn	1 month	stop	Appropriate cleaning solvent	Screen # 6 129.609.908 (pack of 5) Seal 129.529.918
		Remove and install a new filter	2 mn	6 months	stop		Complete AIRMIX® filter 155.010.100


■ TROUBLESHOOTING

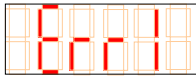
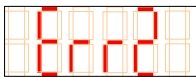
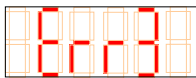
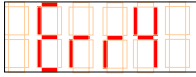

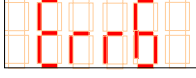


For any intervention on the CYCLOMIX™ MICRO :

- Flush the circuits,
- Shut off the compressed air,
- Depressurize the hoses by triggering the gun,
- Shut off the electric supply.

If a problem occurs during the operating of the CYCLOMIX™ MICRO, some alarm will be displayed on the screen of the CYCLOMIX™ MICRO.

Enter  to acquit each alarm (we advice you to keep active the error 6 even if you can deactivate it).

TROUBLES	CAUSES	SOLUTIONS
	BASE flowmeter blocked.	Check the fluid circuit (pump, valve). Clean or change. Check or install a filter upstream the flowmeter.
	CATA flowmeter blocked.	Check the fluid circuit (pump, valve). Clean or change. Check or install a filter upstream the flowmeter.
	Incorrect mixing ratio Flow improperly adjusted	Check the pressure differential : the CATA pressure must be higher than the BASE pressure of 15%
	Time between air opening and fluid opening upper than 6 s Flow switch blocked Air leak	Trigger the gun quicker. Change the flow switch.
	VP6 valve leaking	Remove VP6 and check the correct operating. Change the valve if necessary.
 <i>(Caution: this error appears only in F1 mode (production) and except the priming /regeneration stage)</i>	There is no signal from the flow-switch whereas there are impulses on the base flowmeter or on the catalyst flowmeter.	Check the good operation of the flow-switch. Change it if necessary. Control the good operation of the electronic card. Increase the value of P12.

■ **DIAGNOSTICS**

ELECTRIC

FAULTS	CHECKING
The CYCLOMIX™ MICRO does not switch on	Check that the isolating switch is on 'I'.
	Check that the mains supply is connected. No : connect it.
	Check that the fuse on the electric card inside the box is in working order. No : change the fuse (ind. 3).
	Check the electric wiring of the supply cable (bad contact or other).
You can choose the color (when using a 3 colors' CYCLOMIX™ MICRO)	Check the connection of the J7 shunt inside of the electric box (refer to Annexes).

FLUID

FAULTS	CHECKING
No fluid flows when passing into production or flushing mode.	Check if the valves are open : No : - Check air supply (minimum 4 bar / 58 psi), - Check the connection of the 25 pts cable - Check the correct operating of the electrovalves. Yes : - Check the fluid pressure - Check the static mixer.
In production : there is only catalyst and the injection valve opens but does not close. Moreover, the CYCLOMIX™ MICRO does not indicate faults.	Check the flow switch and the CATALYST flowmeter.
In production : the base only flows and the injection valve does not open.	Check the flow switch & the BASE flowmeter.
The CYCLOMIX™ MICRO displays the correct mixing but the consumption of catalyst is too important.	Check the non-return valve of the BASE . Check the grounds of the CYCLOMIX™ MICRO (230V intake and ground cable of the fluid module)
The CYCLOMIX™ MICRO displays the correct mixing but the consumption of catalyst is not enough.	Check the grounds of the CYCLOMIX™ MICRO.
When the main menu page is displayed, fluid flows out when the gun is open	Check the valves Checking of the valve : look at what is flowing : if it is solvent, change the valve (Vp 1), if it is base, change the valve (Vp 2), if it is catalyst, change the valve (Vp 6).
In production : the fluid flows from the TA test outlet	Change the 3 way-valve.

FAULTS	CHECKING
One of the meters does not count	If the CYCLOMIX™ MICRO indicates that the BASE flowmeter is blocked and that the fault is recurrent : <ul style="list-style-type: none"> - Clean the mobile parts of the flowmeter (gearing and bearings), - Check the sensor assembly, - Check the electric wiring of the sensor.
	If the CYCLOMIX™ MICRO indicates that the CATALYST flowmeter is blocked and that the fault is recurrent : <ul style="list-style-type: none"> - Clean the mobile parts of the flowmeter (gearing and bearings), - Check the sensor assembly, - Check the electric wiring of the sensor, - Check the VP6 valve, - Check the piloting electrovalve of the VP6 valve, - Check if there is a clogging of the injector.

AUTO-WASH

You cannot switch to production with the auto-wash : it only can be used as a support.

16. DISASSEMBLY - REASSEMBLY

Stop the CYCLOMIX™ MICRO after its flushing.
Depressurize the systems.

Guards (air motor cover, coupling shields, connectors,...) 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.

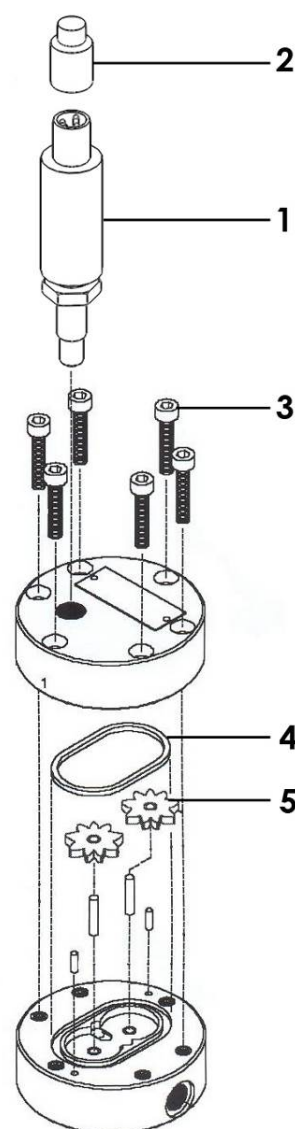
■ MIXER

Unscrew the mixer assembly and replace it with a new one.

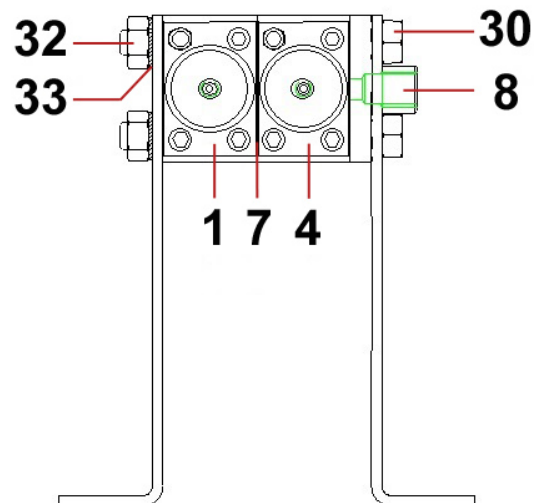
■ FLOWMETER

The flowmeters consist of an electronic sensor (1) and of a mechanical part that is composed of bearings and gearings.

To remove the flowmeter : disconnect the connector (2) and unscrew the sensor (1). Then loosen the screws (3) of the mechanic part. Once the screws removed, open the flowmeter paying attention to the seal (4) and to the gearings (5). Clean the different elements then reinstall.



■ **NEW MODULE INSTALLATION (OR MODULE REPLACEMENT) (REFER TO DOC. 573.187.050)**



Unscrew nuts (32).

Remove washers (33).

Carry out the same operation for the second tie-rod.

Remove both tie-rods (30).

Mount the new module (be certain seal (7) is installed between two modules).

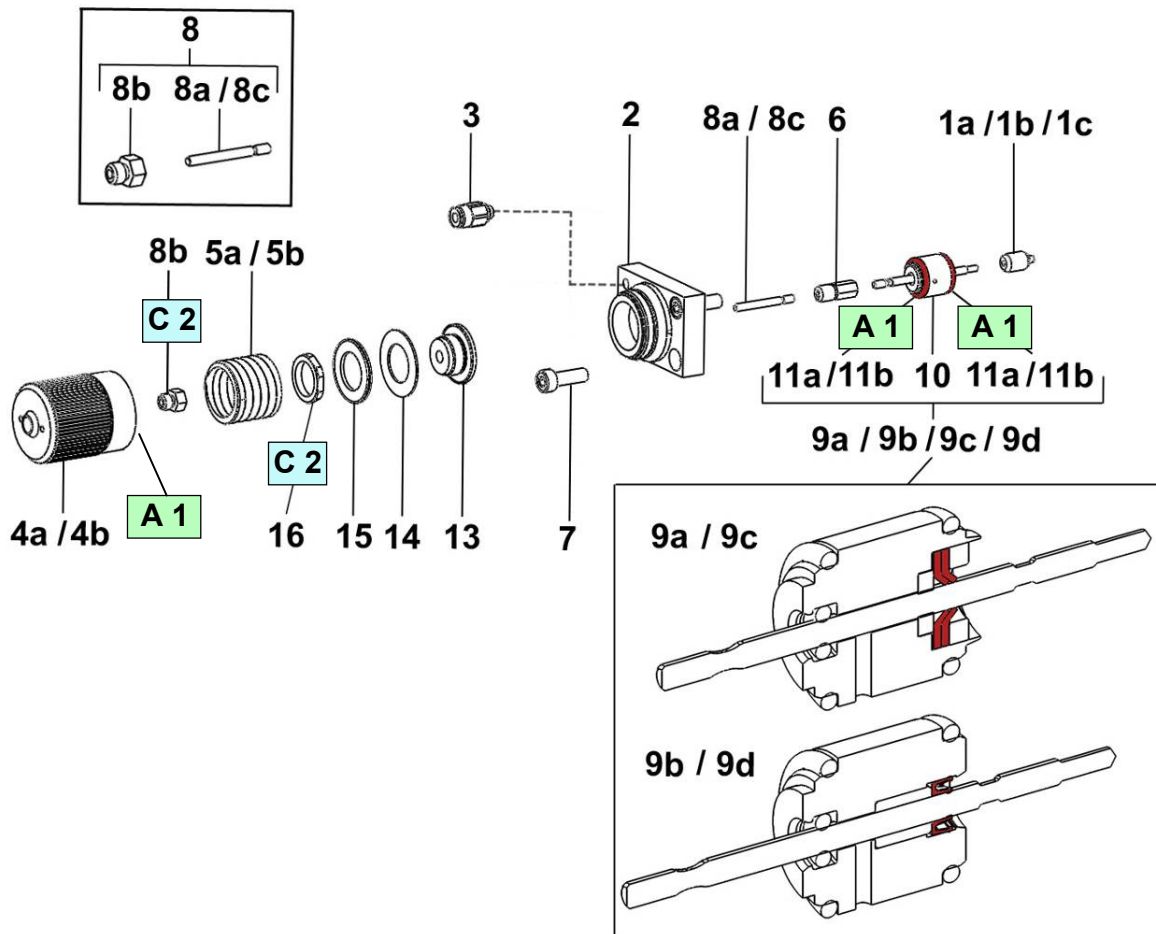
Slide the appropriate tie-rods through the modules, from fluid outlet flange to the end module.

Be careful when positioning tie-rods (30), tie-rods head against fluid outlet flange (8).

Install washers (33) and then screw nuts (32).

■ PILOTED VALVES (FLUID VALVES AND TEST VALVES)

CARTRIDGE OF A FLUID VALVE (IND. 9A / 9B / 9C / 9D) (REFER TO DOC. 573.188.050)



Unscrew the 3 screws (7).

Extract the valve from the module body.

Unscrew the needle (1a / 1b / 1c).

Unscrew the cylinder (4a / 4b).

Hold rod carrier (6), unscrew the needle rod and remove cartridge with rod assembly (9a / 9b / 9c / 9d). Remove the seals.

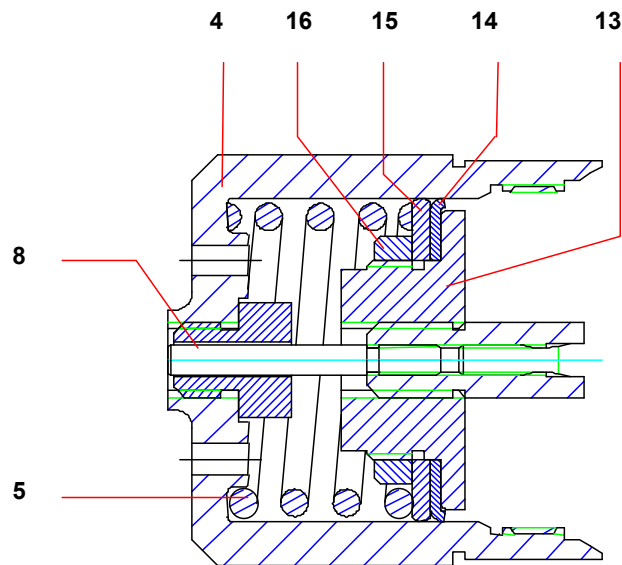
When reassembling :

Change the seals (11a / 11b), lubricate them then install new cartridge (9a / 9b / 9c / 9d) in cylinder support (2) by pushing it until the cartridge shoulder comes to lean against the cylinder support shoulder. Then reinstall all the components in the reverse order of disassembly.

Install the valve in front of the module body.

Centre the cartridge (9a / 9b / 9c / 9d) on the module body and reinstall screws (7).

PISTON PACKING (Ind. 14)



- Unscrew the cylinder (4).
- Remove the spring (5).
- Unscrew the opening signal light (8).
- Unscrew the nut (16).
- Remove the support washer (15) and the packing (14).
- Clean the parts and change them if necessary.

Before reassembling :

Before assembling on the piston (13), take care of shaping the cartridge lip (14) by hand as shown in the above drawing (cartridge turned up on the piston).

The nut (16) must be glued on the piston (13) with loctite adhesive (eg : Loctite 222).

Index	Instructions	Description	Part number
A 1	PTFE grease	PTFE grease (10 ml / 0.0026 US gal)	560.440.101
C 2	Low strength - Anaerobic Adhesive	Loctite 222 (50 ml / 0.013 US gal)	554.180.010

Doc. 573.359.050 Date/Datum/Fecha : 29/03/19 Annule/Cancel/ Ersetzt/Anula : 07/12/18	Modif. / Änderung : Mise à jour / Update / Aktualisierung / Actualización	Pièces de rechange Spare parts list Ersatzteilliste Piezas de repuesto
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SYSTEME DE DOSAGE ELECTRONIQUE

MIXING SYSTEM

ELEKTRONISCHE 2-K-ANLAGE

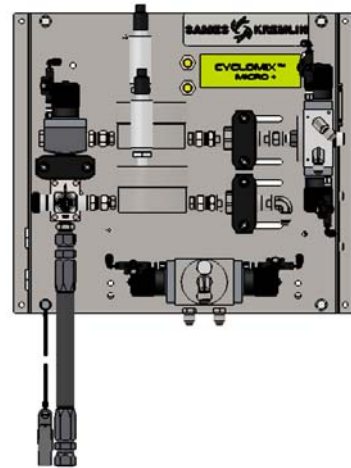
SISTEMA DE DOSIFICACIÓN

CYCLOMIX™ MICRO

CYCLOMIX™ MICRO+

CYCLOMIX™ MICRO+ PH

CYCLOMIX™ MICRO+ PH+



CYCLOMIX™ MICRO+ PH

Sans mélangeur, avec circuit catalyseur en inox 316 L

Without mixer, with catalyst system, stainless steel 316 L

Ohne Mischer, Härtersystem in Edelstahl 316 L

Sin mezclador, con circuito catalizador de inox 316 L

CYCLOMIX™	BASE / BASIS	CATA / HÄRTER	#
MICRO	1A + 1SA	1B	155.660.900
	3A + 1SA		155.660.930
MICRO+	1A + 1SA	1B + 1SB	155.660.911
	3A + 1SA		155.660.933
MICRO+ PH	1A + 1SA	1B + 1SB	155.660.951
	3A + 1SA		155.660.953
MICRO+ PH+	1A + 1SA	1B + 1SB	997.202.611
	3A + 1SA		997.202.631

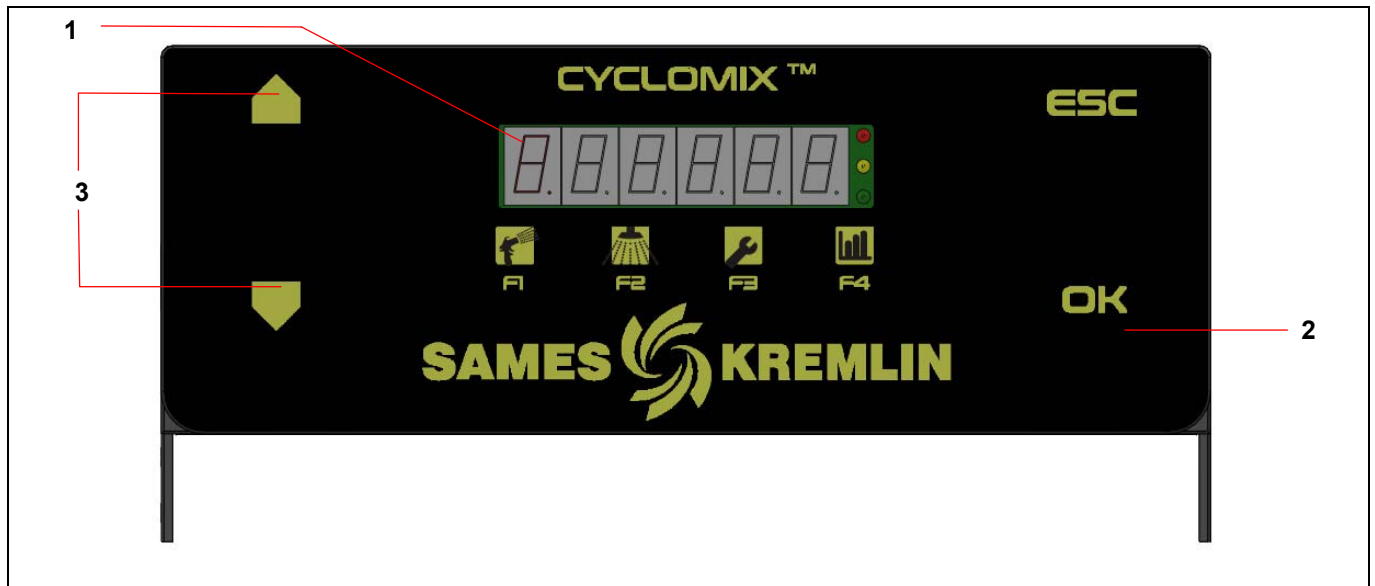
A : Base / Basis

B : Cata / Härter

SA : solvant / solvent / Verdünnung / disolvente → base / Basis

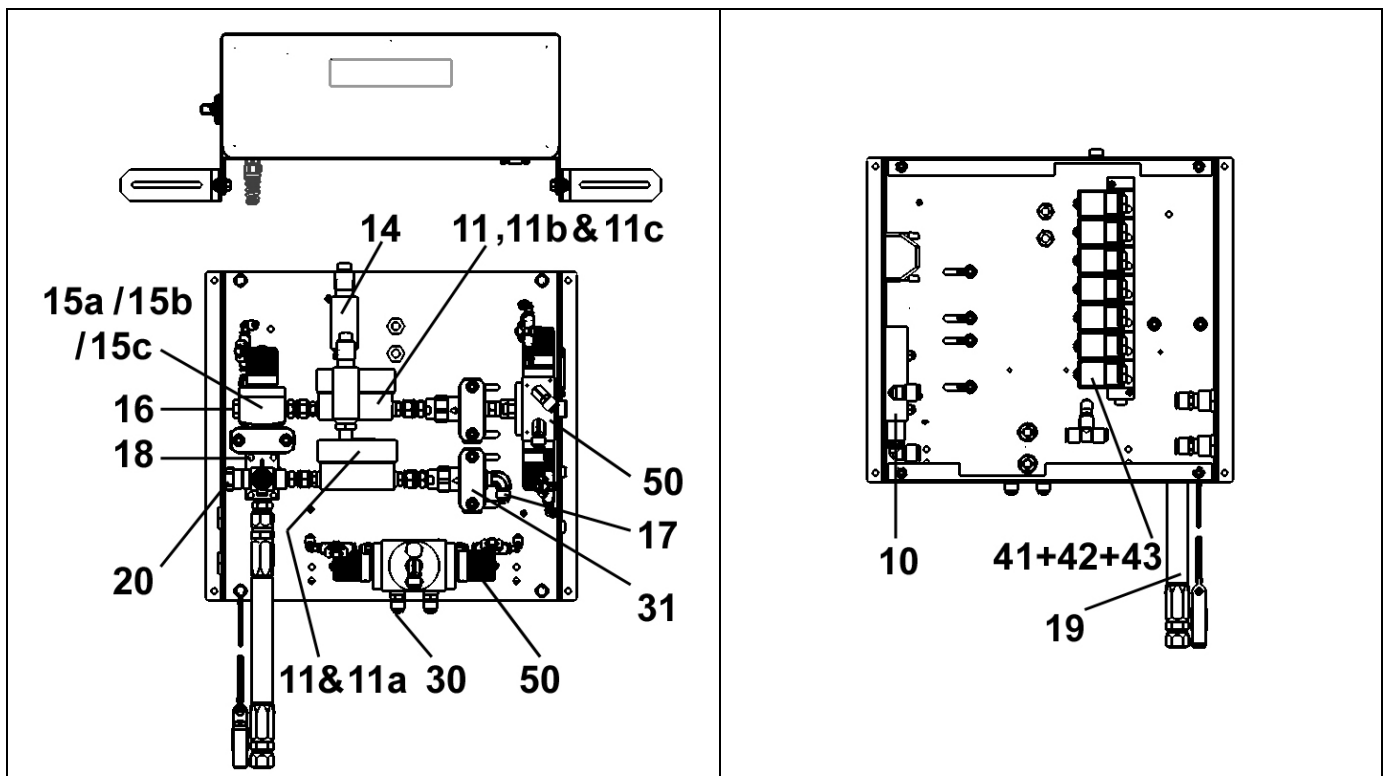
SB : solvant / solvent / Verdünnung / disolvente → cata / Härter

BAIE DE COMMANDE / CONTROL CABINET / STEUERGEHÄUSE / ARMARIO DE MANDO



Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*1	155 660 917	Carte µ avec afficheur	µ card with display unit	Elektronische Karte mit integriertem Display	Carta µ con visualizador	1
2	055 660 918	Façade	Front part	Frontplatte	Parte delantera	1
-	901 280 192	Interrupteur	Switch	Schalter	Interruptor	1
3	155 660 925	Ensemble capteur et aimant	Sensor and magnet assembly	Sensor und Magnet Einheit	Conjunto captador e imán	4
-	901 280 193	Buzzer 24V - 100 db	Buzzer 24V - 100 db	Summer 24V - 100 dB	Sirena 24V - 100 db	1

PARTIE PRODUIT / MIXING UNIT / MATERIALTEIL / PARTE PRODUCTO



CYCLOMIX™ MICRO & CYCLOMIX™ MICRO+

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*10	903 050 525	Débistat	Flow switch	Fließschalter	Debistat	1
*11	155 660 078	Ensemble compteur (voir détail)	Meter assembly (see detail)	Volumenmessgerät kpl. (siehe Detail)	Conjunto contador (ver detalle)	2
15a	155 528 010	Clapet HP 200 bar (voir détail)	HP valve, 200 bar / 2900 psi (see detail)	Ventil HP 200 bar (siehe Detail)	Válvula AP 200 bar (ver detalle)	1
16	055 528 002	Bouchon	Plug	Blindstopfen	Tapón	1
17	903 160 510	Clapet anti retour inox	Non-return valve, stainless steel	Rückschlagventil, Edelstahl	Válvula anti-retorno inox	2
18	055 660 070	Bloc d'injection	Injection unit	Injektions-Block	Bloque de inyección	1
*-	155 660 071	▪ Buse Ø 2	▪ Nozzle, model Ø 2	▪ Düse Ø 2	▪ Boquilla, tipo Ø 2	1
*19	155 660 080	Ensemble mélangeur souple (1m - 240 bar)	Flexible mixer assembly (1 m / 39.4" - 240 bar / 3480 psi)	Mischer-Schlauch mit Anschlüssen (1m - 240 bar)	Conjunto mezclador flexible (1m - 240 bar)	1
20	903 090 221	Vanne 3 voies FFF 1/4 BSP (inox)	Three way valve FFF 1/4 BSP (stainless steel)	3-Wege Ventile AG AG AG 1/4 BSP (Edelstahl)	Válvula 3 vías HHH 1/4 BSP (inox)	1
21	050 450 651	Tuyau produit (Ø 4,8 mm, long. 0,6 m, raccords inox, 240 bar)	Fluid hose (3/16" dia, 0.6 m / 23.6" long, stainless steel hoses, 240 bar / 3481 psi)	Materialschlauch (Ø 4,8 mm, Länge: 0,6 m, Anschlüsse Edelstahl, 240 bar)	Tubería producto (Ø 4,8 mm, 0,6 m de largo, racores de inox, 240 bar)	1
22	901 250 216	Cordon de liaison (lg. 5 m)	Connecting bead (length 5 m / 196.85")	Verbindungskabel (Länge 5 M)	Cordón de conexión (5 m de largo)	1
30	000 972 025	Raccord produit droit (M 1/4 NPT - M 1/2 JIC)	Straight fluid fitting (M 1/4 NPT - M 1/2 JIC)	Gewindenippel (AG 1/4 NPT - AG 1/2 JIC)	Racor recto producto (M 1/4 NPT - M 1/2 JIC)	x
31	905 210 602	Raccord coudé inox (M 1/4 NPT - M 1/2 JIC)	Elbow fitting, stainless steel (male 1/4 NPT - male # 5 JIC)	Winkelnippel, Edelstahl (AG 1/4 NPT - AG 1/2 JIC)	Racor acodado inox (M 1/4 NPT - M 1/2 JIC)	x
41	903 050 516	Electrovannes 24V DC	Electrovalves, 24V DC	Elektroventil 24V DC	Electroválvulas 24V DC	x
42	903 050 517	Embase	Base	Anschlussplatte	Base	x
43	903 050 518	Embase juxtaposable	Base	Anschlussplatte	Base	1
50	-	Ensemble changement de teintes (voir détail)	Color changer assembly (see detail)	Farbwechselblock (siehe Detail)	Conjunto cambiador de tintes (ver detalle)	x

CYCLOMIX™ MICRO+ PH

Pièces spécifiques - Specific parts - Spezifische Teile - Partes específicas

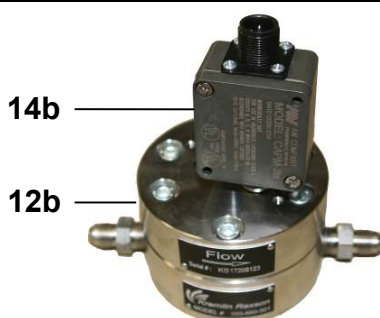
ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
11a	155 660 078	Ensemble compteur (BASE) (voir détail)	Meter assembly (BASE) (see detail)	Volumenmessgerät kpl. (BASIS) (siehe Detail)	Conjunto contador (BASE) (ver detalle)	1
11b	NC / NS	Ensemble compteur (CATA) (voir détail)	Meter assembly (CATA) (see detail)	Volumenmessgerät kpl. (HÄRTER) (siehe Detail)	Conjunto contador (CATA) (ver detalle)	1
11c	155 660 079	Ensemble compteur (CATA) (voir détail)	Meter assembly (CATA) (see detail)	Volumenmessgerät kpl. (HÄRTER) (siehe Detail)	Conjunto contador (CATA) (ver detalle)	1
15b	155 536 500	Clapet 200 bar (inox 316L) (voir détail)	Valve, 200 bar / 2900 psi (stainless steel, 316 L) (see detail)	Ventil 200 bar (Edelstahl 316L) (siehe Detail)	Válvula 200 bar (inox 316L) (ver detalle)	1
18	055 660 470	Bloc d'injection (inox 316L)	Injection unit (stainless steel, 316 L)	Injektions-Block (Edelstahl 316L)	Bloque de inyección (inox 316L)	1

CYCLOMIX™ MICRO+ PH+***Pièces spécifiques - Specific parts - Spezifische Teile - Partes específicas***

ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
11a	155 660 078	Ensemble compteur (BASE) (voir détail)	Meter assembly (BASE) (see detail)	Volumenmessgerät kpl. (BASIS) (siehe Detail)	Conjunto contador (BASE) (ver detalle)	1
11d	NC / NS	Ensemble compteur (CATA) (voir détail)	Meter assembly (CATA) (see detail)	Volumenmessgerät kpl. (HÄRTER) (siehe Detail)	Conjunto contador (CATA) (ver detalle)	1
11e	NC / NS	Ensemble compteur (CATA) (voir détail)	Meter assembly (CATA) (see detail)	Volumenmessgerät kpl. (HÄRTER) (siehe Detail)	Conjunto contador (CATA) (ver detalle)	1
15c	155 662 030	Clapet 200 bar (inox 316L NPTF) (voir détail)	Valve, 200 bar / 2900 psi (stainless steel, 316 L NPTF) (see detail)	Ventil 200 bar (Edelstahl 316L NPTF) (siehe Detail)	Válvula 200 bar (inox 316L NPTF) (ver detalle)	1
18	055 660 470	Bloc d'injection (inox 316L)	Injection unit (stainless steel, 316 L)	Injektions-Block (Edelstahl 316L)	Bloque de inyección (inox 316L)	1

**DEBITMETRES ET CAPTEURS / FLOWMETERS AND SENSORS
MESSZELLEN UND SENSOREN / CAUDALÍMETROS Y CAPTADORES**

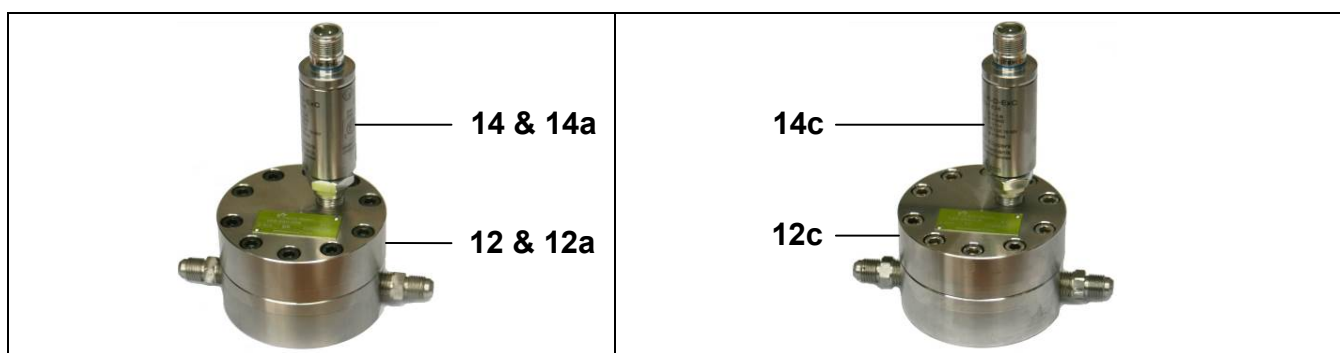
*Anciens débitmètres et capteurs / Former flowmeters and sensors
/ Alte Messzellen und Sensoren / Caudalímetros y captadores anteriores*



⇒ **CYCLOMIX™ MICRO+ PH**

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
11b	NC / NS	Ensemble compteur (CATA)	Meter assembly (CATA)	Volumenmessgerät kpl. (HÄRTER)	Conjunto contador (CATA)	1
12b	055 660 501	▪ Débitmètre (CATA) (inox 316 L)	▪ Flowmeter (CATA) (stainless steel, 316 L)	▪ Messzelle (HÄRTER) (Edelstahl 316 L)	▪ Caudalímetro (CATA) (inox 316 L)	1
14b	055 660 002	▪ Capteur	▪ Sensor	▪ Sensor	▪ Captador	1

**Nouveaux débitmètres et capteurs / New flowmeters and sensors
/ Neue Messzellen und Sensoren / Nuevos caudalímetros y captadores**



⇒ **CYCLOMIX™ MICRO & CYCLOMIX™ MICRO+**

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*11	155 660 078	Ensemble compteur	Meter assembly	Volumenmessgerät kpl.	Conjunto contador	2
*12	155 660 041	▪ Débitmètre	▪ Flowmeter	▪ Messzelle	▪ Caudalímetro	1
*-	155 660 082	▪ ▪ Joint (x 1)	▪ ▪ Seal (pack of 1)	▪ ▪ Dichtung (1 St.)	▪ ▪ Junta (bolsa de 1)	1
*-	155 660 086	▪ Ensemble capteur	▪ Sensor assembly	▪ Sensor kpl.	▪ Conjunto captador	1
*14	910 060 106	▪ ▪ Capteur	▪ ▪ Sensor	▪ ▪ Sensor	▪ ▪ Captador	1
-	NC / NS	▪ ▪ Connecteur	▪ ▪ Connector	▪ ▪ Anschluss	▪ ▪ Conector	1

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*	155 660 165	Pochette de maintenance débitmètre (ind. 12 + joint)	Servicing kit - Flowmeter (ind. 12 + seal)	Servicekit für Messzelle (Pos. 12 + Dichtung)	Bolsa de mantenimiento caudalímetro (ind. 12 + junta)	1

⇒ **MICRO+ PH**

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
* 11a	155 660 078	Ensemble compteur (BASE)	Meter assembly (BASE)	Volumenmessgerät kpl. (BASIS)	Conjunto contador (BASE)	1
* 12a	155 660 041	▪ Débitmètre (BASE)	▪ Flowmeter (BASE)	▪ Messzelle (BASIS)	▪ Caudalímetro (BASE)	1
*- 12a	155 660 082	▪ ▪ Joint (x 1)	▪ ▪ Seal (pack of 1)	▪ ▪ Dichtung (1 St.)	▪ ▪ Junta (bolsa de 1)	1
*- 12a	155 660 086	▪ Ensemble capteur	▪ Sensor assembly	▪ Sensor kpl.	▪ Conjunto captador	1
* 14a	910 060 106	▪ ▪ Capteur	▪ ▪ Sensor	▪ ▪ Sensor	▪ ▪ Captador	1
- 14a	NC / NS	▪ ▪ Connecteur	▪ ▪ Connector	▪ ▪ Anschluss	▪ ▪ Conector	1
* 11c	155 660 079	Compteur (CATA)	Meter (CATA)	Volumenmessgerät kpl. (HÄRTER)	Contador (CATA)	1
* 12c	155 660 042	▪ Débitmètre (CATA) (inox 316 L)	▪ Flowmeter (CATA) (stainless steel, 316 L)	▪ Messzelle (HÄRTER) (Edelstahl 316 L)	▪ Caudalímetro (CATA) (inox 316 L)	1
*- 12c	155 660 082	▪ ▪ Joint (x 1)	▪ ▪ Seal (pack of 1)	▪ ▪ Dichtung (1 St.)	▪ ▪ Junta (bolsa de 1)	1
*- 12c	155 660 086	▪ Ensemble capteur	▪ Sensor assembly	▪ Sensor kpl.	▪ Conjunto captador	1
* 14c	910 060 106	▪ ▪ Capteur	▪ ▪ Sensor	▪ ▪ Sensor	▪ ▪ Captador	1
- 14c	NC / NS	▪ ▪ Connecteur	▪ ▪ Connector	▪ ▪ Anschluss	▪ ▪ Conector	1

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
* 155 660 165	155 660 165	Pochette de maintenance débitmètre (ind. 12a + joint)	Servicing kit - Flowmeter (ind. 12a + seal)	Servicekit für Messzelle (Pos. 12a + Dichtung)	Bolsa de mantenimiento caudalímetro (ind. 12a + junta)	1
* 155 660 166	155 660 166	Pochette de maintenance débitmètre (ind. 12c + joint)	Servicing kit - Flowmeter (ind. 12c + seal)	Servicekit für Messzelle (Pos. 12c + Dichtung)	Bolsa de mantenimiento caudalímetro (ind. 12c + junta)	1

⇒ **MICRO+ PH+**

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
* 11a	155 660 078	Ensemble compteur (BASE)	Meter assembly (BASE)	Volumenmessgerät kpl. (BASIS)	Conjunto contador (BASE)	1
* 12a	155 660 041	▪ Débitmètre (BASE)	▪ Flowmeter (BASE)	▪ Messzelle (BASIS)	▪ Caudalímetro (BASE)	1
*- 155 660 082	155 660 082	▪ ▪ Joint (x 1)	▪ ▪ Seal (pack of 1)	▪ ▪ Dichtung (1 St.)	▪ ▪ Junta (bolsa de 1)	1
*- 155 660 086	155 660 086	▪ Ensemble capteur	▪ Sensor assembly	▪ Sensor kpl.	▪ Conjunto captador	1
* 14a	910 060 106	▪ ▪ Capteur	▪ ▪ Sensor	▪ ▪ Sensor	▪ ▪ Captador	1
- NC / NS	NC / NS	▪ ▪ Connecteur	▪ ▪ Connector	▪ ▪ Anschluss	▪ ▪ Conectador	1
11d	NC / NS	Compteur (CATA)	Meter (CATA)	Volumenmessgerät kpl. (HÄRTER)	Contador (CATA)	1
* 12d	NC / NS	▪ Débitmètre (CATA) (inox 316 L)	▪ Flowmeter (CATA) (stainless steel, 316 L)	▪ Messzelle (HÄRTER) (Edelstahl 316 L)	▪ Caudalímetro (CATA) (inox 316 L)	1
*- 155 660 082	155 660 082	▪ ▪ Joint (x 1)	▪ ▪ Seal (pack of 1)	▪ ▪ Dichtung (1 St.)	▪ ▪ Junta (bolsa de 1)	1
*- 155 660 086	155 660 086	▪ Ensemble capteur	▪ Sensor assembly	▪ Sensor kpl.	▪ Conjunto captador	1
* 14c	910 060 106	▪ ▪ Capteur	▪ ▪ Sensor	▪ ▪ Sensor	▪ ▪ Captador	1
- NC / NS	NC / NS	▪ ▪ Connecteur	▪ ▪ Connector	▪ ▪ Anschluss	▪ ▪ Conectador	1

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
* 155 660 165	155 660 165	Pochette de maintenance débitmètre (ind. 12a + joint)	Servicing kit - Flowmeter (ind. 12a + seal)	Servicekit für Messzelle (Pos. 12a + Dichtung)	Bolsa de mantenimiento caudalímetro (ind. 12a + junta)	1
* 155 660 166	155 660 166	Pochette de maintenance débitmètre (ind. 12c + joint)	Servicing kit - Flowmeter (ind. 12c + seal)	Servicekit für Messzelle (Pos. 12c + Dichtung)	Bolsa de mantenimiento caudalímetro (ind. 12c + junta)	1

Nota :	<p>A partir d'août 2014 de nouveaux débitmètres et capteurs seront installés sur nos machines. Il y aura une phase de transition pendant laquelle il est possible que vous disposiez des anciens débitmètres et capteurs sur la partie CATA et des nouveaux débitmètres et capteurs sur la partie BASE. Cette combinaison d'éléments n'altère pas la qualité de dosage ni la fiabilité de l'équipement. Si vous possédez une machine dont le numéro de série est antérieur à 14Y1139 et que vous désirez remplacer l'un de vos débitmètres ou de vos capteurs merci de vous référer au document 573.705.070.</p>
Nota :	<p>From August 2014 new flowmeters and sensors will be installed on our machines. There will be a transition phase during which you may have the former flowmeters and sensors on the CATA part and of the new flowmeters and sensors on the BASE part. This combination of elements affects neither the mixing ratio quality nor the equipment reliability. If you have a machine with reference number is prior to 14Y1139 and if you want to replace one of your flowmeters or sensors, please refer to the document 573.705.070.</p>
Anmerkung :	<p>Seit August 2014 werden in unsere Anlagen neue Messzellen und Sensoren eingebaut. In einer Übergangsphase kann es sein, dass an der Maschine alte und neue Volumenmessgeräte nebeneinander eingebaut sind. Dies hat keinerlei Einfluss auf die Mischqualität und Zuverlässigkeit der Anlage. Wenn Sie eine Maschine mit der Seriennummer kleiner als 14Y1139 haben, und Sie wollen eine Messzelle oder Sensor ersetzen, dann schauen Sie im Dokument 573.705.070 nach.</p>
Nota :	<p>A partir de Agosto de 2014, se instalarán nuevos caudalímetros y captadores en nuestras máquinas. Durante una fase de transición, es posible encontrar anteriores caudalímetros y captadores en la parte CATA y nuevos en la parte BASE. La combinación de los dos no afecta ni la calidad de dosificación ni la fiabilidad del equipo. Si tiene una máquina cuyo número de serie es anterior a 14Y1139 y si desea cambiar uno de sus caudalímetros o captadores por favor consulte el documento 573.705.070.</p>

**CTM : ENSEMBLE CHANGEUR DE TEINTES / COLOR CHANGER ASSEMBLY
/ FARBWECHELBLOCK / CONJUNTO CAMBIADOR DE TINTES**

(AIRMIX® 200 bar / 2900 psi) (Ind. 50)

(Doc. 573.187.050 & 573.188.050)

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
51	155 660 020	Ensemble changement de teintes (1 Base)	Color changer assembly (1 Base)	Farbwechselblock (1 Basis)	Conjunto cambiador de tintes (1Base)	x
52	155 660 931	Ensemble changement de teintes (3 Bases)	Color changer assembly (3 Bases)	Farbwechselblock (3 Basis)	Conjunto cambiador de tintes (3 bases)	x
53	155 660 020	Ensemble changement de teintes (1 Cata)	Color changer assembly (1 Cata)	Farbwechselblock (1 Härter)	Conjunto cambiador de tintes (1 Cata)	x
54	-	Ensemble changement de teintes (1 Cata) inox 316L	Color changer assembly (1 Cata) 316L stainless steel	Farbwechselblock (1 Härter) Edelstahl 316L	Conjunto cambiador de tintes (1 Cata) inox 316L	x
55	-	Ensemble changement de teintes (1 Cata) inox 316L NPTF	Color changer assembly (1 Cata) 316L NPTF stainless steel	Farbwechselblock (1 Härter) Edelstahl 316L NPTF	Conjunto cambiador de tintes (1 Cata) inox 316L NPTF	x

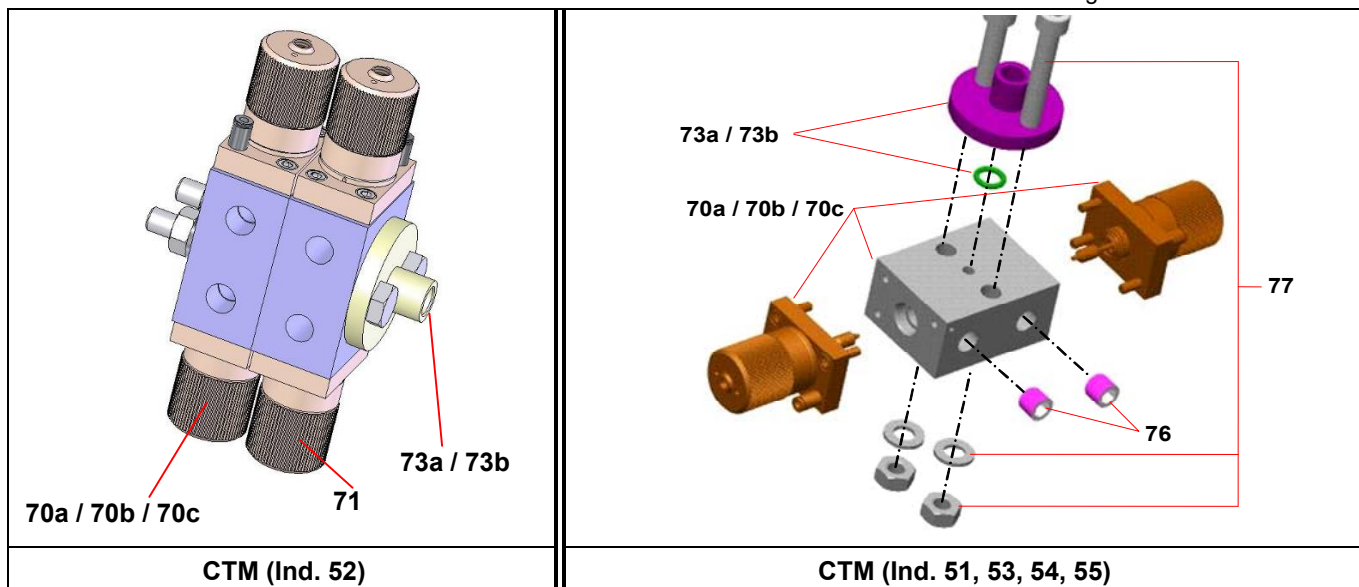


CYCLOMIX™	Base / Basis Cata / Härter	Ind. 51 (Ind. 70a + 73a)	Ind. 52 (Ind. 70a + 71 + 73a)	Ind. 53 (Ind. 70a + 73a)	Ind. 54 (Ind. 70b + 73b)	Ind. 55 (Ind. 70c + 73b)
MICRO	1A + 1SA / 1B	1	-	-	-	-
	3A + 1SA / 1B	-	1	-	-	-
MICRO+	1A + 1SA / 1B + 1SB	1	-	1	-	-
	3A + 1SA / 1B + 1SB	-	1	1	-	-
MICRO+ PH	1A + 1SA / 1B + 1SB	1	-	-	1	-
	3A + 1SA / 1B + 1SB	-	1	-	1	-
MICRO+ PH+	1A + 1SA / 1B + 1SB	1	-	-	-	1
	3A + 1SA / 1B + 1SB	-	1	-	-	1

A : base / Basis

B : cata / Härter

S : solvant / solvent / Verdünnung / disolvente



CTM (Ind. 52)

CTM (Ind. 51, 53, 54, 55)

CTM (Ind. 51, 52, 53)

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*70a	155 535 350	Module d'extrémité AIRMIX® 200 bar (voir Doc. 573.187.050)	End module 200 bar / 2900 psi (refer to Doc. 573. 187.050)	Unteres Modul 200 bar (siehe Dok. 573.187.050)	Modulo AIRMIX® de extremidad 200 bar (consultar Doc. 573.187.050)	1
*71	155 535 450	Module de commutation AIRMIX® 200 bar (voir Doc. 573.187.050)	Intermediate module 200 bar / 2900 psi (refer to Doc. 573. 187.050)	Zwischen Modul 200 bar (siehe Dok. 573.187.050)	Modulo AIRMIX® intermedio 200 bar (consultar Doc. 573.187.050)	1
*73a	155 535 500	Bride de sortie équipée	Flange assembly, outlet material	Ausgangsflansch, kpl	Brida de salida equipada	1
76	906 314 211	Bouchon 1/4 "	Plug, 1/4"	Blindstopfen 1/4"	Tapón 1/4"	2
77	-	Ensemble 2 tirants	Set of 2 tie-rods	Verbindungsbolzen (Satz mit 2 Stück)	Conjunto de 2 tirantes	1
-	155 535 610	- pour 1 module	- for 1 module	- für 1 Modul	- para 1 modulo	-
-	155 535 620	- pour 2 modules	- for 2 modules	- für 2 Module	- para 2 modulos	-

CTM (Ind. 54) (inox 316L / Stainless steel, 316L / Edelstahl 316L / inox 316L)

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
30	905 160 218	Raccord produit tournant (M 1/4 G - F 1/2 JIC)	Swivel fluid fitting (M 1/4 G - F 1/2 JIC)	Drehgelenk (AG 1/4 G - IG 1/2 JIC)	Racor producto giratorio (M 1/4 G - H 1/2 JIC)	4
*70b	155 536 200	Module d'extrémité AIRMIX® 200 bar (inox 316L) (voir Doc. 573.187.050)	End module 200 bar / 2900 psi (stainless steel, 316 L) (refer to Doc. 573. 187.050)	Unteres Modul 200 bar (Edelstahl 316L) (siehe Dok. 573.187.050)	Modulo AIRMIX® de extremidad 200 bar (inox 316L) (consultar to Doc. 573.187.050)	1
*73b	155 536 410	Bride de sortie équipée (inox 316L) (voir Doc. 573.187.050)	Flange assembly, outlet material (stainless steel, 316 L) (refer to Doc. 573.187.050)	Ausgangsflansch, kpl (Edelstahl 316L) (siehe Dok. 573.187.050)	Brida de salida equipada (inox 316L) (consultar Doc. 573.187.050)	1
76	906 314 211	Bouchon 1/4 " inox	Plug, 1/4"	Blindstopfen 1/4"	Tapón 1/4"	2
77	155 535 610	Ensemble 2 tirants	Set of 2 tie-rods	Verbindungsbolzen (Satz mit 2 Stück)	Conjunto de 2 tirantes	1

CTM (Ind. 55) (inox 316L NPTF / Stainless steel, 316L NPTF / Edelstahl 316L NPTF / inox 316L NPTF)

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
30	905 160 218	Raccord produit tournant (M 1/4 G - F 1/2 JIC)	Swivel fluid fitting (M 1/4 G - F 1/2 JIC)	Drehgelenk (AG 1/4 G - IG 1/2 JIC)	Racor producto giratorio (M 1/4 G - H 1/2 JIC)	4
*70c	155 662 050	Module AIRMIX® d'extrémité (200 bar) (inox 316 L NPTF) (voir Doc. 573.187.050)	End module (material or solvent or air inlet) (200 bar / 2900 psi) (stainless steel, 316 L NPTF) (refer to Doc. 573.187.050)	Unteres Modul (Endmodul) (200 bar) (Edelstahl 316 L NPTF) (siehe Dok. 573.187.050)	Modulo AIRMIX® de extremidad (200 bar) (inox 316 L NPTF) (consultar Doc. 573.187.050)	1
*73b	155 536 410	Bride de sortie équipée (inox 316L) (voir Doc. 573.187.050)	Flange assembly, outlet material (stainless steel, 316 L) (refer to Doc. 573.187.050)	Ausgangsflansch, kpl (Edelstahl 316L) (siehe Dok. 573.187.050)	Brida de salida equipada (inox 316L) (consultar Doc. 573.187.050)	1
76	906 314 211	Bouchon 1/4 " inox	Plug, 1/4"	Blindstopfen 1/4"	Tapón 1/4"	2
77	155 535 610	Ensemble 2 tirants	Set of 2 tie-rods	Verbindungsbolzen (Satz mit 2 Stück)	Conjunto de 2 tirantes	1

CLAPET PILOTÉ / PILOTED VALVE / VENTIL / VÁLVULA PILOTADA (200 bar / 2900 psi)

<p>Ind. 15a inox / stainless steel / Edelstahl / inox # 155.528.010</p> <p>Ind. 15b inox 316L / stainless steel, 316L Edelstahl 316L / inox 316L # 155.536.500</p> <p>Ind. 15c inox 316L NPTF / stainless steel, 316L NPTF Edelstahl 316L NPTF / inox 316L NPTF # 155.662.030</p>	
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⇒ **CYCLOMIX™ MICRO & CYCLOMIX™ MICRO+**

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
68a	055 528 001	Corps	Body	Körper	Cuerpo	1
*69 a	155 535 315	Vanne AIRMIX® 200 bar (voir Doc. 573.188.050)	AIRMIX® valve, 200 bar / 2900 psi (refer to Doc. 573.188.050)	AIRMIX®-Ventil 200 bar (siehe Dok. 573.188.050)	Válvula AIRMIX® 200 bar (consultar Doc. 573.188.050)	1

⇒ **CYCLOMIX™ MICRO+ PH**

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
68b	055 536 501	Corps (inox 316 L)	Body (stainless steel, 316 L)	Körper (Edelstahl 316 L)	Cuerpo (inox 316 L)	1
*69 b	155 536 300	Vanne AIRMIX® 200 bar (inox 316 L) (voir Doc. 573.188.050)	AIRMIX® valve, 200 bar / 2900 psi (stainless steel, 316 L) (refer to Doc. 573.188.050)	AIRMIX®-Ventil 200 bar (Edelstahl 316L) (siehe Dok. 573.188.050)	Válvula AIRMIX® 200 bar (inox 316 L) (consultar Doc. 573.188.050)	1
-	055 528 003	Bouchon pour clapet (inox 316 L)	Plug, valve (stainless steel, 316 L)	Blindstopfen für Ventil (Edelstahl 316 L)	Tapón para válvula (inox 316 L)	1

⇒ **CYCLOMIX™ MICRO+ PH+**

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
68c	055 662 031	Corps (inox 316 L NPTF)	Body (stainless steel, 316 L NPTF)	Körper (Edelstahl 316 L NPTF)	Cuerpo (inox 316 L NPTF)	1
*69 c	155 662 020	Vanne AIRMIX® 200 bar (inox 316 L) (voir Doc. 573.188.050)	AIRMIX® valve, 200 bar / 2900 psi (stainless steel, 316 L) (refer to Doc. 573.188.050)	AIRMIX®-Ventil 200 bar (Edelstahl 316L) (siehe Dok. 573.188.050)	Válvula AIRMIX® 200 bar (inox 316 L) (consultar Doc. 573.188.050)	1

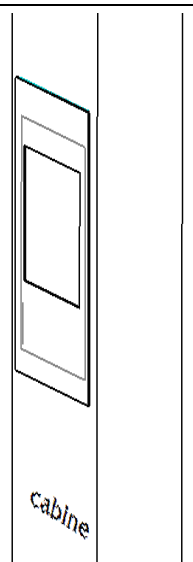
ACCESSOIRES - ACCESSORIES - ZUBEHÖR - ACCESORIOS

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
-	910 090 102	Gobelet gradué (650 ml)	Graduated cup (650 ml)	Messbecher (650 ml)	Copa graduada (650 ml)	2
-	903 090 806	Vanne F 1/4 BSP (pour alimentation en air du pistolet)	Valve, F 1/4 BSP (for gun air supply)	Ventil, IG 1/4 BSP (für die Luftversorgung der Pistole)	Válvula H 1/4 BSP (para alimentar con aire la pistola)	1
-	-	Raccord d'adaptation pour test "TB" (inox)	Adjustment fitting for "TB" test (stainless steel)	Anpassungsanschluss für das Ausliterventil "TB" (Edelstahl)	Racor de adaptación para prueba "TB" (inox)	1
-	055 660 929	Raccord F 3/4 JIC - F 1/4 BSP	Fitting, F 3/4 JIC - F 1/4 BSP	Anschluss IG 3/4 JIC - IG 1/4 BSP	Racor, H 3/4 JIC - H 1/4 BSP	1
-	905 121 024	Raccord M 1/4 BSP - T 2,7 x4	Fitting, M 1/4 BSP - T 2,7 x4	Anschluss AG 1/4 BSP - Schlauch 2,7× 4	Racor, M 1/4 BSP - T 2,7 x4	1
-	155 660 935	Kit Impression	Printing kit	Druckereinheit	Kit impresión	1

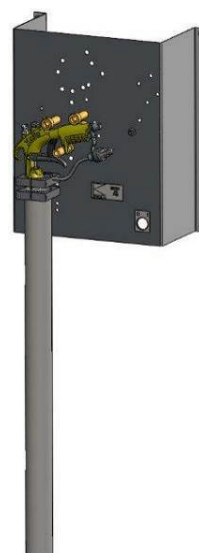
OPTION - ON REQUEST - OPTION - OPCIÓN

#	Désignation	Description	Bezeichnung	Denominación
155 010 100	Filtre Airmix® en ligne (voir Doc. 573.253.050)	Airmix® filter in-line (refer to Doc. 573.253.050)	Airmix®-In Line Filter (siehe Dok. 573.253.050)	Filtro Airmix® en línea (consultar Doc. 573.253.050)
155 660 955	Kit mélangeur pour Cyclomix Micro+PH	Mixing kit for Cyclomix Micro+PH	Mischer Kit für Cyclomix Micro+ PH	Kit mezclador para Cyclomix Micro+PH
055 660 074	Kit electrovanne	Electrovalve	Elektroventilsatz	Kit electroválvula

**KIT COMMANDE EN CABINE
BOOTH CONTROL KIT
SET FÜR KABINENSTEUERUNG
KIT MANDO EN CABINA**
155.660.340



AUTO-WASH
155.660.300



- * 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.
- N S : Bezeichnete Teile gibt es nicht einzeln, sondern nur komplett.
- N S : no suministrado.



INSTRUCTION MANUAL
COLOR CHANGER

Manual : 2102 573.186.112

Date : 19/02/21 - Supersede : 20/12/18
Modif. : Update

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.

SAMES KREMLIN SAS
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38 240 - MEYLAN - France
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www.sames-kremlin.com

**INSTRUCTION MANUAL
COLOR CHANGER**

TABLE OF CONTENTS

1. GENERAL SAFETY INSTRUCTIONS2

2. DESCRIPTION2

3. ASSEMBLING3

4. TECHNICAL FEATURES3

5. DISASSEMBLY - ASSEMBLY5

ADDITIONAL DOCUMENTATIONS :

EU declaration of conformity	578.050.130
	Spare parts
Color changer	573.187.050
CTM valve	573.188.050

Dear Customer,

You are the owner of our new color changer 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 advise 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

- ➔ 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.
- ➔ Use the equipments only in a well-ventilated area to prevent from serious body injuries, fire and explosion hazards.
- ➔ Spraying of some materials may result in hazardous working conditions. To protect the operator, respirator mask, hand cream and glasses are required.
- ➔ 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.

2. DESCRIPTION

The color changer is composed of several stackings modules.

It enables a quick color change without material handling. As a result, costs through down time and solvent consumption are dramatically reduced.

There is no dead volume thus allowing a full flushing.

It is used on automatic installations and also on optimized manual installation. A color changer consists of :

- 1 end module (inlet),
- x intermediate modules,
- 1 outlet flange,
- 2 tie-rods.

The end module and the intermediate modules are fitted with two air operated valves. Each valve feeds the central fluid passage with the selected color.

Select the appropriate modules and valves according to the application :

- airspray (low pressure),
- AIRMIX (medium pressure - 120 bar / 1740 psi),
- AIRMIX (high pressure - 200 bar / 2900 psi).

With the required color valves, add a solvent valve for the flushing and, if necessary, an additional valve to provide compressed air to speed up the flushing process.

On a color changer, the number of valves is **always** an even number.

3. ASSEMBLING

The modules are stacked together and secured by tie-rods suitable for the number of modules.

If required two wall mounting brackets (use screws Ø 6 mm) can be installed on both side of the color changer.

It is **compulsory** to fit the solvent valve on the end module, **on the opposite side of the fluid outlet**.

4. TECHNICAL FEATURES

Modula rand versatile.

Ease of maintenance (the valves can be removed without dismantling the fluid hoses). De- signed for fluid circulation.

Supplied with valve opening indicator.

	Airspray	AIRMIX 120 bar / 1740 psi	AIRMIX GT 200 bar / 2900 psi	AIRMIX 200 bar / 2900 psi (stainless steel 316 L)	AIRMIX 200 bar / 2900 psi (stainless steel 316 L NPTF)
Maximum fluid pressure	8 bar / 116 psi	120 bar / 1740 psi	200 bar / 2900 psi	200 bar / 2900 psi	200 bar / 2900 psi
Central fluid passage diameter	8 mm / 5/16"	6 mm // 1/4"	6 mm / 1/4"	6 mm / 1/4"	6 mm / 1/4"
Air control fitting (ind. 5)	For hose 2,7 x 4				
Fluid inlet fitting (ind. 4)	F 1/4" NPS				F 1/4" NPTF
Fluid outlet fitting (ind. 6)	F 1/4" NPS				
Wetted parts	Stainless steel PTFE seals	Stainless steel PTFE seals	Stainless steel GT seals	Stainless steel 316L PTFE seals	Stainless steel 316L NPTF PTFE seals

- 1 → end module (inlet)
- 2 → intermediate module
- 3 → outlet flange

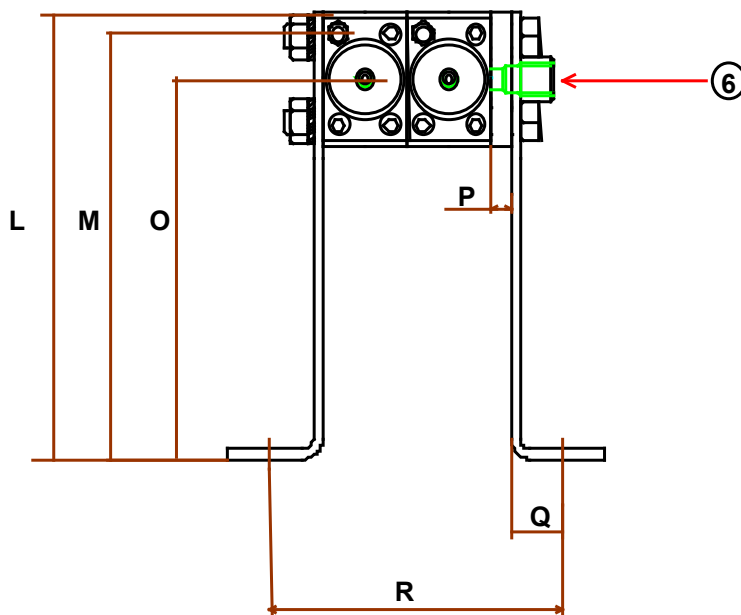
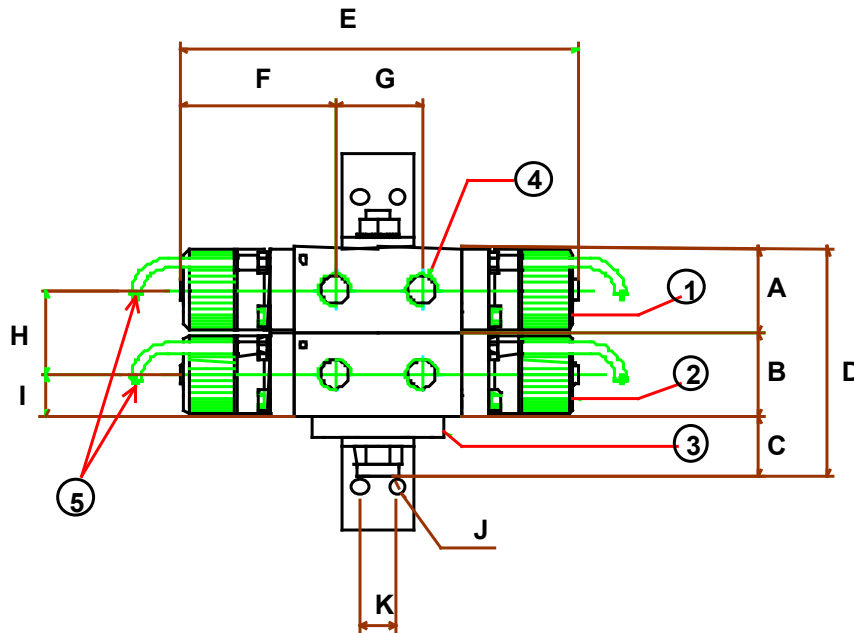
} Refer to drawing next page

Dimensions :

Ind.	A	B	C	D*	E	F	G	H*	I	J	K	L
mm	35	35	25	$60 + (N \times 35)$	165	64,5	36	$N \times 35$	17,5	$\varnothing 6,5$	15	185
"	1.38	1.38	1	$2.36 + (N \times 1.38)$	6.50	2.54	1.42	$N \times 1.38$	0.69	0.26	0.59	7.28

Ind.	M	O	P	Q	R*
mm	176,5	157,5	8	21,5	$86 + (N \times 35)$
"	6.95	6.20	5/16	0.85	$3.38 + (N \times 1.38)$

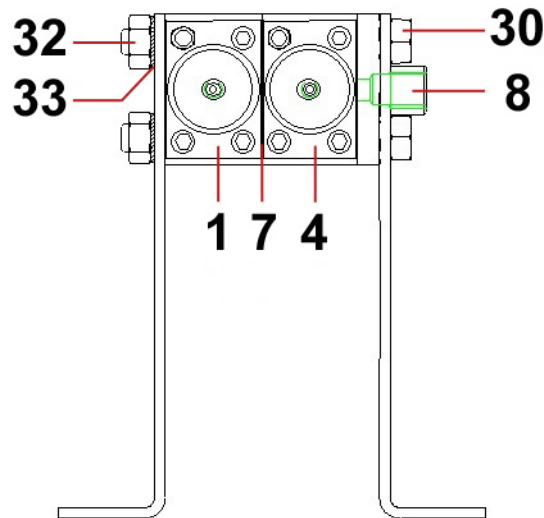
* N = Number of intermediate module



5. DISASSEMBLY - ASSEMBLY

Prior to removing a component shut off air and material supplies. Depressurize the system.

■ NEW MODULE INSTALLATION (OR MODULE REPLACEMENT) (REFER TO DOC. 573.187.050)



Unscrew nuts (32).

Remove washers (33).

Carry out the same operation for the second tie-rod.

Remove both tie-rods (30).

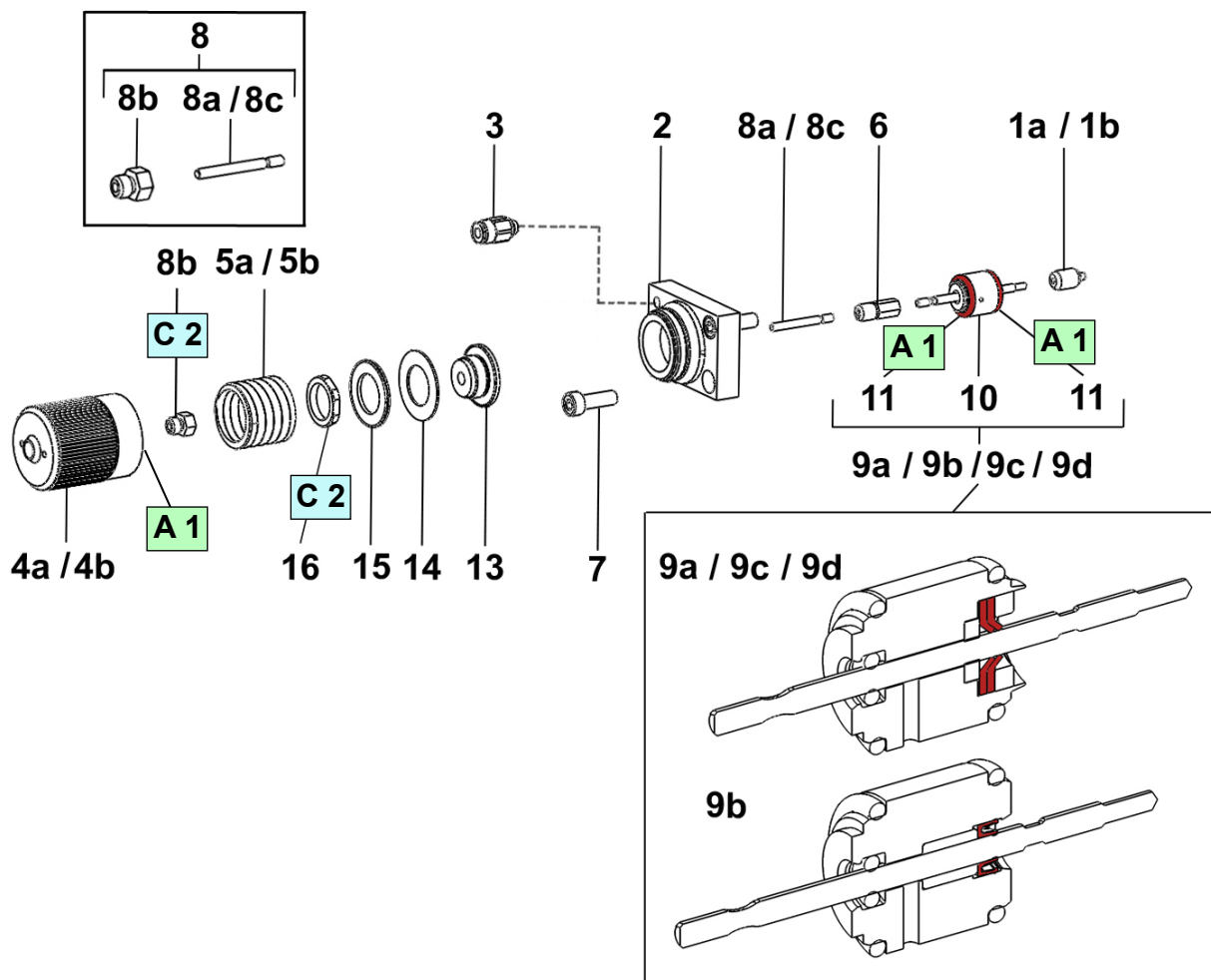
Mount the new module (be certain seal (7) is installed between two modules).

Slide the appropriate tie-rods through the modules, from fluid outlet flange to the end module.

Be careful when positioning tie-rods (30), tie-rods head against fluid outlet flange (8).

Install washers (33) and then screw nuts (32).

■ CARTRIDGE OF A FLUID VALVE (IND. 9A / 9B / 9C / 9D) (REFER TO DOC. 573.188.050)



Unscrew the 3 screws (7).

Extract the valve from the module body.

Unscrew the needle (1a / 1b).

Unscrew the cylinder (4a / 4b).

Hold rod carrier (6), unscrew the needle rod and remove cartridge with rod assembly (9a / 9b / 9c / 9d). Remove the seals.

When reassembling :

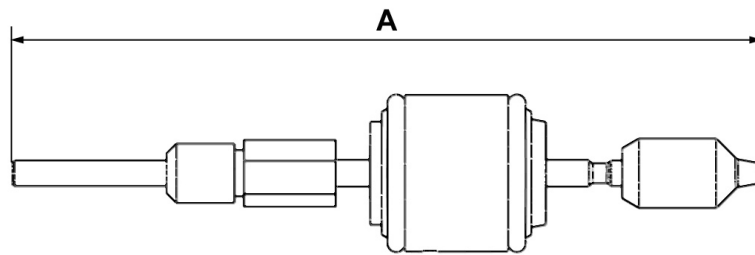
Change the seals (11), lubricate them then install new cartridge (9a / 9b / 9c / 9d) in cylinder support (2) by pushing it until the cartridge shoulder comes to lean against the cylinder support shoulder. Then reinstall all the components in the reverse order of disassembly.

Install the valve in front of the module body.

Centre the cartridge (9a / 9b / 9c / 9d) on the module body and reinstall screws (7).

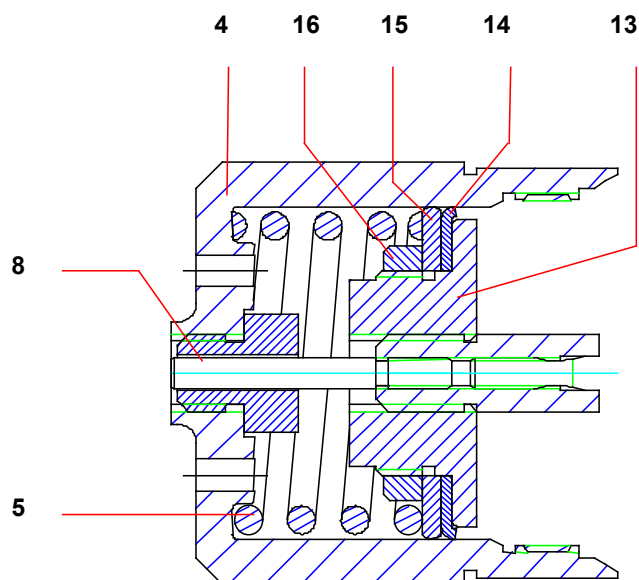


Comply with the dimension value A (1+9+6+8a).



A (mm)	
Airspray valve	78.5 / 3.09
AIRMIX valve 120 bar / 1740 psi	77 / 3.03
AIRMIX valve 200 bar / 2900 psi	82.9 / 3.26
AIRMIX valve 200 bar / 2900 psi (stainless steel 316 L)	
AIRMIX valve 200 bar / 2900 psi (stainless steel 316 L NPTF)	

■ PISTON PACKING (IND. 14)



- Unscrew the cylinder (4).
- Remove the spring (5).
- Unscrew the valve opening indicator (8).
- Unscrew the nut (16).
- Remove the support washer (15) and the packing (14).
- Clean the parts and replace them if it is necessary.

Prior to their reassembly on piston (13), packing lip (14) must be shaped by hand as shown as above (packing turned up on the piston).

Glue the nut (16) on the piston (13) with a light coating of glue (eg : Loctite 222).

Index	Instructions	Description	Part number
A 1	PTFE grease	PTFE grease (10 ml / 0.0026 US gal)	560.440.101
C 2	Low strength - Anaerobic Adhesive	Loctite 222 (50 ml / 0.013 US gal)	554.180.010



<p align="center">FR</p> <p>Pour une utilisation sûre, il est de votre responsabilité de :</p> <ul style="list-style-type: none"> • Lire attentivement tous les documents contenus dans le CD joint avant la mise en service de l'équipement, • D'installer, d'utiliser, d'entretenir et de réparer l'équipement conformément aux préconisations de SAMES KREMLIN ainsi qu'aux réglementations nationales et/ou locales, • Vous assurez que les utilisateurs de cet équipement ont été formés, ont parfaitement compris les règles de sécurité et qu'ils les appliquent. 	<p align="center">UK</p> <p>To ensure safe use of the machinery, it is your responsibility to:</p> <ul style="list-style-type: none"> • Carefully read all documents contained on the enclosed CD before putting the machinery into service, • Install, use, maintain and repair the machinery in accordance with SAMES KREMLIN's recommendations and national and/or local regulations, • Make sure that the users of the machinery have received proper training and that they have perfectly understood the safety rules and apply them. 	<p align="center">DE</p> <p>Eine sichere Nutzung setzt voraus, dass Sie :</p> <ul style="list-style-type: none"> • alle in der CD enthaltenen Dokumente vor der Inbetriebnahme der Anlage aufmerksam lesen, • die Anlage im Einklang mit den Empfehlungen von SAMES KREMLIN sowie mit den nationalen und/oder lokalen Bestimmungen installieren, verwenden, warten und reparieren, • sich vergewissern, dass die Nutzer dieser Anlage angemessen geschult wurden, die Sicherheitsbestimmungen verstanden haben und sie anwenden.
<p align="center">ES</p> <p>Para una utilización segura, será de su responsabilidad:</p> <ul style="list-style-type: none"> • leer atentamente todos los documentos que se incluyen en el CD adjunto antes de la puesta en servicio del equipo, • instalar, utilizar, efectuar el mantenimiento y reparar el equipo con arreglo a las recomendaciones de SAMES KREMLIN y a la normativa nacional y/o local, • cerciorarse de que los usuarios de este equipo han recibido la formación necesaria, han entendido perfectamente las normas de seguridad y las aplican. 	<p align="center">IT</p> <p>Per un uso sicuro, vi invitiamo a:</p> <ul style="list-style-type: none"> • leggere attentamente tutta la documentazione contenuta nel CD allegato prima della messa in funzione dell'apparecchio, • installare, utilizzare, mantenere e riparare l'apparecchio rispettando le raccomandazioni di SAMES KREMLIN, nonché le normative nazionali e/o locali, • accertarvi che gli utilizzatori dell'apparecchio abbiano ricevuto adeguata formazione, abbiano perfettamente compreso le regole di sicurezza e le applichino. 	<p align="center">PT</p> <p>Para uma utilização segura, é da sua responsabilidade:</p> <ul style="list-style-type: none"> • Ler atentamente todos os documentos incluídos no CD em anexo antes de pôr o equipamento em funcionamento, • Proceder à instalação, utilização, manutenção e reparação do equipamento de acordo com as preconizações de SAMES KREMLIN, bem como com outros regulamentos nacionais e/ou locais aplicáveis, • Assegurar-se que os utilizadores do equipamento foram devidamente capacitados, compreenderam perfeitamente e aplicam as devidas regras de segurança.
<p align="center">NL</p> <p>Voor een veilig gebruik dient u:</p> <ul style="list-style-type: none"> • alle document op de bijgevoegde cd aandachtig te lezen alvorens het apparaat in werking te stellen, • het apparaat te installeren, gebruiken, onderhouden en repareren volgens de door SAMES KREMLIN gegeven aanbevelingen en overeenkomstig de nationale en/of plaatselijke reglementeringen, • zeker te stellen dat de gebruikers van dit apparaat zijn opgeleid, de veiligheidsregels perfect hebben begrepen en dat zij die ook toepassen. 	<p align="center">SE</p> <p>För en säker användning av utrustningen ansvarar ni för följande:</p> <ul style="list-style-type: none"> • Läs noga samtliga dokument som finns på den medföljande cd-skivan innan utrustningen tas i drift. • Installera, använd, underhåll och reparera utrustningen enligt anvisningarna från SAMES KREMLIN och enligt nationella och/eller lokala bestämmelser. • Försäkra er om att användare av denna utrustning erhållit utbildning, till fullo förstått säkerhetsföreskrifterna och tillämpar dem. 	<p align="center">FI</p> <p>Käytön turvallisuuden varmistamiseksi velvollisuutesi on:</p> <ul style="list-style-type: none"> • Lukea huolella kaikki CD:llä olevat asiakirjat ennen laitteiston käyttöönottoa, • Noudattaa laitteiston asennuksessa, käytössä, kunnossapidossa ja huollossa SAMES KREMLIN in suosituksia sekä kansallisia ja/tai paikallisia määräyksiä, • Varmistaa, että laitteiston käyttäjät ovat koulutettuja ja ymmärtävät täysin turvallisuusmääräykset ja miten niitä sovelletaan.
<p align="center">PL</p> <p>Dla zapewnienia bezpiecznego użytkowania na użytkownika spoczywa obowiązek:</p> <ul style="list-style-type: none"> • Uważnego zapoznania się ze wszystkimi dokumentami znajdującymi się na załączonej płycie CD przed pierwszym uruchomieniem urządzenia, • Instalowania, użytkowania, konserwacji i naprawy urządzenia zgodnie z zaleceniami firmy SAMES KREMLIN oraz z przepisami miejscowymi, • Upewnienia, że wszyscy przeszkoleni użytkownicy urządzenia zrozumieli zasady bezpieczeństwa i stosują się do nich. 	<p align="center">CS</p> <p>Pro bezpečné používání jste povinni:</p> <ul style="list-style-type: none"> • Před uvedením zařízení do provozu si pozorně přečíst veškeré dokumenty obsažené na příloženém CD, • Nainstalovat, používat, udržovat a opravovat zařízení v souladu s pokyny firmy SAMES KREMLIN a s národními a/nebo místními legislativními předpisy, • Ujistit se, že uživatelé tohoto zařízení byli vyškoleni, že dokonale pochopili bezpečnostní pravidla a že je dodržují. 	<p align="center">SL</p> <p>Za varno uporabo ste dolžni:</p> <ul style="list-style-type: none"> • natančno prebrati vse dokumente na CD pred zagonom stroja, • instalirati, uporabljati, vzdrževati in popravljati opremo po določilih SAMES KREMLIN in v skladu z veljavnimi nacionalnimi in/ali lokalnimi predpisi, • poskrbeti, da so uporabniki te opreme ustrezno usposobljeni, poznajo varnostne predpise in da jih upoštevaajo.
<p align="center">SK</p> <p>V záujme bezpečného je vašou povinnosťou:</p> <ul style="list-style-type: none"> • pozorne si prečítať všetky dokumenty obsiahnuté na priloženom CD predtým, ako zariadenie uvediete do prevádzky, • nainštalovať, používať, udržiavať a opravovať zariadenie v súlade s odporúčaniami spoločnosti SAMES KREMLIN a národnými a/alebo miestnymi predpismi, • uistiť sa, že používatelia tohto zariadenia boli zaškolení, riadne porozumeli pravidlám bezpečnosti a používajú ich. 	<p align="center">HU</p> <p>A biztonságos használat érdekében az Ön felelőssége, hogy:</p> <ul style="list-style-type: none"> • a berendezés üzembe helyezése előtt figyelmesen elolvassa a mellékelt CD által tartalmazott összes dokumentumot, • a berendezést a SAMES KREMLIN ajánlásainak valamint a nemzeti és/vagy helyi szabályozásoknak megfelelően helyezze üzembe, használja, tartsa karban és javítsa, • megbizonyosodjon róla, hogy a berendezés felhasználói képzettek, tökéletesen megértették és alkalmazzák a biztonsági előírásokat. 	<p align="center">RO</p> <p>Pentru o utilizare sigură, este responsabilitatea dvs. să:</p> <ul style="list-style-type: none"> • Citiți cu atenție toate documentele de pe CD-ul anexat, înainte de punerea în funcțiune a echipamentului, • Instalați, utilizați, întrețineți și reparați echipamentul conform instrucțiunilor SAMES KREMLIN precum și reglementărilor naționale și/sau locale, • Vă asigurați că utilizatorii acestei echipament au fost instruiți, au înțeles perfect regulile de securitate și le aplică integral.

Déclaration(s) de conformité au verso de ce document / Declaration(s) of conformity at the back of this document / Konformitätserklärung(en) auf der Rückseite dieser Unterlage

/ Declaración (es) de conformidad en el reverso de este documento / Dichiarazione/i di conformità sul retro del presente documento / Declaração(ões) de conformidade no verso do documento / Conformiteitsverklaring(en) op de keerzijde van dit document / Försäkran om överensstämmelse på omstående sida av detta dokument / Vaatimustenmukaisuusvakuutukset tämän asiakirjan kääntöpuolella / Deklaracja(e) zgodności na odwrocie dokumentu / Prohlášení o shodě se nachází/nacházejí na zadní straně tohoto dokumentu / Deklaracija(e) o skladnosti na hrbtini strani tega dokumenta / Vyhlásenie/-a o zhode sa nachádzajú na zadnej strane dokumentu / A dokumentum hátlapján szereplő megfelelőségi nyilatkoz(ok) / Declarații de conformitate pe versoul acestei document



DECLARATION UE DE CONFORMITE
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DECLARATIA DE CONFORMITATE UE

Le fabricant / The manufacturer / Der Hersteller / El fabricante / Il produttore / O fabricante / De fabrikant / Tillverkare / Valmistaja / Producent / Výrobce / Proizvajalec / Výrobca / Gyártó / Fabricantul:	SAMES KREMLIN SAS 13, chemin de Malacher 38 240 - MEYLAN - FRANCE Tél. : 33 (0)4 76 41 60 60
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Déclare que le matériel désigné ci-après / Herewith declares that the equipment / erklärt hiermit, dass die / Declara que el material designado a continuación / Dichiaro che il materiale sottoindicato / Declara que o material a seguir designado / verklaart dat de hieronder aangeduide apparatuur

/ Kungör att den utrustning som anges här nedan / ilmoittaa, että alla mainitut laitteistot / Oświadcza, że wymienione poniżej urządzenia / Prohlašuje, že níže uvedené vybavení / Izjavlja, da je opisana oprema spodaj / Vyhlasuje, že zariadenie uvedené nižšie / Kijelenti, hogy a megjelölt anyag a továbbiakban / Declară că echipamentul precizat mai jos:

CHANGEUR DE TEINTES / COLOR CHANGER / FARBWECHSELBLOCK / CAMBIADOR DE COLOR

Est conforme à la législation d'harmonisation de l'Union applicable suivante / Is in conformity with the relevant Union harmonisation legislation / Erfüllt die einschlägigen Harmonisierungsrechtsvorschriften der Union / es conforme con la legislación de armonización pertinente de la Unión / è conforme alla pertinente normativa di armonizzazione dell'Unione / in overeenstemming met de desbetteffende harmonisatiewetgeving van de Unie / med den relevanta harmoniserade unionslagstiftningen / on asiaa koskevan unionin yhdenmukaistamislainsäädännön vaatimusten mukainen / jest zgodny z odpowiednimi wymaganiami unijnego prawodawstwa harmonizacyjnego / Shoduje se s následující příslušnou evropskou harmonizační legislativou

/ V skladu s harmonizirano zakonodajo Unije / Je v súlade s uplatniteľnými harmonizačnými právnymi predpismi EÚ / Megfelel a következõ alkalmazandó uniós harmonizációs szabályozásnak / Este conform cu legislația aplicabilă de armonizare de mai jos

Directive ATEX / ATEX Directive / ATEX Richtlinie / Directiva ATEX / Direttiva ATEX / Diretiva ATEX / ATEX-Richtlijn / ATEX-direktivet / ATEX-direktivi / Dyrektywa ATEX / Směrnice ATEX / Direktiva ATEX / Smernica ATEX / ATEX-irányelv	2014/34/UE
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La présente déclaration de conformité est établie sous la seule responsabilité du fabricant / This declaration of conformity is issued under the sole responsibility of the manufacturer / Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller / La presente declaración de conformidad se expide bajo la exclusiva responsabilidad del fabricante / La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante / A presente declaração de conformidade é emitida sob a exclusiva responsabilidade do fabricante / Deze conformiteitsverklaring wordt verstrekt onder volledige verantwoordelijkheid van de fabrikant / Denna försäkran om överensstämmelse utfärdas på tillverkarens eget ansvar / Tämä vaatimustenmukaisuusvakuutus on annettu valmistajan yksinomaisella vastuulla / Niniejsza deklaracja zgodności wydana zostaje na wyłączną odpowiedzialność producenta / Toto prohlášení o shodě se vydává na výhradní odpovědnost výrobce / Za izdajo te izjave o skladnosti je odgovoren izključno proizvajalec / Toto vyhlásenie o zhode sa vydáva / na vlastnú zodpovednosť výrobcu / Ezt a megfelelőségi nyilatkozatot a gyártó kizárólagos felelőssége mellett adják ti / Prezenta declarație de conformitate este emisă pe răspunderea exclusivă a producătorului.

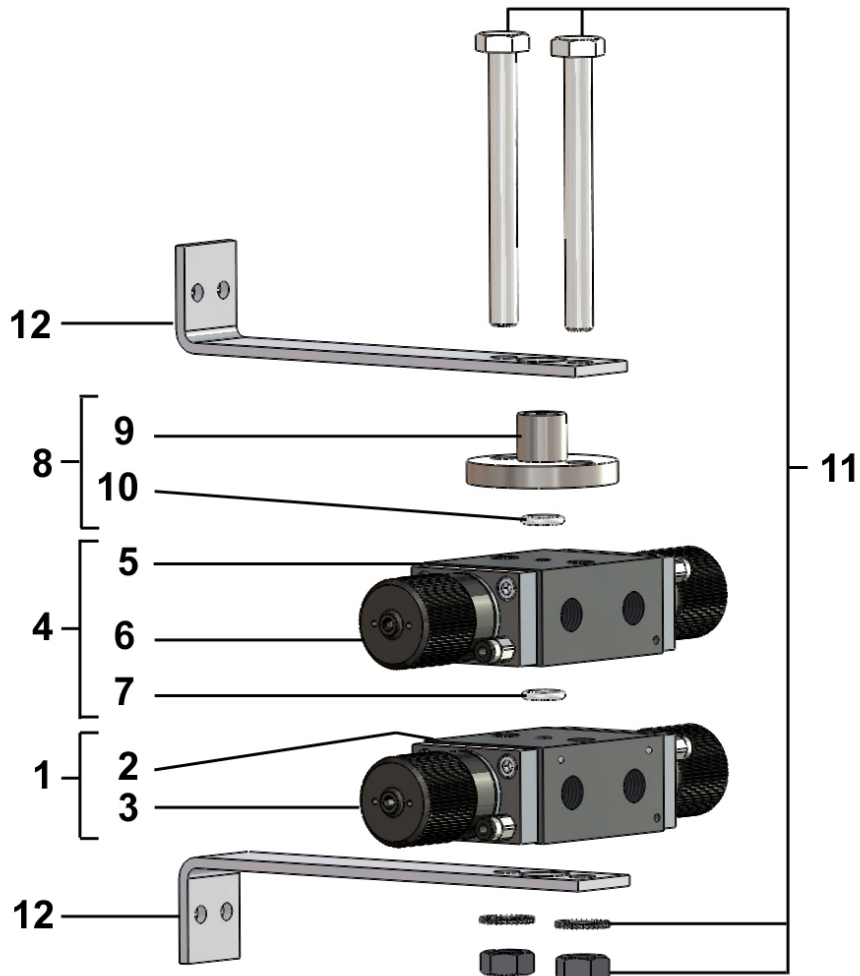
Hervé WALTER

Directeur Recherche & Développement / Research & Development Director / Direktor für Forschung & Entwicklung / Director de Investigación y Desarrollo / Direttore Ricerca e sviluppo / Diretor de Pesquisa e desenvolvimento / Manager Onderzoek en Ontwikkeling / Direktör för Forskning och Utveckling / Johtaja tutkimus ja kehitys / Dyrektor ds. Badań i rozwoju / Ředitel výzkumu a vývoje / Direktor za raziskave in razvoj / Riaditeľ pre výskum a vývoj / Kutatási és Fejlesztési Igazgató / Director de cercetare și Dezvoltare

Fait à Meylan, le / Established in Meylan, on / Geschehen zu Meylan, am / En Meylan, a / Redatto a Meylan, / Vastgesteld te Meylan, / Utformat i Meylan, den / Meylan, Ranska, / Sporządzono w Meylan, dnia / Meylan, dnia / V Meylanu, / V Meylan dňa / Kelt Meylanban, / Întocmită la Meylan, pe data de 06/05/2021 - 05/06/2021

<p>Doc. 573.187.050 Date/Datum/Fecha : 07/05/21 Annule/Cancel/ Ersetzt/Anula : 03/01/19</p>	<p>Modif. / Änderung : Mise à jour / Update / Aktualisierung / Actualización</p>	<p>Pièces de rechange Spare parts list Ersatzteilliste Piezas de repuesto</p>
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CTM	<p>CHANGEUR DE TEINTES INOX / STAINLESS STEEL COLOR CHANGER FARBWECHSELBLOCK - EDELSTAHL / CAMBIO DE COLOR INOX</p>
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➡ **Ind 3 & 6 → Doc. / Dok. 573.188.050**

Version pneumatique / Airspray version / Niederdruck Version / Versión neumática

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*1	155 535 100	Module pneumatique d'extrémité	End module (material or solvent or air inlet)	Unteres Modul (Endmodul)	Modulo neumático de extremidad	1
2	055 535 101	• Corps du module	• Body	• Modulkörper	• Cuerpo del modulo	1
*3	155 535 110	• Vanne pneumatique	• Airspray valve	• Niederdruckventil	• Válvula neumática	2
*4	155 535 200	Module pneumatique de commutation	Intermediate module (material inlet only)	Zwischen-Modul (Materialeingang)	Modulo neumático intermediario	1XN
5	055 535 201	• Corps du module	• Body	• Modulkörper	• Cuerpo del modulo	1
*6	155 535 110	• Vanne pneumatique	• Airspray valve	• Niederdruckventil	• Válvula neumática	2
*7	155 535 710	• Joint PTFE (x 10)	• Seal, PTFE (x 10)	• PTFE-Dichtung (10 St.)	• Junta PTFE (x 10)	1

Version Airmix® (120 bar) / Airmix Version (120 bar / 1740 psi)

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*1	155 535 300	Module AIRMIX® d'extrémité (120 bar)	End module (material or solvent or air inlet)	Unteres Modul (Endmodul) (120 bar)	Modulo AIRMIX® de extremidad (120 bar)	1
2	055 535 301	• Corps du module	• Body	• Modulkörper	• Cuerpo del modulo	1
*3	155 535 310	• Vanne AIRMIX® (120 bar)	• AIRMIX valve (120 bar / 1740 psi)	• Airmix® -Ventil (120 bar)	• Válvula AIRMIX® (120 bar)	2
*4	155 535 400	Module AIRMIX® de commutation (120 bar)	Intermediate module (material inlet only) (120 bar / 1740 psi)	Zwischen-Modul (Materialeingang) (120 bar)	Modulo AIRMIX® intermediario (120 bar)	1XN
5	055 535 401	• Corps du module	• Body	• Modulkörper	• Cuerpo del modulo	1
*6	155 535 310	• Vanne AIRMIX® (120 bar)	• AIRMIX valve (120 bar / 1740 psi)	• AIRMIX® -Ventil (120 bar)	• Válvula AIRMIX® (120 bar)	2
*7	155 535 710	• Joint PTFE (les 10)	• Seal, PTFE (x 10)	• PTFE-Dichtung (10 St.)	• Junta PTFE (x 10)	1

Version Airmix® (200 bar) / Airmix® Version (200 bar / 2900 psi)

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*1	155 535 350	Module d'extrémité AIRMIX® GT (200 bar) (pour machine dont le numéro de série est > à 15T1003)	GT AIRMIX end module (material or solvent or air inlet) (200 bar / 2900 psi) (for machine which part number is > to 15T1003)	Unteres Modul GT (Endmodul für Material und Spülmittel oder Spülmittel und Pulsluft) (200 bar) (ab Seriennummer > 15T1003)	Modulo de extremidad AIRMIX® GT (200 bar) (para máquina cuyo número de serie es superior a 15T1003)	1
2	055 535 301	• Corps du module	• Body	• Modulkörper	• Cuerpo del modulo	1
*3	155 535 315	• Vanne AIRMIX® GT (200 bar)	• GT AIRMIX valve (200 bar / 2900 psi)	• AIRMIX® GT -Ventil (200 bar)	• Válvula AIRMIX® GT (200 bar)	2
*4	155 535 450	Module AIRMIX® de commutation (200 bar)	Intermediate module (material inlet only) (200 bar / 2900 psi)	Zwischen-Modul (Materialeingang) (200 bar)	Modulo AIRMIX® intermediario (200 bar)	1XN
5	055 535 401	• Corps du module	• Body	• Modulkörper	• Cuerpo del modulo	1
*3	155 535 315	• Vanne AIRMIX® GT (200 bar)	• GT AIRMIX valve (200 bar / 2900 psi)	• AIRMIX® GT -Ventil (200 bar)	• Válvula AIRMIX® GT (200 bar)	2
*7	155 535 710	• Joint PTFE (les 10)	• Seal, PTFE (x 10)	• PTFE-Dichtung (10 St.)	• Junta PTFE (x 10)	1

Pièces communes - Common parts - Gleiche Teile - Partes comunes

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*8	155 535 500	Bride de sortie équipée	Flange assembly, material outlet	Ausgangsflansch (Materialausgang) kpl.	Brida de salida equipada	1
9	NC / NS	•Bride de sortie nue	•Bare outlet flange	•Ausgangsflansch, nackt	•Brida de salida sola	1
*10	155 535 710	•Joint PTFE (les 10)	•Seal, PTFE (x 10)	•PTFE- Dichtung (10 St.)	•Junta PTFE (x 10)	1

CHANGEUR DE TEINTES INOX 316 L	COLOR CHANGER, 316 L STAINLESS STEEL
FARBWECHSELBLOCK, EDELSTAHL 316 L	CAMBIO DE COLOR INOX 316 L

Version Airmix® (200 bar) / Airmix Version (200 bar / 2900 psi)

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*1	155 536 200	Module AIRMIX® d'extrémité (200 bar) (inox 316 L)	End module (material or solvent or air inlet) (200 bar / 2900 psi) (stainless steel, 316 L)	Unteres Modul (Endmodul) (200 bar) (Edelstahl 316 L)	Modulo AIRMIX® de extremidad (200 bar) (inox 316 L)	1
2	055 536 301	•Corps du module (inox 316 L)	•Body (stainless steel, 316 L)	•Modulkörper (Edelstahl 316 L)	•Cuerpo del modulo (inox 316 L)	1
*3	155 536 300	•Vanne AIRMIX® (200 bar) (inox 316 L)	•AIRMIX valve (200 bar / 2900 psi) (stainless steel, 316 L)	•AIRMIX® -Ventil (200 bar) (Edelstahl 316 L)	•Válvula AIRMIX® (200 bar) (inox 316 L)	2
*4	155 536 320	Module AIRMIX® de commutation (200 bar) (inox 316 L)	Intermediate module (material inlet only) (200 bar / 2900 psi) (stainless steel, 316 L)	Zwischen-Modul (Materialeingang) (200 bar) (Edelstahl 316 L)	Modulo AIRMIX® intermédiaire (200 bar) (inox 316 L)	1XN
5	NC / NS	•Corps du module (inox 316 L)	•Body (stainless steel, 316 L)	•Modulkörper (Edelstahl 316 L)	•Cuerpo del modulo (inox 316 L)	1
*6	155 536 300	•Vanne AIRMIX® (200 bar) (inox 316 L)	•AIRMIX valve (200 bar / 2900 psi) (stainless steel, 316 L)	•Airmix® -Ventil (200 bar) (Edelstahl 316 L)	•Válvula AIRMIX® (200 bar) (inox 316 L)	2
*7	155 535 710	•Joint PTFE (les 10)	•Seal, PTFE (x 10)	•PTFE-Dichtung (10 St.)	•Junta PTFE (x 10)	1
*8	155 536 410	Bride de sortie équipée	Flange assembly, material outlet	Ausgangsflansch (Materialausgang) kpl.	Brida de salida equipada	1
9	NC / NS	•Bride de sortie nue (inox 316 L)	•Bare flange (stainless steel, 316 L)	•Ausgangsflansch, nackt (Edelstahl 316 L)	•Brida de salida sola (inox 316 L)	1
*10	155 535 710	•Joint PTFE (les 10)	•Seal, PTFE (x 10)	•PTFE-Dichtung (10 St.)	•Junta PTFE (x 10)	1

CHANGEUR DE TEINTES INOX 316 L NPTF	COLOR CHANGER, 316 L NPTF STAINLESS STEEL
FARBWECHSELBLOCK, EDELSTAHL 316 L NPTF	CAMBIO DE COLOR INOX 316 L NPTF

Version Airmix® (200 bar) / Airmix Version (200 bar / 2900 psi)

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*1	155 662 050	Module AIRMIX® d'extrémité (200 bar) (inox 316 L NPTF)	End module (material or solvent or air inlet) (200 bar / 2900 psi) (stainless steel, 316 L NPTF)	Unteres Modul (Endmodul) (200 bar) (Edelstahl 316 L NPTF)	Modulo AIRMIX® de extremidad (200 bar) (inox 316 L NPTF)	1
2	155 662 051	• Corps du module (inox 316 L NPTF)	• Body (stainless steel, 316 L NPTF)	• Modulkörper (Edelstahl 316 L NPTF)	• Cuerpo del modulo (inox 316 L NPTF)	1
*3	155 662 020	• Vanne AIRMIX® (200 bar) (inox 316 L NPTF)	• AIRMIX valve (200 bar / 2900 psi) (stainless steel, 316 L NPTF)	• AIRMIX® -Ventil (200 bar) (Edelstahl 316 L NPTF)	• Válvula AIRMIX® (200 bar) (inox 316 L NPTF)	2
*4	155 662 060	Module AIRMIX® de commutation (200 bar) (inox 316 L NPTF)	Intermediate module (material inlet only) (200 bar / 2900 psi) (stainless steel, 316 L NPTF)	Zwischen-Modul (Materialeingang) (200 bar) (Edelstahl 316 L NPTF)	Modulo AIRMIX® intermedio (200 bar) (inox 316 L NPTF)	1XN
5	155 662 062	• Corps du module (inox 316 L NPTF)	• Body (stainless steel, 316 L NPTF)	• Modulkörper (Edelstahl 316 L NPTF)	• Cuerpo del modulo (inox 316 L NPTF)	1
*6	155 662 020	• Vanne AIRMIX® (200 bar) (inox 316 L NPTF)	• AIRMIX valve (200 bar / 2900 psi) (stainless steel, 316 L NPTF)	• Airmix® -Ventil (200 bar) (Edelstahl 316 L NPTF)	• Válvula AIRMIX® (200 bar) (inox 316 L NPTF)	2
*7	155 535 710	• Joint PTFE (les 10)	• Seal, PTFE (x 10)	• PTFE-Dichtung (10 St.)	• Junta PTFE (x 10)	1
*8	155 536 410	Bride de sortie équipée	Flange assembly, material outlet	Ausgangsflansch (Materialausgang) kpl.	Brida de salida equipada	1
9	NC / NS	• Bride de sortie nue (inox 316 L)	• Bare flange (stainless steel, 316 L)	• Ausgangsflansch, nackt (Edelstahl 316 L)	• Brida de salida sola (inox 316 L)	1
*10	155 535 710	• Joint PTFE (les 10)	• Seal, PTFE (x 10)	• PTFE-Dichtung (10 St.)	• Junta PTFE (x 10)	1

* 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.

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

N S : no suministrado.

TIRANT / TIE-RODS / VERBINDUNGSBOLZEN / TIRANTE

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*11	---	Ensemble de 2 tirants pour :	Set of 2 tie-rods for :	Verbindungsbolzen (Satz mit 2 Stück) für:	Conjunto de 2 tirantes para :	1
-	155 535 610	• 1 module (1 d'extrémité + 1 bride)	• 1 module (1 end module + 1 flange)	• 1 Modul (1 Endmodul + 1 Ausgangsflansch)	• 1 modulo (1 de extremidad + 1 brida)	-
-	155 535 620	• 2 modules (1 d'extrémité + 1 de commutation + 1 bride)	• 2 modules (1 end module + 1 intermediate module + 1 flange)	• 2 Module (1 Endmodul + 1 Zwischenmodul + 1 Ausgangsflansch)	• 2 modulos (1 de extremidad + 1 intermediario + 1 brida)	-
-	155 535 630	• 3 modules (1 d'extrémité + 2 de commutation + 1 bride)	• 3 modules (1 end module + 2 intermediate modules + 1 flange)	• 3 Module (1 Endmodul + 2 Zwischenmodule + 1 Ausgangsflansch)	• 3 modulos (1 de extremidad + 2 intermediario + 1 brida)	-
-	155 535 640	• 4 modules (1 d'extrémité + 3 de commutation + 1 bride)	• 4 modules (1 end module + 3 intermediate modules + 1 flange)	• 4 Module (1 Endmodul + 3 Zwischenmodule + 1 Ausgangsflansch)	• 4 modulos (1 de extremidad + 3 intermediario + 1 brida)	-
-	155 535 650	• 5 modules (1 d'extrémité + 4 de commutation + 1 bride)	• 5 modules (1 end module + 4 intermediate modules + 1 flange)	• 5 Module (1 Endmodul + 4 Zwischenmodule + 1 Ausgangsflansch)	• 5 modulos (1 de extremidad + 4 intermediario + 1 brida)	-

Chaque tirant est équipé d'un écrou et d'une rondelle.

Each tie-rod is supplied with 1 nut and 1 washer.

Jeder Verbindungsbolzen wird mit 1 Mutter und 1 Beilagscheibe geliefert.

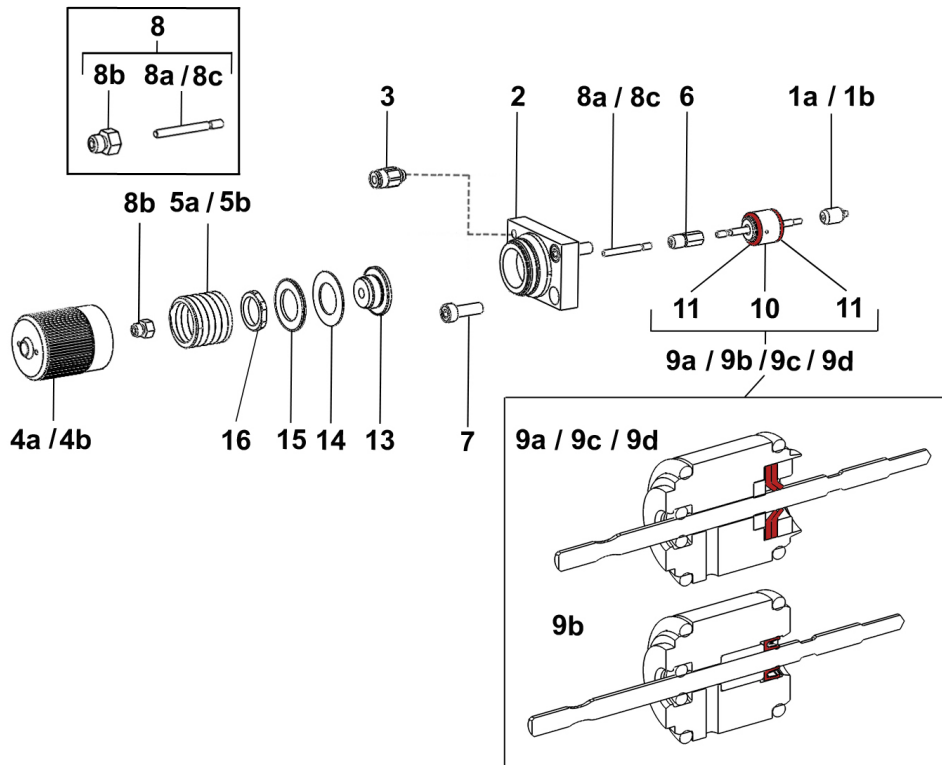
Cada tirante está equipado con una tuerca y una arandela.

OPTIONS - ON REQUEST - OPTIONEN - OPCIONES

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
12	155 535 700	Ensemble de 2 équerres de fixation	Set of 2 wall mounting brackets	Haltewinkel (Satz mit 2 Winkel)	Conjunto de 2 escuadras de fijación	1

<p>Doc. 573.188.050 Date/Datum/Fecha : 18/02/21 Annule/Cancel/ Ersetzt/Anula : 02/01/19</p>	<p>Modif. / Änderung : Ind. / Pos. 11 a / 11 b → 11 Pour / For / Für / Para # 155 536 300: Ind. / Pos. 1c # 155 507 014 → Ind. / Pos. 1b # 155 507 013 Ind. / Pos. 1c supprimé / canceled / Annulliert / suprimido Ind. / Pos. 1d : 155 662 011 → 029 930 202 Pour / For / Für / Para # 155 662 010: # 155 662 099 → # 129 529 918</p>	<p>Pièces de rechange Spare parts list Ersatzteilliste Piezas de repuesto</p>
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VANNE CTM en inox pour changeur de teintes	CTM VALVE (stainless steel) for color changer
CTM FARBWECHSEL-VENTIL (Edelstahl)	VÁLVULAS CTM de inox para cambiador de color



<p>Respecter la cote de montage A (1+9+6+8a). Comply with the dimension value A (1+9+6+8a). Bei der Montage das Maß A einhalten (1+9+6+8a). Cumplir con la cota de montaje A (1+9+6+8a).</p>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="5">A (mm / ")</th> </tr> </thead> <tbody> <tr> <td style="width: 20%;">155 535 110</td> <td style="width: 20%;">155 535 310</td> <td style="width: 20%;">155 535 315</td> <td style="width: 20%;">155 536 300</td> <td style="width: 20%;">155 662 020</td> </tr> <tr> <td>78,5 / 3.09</td> <td>77 / 3.03</td> <td colspan="3">82,9 / 3.26</td> </tr> </tbody> </table>	A (mm / ")					155 535 110	155 535 310	155 535 315	155 536 300	155 662 020	78,5 / 3.09	77 / 3.03	82,9 / 3.26		
A (mm / ")																
155 535 110	155 535 310	155 535 315	155 536 300	155 662 020												
78,5 / 3.09	77 / 3.03	82,9 / 3.26														

VANNE PNEUMATIQUE	AIRSPRAY VALVE	#
NIEDERDRUCK-VENTIL	VÁLVULA NEUMÁTICA	155.535.110

VANNE AIRMIX® 120 bar	AIRMIX VALVE (120 bar / 1740 psi)	#
AIRMIX® - VENTIL (120 bar)	VÁLVULA AIRMIX® 120 bar	155.535.310

VANNE AIRMIX® GT 200 bar	GT AIRMIX VALVE (200 bar / 2900 psi)	#
AIRMIX® GT - VENTIL (200 bar)	VÁLVULA AIRMIX® GT 200 bar	155.535.315

VANNE AIRMIX® 200 bar (inox 316 L)	AIRMIX VALVE (200 bar / 2900 psi) (stainless steel, 316 L)	#
AIRMIX® - VENTIL (200 bar), (Edelstahl 316 L)	VÁLVULA AIRMIX® 200 bar (inox 316 L)	155.536.300

VANNE AIRMIX® 200 bar (inox 316 L NPTF)	AIRMIX VALVE (200 bar / 2900 psi) (stainless steel, 316 L NPTF)	#
AIRMIX® - VENTIL (200 bar), (Edelstahl 316 L NPTF)	VÁLVULA AIRMIX® 200 bar (inox 316 L NPTF)	155.662.020

Pièces communes - Common parts - Gleiche Teile - Partes comunes

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
3	905 120 944	Raccord droit M5 (air commande ouverture)	Air connector, M5 (control air)	Steckanschluss, M5 (Steuerluft)	Racor recto M5 (aire de mando de apertura)	1
6	055 501 003	Entraîneur de tige	Rod carrier	Stangenführung	Arrastre de eje	1
7	933 151 221	Vis CHc M5 x 16	Screw, model CHc M5 x 16	Schraube, CHc M5 x 16	Tornillo, tipo CHc M5 x 16	3
13	029 875 301	Piston seul	Piston only	Kolben, einzeln	Pistón solo	1
*14	029 711 302	Garniture	Packing	Kolbenmanschette	Guarnición	1
15	029 711 303	Rondelle d'appui	Support washer	Scheibe	Arandela de apoyo	1
16	029 711 304	Ecrou M 16 x 100	Nut, model M 16 x 100	Mutter, M 16 x 1,00	Tuerca, tipo M 16 x 100	1

* 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.

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

N S : no suministrado.

Pièces spécifiques - Specific parts - Spezifische Teile - Partes específicas

Pour / for / für / para # 155.535.110

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*1a	155 501 004	Pointeau	Needle	Nadel	Aguja	1
2a	055 535 121	Support cylindre	Support, cylinder	Zylinderhalterung	Soporte cilindro	1
4a	029 711 401	Cylindre	Cylinder	Zylinder	Cilindro	1
5a	050 313 504	Ressort	Spring	Feder	Muelle	1
8	155 501 007	Témoin d'ouverture	Valve opening indicator	Schaltzustandsanzeiger	Testigo de apertura	1
8c	055 501 008	▪ Tige	▪ Rod	▪ Stange	▪ Eje	1
8b	055 501 009	▪ Guide	▪ Guide	▪ Führung	▪ Guía	1
*9a	155 535 140	Cartouche équipée	Cartridge assembly	Packung, kpl	Cartucho equipado	1
10	NC / NS	▪ Cartouche avec tige	▪ Cartridge with rod	▪ Packung mit Stange	▪ Cartucho con eje	1
*11	129 529 918	▪ Joint PTFE (les 10)	▪ Seal, PTFE (pack of 10)	▪ Dichtung PTFE (10 St.)	▪ Junta PTFE (bolsa de 10)	2

Pour / for / für / para # 155.535.310

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*1b	155 507 013	Pointeau	Needle	Nadel	Aguja	1
2a	055 535 121	Support cylindre	Support, cylinder	Zylinderhalterung	Soporte cilindro	1
4a	029 711 401	Cylindre	Cylinder	Zylinder	Cilindro	1
5a	050 313 504	Ressort	Spring	Feder	Muelle	1
8	155 501 007	Témoin d'ouverture	Valve opening indicator	Schaltzustandsanzeiger	Testigo de apertura	1
8c	055 501 008	▪ Tige	▪ Rod	▪ Stange	▪ Eje	1
8b	055 501 009	▪ Guide	▪ Guide	▪ Führung	▪ Guía	1
*9a	155 535 140	Cartouche équipée	Cartridge assembly	Packung, kpl	Cartucho equipado	1
10	NC / NS	▪ Cartouche avec tige	▪ Cartridge with rod	▪ Packung mit Stange	▪ Cartucho con eje	1
*11	129 529 918	▪ Joint PTFE (les 10)	▪ Seal, PTFE (pack of 10)	▪ Dichtung PTFE (10 St.)	▪ Junta PTFE (bolsa de 10)	2

Pour / for / für / para # 155.535.315

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*1b	155 507 013	Pointeau	Needle	Nadel	Aguja	1
2a	055 535 121	Support cylindre	Support, cylinder	Zylinderhalterung	Soporte cilindro	1
4b	055 535 316	Cylindre	Cylinder	Zylinder	Cilindro	1
5b	050 316 501	Ressort	Spring	Feder	Muelle	1
8	-	Témoin d'ouverture	Valve opening indicator	Schaltzustandsanzeiger	Testigo de apertura	1
8a	055 501 010	▪ Tige	▪ Rod	▪ Stange	▪ Eje	1
8b	055 501 009	▪ Guide	▪ Guide	▪ Führung	▪ Guía	1
*9b	155 528 012	Cartouche équipée	Cartridge assembly	Packung, kpl	Cartucho equipado	1
10	NC / NS	▪ Cartouche avec tige	▪ Cartridge with rod	▪ Packung mit Stange	▪ Cartucho con eje	1
*11	129 529 918	▪ Joint PTFE (les 10)	▪ Seal, PTFE (pack of 10)	▪ Dichtung PTFE (10 St.)	▪ Junta PTFE (bolsa de 10)	2

Pour / for / für / para # 155.536.300

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*1b	155 507 013	Pointeau	Needle	Nadel	Aguja	1
2a	055 535 121	Support cylindre	Support, cylinder	Zylinderhalterung	Soporte cilindro	1
4b	055 535 316	Cylindre	Cylinder	Zylinder	Cilindro	1
5b	050 316 501	Ressort	Spring	Feder	Muelle	1
8	-	Témoin d'ouverture	Valve opening indicator	Schaltzustandsanzeiger	Testigo de apertura	1
8a	055 501 010	▪ Tige	▪ Rod	▪ Stange	▪ Eje	1
8b	055 501 009	▪ Guide	▪ Guide	▪ Führung	▪ Guía	1
*9c	155 536 350	Cartouche équipée (inox 316 L)	Cartridge assembly (stainless steel, 316 L)	Packung, kpl (Edelstahl 316 L)	Cartucho equipado (inox 316L)	1
10	NC / NS	▪ Cartouche avec tige	▪ Cartridge with rod	▪ Packung mit Stange	▪ Cartucho con eje	1
*11	129 529 918	▪ Joint PTFE (les 10)	▪ Seal, PTFE (pack of 10)	▪ Dichtung PTFE (10 St.)	▪ Junta PTFE (bolsa de 10)	2

Pour / for / für / para # 155.662.020

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*1d	029 930 202	Pointeau	Needle	Nadel	Aguja	1
2b	155 662 021	Support cylindre	Support, cylinder	Zylinderhalterung	Soporte cilindro	1
4b	055 535 316	Cylindre	Cylinder	Zylinder	Cilindro	1
5b	050 316 501	Ressort	Spring	Feder	Muelle	1
8	-	Témoin d'ouverture	Valve opening indicator	Schaltzustandsanzeiger	Testigo de apertura	1
8a	055 501 010	▪ Tige	▪ Rod	▪ Stange	▪ Eje	1
8b	055 501 009	▪ Guide	▪ Guide	▪ Führung	▪ Guía	1
*9d	155 662 010	Cartouche équipée (inox 316 L)	Cartridge assembly (stainless steel, 316 L)	Packung, kpl (Edelstahl 316 L)	Cartucho equipado (inox 316L)	1
10	NC / NS	▪ Cartouche avec tige	▪ Cartridge with rod	▪ Packung mit Stange	▪ Cartucho con eje	1
*11	129 529 918	▪ Joint PTFE (les 10)	▪ Seal, PTFE (pack of 10)	▪ Dichtung PTFE (10 St.)	▪ Junta PTFE (bolsa de 10)	2

* 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.

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

N S : no suministrado.



**SYSTEME DE DOSAGE
CYCLOMIX™ MICRO™**

**CYCLOMIX™ MICRO™
ELEKTRONISCHE 2-K-ANLAGE**

ANNEXES

**CYCLOMIX™ MICRO™
MIXING SYSTEM**

**SISTEMA DE DOSIFICACIÓN
CYCLOMIX™ MICRO™**

Manuel / Manual / Betriebsanleitung / Libro : 1812 573.191.120

Date / Datum / Fecha : 07/12/18 - Annule / Supersede / Ersetzt / Anula : 02/01/12

Modif./Änderung : Mise à jour / Update / Aktualisierung / Actualización

NOTICE ORIGINALE / TRANSLATION FROM THE ORIGINAL MANUAL
/ ÜBERSETZUNG DER ORIGINALE BETRIEBSANLEITUNG / TRADUCCIÓN DEL LIBRO ORIGINAL

Rapport de dosage	Mix ratio	Mischungsverhältnis	Relación de mezcla
Schéma pneumatique	Pneumatic diagram	Pneumatikschema	Esquema neumático
Schéma électrique	Electrical diagram	Elektroschema	Esquema eléctrico

SAMES KREMLIN SAS
13, chemin de Malacher
38 240 - MEYLAN - France
☎ : 33 (0)4 76 41 60 60

www.sames-kremlin.com

RAPPORT DE DOSAGE - MIX RATIO - MISCHUNGSVERHÄLTNIS - RELACIÓN DE MEZCLA

A : Base / Basis

$$B / A \times 100 = X\%$$

B : Catalyseur / Catalyst / Härter / Cata

Ex : A = 2.5 B = 1 \Rightarrow 1 / 2.5 x 100 = 40%

A	B	%
0.6	1	167
1	1	100
1.5	1	66.7
2	1	50
2.5	1	40
3	1	33.3
3.5	1	28.6
4	1	25
4.5	1	22.2
5	1	20
5.5	1	18.2
6	1	16.7
6.5	1	15.4
7	1	14.3
7.5	1	13.3
8	1	12.5
8.5	1	11.8
9	1	11.1
9.5	1	10.5
10	1	10

A	B	%
10.5	1	9.524
11	1	9.091
11.5	1	8.696
12	1	8.333
12.5	1	8
13	1	7.692
13.5	1	7.407
14	1	7.143
14.5	1	6.897
15	1	6.667
15.5	1	6.452
16	1	6.25
16.5	1	6.061
17	1	5.882
17.5	1	5.714
18	1	5.556
18.5	1	5.405
19	1	5.263
19.5	1	5.128
20	1	5

Ind.	Désignation	Description	Bezeichnung	Descripción
R1	Alimentation en air	Air supply	Lufteingang	Alimentación en aire
R2	Air de pulvérisation (→ pistolet)	Spraying air (→ gun)	Zerstäuberluft zur Pistole	Aire de pulverización (→ pistola)
DB1	Débistat	Flow switch	Fließschalter	Caudalímetro
EV xx	Electrovannes	Electrovalves	Elektroventil	Electroválvulas
AR 1	Clapet anti-retour (base)	Non-return valve (base)	Rückschlagventil (Basis)	Válvula anti-retorno (base)
AR 2	Clapet anti-retour (cata)	Non-return valve (cata)	Rückschlagventil (Härter)	Válvula anti-retorno (cata)
CA	Compteur base	Base meter	Basis-Messzelle	Contador base
CB	Compteur cata	Catalyst meter	Härter-Messzelle	Contador cata
SA	Vanne solvant A	Solvent A valve	Spülmittel-Ventil A	Válvula disolvente A
A1	Vanne produit Base A1	Base valve, A1	Basis-Ventil, A1	Válvula producto Base, A1
A2	Vanne produit Base A2	Base valve, A2	Basis-Ventil, A2	Válvula producto Base, A2
A3	Vanne produit Base A3	Base valve, A3	Basis-Ventil, A3	Válvula producto Base, A3
B1	Vanne produit Cata B1	Catalyst valve, B1	Härter -Ventil, B1	Válvula producto Cata, B1
SB	Vanne solvant B	Solvent B valve	Spülmittel-Ventil B	Válvula disolvente B
IN	Vanne 3 voies	Three way valve	3-Wege Ventile	Válvula 3 vias
TA	Vanne test base	Base test valve	Basis-Ausliterrohr	Válvula test base
VP 6	Vanne injection	Injection valve	Injektions-Ventil	Válvula inyección

CYCLOMIX MICRO

1 Teinte

3 Teintes

1 Teinte et 1 rinçage cata

3 Teintes et 1 rinçage cata

KREMLIN REXSON

150, avenue de Stalingrad
93245 STAINS



KREMLIN REXSON



REXSON

Schema electrique et pneumatique

N° D'AFFAIRE : 055 660 999

Dessiné le : 19/02/2009

Modifié le : 17/01/2011

Par : FRIAA

Bordereau : 9765

Bordereau Modif : 2815

Indice : H

13 FOLIO

Schema electrique

KREMLIN REXSON

150, avenue de Stalingrad
93245 STAINS



KREMLIN REXSON



REXSON

Schema electrique

N° D'AFFAIRE : 055 660 999

Dessiné le : 19/02/2009

Modifié le : 17/01/2011

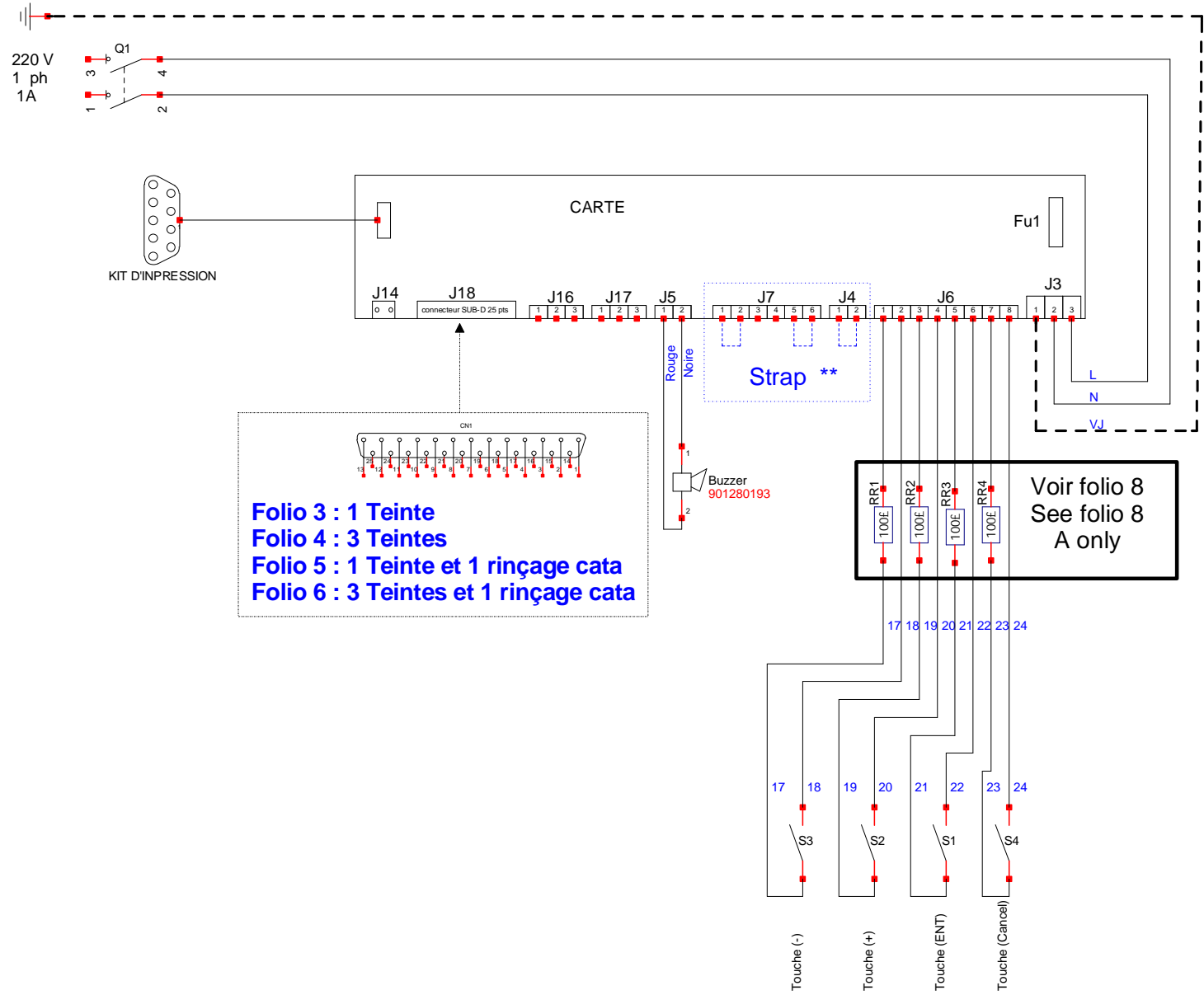
Par : FRIAA

Bordereau : 9765

Bordereau Modif : 2815

Indice : H

13 FOLIO



Folio 3 : 1 Teinte
Folio 4 : 3 Teintes
Folio 5 : 1 Teinte et 1 rinçage cata
Folio 6 : 3 Teintes et 1 rinçage cata

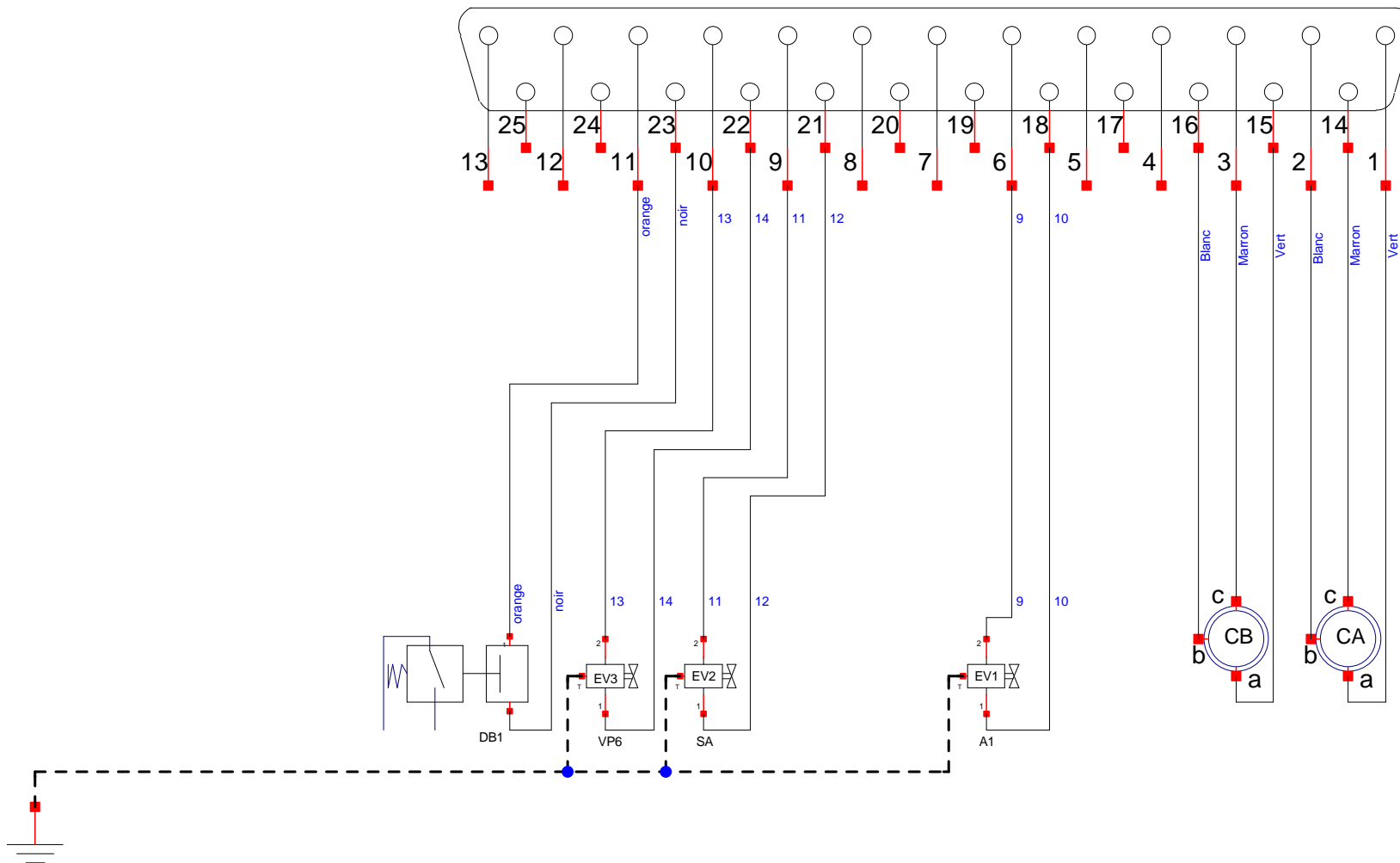
Voir folio 8
 See folio 8
 A only

Strap **

	Strapper
1 Teinte	1 et 2 J4
3 Teintes	1 et 2 J7
1 Teinte et 1 rinçage cata	5 et 6 J7
3 Teintes et 1 rinçage cata	1 et 2 5 et 6 J7

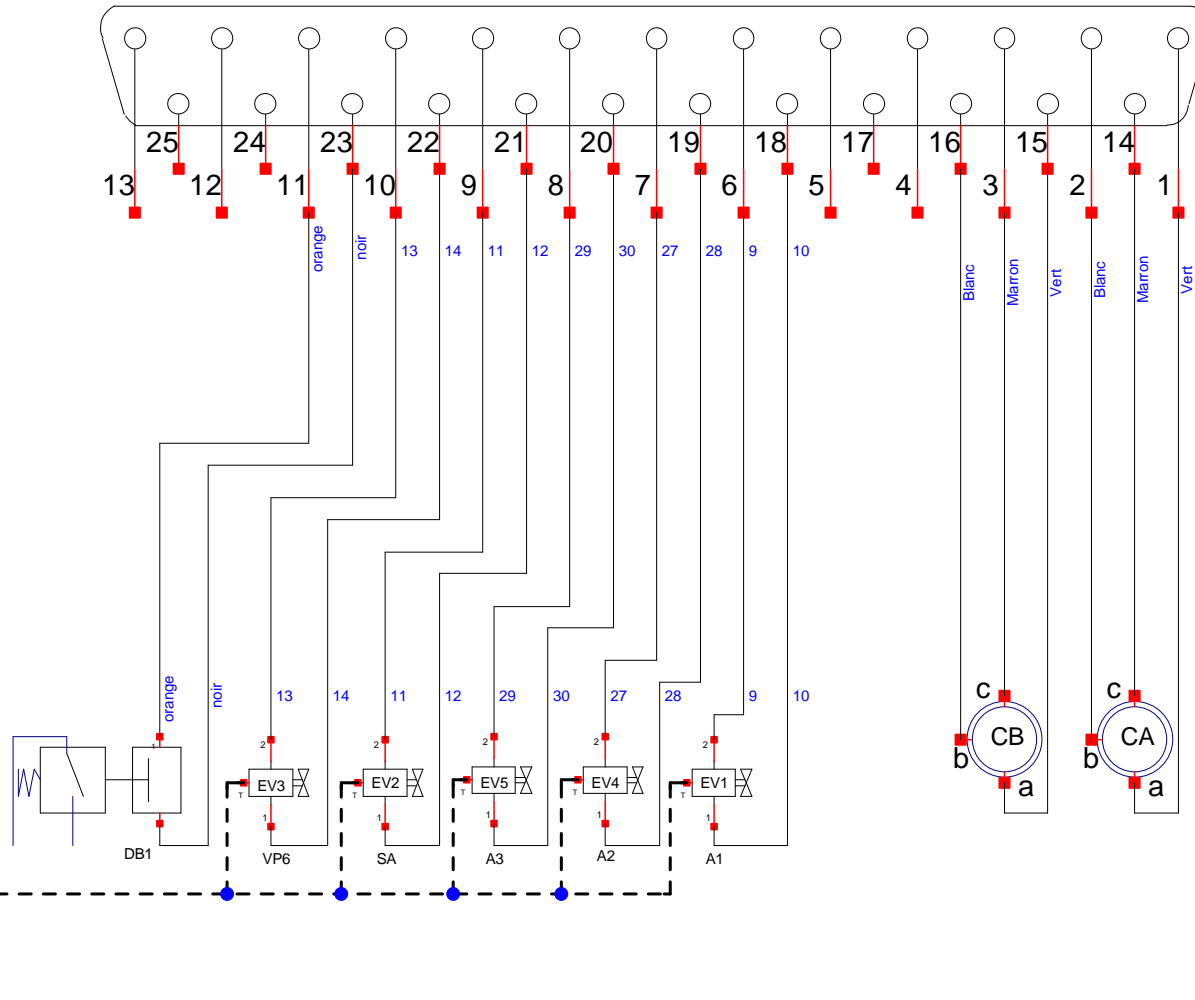
1 Teinte Strapper 1-2 (J4)

CN1



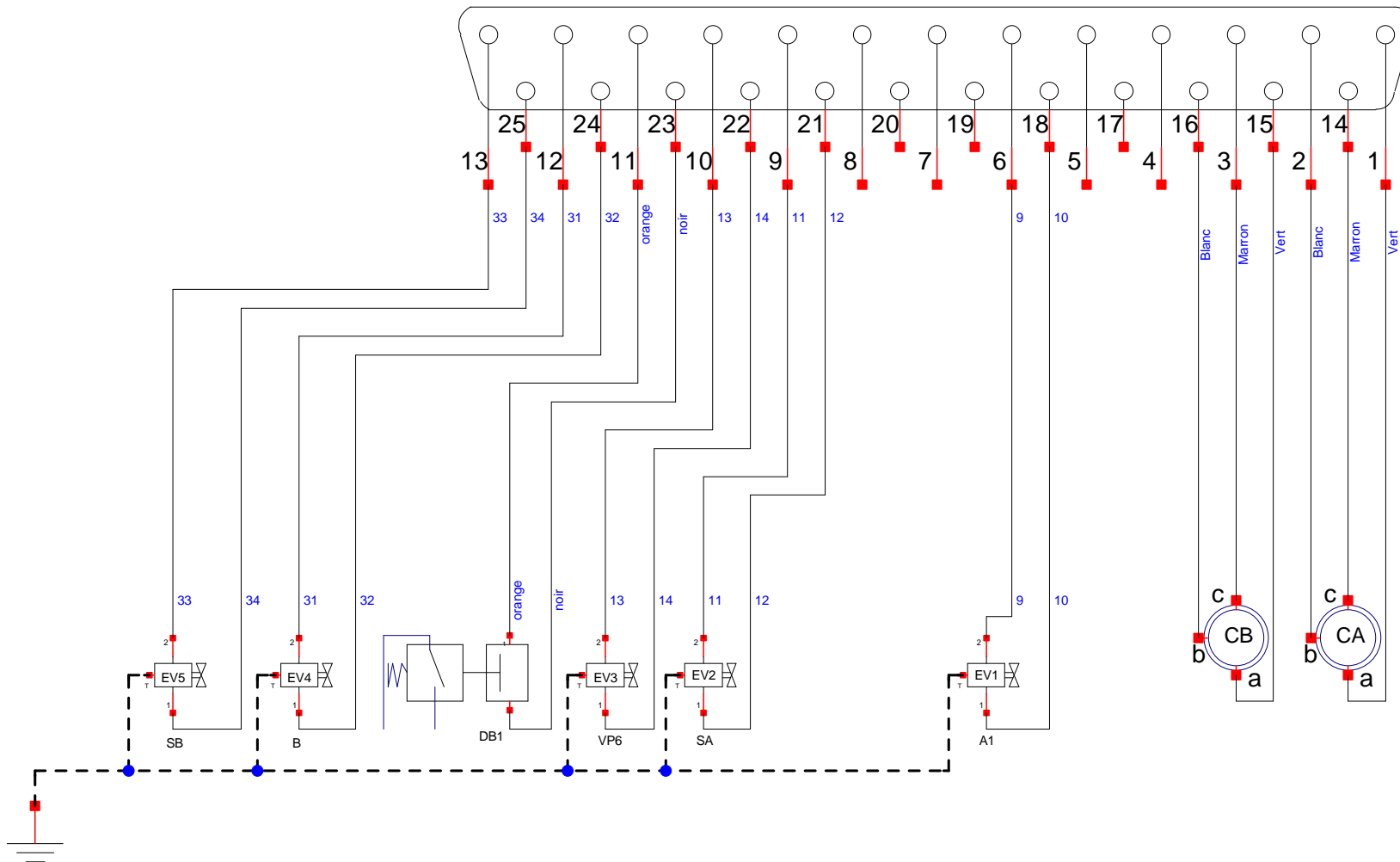
3 Teintes Strapper 1-2 (J7)

CN1



1 Teinte et 1 rinçage cata Strapper 5-6 (J7)

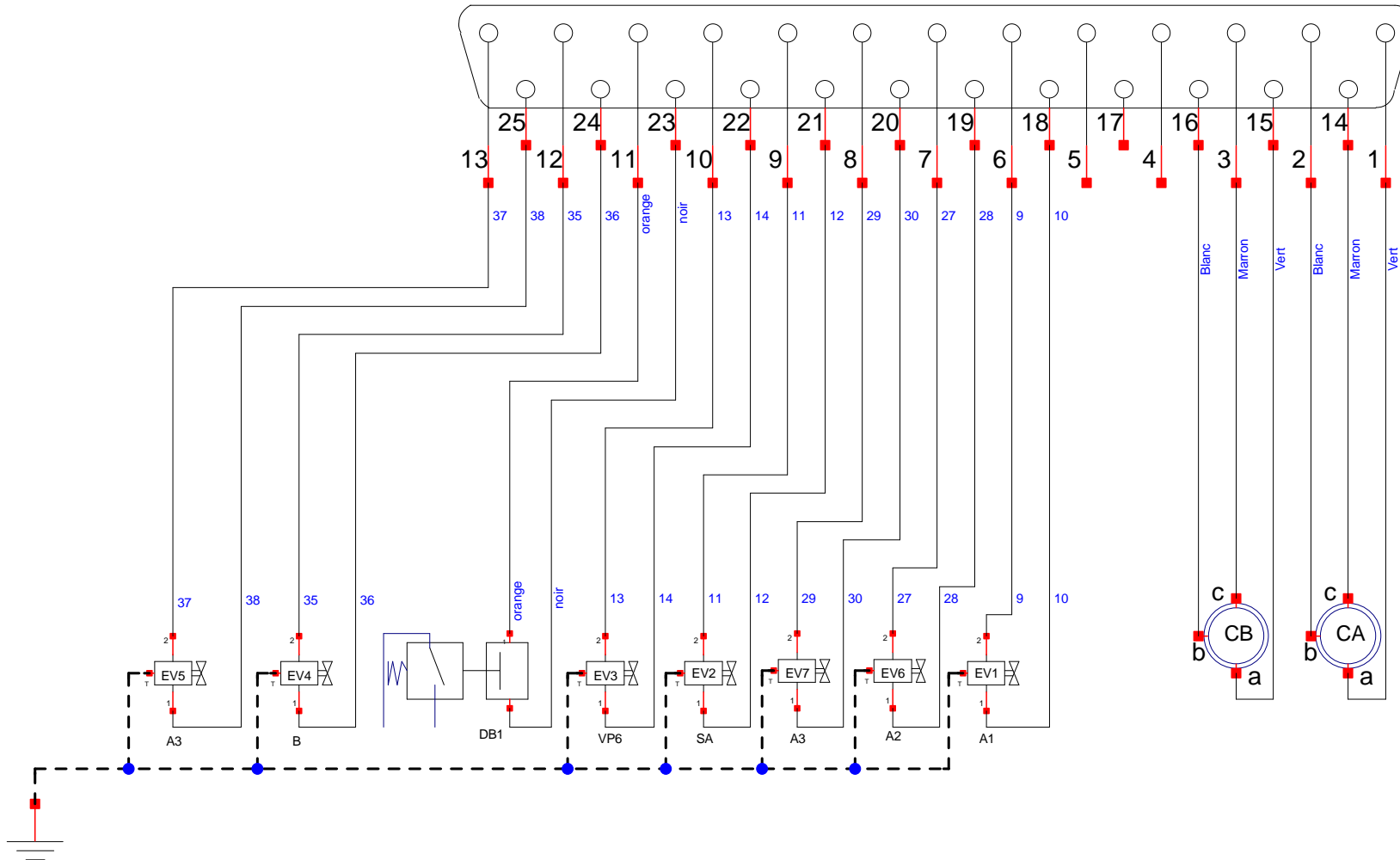
CN1



3 Teintes et 1 rinçage cata

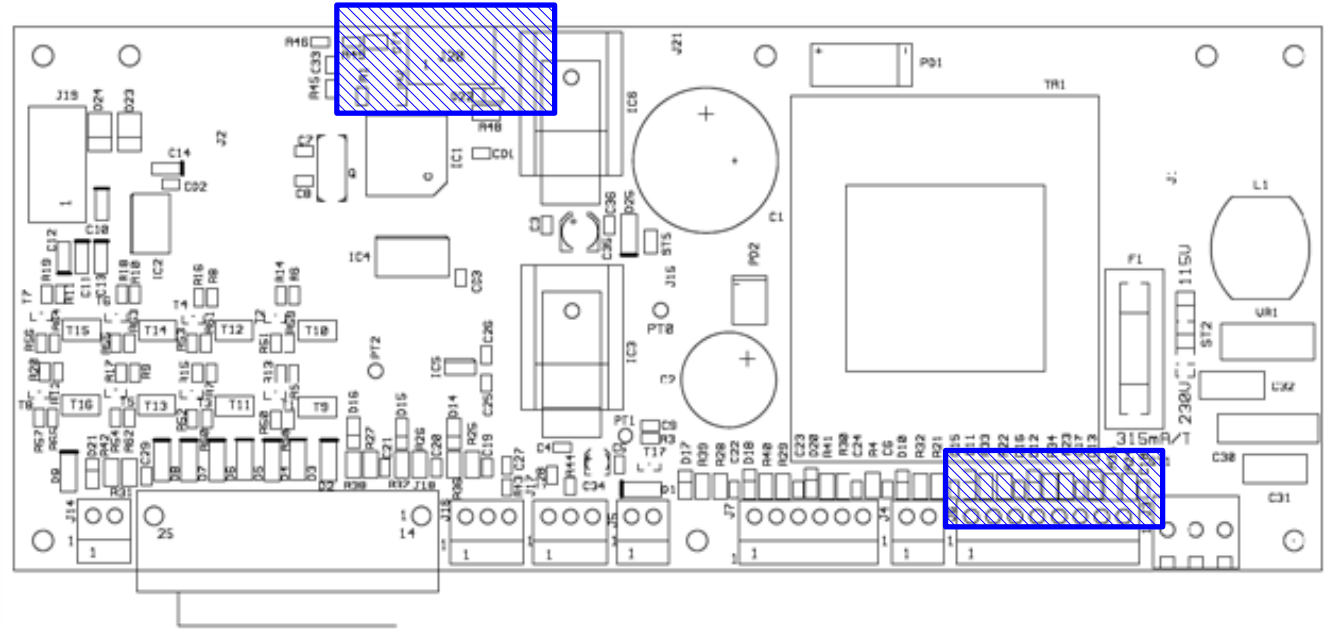
Strapper 1-2 et 5-6 (J7)

CN1

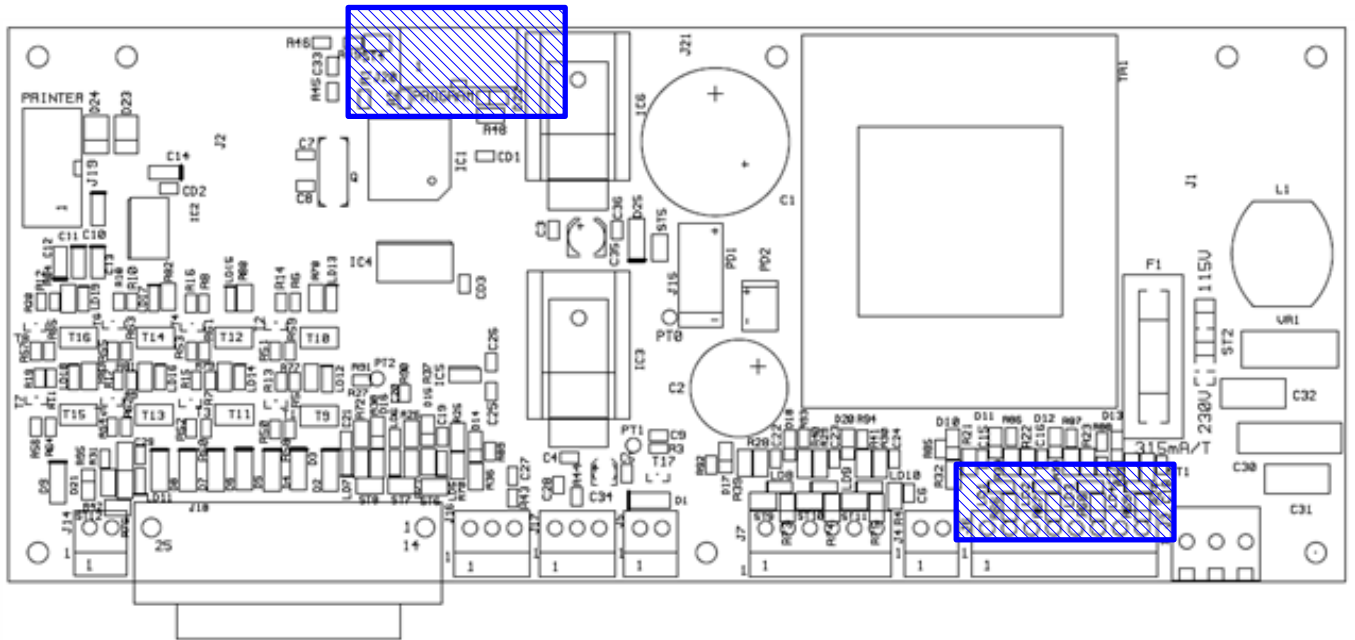


A

Ancienne carte Electronique
Sans led et résistance
Electronic board
Without DEL resistor



Nouvelle carte Electronique
Avec led et résistance
New electronic board
With DEL resistor



Schema pneumatique

KREMLIN REXSON

150, avenue de Stalingrad
93245 STAINS



KREMLIN REXSON



REXSON

Schema pneumatique

N° D'AFFAIRE : 055 660 999

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Par : FRIAA

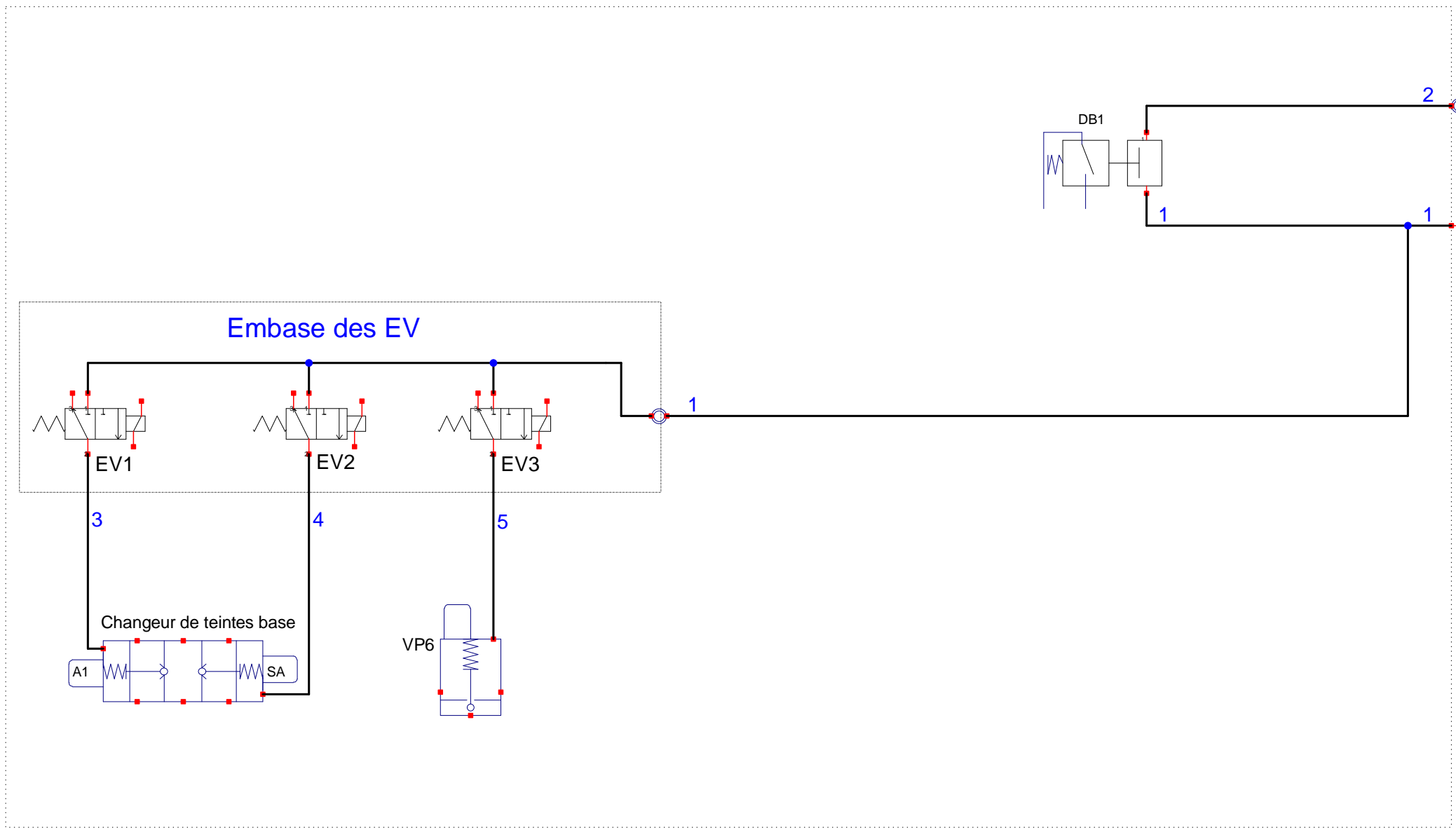
Bordereau : 9765

Bordereau Modif : 2815

Indice : H

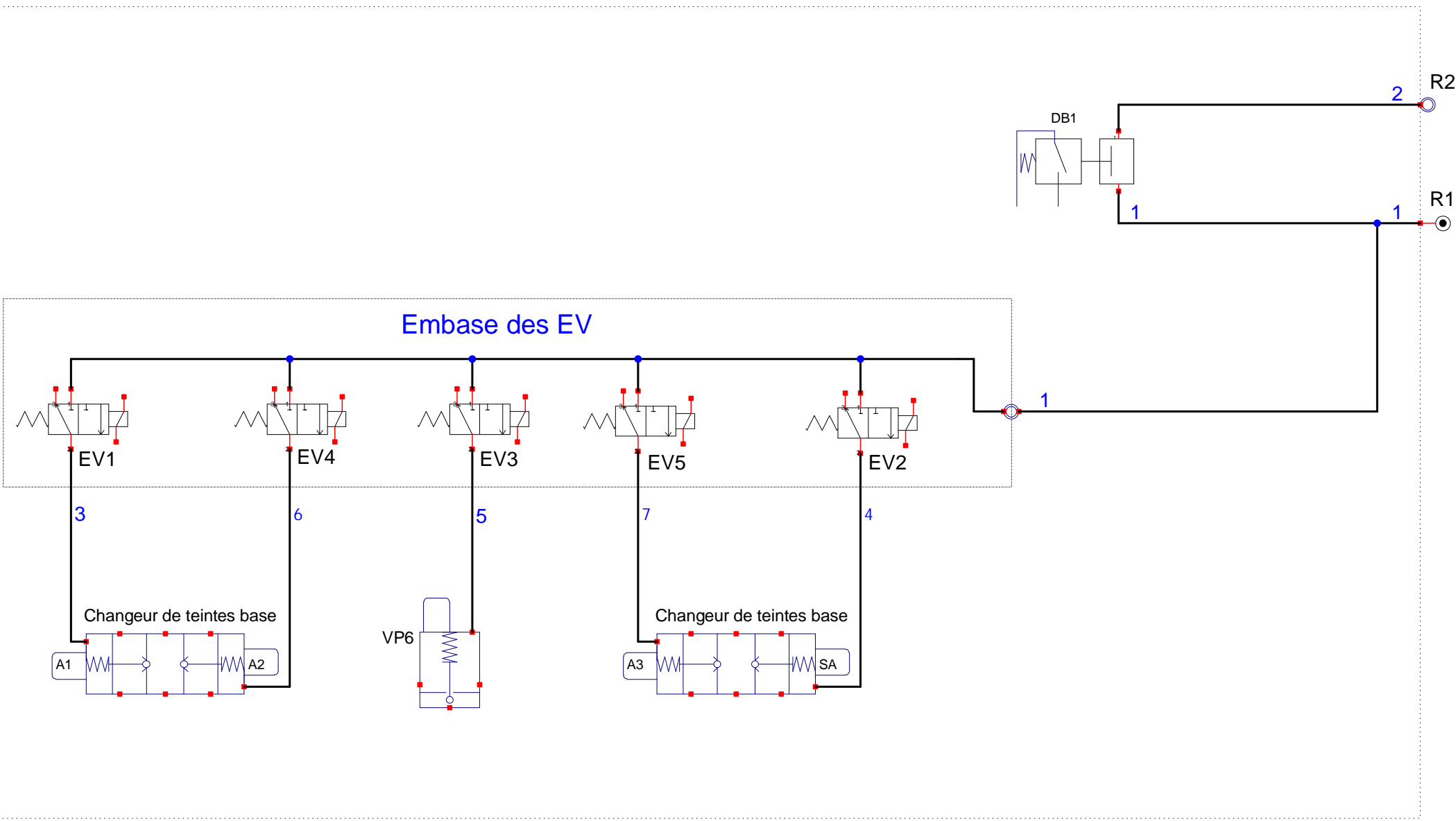
13 FOLIO

1 Teintes

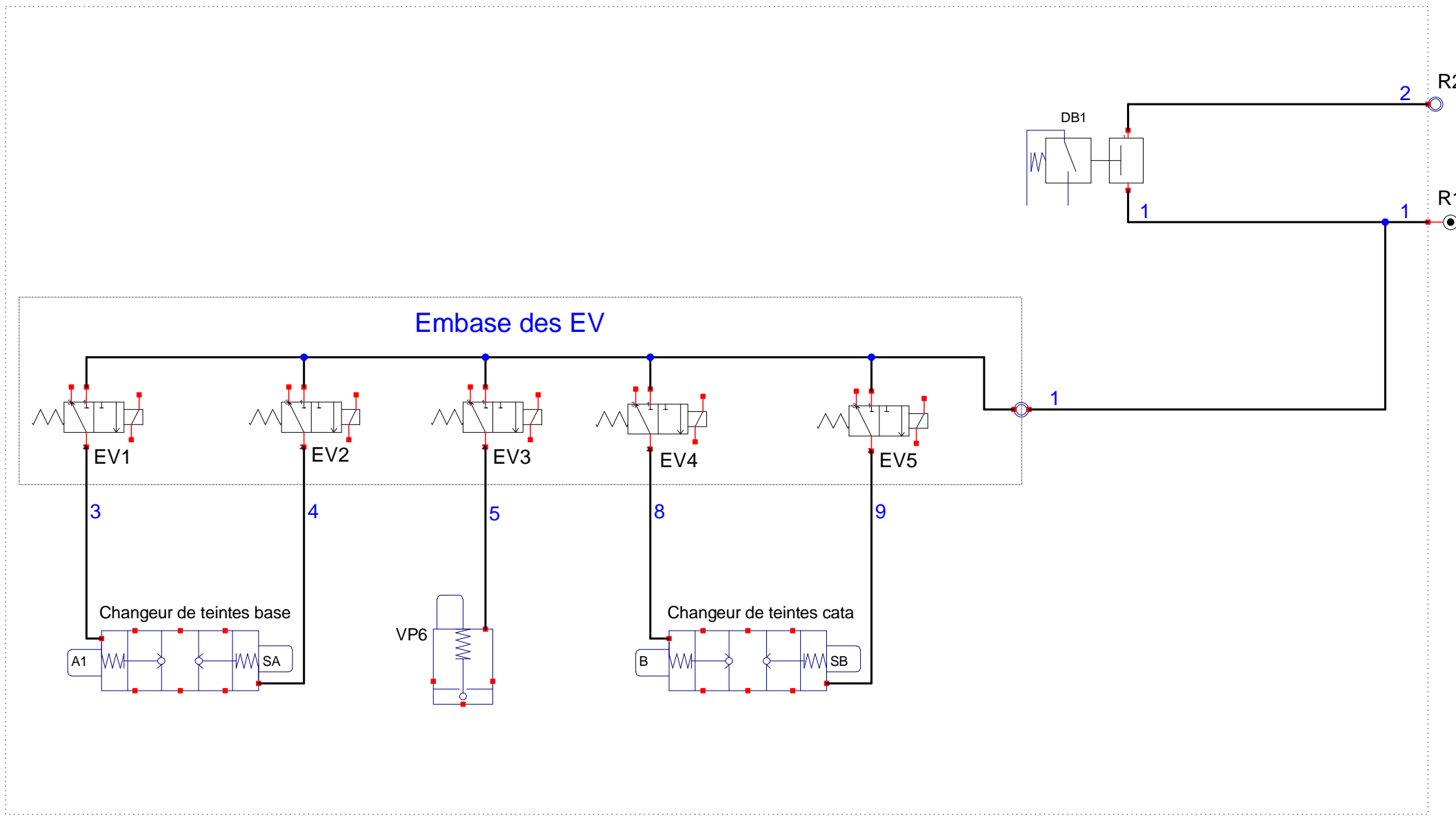


3 Teintes

Embase des EV

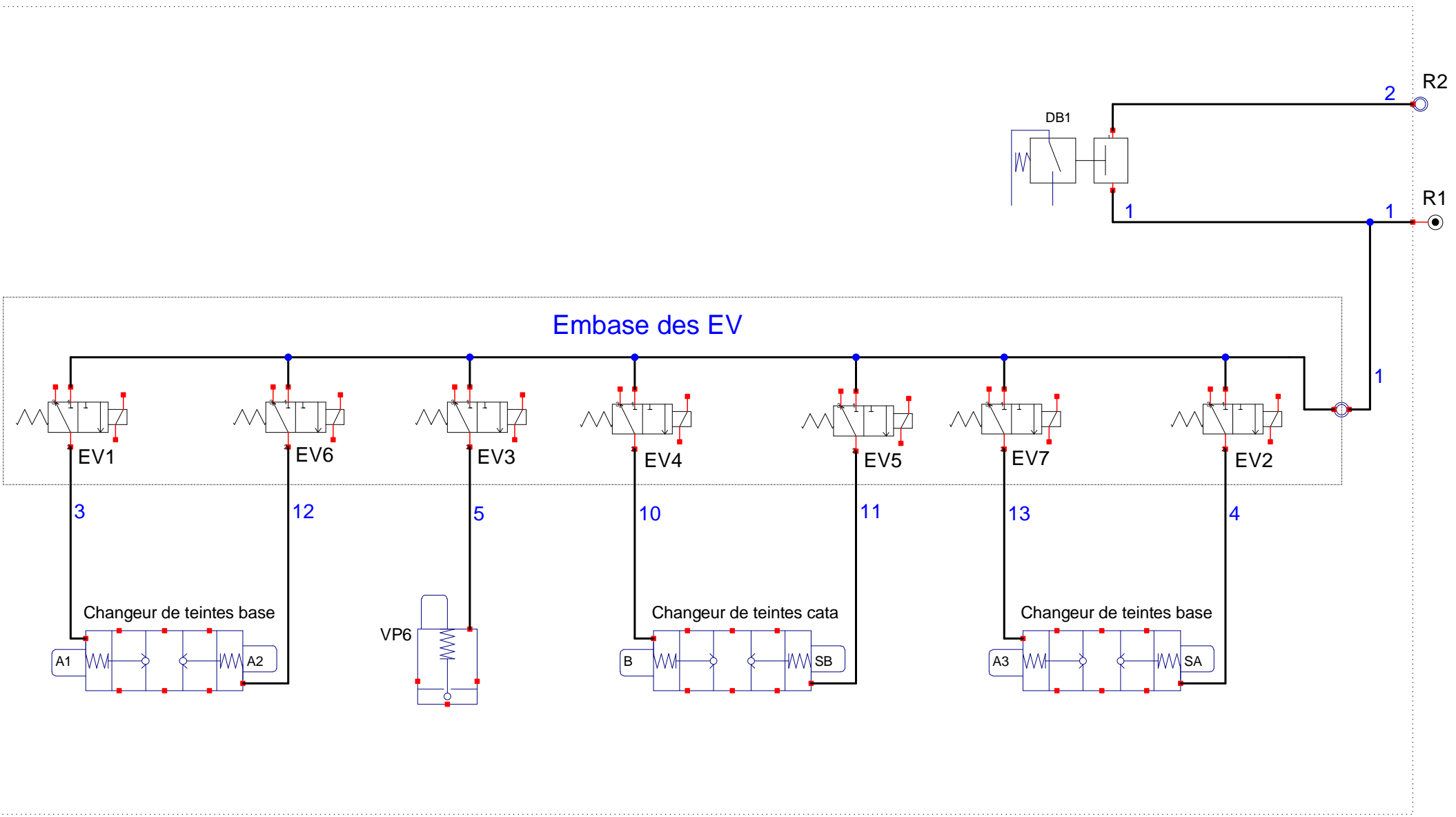


1 Teinte et 1 rinçage cata



3 Teintes et 1 rinçage cata

Embase des EV



**REPLACEMENT
REPLACEMENT
AUSTAUCH
CAMBIO**

**CYCLOMIX™
REPLACEMENT DES DEBITMETRES ET CAPTEURS
FLOWMETERS AND SENSORS REPLACEMENT
AUSTAUCH DES MESSZELLEN UND SENSOREN
CAMBIO DE LOS CAUDALÍMETROS**

**NOTICE ORIGINALE
/ TRANSLATION FROM THE ORIGINAL MANUAL
/ ÜBERSETZUNG DER ORIGINAL BETRIEBSANLEITUNG
/ TRADUCCIÓN DEL LIBRO ORIGINAL**



		#
CYCLOMIX™ MULTI	↙ 3	155.660.81X
CYCLOMIX™ MULTI PH	↙ 4 - 5	155.660.51X
CYCLOMIX™ MICRO, MICRO+ & MICRO+ PH	↙ 6 - 7	155.660.9XX
CYCLOMIX™ MICRO+ PH+	↙ 7	NC / NS
REPLACEMENT DES PIECES REPLACEMENT OF THE PARTS AUSTAUCH DER TEILE CAMBIO DE LAS PIEZAS	↙ 8 - 10	-

A partir d'août 2014 de nouveaux débitmètres et capteurs seront installés sur nos machines.

Il y aura une phase de transition pendant laquelle il est possible que vous disposiez des anciens débitmètres et capteurs sur la partie CATA et des nouveaux débitmètres et capteurs sur la partie BASE. Cette combinaison d'éléments n'altère ni la qualité de dosage ni la fiabilité de l'équipement.

From August 2014 new flowmeters and sensors will be installed on our machines.

There will be a transition phase during which you may have the former flowmeters and sensors on the CATA part and the new flowmeters and sensors on the BASE part. This combination of elements affects neither the mixing ratio quality nor the equipment reliability.

Seit August 2014 werden in unsere Anlagen neue Messzellen und Sensoren eingebaut.

In einer Übergangsphase kann es sein, dass an der Maschine alte und neue Volumenmessgeräte nebeneinander eingebaut sind. Dies hat keinerlei Einfluss auf die Mischqualität und Zuverlässigkeit der Anlage.

A partir de Agosto de 2014, se instalarán nuevos caudalímetros y captadores en nuestras máquinas.

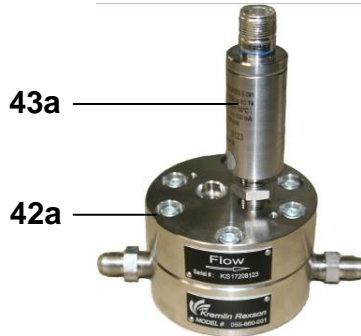
Durante una fase de transición, es posible encontrar anteriores caudalímetros y captadores en la parte CATA y nuevos en la parte BASE. La combinación de los dos no afecta ni la calidad de dosificación ni la fiabilidad del equipo.

CYCLOMIX™ MULTI



**Se reporter à / Refer to / Siehe / Consultar
doc. / dok. 573.344.050**

**Anciens débitmètres et capteurs / Former flowmeter and sensor
/ Alte Messzellen und Sensoren / Caudalímetros y captadores anteriores**



**Attention ce débitmètre n'est plus commercialisé (pour machine dont le numéro de série est antérieur à 14Y1124)
/ Caution this flowmeter is not serviceable any more (for machine which part number is prior to 14Y1124)
/ Achtung dieses Messzelle ist nicht mehr lieferbar (für Maschine mit der Seriennummer kleiner als 14Y1124)
/ Cuidado Este caudalímetro no se suministra más (para máquina cuyo número de serie es anterior a 14Y1124)**

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
-	155 660 011	Ensemble compteur	Meter assembly	Volumenmessgerät kpl.	Conjunto contador	2
42a	055 660 001	▪ Débitmètre	▪ Flowmeter	▪ Messzelle	▪ Caudalímetro	2
-	109 100 106	▪ ▪ Joint (les 2)	▪ ▪ Seal (pack of 2)	▪ ▪ Dichtung (Satz à 2)	▪ ▪ Junta (bolsa de 2)	1
43a	910 060 102	▪ Capteur	▪ Sensor	▪ Sensor	▪ Captador	2

**Nouveaux débitmètres et capteurs / New flowmeter and sensor
/ Neue Messzellen und Sensoren / Nuevos caudalímetro y captador**



Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
-	155 660 078	Ensemble compteur	Meter assembly	Volumenmessgerät kpl.	Conjunto contador	2
42	155 660 041	▪ Débitmètre	▪ Flowmeter	▪ Messzelle	▪ Caudalímetro	1
-	155 660 082	▪ ▪ Joint (x 1)	▪ ▪ Seal (pack of 1)	▪ ▪ Dichtung (1 St.)	▪ ▪ Junta (bolsa de 1)	1
-	155 660 086	▪ Ensemble capteur	▪ Sensor assembly	▪ Sensor Einheit	▪ Conjunto captador	1
43	910 060 106	▪ ▪ Capteur	▪ ▪ Sensor	▪ ▪ Sensor	▪ ▪ Captador	1
-	NC / NS	▪ ▪ Connecteur	▪ ▪ Connector	▪ ▪ Anschluss	▪ ▪ Conector	1

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*	155 660 165	Pochette de maintenance débitmètre (ind. 42 + joint)	Servicing kit - Flowmeter (ind. 42 + seal)	Servicekit für Messzelle (Pos. 42 + Dichtung)	Bolsa de mantenimiento caudalímetro (ind. 42 + junta)	1

CYCLOMIX™ MULTI PH



**Se reporter à / Refer to / Siehe / Consultar
doc. / dok. 573.358.050**

**Anciens débitmètres et capteurs / Former flowmeters and sensors
/ Alte Messzellen und Sensoren / Caudalímetros y captadores anteriores**

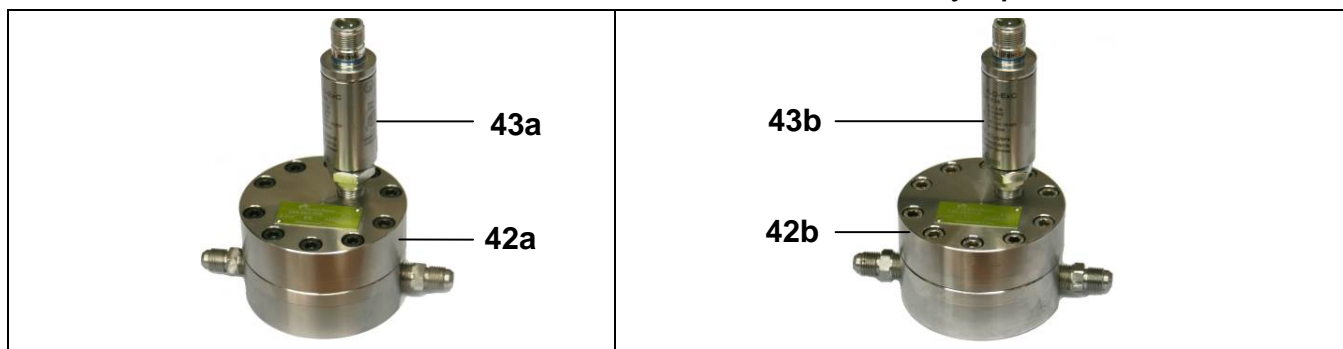


Attention ce débitmètre n'est plus commercialisé (pour machine dont le numéro de série est antérieur à 14Y1124)
/ **Caution this flowmeter is not serviceable any more (for machine which part number is prior to 14Y1124)**
/ **Achtung dieses Messzelle ist nicht mehr lieferbar (für Maschine mit der Seriennummer kleiner als 14Y1124)**
/ **Cuidado Este caudalímetro no se suministra más (para máquina cuyo número de serie es anterior a 14Y1124)**

Pour machine dont le numéro de série est antérieur à 14Y1139
/ **For machine which part number is prior to 14Y1139**
/ **Für Maschine mit der Seriennummer kleiner als 14Y1139**
/ **Para máquina cuyo número de serie es anterior a 14Y1139**

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
-	155 660 011	Ensemble compteur (BASE)	Meter assembly (BASE)	Volumenmessgerät kpl. (BASIS)	Conjunto contador (BASE)	2
42d	055 660 001	▪ Débitmètre (BASE)	Flowmeter (BASE)	▪ Messzelle (BASIS)	▪ Caudalímetro (BASE)	1
-	109 100 106	▪ ▪ Joint (les 2)	▪ ▪ Seal (pack of 2)	▪ ▪ Dichtung (Satz à 2)	▪ ▪ Junta (bolsa de 2)	1
43d	910 060 102	▪ Capteur	▪ Sensor	▪ Sensor	▪ Captador	1
-	NC / NS	Ensemble compteur (CATA)	Meter assembly (CATA)	Volumenmessgerät kpl. (HÄRTER)	Conjunto contador (CATA)	1
42c	055 660 501	▪ Débitmètre (CATA) (inox 316 L)	▪ Flowmeter (CATA) (stainless steel, 316 L)	▪ Messzelle (HÄRTER) (Edelstahl 316L)	▪ Caudalímetro (CATA) (inox 316 L)	1
43c	910 060 102	▪ Capteur	▪ Sensor	▪ Sensor	▪ Captador	2

**Nouveaux débitmètres et capteurs / New flowmeters and sensors
/ Neue Messzellen und Sensoren / Nuevos caudalímetros y captadores**



Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
-	155 660 078	Ensemble compteur (BASE)	Meter assembly (BASE)	Volumenmessgerät kpl. (BASIS)	Conjunto contador (BASE)	1
42a	155 660 041	▪ Débitmètre (BASE)	▪ Flowmeter (BASE)	▪ Messzelle (BASIS)	▪ Caudalímetro (BASE)	1
-	155 660 082	▪ ▪ Joint (x 1)	▪ ▪ Seal (pack of 1)	▪ ▪ Dichtung (1 St.)	▪ ▪ Junta (bolsa de 1)	1
-	155 660 086	▪ Ensemble capteur	▪ Sensor assembly	▪ Sensor Einheit.	▪ Conjunto captador	1
43a	910 060 106	▪ ▪ Capteur	▪ ▪ Sensor	▪ ▪ Sensor	▪ ▪ Captador	1
-	NC / NS	▪ ▪ Connecteur	▪ ▪ Connector	▪ ▪ Anschluss	▪ ▪ Conectador	1
-	155 660 079	Ensemble compteur (CATA)	Meter assembly (CATA)	Volumenmessgerät kpl. (HÄRTER)	Conjunto contador (CATA)	1
42b	155 660 042	▪ Débitmètre (CATA) (inox 316 L)	▪ Flowmeter (CATA) (stainless steel, 316 L)	▪ Messzelle (HÄRTER) (Edelstahl 316L)	▪ Caudalímetro (CATA) (inox 316 L)	1
-	155 660 082	▪ ▪ Joint (x 1)	▪ ▪ Seal (pack of 1)	▪ ▪ Dichtung (1 St.)	▪ ▪ Junta (bolsa de 1)	1
-	155 660 086	▪ Ensemble capteur	▪ Sensor assembly	▪ Sensor Einheit	▪ Conjunto captador	1
43b	910 060 106	▪ ▪ Capteur	▪ ▪ Sensor	▪ ▪ Sensor	▪ ▪ Captador	1
-	NC / NS	▪ ▪ Connecteur	▪ ▪ Connector	▪ ▪ Anschluss	▪ ▪ Conectador	1



Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*	155 660 165	Pochette de maintenance débitmètre (ind. 42a + joint)	Servicing kit - Flowmeter (ind. 42a + seal)	Servicekit für Messzelle (Pos. 42a + Dichtung)	Bolsa de mantenimiento caudalímetro (ind. 42a + junta)	1
*	155 660 166	Pochette de maintenance débitmètre (ind. 42b+ joint)	Servicing kit - Flowmeter (ind. 42b + seal)	Servicekit für Messzelle (Pos. 42b + Dichtung)	Bolsa de mantenimiento caudalímetro (ind. 42b + junta)	1

CYCLOMIX™ MICRO - CYCLOMIX™ MICRO+ - CYCLOMIX™ MICRO+ PH - CYCLOMIX™ MICRO+ PH+



**Se reporter à / Refer to / Siehe / Consultar
doc. / dok. 573.359.050**

*Anciens débitmètres et capteurs / Former flowmeters and sensors
/ Alte Messzellen und Sensoren / Caudalímetros y captadores anteriores*

 <p>14e & 14d</p> <p>12e & 12d</p>	 <p>14e & 14b</p> <p>12e & 12b</p>
<p>Attention ce débitmètre n'est plus commercialisé (pour machine dont le numéro de série est antérieur à 14Y1124) / Caution this flowmeter is not serviceable any more (for machine which part number is prior to 14Y1124) / Achtung dieses Messzelle ist nicht mehr lieferbar (für Maschine mit der Seriennummer kleiner als 14Y1124) / Cuidado Este caudalímetro no se suministra más (para máquina cuyo número de serie es anterior a 14Y1124)</p>	<p>Pour machine dont le numéro de série est antérieur à 14Y1139 / For machine which part number is prior to 14Y1139 / Für Maschine mit der Seriennummer kleiner als 14Y1139 / Para máquina cuyo número de serie es anterior a 14Y1139</p>

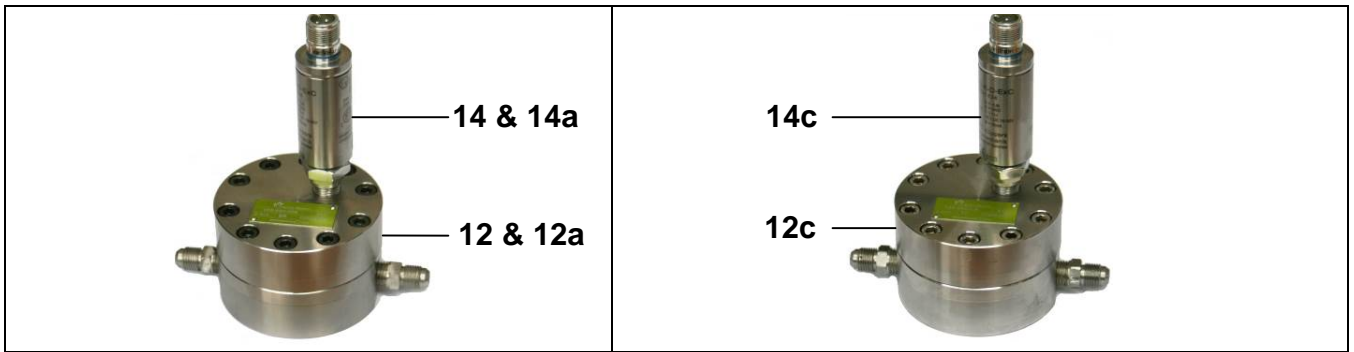
⇒ **CYCLOMIX™ MICRO & CYCLOMIX™ MICRO+**

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
-	155 660 011	Ensemble compteur	Meter assembly	Volumenmessgerät kpl.	Conjunto contador	2
12e	055 660 001	▪ Débitmètre	▪ Flowmeter	▪ Messzelle	▪ Caudalímetro	1
-	109 100 106	▪ ▪ Joint (les 2)	▪ ▪ Seal (pack of 2)	▪ ▪ Dichtung (Satz à 2)	▪ ▪ Junta (bolsa de 2)	1
14e	055 660 002	▪ Capteur	▪ Sensor	▪ Sensor	▪ Captador	1

⇒ **CYCLOMIX™ MICRO+ PH**

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
-	155 660 011	Ensemble compteur (BASE)	Meter assembly (BASE)	Volumenmessgerät kpl. (BASIS)	Conjunto contador (BASE)	1
12d	055 660 001	▪ Débitmètre (BASE)	▪ Flowmeter (BASE)	▪ Messzelle (BASE)	▪ Caudalímetro (BASE)	1
-	109 100 106	▪ ▪ Joint (les 2)	▪ ▪ Seal (pack of 2)	▪ ▪ Dichtung (Satz à 2)	▪ ▪ Junta (bolsa de 2)	1
14d	055 660 002	▪ Capteur	▪ Sensor	▪ Sensor	▪ Captador	1
-	NC / NS	Ensemble compteur (CATA)	Meter assembly (CATA)	Volumenmessgerät kpl. (HÄRTER)	Conjunto contador (CATA)	1
12b	055 660 501	▪ Débitmètre (CATA) (inox 316 L)	▪ Flowmeter (CATA) (stainless steel, 316 L)	▪ Messzelle (HÄRTER) (Edelstahl 316 L)	▪ Caudalímetro (CATA) (inox 316 L)	1
14b	055 660 002	▪ Capteur	▪ Sensor	▪ Sensor	▪ Captador	1

**Nouveaux débitmètres et capteurs / New flowmeters and sensors
/ Neue Messzelle und Sensor / Nuevos caudalímetros y captadores**



⇒ **CYCLOMIX™ MICRO & CYCLOMIX™ MICRO+**

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*-	155 660 078	Ensemble compteur	Meter assembly	Volumenmessgerät kpl.	Conjunto contador	2
*12	155 660 041	▪ Débitmètre	▪ Flowmeter	▪ Messzelle	▪ Caudalímetro	1
*-	155 660 082	▪ ▪ Joint (x 1)	▪ ▪ Seal (pack of 1)	▪ ▪ Dichtung (1 St.)	▪ ▪ Junta (bolsa de 1)	1
*-	155 660 086	▪ Ensemble capteur	▪ Sensor assembly	▪ Sensor Einheit	▪ Conjunto captador	1
*14	910 060 106	▪ ▪ Capteur	▪ ▪ Sensor	▪ ▪ Sensor	▪ ▪ Captador	1
-	NC / NS	▪ ▪ Connecteur	▪ ▪ Connector	▪ ▪ Anschluss	▪ ▪ Conectador	1

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*	155 660 165	Pochette de maintenance débitmètre (ind. 12 + joint)	Service kit - Flowmeter (ind. 12 + seal)	Servicekit für Messzelle (Pos. 12 + Dichtung)	Bolsa de mantenimiento caudalímetro (ind. 12 + junta)	1

⇒ **MICRO+ PH**

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
-	155 660 078	Ensemble compteur (BASE)	Meter assembly (BASE)	Volumenmessgerät kpl. (BASIS)	Conjunto contador (BASE)	1
* 12a	155 660 041	▪ Débitmètre (BASE)	▪ Flowmeter (BASE)	▪ Messzelle (BASIS)	▪ Caudalímetro (BASE)	1
*-	155 660 082	▪ ▪ Joint (x 1)	▪ ▪ Seal (pack of 1)	▪ ▪ Dichtung (1 St.)	▪ ▪ Junta (bolsa de 1)	1
*-	155 660 086	▪ Ensemble capteur	▪ Sensor assembly	▪ Sensor Einheit	▪ Conjunto captador	1
* 14a	910 060 106	▪ ▪ Capteur	▪ ▪ Sensor	▪ ▪ Sensor	▪ ▪ Captador	1
-	NC / NS	▪ ▪ Connecteur	▪ ▪ Connector	▪ ▪ Anschluss	▪ ▪ Conectador	1
*-	155 660 079	Compteur (CATA)	Meter (CATA)	Volumenmessgerät kpl. (HÄRTER)	Contador (CATA)	1
* 12c	155 660 042	▪ Débitmètre (CATA) (inox 316 L)	▪ Flowmeter (CATA) (stainless steel, 316 L)	▪ Messzelle (HÄRTER) (Edelstahl 316 L)	▪ Caudalímetro (CATA) (inox 316 L)	1
*-	155 660 082	▪ ▪ Joint (x 1)	▪ ▪ Seal (pack of 1)	▪ ▪ Dichtung (1 St.)	▪ ▪ Junta (bolsa de 1)	1
*-	155 660 086	▪ Ensemble capteur	▪ Sensor assembly	▪ Sensor Einheit	▪ Conjunto captador	1
* 14c	910 060 106	▪ ▪ Capteur	▪ ▪ Sensor	▪ ▪ Sensor	▪ ▪ Captador	1
-	NC / NS	▪ ▪ Connecteur	▪ ▪ Connector	▪ ▪ Anschluss	▪ ▪ Conectador	1

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*	155 660 165	Pochette de maintenance débitmètre (ind. 12a + joint)	Servicing kit - Flowmeter (ind. 12a + seal)	Servicekit für Messzelle (Pos. 12a + Dichtung)	Bolsa de mantenimiento caudalímetro (índ. 12a + junta)	1
*	155 660 166	Pochette de maintenance débitmètre (ind. 12c+ joint)	Servicing kit - Flowmeter (ind. 12c + seal)	Servicekit für Messzelle (Pos. 12c + Dichtung)	Bolsa de mantenimiento caudalímetro (índ. 12c + junta)	1

⇒ **MICRO+ PH+**

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*-	155 660 078	Ensemble compteur (BASE)	Meter assembly (BASE)	Volumenmessgerät kpl. (BASIS)	Conjunto contador (BASE)	1
* 12a	155 660 041	▪ Débitmètre (BASE)	▪ Flowmeter (BASE)	▪ Messzelle (BASIS)	▪ Caudalímetro (BASE)	1
*-	155 660 082	▪ ▪ Joint (x 1)	▪ ▪ Seal (pack of 1)	▪ ▪ Dichtung (1 St.)	▪ ▪ Junta (bolsa de 1)	1
*-	155 660 086	▪ Ensemble capteur	▪ Sensor assembly	▪ Sensor Einheit	▪ Conjunto captador	1
* 14a	910 060 106	▪ ▪ Capteur	▪ ▪ Sensor	▪ ▪ Sensor	▪ ▪ Captador	1
-	NC / NS	▪ ▪ Connecteur	▪ ▪ Connector	▪ ▪ Anschluss	▪ ▪ Conectador	1
11d	NC / NS	Compteur (CATA)	Meter (CATA)	Volumenmessgerät kpl. (HÄRTER)	Contador (CATA)	1
* 12d	NC / NS	▪ Débitmètre (CATA) (inox 316 L)	▪ Flowmeter (CATA) (stainless steel, 316 L)	▪ Messzelle (HÄRTER) (Edelstahl 316 L)	▪ Caudalímetro (CATA) (inox 316 L)	1
*-	155 660 082	▪ ▪ Joint (x 1)	▪ ▪ Seal (pack of 1)	▪ ▪ Dichtung (1 St.)	▪ ▪ Junta (bolsa de 1)	1
*-	155 660 086	▪ Ensemble capteur	▪ Sensor assembly	▪ Sensor Einheit	▪ Conjunto captador	1
* 14c	910 060 106	▪ ▪ Capteur	▪ ▪ Sensor	▪ ▪ Sensor	▪ ▪ Captador	1
-	NC / NS	▪ ▪ Connecteur	▪ ▪ Connector	▪ ▪ Anschluss	▪ ▪ Conectador	1

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*	155 660 165	Pochette de maintenance débitmètre (ind. 12a + joint)	Servicing kit - Flowmeter (ind. 12a + seal)	Servicekit für Messzelle (Pos. 12a + Dichtung)	Bolsa de mantenimiento caudalímetro (índ. 12a + junta)	1
*	155 660 166	Pochette de maintenance débitmètre (ind. 12c+ joint)	Servicing kit - Flowmeter (ind. 12c + seal)	Servicekit für Messzelle (Pos. 12c + Dichtung)	Bolsa de mantenimiento caudalímetro (índ. 12c + junta)	1

**REPLACEMENT DES ANCIENS DEBITMETRES ET CAPTEURS
 / FORMER FLOWMETERS AND SENSORS REPLACEMENT
 / ASTAUCH DER ALTEN MESSZELLEN UND SENSOREN
 / CAMBIO DE LOS ANTERIORES CAUDALIMETROS Y CAPTADORES**

Si vous devez remplacer l'une des pièces suivantes
 / In case of replacement of one of the following parts
 / Wenn Sie eines dieser Teile ersetzen müssen
 / Si Vd. tiene que cambiar una de las piezas siguientes

Vous devez commander
 / You must order
 / Müssen Sie folgendes bestellen
 / Vd. debe encargar



055 660 001



910 060 102



055 660 001 + 910 060 102



155 660 078



055 660 501



910 060 102



055 660 501 + 910 060 102



155 660 079

Si vous devez remplacer l'une des pièces suivantes
 / In case of replacement of one of the following parts
 / Wenn Sie eines dieser Teile ersetzen müssen
 / Si vd. tiene que cambiar una de las piezas siguientes

Vous devez commander
 / You must order
 / Müssen Sie folgendes bestellen
 / Vd. debe encargar



055 660 001



055 660 002



055 660 001 + 055 660 002



155 660 078



055 660 501



055 660 002



055 660 501 + 055 660 002



155 660 079

Nota :	Pour effectuer ce changement il n'est pas nécessaire de refaire le câblage connecteur.
Nota :	To replace these elements, you do not need to make the connector cabling again.
Anmerkung :	Wenn Sie diese Teile ersetzen, brauchen Sie die Kabel nicht erneuern.
Nota :	Para llevar a cabo este cambio, no se necesita hacer de nuevo el cableado del conector.