SAMES KREMLIN

DOCUMENTATION

HEATER

MAGMA 500

Manual : 582.104.110-UK - A

Date: 17/08/23

Supersede : 28/12/20

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).

Sames
Siège social: 13, Chemin de Malacher
CS70086
38 243 - MEYLAN Cedex - France
☎ *: 33 (0)4 76 41 60 60*
www.sames.com

EU DECLARATION OF CONFORMITY

(1) **The manufacturer herewith declares that the equipment is in conformity with the relevant Union harmonization legislation.**

<table>
<tr><td rowspan="2">(2) Equipment type</td><td colspan="3">RÉCHAUFFEUR / PAINT HEATER</td></tr>
<tr><td colspan="3">MAGMA 500 ID9 / MAGMA 500 ID14 HV</td></tr>
<tr><td rowspan="4">(3) Applicable Directives</td><td rowspan="4">2014/34/UE</td><td>(4) Marking</td><td>Réchauffeur / Paint Heater
Ex II 2G Ex db IIB T4 Gb</td></tr>
<tr><td>(5) Harmonised standards</td><td>EN 60079-0 : 2018
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<tr><td>(6) Conformity assessment procedures</td><td>Module A Documentation technique (Annexe VIII) / Conformity assessment procedure: Module A Technical documentation (ANNEX VIII)</td></tr>
<tr><td colspan="2">Special conditions for safe use:
Connection to external circuits shall be established by suitable temperature resistant wiring and cable glands. Loose leads connected inside hazardous location shall be protected by suitable type of protection. All unused openings shall be closed by certified blind plugs.
A repair of flameproof joints is only allowed according to manufacturer’s requirements.
A repair according to the values of table 2 and 3 of EN 60079-1 is not allowed.
The used cable gland and the cable must have a minimum operating temperature of +80°C. Alternative cable glands and cables can be used.</td></tr>
<tr><td colspan="2">(7) Notified body</td><td colspan="2">INERIS 0080 – 60550 Verneuil-en-Halatte – France – INERIS-EQEN

UE Type examination certificate :
EPS 18 ATEX 1115X Revision 0

Production Quality Assurance Notification :
INERIS 03ATEXQ721</td></tr>
<tr><td colspan="4">(8) This declaration of conformity is issued under the sole responsibility of the manufacturer.</td></tr>
</table>

Director of the STAINS site - Executive Management (EM)
Hervé WALTER
Established in Stains, on

Hervé Walter
herve.walter@sames.com
Thu, 10 Aug 2023 06:36:34 GMT
Certified by leeway.

(1)	Le Fabricant déclare que le matériel désigné ci-après est conforme à la législation d'harmonisation de l'Union applicable suivante/ Der Hersteller erklärt, dass das nachfolgend bezeichnete Material den folgenden anwendbaren Harmonisierungsrechtsvorschriften der Union entspricht / El fabricante declara que el equipo designado a continuación es conforme con la siguiente legislación de armonización de la UE aplicable / Il fabbricante dichiara che l'attrezzatura designata di seguito è conforme alla seguente legislazione di armonizzazione UE applicabile / O Fabricante declara que o equipamento designado abaixo está em conformidade com a seguinte legislação de harmonização aplicável da UE / Producent deklaruje, że urządzenie wskazane poniżej jest zgodne z następującymi obowiązującymi przepisami harmonizacyjnymi UE/ De fabrikant verklaart dat de hieronder beschreven apparatuur in overeenstemming is met de volgende toepasselijke EU-harmonisatiewetgeving/ Výrobce prohlašuje, že níže uvedené zařízení je ve shodě s těmito platnými harmonizačními právními předpisy EU/ Výrobce prohlašuje, že níže uvedené zařízení je ve shodě s těmito platnými harmonizačními právními předpisy EU/ Producenten erklærer, at det nedenfor angivne udstyr er i overensstemmelse med følgende gældende EU-harmoniseringslovgivning/ Valmistaja vakuuttaa, että jäljempänä mainitut laitteet ovat seuraavien sovellettavien EU:n yhdenmukaistamislainsäädäntöjen mukaisia./ Tootja kinnitab, et allpool nimetatud seadmed vastavad järgmistele kohaldatavatele ELi ühtlustamise õigusaktidele./ Ražotājs apliecina, ka turpmāk norādītās iekārtas atbilst šādiem piemērojamiem ES saskaņošanas tiesību aktiem./ Gamintojas pareiškia, kad toliau nurodyta įranga atitinka šiuos taikytinus ES derinamuosius teisės aktus/ Производителят декларира, че посоченото по-долу оборудване е в съответствие със следното приложимо законодателство на ЕС за хармонизация/ A gyártó kijelenti, hogy az alább megjelölt berendezés megfelel a következő alkalmazandó uniós harmonizációs jogszabályoknak / Producătorul declară că echipamentul desemnat mai jos este în conformitate cu următoarea legislație de armonizare a UE aplicabilă/ Ο κατασκευαστής δηλώνει ότι ο εξοπλισμός που αναφέρεται κατωτέρω συμμορφώνεται με την ακόλουθη ισχύουσα νομοθεσία εναρμόνισης της ΕΕ/ Proizvođač ovime izjavljuje da je oprema u skladu sa zakonskim zahtjevima Ujedinjene Kraljevine./ Výrobca vyhlasuje, že nižšie uvedené zariadenie je v súlade s týmito platnými harmonizačnými právnymi predpismi EÚ/ Proizvajalec izjavlja, da je spodaj navedena oprema skladna z naslednjo veljavno usklajevalno zakonodajo EU/ Производитель заявляет, что указанное ниже оборудование соответствует следующим применимым законодательным актам ЕС по гармонизации/ 製造者は、以下に指定された装置が、適用される以下のEU調和法に適合していることを宣言する。/**制造商声明，下面指定的设备符合以下适用的欧盟协调立法。**
(2)	Type d'équipement/ Art der Ausrüstung/ Tipo de equipo/ Tipo di attrezzatura/ Tipo de equipamento/ Rodzaj sprzętu/ Type uitrusting/ Typ zařízení/ Typ av anordning/ Type af anordning/ Laitteen tyyppi/ Seadme tüüp/ Iekārtas tips/ Įrangos tipas/ Вид оборудване/ A berendezés típusa/ Tipul de echipament/ Τύπος εξοπλισμού/ Vrsta opreme/ Typ zariadenia/ Vrsta naprave/ Тип оборудования/ 機器の種類/ **设备类型**
(3)	Directives applicables/Anwendbare Richtlinien/Directivas aplicables/Direttive applicabili/Directivas aplicáveis/Obowiązujące dyrektywy/Toepasselijke richtlijnen/Platné směrnice/Tillämpliga direktiv/Gældende direktiver/Sovellettavat direktiivit/Kohaldatavad direktiivid/Piemērojamās direktīvas/Taikomos direktyvos/Приложими директиви/Alkalmazandó irányelvek/Directive aplicabile/Ισχύουσες οδηγίες/Primjenjive smjernice/Uplatniteľné smernice/Veljavne direktive/Применимые директивы/**適用される指令/适用的指令**
(4)	Marquage/Markierung/Marcado/Marcatura/Marcação/Znakowanie/Markering/Označení/Märkning/Mærkning/Merkintä/Märgistus/Markējums/Ženklinimas/Маркировка/Jelölés/Marcare/Σήμανση/Obilježava/Označovanie/Označevanje/Маркировка/**マーキング**/标识
(5)	Normes harmonisées/Harmonisierte Normen / Normas armonizadas/ Norme armonizzate/Normas harmonizadas /Normy zharmonizowane /Geharmoniseerde normen /Harmonizované normy /Harmoniserade standarder /Harmoniserede standarder /Yhdenmukaistetut standardit /Harmoneeritud standardid /Saskaņotie standarti /Suderinti standartai /Хармонизирани стандарти /Harmonizált szabványok / Standarde armonizate/Εναρμονισμένα πρότυπα /Harmonizirani standardi /Harmonizované normy /Usklajeni standardi /Гармонизированные стандарты /**整合规格** /协调标准
(6)	Procédure d'évaluation de la conformité/Verfahren der Konformitätsbewertung/Procedimiento de evaluación de la conformidad/Procedura di valutazione della conformità/Procedimento de avaliação da conformidade/Procedura oceny zgodności/Conformiteitsbeoordelingsprocedure/Postup posuzování shody / Förfarande för bedömning av överensstämmelse/Procedure for overensstemmelsesvurdering /Vaatimustenmukaisuuden arviointimenettely / Vastavushindamismenetlus/Atbilstības novērtēšanas procedūra /Atitikties vertinimo procedūra /Процедура за оценка на съответствието /Megfelelőségértékelési eljárás / Procedura de evaluare a conformității/Διαδικασία αξιολόγησης της συμμόρφωσης /Postupak ocjene usklađenosti /Postup posudzovania zhody /Postopek ugotavljanja skladnosti /Процедура оценки соответствия / **適合性評価手順/ 符合性评估程序**
(7)	Organisme notifié/Benannte Stelle/Organismo notificato/Organismo Notificado/Jednostka notyfikowana/Aangemelde instantie/Oznámený subjekt/Anmält organ/Anmeldt organ/Ilmoitettu laitos/Teavitatud asutus/Paziņotā struktūra/Notifikuotoji įstaiga/Нотифициран орган/Bejelentett szerv/Organismul notificat/Κοινοποιημένος οργανισμός/akreditirana organizacija/Notifikovaný orgán/Priglašeni organ/Уведомленный орган/**届出機関/通知的机构**
(8)	Cette déclaration de conformité est délivrée sous la seule responsabilité du fabricant. / Diese Konformitätserklärung wird unter der alleinigen Verantwortung des Herstellers ausgestellt./ Esta declaración de conformidad se emite bajo la única responsabilidad del fabricante./ Questa dichiarazione di conformità è rilasciata sotto la sola responsabilità del produttore./ Esta declaração de conformidade é emitida sob a exclusiva responsabilidade do fabricante./ Niniejsza deklaracja zgodności została wydana na wyłączną odpowiedzialność producenta./ Deze verklaring van overeenstemming wordt afgegeven onder de uitsluitende verantwoordelijkheid van de fabrikant./ Toto prohlášení o shodě je vydáno na výhradní odpovědnost výrobce./ Denna försäkran om överensstämmelse utfärdas på tillverkarens eget ansvar. / Denne overensstemmelseserklæring er udstedt på producentens eget ansvar./ Tämä vaatimustenmukaisuusvakuutus annetaan valmistajan yksinomaisella vastuulla./ Käesolev vastavusdeklaratsioon on välja antud tootja ainuvastutusel./ Šī atbilstības deklarācija ir izdota uz ražotāja atbildību./ Už šią atitikties deklaraciją atsako tik gamintojas./ Настоящата декларация за съответствие се издава на пълната отговорност на производителя./ Ezt a megfelelőségi nyilatkozatot a gyártó kizárólagos felelősségével mellett adjuk ki./ Prezenta declarație de conformitate este emisă pe răspunderea exclusivă a producătorului./ Η παρούσα δήλωση συμμόρφωσης εκδίδεται με αποκλειστική ευθύνη του κατασκευαστή./ Ova izjava o sukladnosti izdaje se isključivo pod odgovornošću proizvođača./ Toto vyhlásenie o zhode sa vydáva na výhradnú zodpovednosť výrobcu./ Za to izjavo o skladnosti je odgovoren izključno proizvajalec./ Din id-dikjarazzjoni ta' konformità għandha tinħareġ taħt ir-responsabbiltà unika tal-manifattur./ Данная декларация соответствия выдана под исключительную ответственность производителя./ **この適合宣言は、製造者の単独責任のもとで発行されています。/本符合性声明由制造商全**权负责发布。

UK DECLARATION OF CONFORMITY

(1) The manufacturer herewith declares that the equipment is in conformity with the UK statutory requirements.

(2) Equipment type	RÉCHAUFFEUR / PAINT HEATER MAGMA 500 ID9 / MAGMA 500 ID14 HV		
(3) Applicable Directives	2016 No. 1107	**(4) Marking**	Réchauffeur / Paint Heater Ex II 2G Ex db IIB T4 Gb
		(5) Designated standards	EN 60079-0 : 2018 EN 60079-1 : 2014
		(6) Conformity assessment procedures	Module A Documentation technique (Annexe VIII) / Conformity assessment procedure: Module A Technical documentation (ANNEX VIII)
		Special conditions for safe use: Connection to external circuits shall be established by suitable temperature resistant wiring and cable glands. Loose leads connected inside hazardous location shall be protected by suitable type of protection. All unused openings shall be closed by certified blind plugs. A repair of flameproof joints is only allowed according to manufacturer's requirements. A repair according to the values of table 2 and 3 of EN 60079-1 is not allowed. The used cable gland and the cable must have a minimum operating temperature of +80°C. Alternative cable glands and cables can be used.	
(7) Approved body		CML 2503 - Ellesmere Port - United Kingdom **UK Type examination certificate :** CML 22UKEX1262X Issue 0 Refers to : **UE Type examination certificate :** EPS 18 ATEX 1115X Issue 0 **UK Quality Assurance Notification :** CML 22UKQAN15825 Issue 0	
(8) This declaration of conformity is issued under the sole responsibility of the manufacturer.			

Director of the STAINS site - Executive Management (EM)
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Established in Stains, on

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herve.walter@sames.com
Thu, 10 Aug 2023 06:33:37 GMT
Certified by leeway.

(1)	Le Fabricant déclare que le matériel désigné ci-après est conforme à la législation des normes désignées du Royaume-Uni suivante/ Der Hersteller erklärt, dass das nachfolgend bezeichnete Material mit den folgenden Rechtsvorschriften für bezeichnete Normen des Vereinigten Königreichs übereinstimmt/ El fabricante declara que el equipo designado a continuación se ajusta a la siguiente legislación de normas designadas del Reino Unido/ Il fabbricante dichiara che l'attrezzatura designata di seguito è conforme alla seguente legislazione sugli standard del Regno Unito/ O Fabricante declara que o equipamento designado abaixo está em conformidade com a seguinte legislação de normas designada pelo Reino Unido/ Producent oświadcza, że urządzenie wskazane poniżej jest zgodne z następującymi normami wyznaczonymi przez ustawodawstwo Wielkiej Brytanii/ De fabrikant verklaart dat de hieronder aangeduide apparatuur in overeenstemming is met de volgende in het VK geldende wetgeving/ De fabrikant verklaart dat de hieronder aangeduide apparatuur in overeenstemming is met de volgende in het VK geldende wetgeving/ Výrobce prohlašuje, že níže uvedené zařízení je v souladu s následujícími právními předpisy Spojeného království./ Tillverkaren intygar att den nedan angivna utrustningen överensstämmer med följande lagstiftning om brittiska standarder/ Producenten erklærer, at det nedenfor angivne udstyr er i overensstemmelse med følgende lovgivning om britiske standarder/ Valmistaja vakuuttaa, että jäljempänä mainitut laitteet ovat seuraavien Ison-Britannian lainsäädännön mukaisten standardien mukaisia./ Tootja deklareerib, et allpool nimetatud seadmed vastavad järgmistele Ühendkuningriigi õigusaktidele/ Ražotājs apliecina, ka turpmāk norādītais aprīkojums atbilst šādiem Apvienotās Karalistes tiesību aktiem par norādītajiem standartiem./ Gamintojas pareiškia, kad toliau nurodyta įranga atitinka šiuos Jungtinės Karalystės teisės aktus dėl nurodytų standartų/ Производителят декларира, че оборудването, посочено по-долу, отговаря на следните стандарти, определени от законодателството на Обединеното кралство/ A gyártó kijelenti, hogy az alább megjelölt berendezések megfelelnek a következő brit szabványokra vonatkozó jogszabályoknak/ Producătorul declară că echipamentul desemnat mai jos este în conformitate cu următoarele standarde desemnate de legislația britanică / Ο κατασκευαστής δηλώνει ότι ο κατωτέρω αναφερόμενος εξοπλισμός συμμορφώνεται με τα ακόλουθα πρότυπα της βρετανικής νομοθεσίας/ Proizvođač ovdje izjavljuje da je oprema u skladu s relevantnim zakonodavstvom Unije o usklađivanju./ Výrobca vyhlasuje, že nižšie uvedené zariadenie je v súlade s nasledujúcimi určenými normami Spojeného kráľovstva / Proizvajalec izjavlja, da je spodaj navedena oprema skladna z naslednjimi standardi, določenimi z zakonodajo Združenega kraljestva/ Производитель заявляет, что оборудование, указанное ниже, соответствует следующим стандартам, установленным законодательством Великобритании/ 製造者は、以下に指定された機器が、以下の英国指定規格の法律 に適合していることを宣言する。/ 制造商声明，下面指定的设备符合以下英国指定的标准法
(2)	Type d'équipement/ Art der Ausrüstung/ Tipo de equipo/ Tipo di attrezzatura/ Tipo de equipamento/ Rodzaj sprzętu/ Type uitrusting/ Typ zařízení/ Typ av anordning/ Type af anordning/ Laitteen tyyppi/ Seadme tüüp/ Iekārtas tips/ Įrangos tipas/ Вид оборудване/ A berendezés típusa/ Tipul de echipament/ Τύπος εξοπλισμού/ Vrsta opreme/ Typ zariadenia/ Vrsta naprave/ Тип оборудования/ 機器の種類/ 设备类型
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(4)	Marquage/Markierung/Marcado/Marcatura/Marcação/Znakowanie/Markering/Označení/Märkning/Mærkning/Merkintä/Märgistus/Marķējums/Ženklinimas/Маркировка/Jelölés/Marcare/Σήμανση/Obilježava/Označovanie/Označevanje/Маркировка/マーキング/标识
(5)	Normes désignées/Bezeichnete Normen /Normas designadas /Norme designate /Normas designadas /Normy wyznaczone / Aangewezen normen/Určené normy /Utpekade standarder /Udpegede standarder /Nimetyt standardit /Määratud standardid /Izraudzītie standarti /Paskirtieji standartai /Определени стандарти /Kijelölt szabványok /Standarde desemnate /Καθορισμένα πρότυπα /Određeni standardi /Určené normy /Določeni standardi /Назначенные стандарты /指定された規格 /指定的标准
(6)	Procédure d'évaluation de la conformité/Verfahren der Konformitätsbewertung/Procedimiento de evaluación de la conformidad/Procedura di valutazione della conformità/Procedimento de avaliação da conformidade/Procedura oceny zgodności/Conformiteitsbeoordelingsprocedure/Postup posuzování shody / Förfarande för bedömning av överensstämmelse/Procedure for overensstemmelsesvurdering /Vaatimustenmukaisuuden arviointimenettely / Vastavushindamismenetlus/Atbilstības novērtēšanas procedūra /Atitikties vertinimo procedūra /Процедура за оценка на съответствието /Megfelelőségértékelési eljárás / Procedura de evaluare a conformității/Διαδικασία αξιολόγησης της συμμόρφωσης /Postupak ocjene usklađenosti /Postup posudzovania zhody /Postopek ugotavljanja skladnosti /Процедура оценки соответствия / 適合性評価手順/ 符合性评估程序
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(8)	Cette déclaration de conformité est délivrée sous la seule responsabilité du fabricant. / Diese Konformitätserklärung wird unter der alleinigen Verantwortung des Herstellers ausgestellt./ Esta declaración de conformidad se emite bajo la única responsabilidad del fabricante./ Questa dichiarazione di conformità è rilasciata sotto la sola responsabilità del produttore./ Esta declaração de conformidade é emitida sob a exclusiva responsabilidade do fabricante./ Niniejsza deklaracja zgodności została wydana na wyłączną odpowiedzialność producenta./ Deze verklaring van overeenstemming wordt afgegeven onder de uitsluitende verantwoordelijkheid van de fabrikant./ Toto prohlášení o shodě je vydáno na výhradní odpovědnost výrobce./ Denna försäkran om överensstämmelse utfärdas på tillverkarens eget ansvar. / Denne overensstemmelseserklæring er udstedt på producentens eget ansvar./ Tämä vaatimustenmukaisuusvakuutus annetaan valmistajan yksinomaisella vastuulla./ Käesolev vastavusdeklaratsioon on välja antud tootja ainuvastutusel./ Šī atbilstības deklarācija ir izdota uz ražotāja atbildību./ Už šią atitikties deklaraciją atsako tik gamintojas./ Настоящата декларация за съответствие се издава на пълната отговорност на производителя./ Ezt a megfelelőségi nyilatkozatot a gyártó kizárólagos felelőssége mellett adjuk ki./ Prezenta declarație de conformitate este emisă pe răspunderea exclusivă a producătorului./ Η παρούσα δήλωση συμμόρφωσης εκδίδεται με αποκλειστική ευθύνη του κατασκευαστή./ Ova izjava o sukladnosti izdaje se isključivo pod odgovornošću proizvođača./ Toto vyhlásenie o zhode sa vydáva na výhradnú zodpovednosť výrobcu./ Za to izjavo o skladnosti je odgovoren izključno proizvajalec./ Din id-dikjarazzjoni ta' konformità għandha tinħareġ taħt ir-responsabbiltà unika tal-manifattur./ Данная декларация соответствия выдана под исключительную ответственность производителя./ この適合宣言は、製造者の単独責任のもとで発行されています。/本符合性声明由制造商全权负责发布。

INSTRUCTION MANUAL

HEATER
MAGMA 500

Manual : 2308 573.226.112

Date : 14/08/23 - Supersede : 28/12/20

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).**

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SAMES KREMLIN

INSTRUCTION MANUAL
HEATER MAGMA 500

TABLE OF CONTENTS

ADDITIONAL DOCUMENTATIONS :

EU declaration of conformity	578.129.130
UKCA declaration of conformity	

	Spare Parts
Paint heater MAGMA 500	573.515.050

Dear Customer, You are the owner of our new paint heater and we would like to take this opportunity to thank you.

Special care has been taken during all designing and manufacturing process to make sure your investment will provide full satisfaction. Non-compliance with instructions and precautions stated in this manual could reduce the equipment working life, resulting in operating problems and create unsafe conditions.

1. WARRANTY

We reserve the right to make changes; these changes may be carried out after the receipt of our order. No claim will be accepted as a consequence of any change carried out in the instruction manuals or in the selection guides.

Our equipment is checked and tested prior to shipment. In the case of a problem arising with the equipment, this must be in writing, within ten days from the delivery date.

Sames warrants all equipment manufactured bearing its name, to be free from defect in material or workmanship for a period of 12 months (one shift per day or 1800 hours - 1 term reached) from the date of delivery. Work life is based on single shift working - 8 hours per day. Warranty claims for defective items will only be accepted in writing and will be verified and confirmed by us.

The warranty does not cover fair wear tear, damage or wear caused by misuse, improper maintenance or non-observance of our recommendations.

Sames will repair or replace parts (carriage paid to our plant and accepted as defective by us). We shall not be liable for any losses, resulting from a production breakdown. Upon request, we can carry out service work at your premises; all expenses (travelling and accommodation) for **Sames** technicians will be chargeable.

In the event that it is found that equipment has been tampered with, this will invalidate the warranty. Equipment that is bought in will be subject to the supplier's warranty.

2. SAFETY INSTRUCTIONS

GENERAL SAFETY INSTRUCTIONS

CAUTION : The equipment can be dangerous if you do not follow our instructions concerning installation and servicing described in this manual and in accordance with applicable European standards and local national safety regulations.

Please carefully read all the instruction literature before operating your equipment.

Only trained operators can use the equipment.

The foreman must ensure that the operator has understood the safety instructions for this equipment as well as the instructions in the manuals for the different parts and accessories.

Read carefully all instruction manuals, label markings before operating the equipment.

Incorrect use may result in injury. This equipment is for professional use only. It must be used only for what it has been designed for. Never modify the equipment. The parts and accessories supplied must be regularly inspected. Defective or worn parts must be replaced.

Guards (motor cover, coupling shields, connectors,…) have been designed for a safe use of the equipment.
The manufacturer will not be held responsible for bodily injury or failure and / or property damage due to destruction, the overshadowing or the partial or total removal of the guards.

Never exceed the equipment components' maximum working pressure.

Comply with regulations concerning safety, fire risks, electrical regulations in force in the country of final destination of the material. Use only products or solvent compatible with the parts in contact with the material (refer to data sheet of the material manufacturer).

PICTOGRAMS

					
NIP HAZARD	WARNING MOVING ELEVATOR	WARNING MOVING PARTS	WARNING MOVING SHOVEL	DO NOT EXCEED THIS PRESSURE	HIGH PRESSURE HAZARD
					
RELIEF OR DRAIN VALVE	WARNING HOSE UNDER PRESSURE	WEAR GLASSES OBLIGATORY	WEAR OF GLOVES IS OBLIGATORY	PRODUCT VAPOR HAZARDS	WARNING HOT PARTS OR AREAS
					
ELECTRICAL HAZARD	WARNING FIRE HAZARDS	EXPLOSION HAZARDS	GROUNDING	WARNING (USER)	WARNING SERIOUS INJURIES

PRESSURE HAZARDS

Current legislation requires that an **air relief** valve be fitted in the air supply circuit to the air motor to prevent over pressurisation. This safety feature, ensures that it is not possible to supply the air motor with excessive air pressure that may cause injury.

Please ensure that **a material drain valve** is fitted in the fluid circuit to drain and depressurise the circuit. Once depressurised and drained, work /servicing may then commence on the equipment. Please remember to close these valves when restarting the system.

HIGH PRESSURE INJECTION HAZARDS

When working with high pressure equipment, special care is required. Fluid leaks can occur. There is a risk of material being injected to any exposed parts of body, this could cause severe injury:

- medical care must be sought immediately if paint is injected under the skin or in other parts of the body (eyes, fingers).
- never point the spray gun at any one. Never try to stop the spray with your hands or fingers nor with rags or similars.
- **follow the shutdown procedure and always depressurize air and fluid circuits** before carrying out any servicing on the gun (cleaning, checking, maintenance of the material or cleaning of the gun nozzles).
- for the guns equipped with a safety device, always lock the trigger when not in use.

FIRE - EXPLOSION - SPARKS - STATIC ELECTRICITY HAZARDS

A poor earth connection, inadequate ventilation, sparks or static electricity can cause an explosion or fire. to avoid these risks when using or servicing **Sames** equipment, the following safety procedures must be followed :

- ensure a good earth connection and ground the parts to be handled i.e. solvents, materials, components and equipment,
- ensure adequate ventilation,
- keep working area clean and free from waste solvents, chemicals, or solid waste i.e. rags, paper and empty chemicals drums,
- never use electrical switches / power if in an atmosphere of volatile solvent vapour,
- stop working immediately in case of electrical arcs,
- never store chemicals and solvents in the working area.
- use paint whose flash point is the highest possible to prevent from any formation of gas and inflammable vapours (refer to materials' safety instructions),
- install a cover on the drums to reduce the diffusion of gas and vapours in the spraybooth.

TOXIC PRODUCT HAZARDS




Toxic products or vapours can cause severe injury not only though contact with the body, but also if the products are ingested or inhaled. It is imperative :

- to know the material products and their risks,
- notified or hazardous materials must be stored in accordance with the regulations,
- the material must be stored in an appropriate container, never place materials in a container where there is a risk of spillage or leakage,
- a procedure must be applied for the safe disposal of waste material. It must comply with all prevailing regulations and legislations of the country where the equipment is to be used,
- protective clothing should always be worn in compliance with the material manufacturers' recommendations,
- depending on the application and chemical safety instructions, safety glasses, hearing protective earplug, gloves, foot wear, protective masks and possible breathing equipment should be worn to comply with the regulations (Refer to chapter "Safety equipment" of **Sames** selection guide).


CAUTION!

It is forbidden to use material containing high concentrations of halogenated hydrocarbon solvents with **aluminium** or **zinc fillers**. Non-compliance with the instructions may cause explosion risk causing serious or fatal injury.

EQUIPMENT REQUIREMENTS

Guards (motor cover, coupling shields, connectors,…) have been designed for a safe use of the equipment.
The manufacturer will not be held responsible for bodily injury or failure and / or property damage due to destruction, the overshadowing or the partial or total removal of the guards.

PUMP


Before carrying out any work, it is imperative to read and clearly understand the disassembly and reassembly instructions before servicing. The operator must understand the equipment and the safety instructions. These instructions are available in the equipment manuals.

The air motor is designed to be mounted with a pump. Never modify any components or couplings. When operating, please keep hands away from moving parts. Before starting up the equipment, please read the PRESSURE RELIEF instructions. Please ensure that any relief or drain valves fitted are in good working order.

HOSES

- Keep hoses out of circulation areas, moving parts or hot surfaces,
- Never expose product hoses to temperature higher than + 60°C / 140° F or lower than 0°C / 32° F,
- Never pull or use the hoses to move the equipment,
- Tighten all fittings as well as the hoses before operating the equipment,
- Check the hoses regularly; change them if they are damaged,
- Never exceed the maximum working pressure (MWP) indicated on the hose.

USED PRODUCTS

Considering the wide variety of products that are available and can be used in our equipment it is impossible to check and make recommendations for all chemical data, regarding the risks of possible chemical attack and their long term chemical reaction.

Sames cannot be held liable for :

- compatibility of wetted parts,
- risks to staff and the surroundings,
- for worn or defective parts, for faulty equipment or units, or the quality of final product.

It is the responsibility of the user to know and prevent any possible risks such as toxic vapours, fires or explosions. He shall determine the risks of immediate reactions or pursuant to repeated exposures of the staff,

Sames shall not be liable for physical injuries, direct or indirect material damages caused by the use of chemicals.

3. SPECIFIC SAFETY INSTRUCTIONS

- **The MAGMA 500 heater is explosion proof. It can be installed in an area 1 or area 2 (ATEX).**
- **Ground the equipment (plug with ground terminal or connection provided on the heater).**

Check the voltage indicated on the equipment.

Do not use any product or solvent incompatible with the heater materials.

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

ELECTRIC HAZARDS

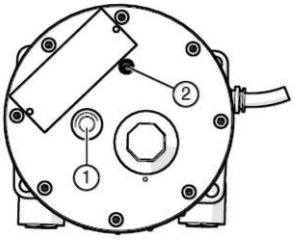
Connections for the material fluid heater that do not have explosion protection may only be used outside of areas that fall under the explosion protection ordinance, even if the material fluid heater itself is explosion protected.
Make sure that the connection line is permitted for the respective explosion protection zone according to the operation site.

HOT SURFACES HAZARDS

When using material heaters, the equipment surfaces may become hot. A risk of burns exists.
When processing heated materials always wear protective gloves with forearm protection.
The material hoses may not touch the hot areas of the material fluid heater.

SAFETY TEMPERATURE LIMITER

The safety temperature limiter (STL) switches the material fluid heater off if the highest permissible temperature is exceeded and at temperatures below 10°C / 50°F.
To switch it back on, press the reset button (1) until the control light (2) illuminates.



4. DESCRIPTION

Material fluid heaters are electrically operated auxiliary devices for material preparation and air heating.

Through the so-called hot spray process, higher layer thicknesses, shorter drying times and super surfaces can be achieved in particular.

Even coating materials, which cannot be processed or are difficult to process due to their consistency, can be sprayed without issues through heating.

A material fluid heater consists of two assemblies:

- Housing with electrical switching and heating elements.
- Heat exchanger with one material inlet nozzle and one material outlet nozzle.

The liquid materials flow through the heat exchanger and are thereby heated by the electrical heating elements.

The desired temperature can be continuously controlled with the thermostat (max. heating temperature 85°C / 185°F).

The housing is designed cone-shaped in the lower area.

The heat exchanger has a corresponding contrary cone. If the heat exchanger becomes clogged, it can be dismantled from the main part by means of several jacking screws and be replaced.

An explosion-protected cable gland is installed on the housing for the design with a fixed connection line and is designed according to IP 54.

The technical data for your equipment can be found on the equipment card enclosed, or on the type plate.

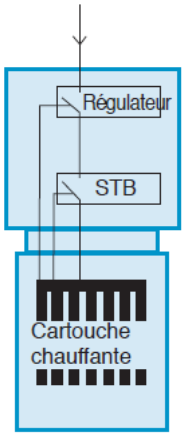
INTENDED USE

Material fluid heaters can be used in the high pressure range up to a maximum of 500 bar / 7251.5 psi to heat the material to be processed and for air heating.

The following materials may be heated:

- Lacquers and paints,
- Preserving agents (oils and greases),
- Release agents,
- Insulating and flame proofing materials,
- Tar-epoxy paints, cold bitumen and the like,
- Polyurethane,
- Water.

■ **Standard type**



Standard type

Standard type

The ID 9 material fluid heaters are suitable for processing low to medium-viscosity materials in combination with Airless, Airless 2K and Airmix® systems.

The material fluid heaters can also be used simultaneously for air heating by installing an attachment kit to heat the spray air supply for Airmix® systems. Through the additional heating of the spray air, the quality of the surfaces can be improved and the drying time is shortened.

The ID 14 material fluid heaters are suitable for processing high-viscosity materials due to the larger material outlet.

Furthermore, these material fluid heaters can be used for compressed air heating or as a preheater for the material supply in 2 component spray systems.

ERRONEOUS USE

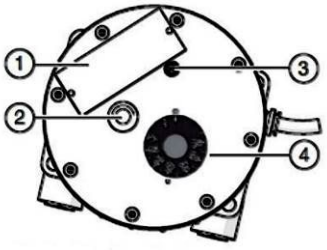
Any use other than that stipulated in the technical documentation is deemed to be erroneous use and will void the warranty.

Erroneous use applies in particular if :

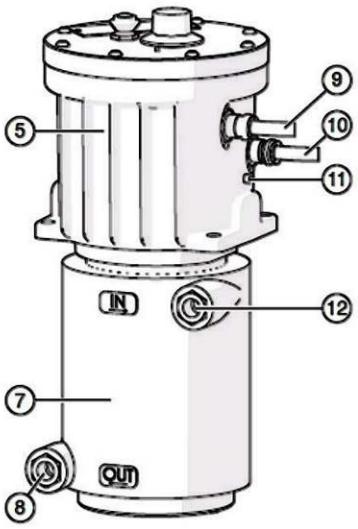
- impermissible materials are processed,
- unauthorized modifications or changes are implemented,
- the safety features are modified, removed or bypassed,
- spare parts are installed that were not manufactured or delivered by **Sames** (refer to Doc. 573.415.050),
- accessories are used that are not suitable for the equipment (refer to Doc. 573.515.050),
- equipment without  identification are used in potentially explosive atmospheres,
- the equipment is operated outside of the operating limits according to the marking plate.

DESCRIPTION OF THE DEVICE

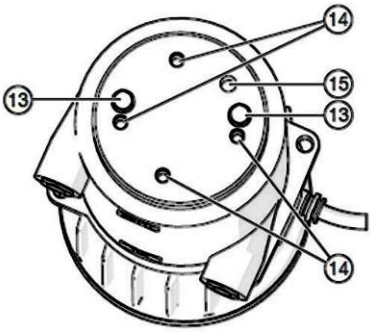
Ind.	Description
1	Type plate
2	Reset button / reset
3	Control light that illuminates during the heat-up phase. The control light goes out when the set temperature is reached and switches back on when heating up is started again.
4	Thermostat with temperature scale from 30°C / 86°F to 85°C / 185°F I = OFF F = Anti-freeze function
5	Top with electrical switching and heating elements
6	Air connection (G 1/4") (only for air heating)
7	Bottom / heat exchanger
8	Connection for material hose - OUT M 1/2 JIC for ID 9 M 3/4 JIC for ID 14 HV
9	24 V control voltage
10	Power connection (explosion protected cable gland)
11	Grounding screw
12	Connection for material hose - IN M 1/2 JIC for ID 9 M 3/4 JIC for ID 14 HV
13	Fastening screws for heat exchanger (M 8) Tightening torque: 1x 20 Nm + 1x 13 Nm
14	Seal openings when using for air heating. Screws (M 10) are included in the "Air heating" attachment kit.
15	Air connection (G 1/4") (only for air heating)



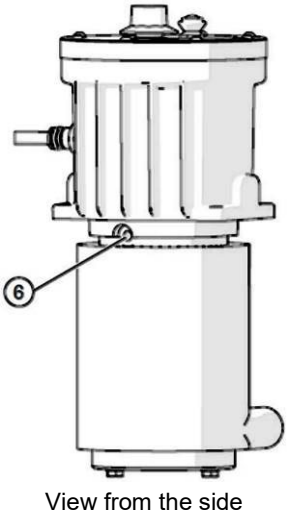
View from the top



View from the side



View from below



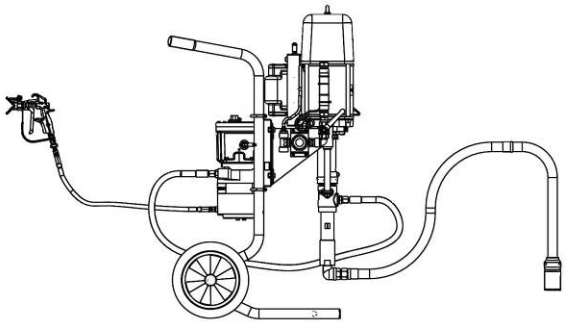
View from the side

USE

Material heating in the Airless or Airmix® spray process

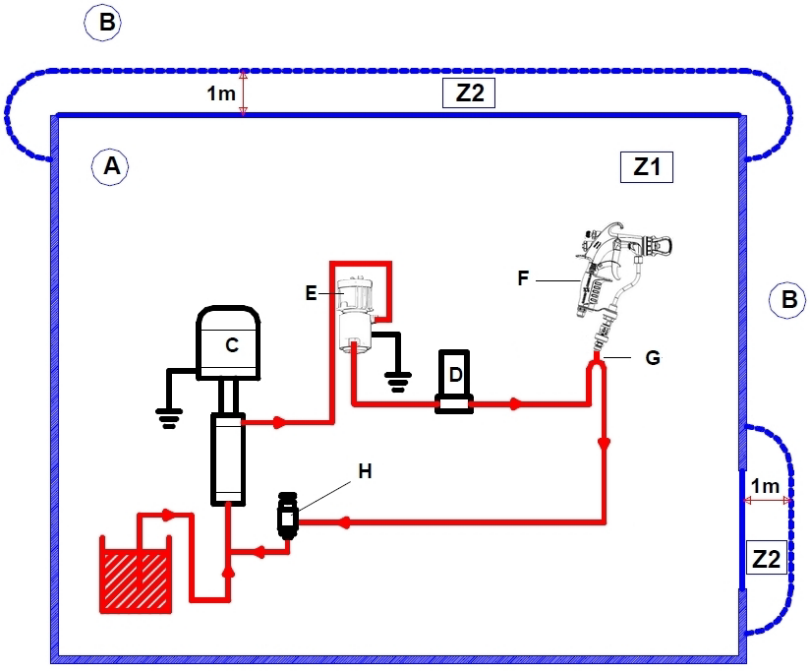
By attaching a material fluid heater, higher layer thicknesses, shorter drying times and better surfaces are achieved.

Furthermore, materials, which cannot be processed or are difficult to process when cold, can be sprayed without issues through heating.



Magma used as one pass heater mounted on cart

Alternatively, material fluid heaters can be used on a recirculation circuit if high temperatures are needed on the spray gun or in the spray nozzle.



Captions :

A - Explosive area
Area 1 (Z 1) or
area 2 (Z 2) : spraybooth

B - Non explosive area

C - Pump

D - Filter

E - Magma heater

F - Spray booth

G - Y-fitting

H - Circulation valve or non-return regulator

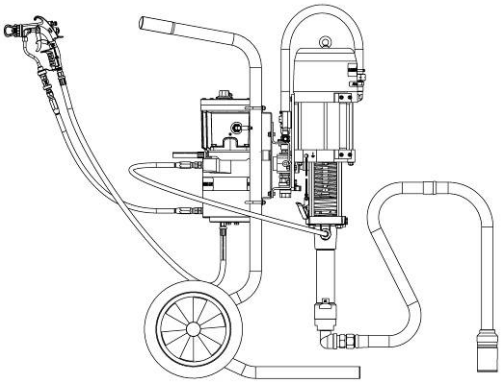
Heated atomizing air for Airmix® hot spray devices

For an optimal spray pattern, a better flow of the paint and shorter drying times.

So that the preheated material is not cooled off by cold spray air, the material fluid heater can also be simultaneously used as an atomizing air heater.

The atomizing air coming out from the pump is plug through a hose into the material fluid heater and is then plug via an air hose to the spray gun warmed up.

In order to prevent heat losses, the air and material hose should be used as an insulated hose pair.



Magma used as one pass heater mounted on cart with heated atomizing air on Airmix® system.

Higher air flow can reduce the heat output for the material heating.

5. TRANSPORT, INSTALLATION AND ASSEMBLY

The equipment left the factory in faultless condition, packaged correctly for transport.


Check the equipment at the time of receipt for any transport damage and for completeness.

TRANSPORT

When transporting the equipment, observe the following information:

- Disconnect the entire energy supply to the equipment - even for short transport distances.
- Empty the equipment prior to transport - residual liquids may still leak out of the equipment during transport.

INSTALLATION SITE

- Always observe the processing instructions of the material manufacturer. Pay particular attention to the information on ignition temperatures.
- Observe the explosion protection zones  at your place of work.
- Before connecting the device to the power supply, check the electrical supply system for possible malfunctions.
- The owner of the system must protect the entire system with suitable lightning protection measures.
- Keep the working area clean, in particular all walking and standing areas. Remove spilled paint or solvent immediately.
- Make sure that no moisture (e.g. through rain, cleaning with high pressure cleaner, etc.) can penetrate into the material fluid heater.
- The material fluid heater may never be immersed in a container with liquid (e.g. solvent).
- Make sure the workplace is sufficiently ventilated and aired.
- Always observe the processing instructions of the material manufacturer.
- Observe and follow all the information in the operation manual of the spraying device used and the manuals of the accessories used.

ASSEMBLY

During installation work ignition sources may arise (e.g. due to mechanical sparks, electrostatic discharge, etc.).

➲ **Carry out all assembly work outside of potentially explosive areas.**

Connecting electricity

The material fluid heater is equipped with a permanent connection line with an open end. Connect the device as follows :

If untrained personnel carry out assembly work, they endanger themselves and others, as well as risking the operational safety of the equipment. Electrical parts may only be installed by specialist personnel with an electrical qualification.

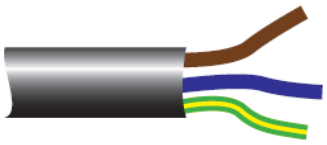
Observe the explosion protection zones at your place of work.

In potentially explosive areas, the connection must be designed explosion-protected. Cables and cable entries must be appropriately approved and be temperature-resistant.

Entries that are not used must be sealed.

Cables and cable entries and the cables used must have at least a maximum operating temperature of + 80°C / + 176° F Alternative, equivalent approved cable entries may be used.

Assembly for 115 and 230 V devices



brown	L
blue	N
green/yellow	PE

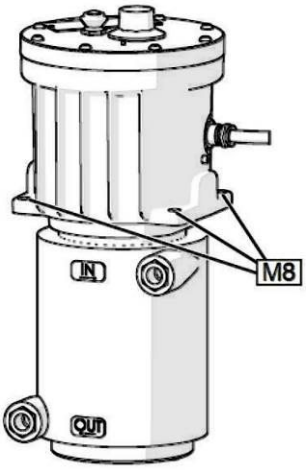
Assembly for 400 V devices

brown	L1
blue	L2
grey	L3
green/yellow	PE

Installing the material fluid heater on a holder

The material fluid heater can be installed in different ways depending on the intended purpose:

- on a holder directly on the frame of the spraying device or the coating unit,
- separately on a wall holder.

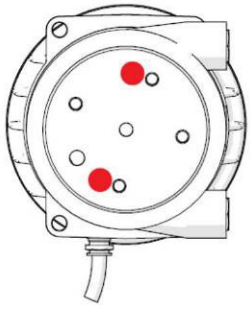


Installing / disassembling top to / from bottom

The top and bottom of the material fluid heater can be twisted together in 90° steps, depending on how the assembly situation onsite requires it.

Orientate yourself with the position of the material inlets and outlets to the position of the cable gland when installing the top to the bottom.

Assembly when both the cable gland and the material inlets and outlets point to the same side is not possible.



When installing the top and the bottom, always use the two holes that are located at the points marked here.

Disassembly :

Despite relieving the pressure, residual pressures can still be present due to material congestion or clumping which can suddenly escape during disassembly work and cause serious injuries.

- You must be particularly careful during disassembly work.
- When disassembling material hoses, cover the screw connection with a cloth in order to catch possible material sprays.

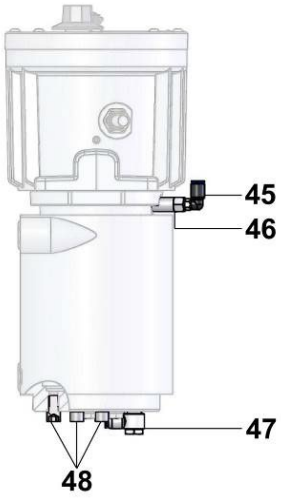
- Disconnect device from power supply.
- Release both screws on the bottom of the device in order to lift the top from the bottom.

Installing the air heating

NOTA : A corresponding conversion kit is required for the air heating. Please contact a Sames dealer or Sames customer service.

Use the spare parts list for the conversion kit as an aid for the installation.

Ind.	Description
45	L-plug-in connector
46	Cocket nipple
47	L-plug-in connector
48	Screw



If the material fluid heater is used for air heating for an air motor, proceed as follows:

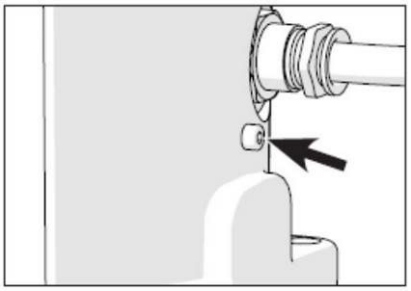
- Install elbow union as air inlet in one of the holes on the bottom of the device.
- Screw pneumatic screw connection into the air outlet by means of the socket nipple.
- Establish a pneumatic connection between the air motor of the spraying device and the material fluid heater.

GROUNDING THE DEVICE

To avoid risks caused by static electricity, the equipment as well as its components must be grounded.

This wire must be connected to a safe ground.

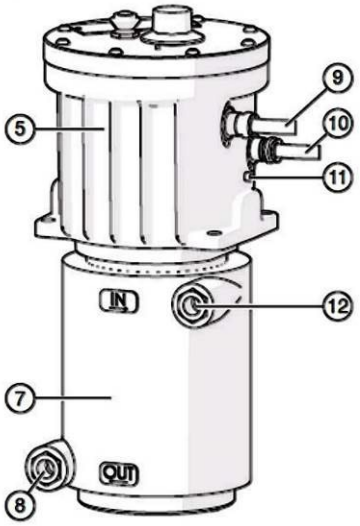
- Connect the ground cable to the grounding screw provided for this. The grounding screw is located next to the power cord connection and is labeled with ⏚ symbol.
- Attach the terminal of the ground cable to an electrically conductive object.



ATTACHING THE MATERIAL HOSES

- Remove yellow protective caps from the IN and OUT nozzles of the heat exchanger.
- Seal the delivered nipples well with medium thread lock.
- Install material hoses by means of double nipples to the material fluid heater (tightening torque 80 Nm).

Ind.	Description
8	Material outlet - OUT M 1/2 JIC for ID 9 M 3/4 JIC for ID 14 HV
12	Material inlet - IN M 1/2 JIC for ID 9 M 3/4 JIC for ID 14 HV



6. OPERATION

Prerequisites:

- The equipment must be correctly installed and fully assembled.
- Only put the equipment into operation if you are equipped with the prescribed personal protective equipment (Refer to § 2).
- Observe the safety data sheet of the respective material manufacturer when heating spraying materials.

PUTTING THE EQUIPMENT INTO OPERATION

- Check if all safety features are present and fully functional.
- Check if all parts and accessories for the spraying device used correspond to the maximum permissible working pressure of the material fluid heater.

NOTA :

The maximum working pressure of the material fluid heater must be the same or higher than the maximum working pressure of the spraying device and the accessories used.

With varying working pressures, the lowest value always applies as the maximum permissible working pressure for the entire spraying system.

- Flush the material fluid heater in cold, switched off condition together with the spraying device on which it is constructed in order to flush out the factory test substance (during initial commissioning) or residues of previous spraying material.
  In order to prevent a risk of explosion due to heating of the solvent, the cleaning fluid may not be pumped longer than a maximum of 5 minutes. The amount of the cleaning fluid must be tailored to the size of the spraying device. At least 8 to 25 liters of cleaning fluid is required depending on the size of the spraying device.
- During commissioning (flushing), check that all equipment parts are leak-tight and tighten the connections if necessary.
- Make sure that the equipment and the object to be coated are correctly grounded (Refer to § 5 - Grounding the device).

SWITCHING ON THE DEVICE AND SETTING THE TEMPERATURE

Observe the operation manual for the spraying device or the device with which the material fluid heater is being used.

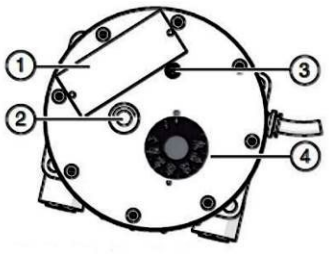
ATTENTION!

Note that for devices without circulation, material that is still cold is in the hoses. Spray the material back into the material drum until warm material escapes.

Note that the pot life of the material may potentially be significantly shortened through the heating, particularly for 2 component materials.

Using the thermostat, the device is switched on and the temperature to which the material (or air) to be processed is to be heated up to is set.

Ind.	Description
1	Type plate
2	Reset button / reset
3	Control light illuminates during the heat-up phase. The control light goes out when the set temperature is reached and switches back on when heating up is started again.
4	Thermostat with temperature scale from 30°C / 86°F to 85°C / 185°F I = OFF F = Anti-freeze function



When the outdoor temperature is below 10°C / 50°F, press the reset button and hold it until the control light illuminates.

If the highest permissible temperature is exceeded, a temperature limiter switches the material fluid heater off.

To switch it back on, press the reset button until the control light illuminates again.

FLUSHING

Flushing is necessary :

- during the initial commissioning so that the spraying material is not influenced by the test substance with which the equipment was tested in the factory for faultless function.
- during a change of the material.
- if the equipment is to be deactivated for a longer period.

WARNING!

Heating solvents can lead to an explosion.
Serious personal injuries and property damage may result.

➲ Always flush and clean the device with a suitable cleaning fluid only in **cooled off and voltage-free** condition!

NOTA :

Use the cleaning fluid pertaining to the new material and recommended by the material manufacturer.

Observe and follow all work steps that are described in the operation manual of your spraying device for a change of material and/or commissioning.

DECOMMISSIONING

- Switch off the device 10 min. before the end of work.
- Turn the thermostat to position "I-OFF" (Refer to figure below).
- Use the residual heat until the end of work. The cooling time also shortens until the flushing.

- Flush the device.
- Prevent damage to the device and the entire system by thoroughly flushing the device after each decommissioning.
- Observe and follow the information in the operation manual for the spraying device and in § 6 - Flushing.

STORAGE

Store the equipment in a place where it is protected against dirt, moisture, frost, and heat.

DISPOSAL

It is necessary to collect residues of spraying material, cleaning fluids, oil, greases and other chemical substances according to the legal regulations for recycling or disposal. The official local waste water protection laws apply.

At the end of the equipment's use it must be put out of use, disassembled and disposed of according to the legal regulations.

- Thoroughly clean the equipment of material residues.
- Disassemble the equipment and separate the materials - metals must be taken to a scrap metal depot, plastic parts can be disposed of with household waste.

7. TESTING AND MAINTENANCE

If untrained personnel carry out maintenance and repair work, they endanger themselves and others, as well as risking the operational safety of the equipment. Maintenance and repair work on electrical parts must be carried out by specialist personnel with an electrical qualification - all other maintenance and repair work must be carried out by Sames customer service or specially trained personnel.

Prior to maintenance and repair work:

- Shut off the compressed air supply for the entire spraying system.
- Disconnect the power supply.
- Depressurize the entire spraying system.

NOTA : Observe and follow the operation manual for the spraying device and accessories used for this.

The device must be regularly checked by expert personnel according to DIN EN 60079-17 when using it in potentially explosive areas.

For devices that are not used in potentially explosive areas, the following should be regularly checked :

- the function of all safety features,
- the faultless function of the equipment and
- that the cables are free of damages.

In the case of equipments that have been put out of use, the test can be delayed until the next time commissioning takes place.

The results of the tests must be recorded in writing and stored until the next test. The test certificate or a copy of this must be available at the equipment's place of use.

8. TROUBLESHOOTING

DEFECTS	CAUSES	SOLUTIONS
Material in the material fluid heater is not heated	No voltage present	A: Check power supply. B: Check mains connection and power cable and replace if necessary. **The faults (point A and B) may only be eliminated by personnel with an electrical qualification.**
	Material fluid heater switched off by temperature limiter	C: Press the reset button until the control light illuminates again.
Material does not reach the desired temperature	The heating cartridges are defective	Call customer service.
	Temperature limiter is defective	
	Temperature is set incorrectly	Reset temperature on the thermostat.
	Flow volume is too high	A: Decrease flow volume (smaller nozzle hole). B: Install a second material fluid heater in the spraying system.
Leakage at double nipples or material hoses	Double nipples and/or material hoses are not securely installed or are damaged	Tighten or replace double nipples and/or material hoses.

DEFECTS	CAUSES	SOLUTIONS
No material flow	The heat exchanger is clogged.	 As long as the spray material is not yet completely hardened, the heat exchanger can possibly still be cleaned by flushing with a higher pressure (maximum 450 bar / 6526.7 psi). However, due to the risk of explosion, the material fluid heater may only be flushed with solvent in cold condition. Flush heat exchanger thoroughly, replace if necessary. If the material is hardened (particularly with two component materials), the heat exchanger must be replaced. Replace the heat exchanger only in cold condition and voltage-free condition. For removal, release the 2 fastening screws and screw the jacking screw in further until the heat exchanger can be removed from the housing. Before the installation, the cone-shaped inner side of the heat exchanger must be completely brushed with **Sames** copper paste (copper paste P/N 156.160.118).

9. SPECIFICATIONS

The following applies for all material fluid heaters :

TECHNICAL FEATURES	
Max. temperature*	85°C / 185°F
Max. working pressure	500 bar / 7.251.5 psi
Temperature class	T4 (135°C / 275°F)
Dimensions (LxWxH)	405 x 220 x 180 mm / 16 x 8.66 x 7.08 inches
Weight	17.6 kg / 38.8 lbs

*At 1.8 kW, 1l of water can be heated in 1 minute about 25 °C / 77°F.

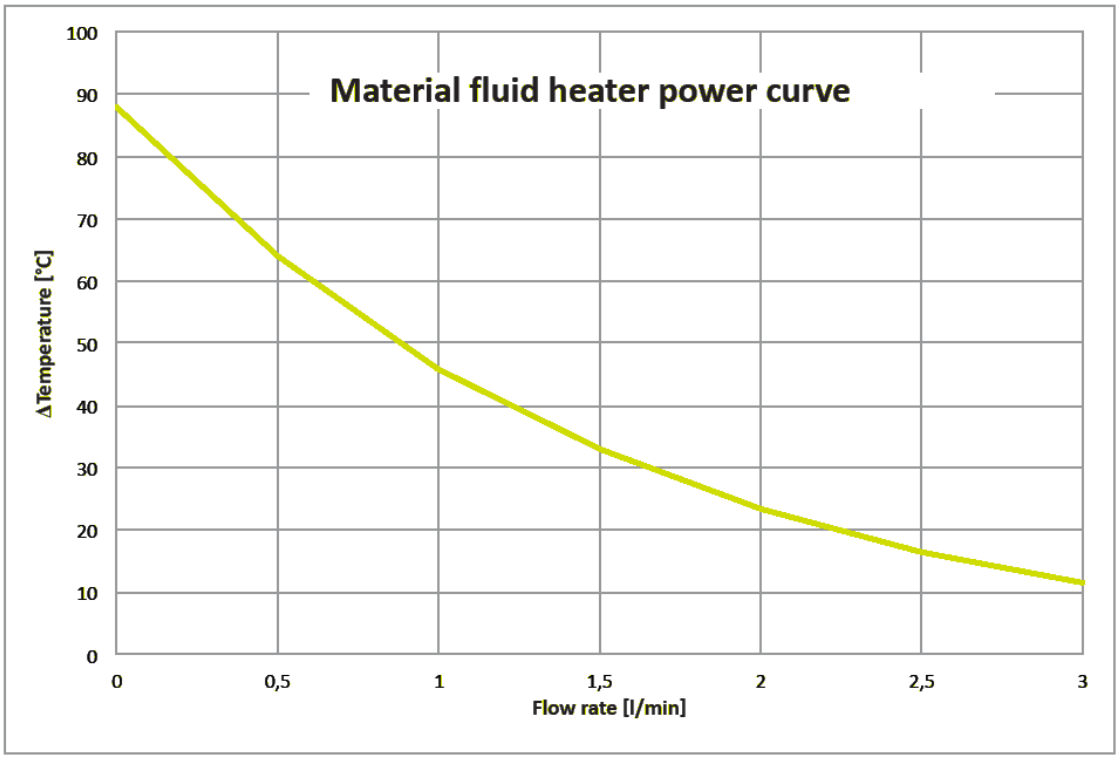
*At 2.0 kW, 1l of water can be heated in 1 minute about 28 °C / 82.4°F.

*At 3.5 kW, 1l of water can be heated in 1 minute about 50 °C / 122°F.

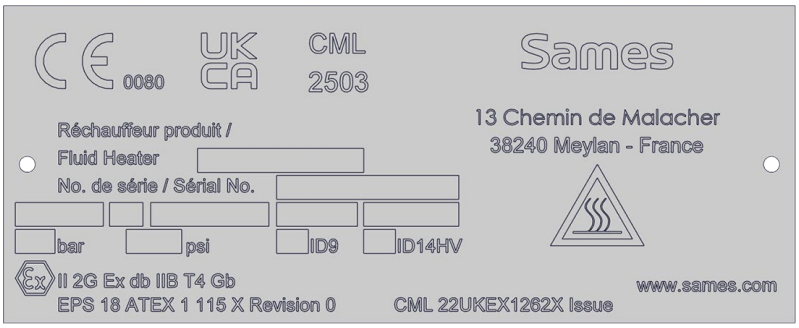
The following specific technical data results according to the item number on the type plate:

Fitting IN/OUT	Volt max. (V)	Power (W)	Phase	Material	Internal Diameter (mm) / (")	Part number
M 3/4JIC	230	3500	1	Stainless steel	14 / 0.55	156.160.010
	115	1800				156.160.020
	400	3800	3			156.160.030
M 1/2JIC	230	3500	1		9 / 0.35	156.160.040
	115	1800				156.160.050
	400	3800	3			156.160.060
M 3/4JIC	440	3500	1		14 / 0.55	156.160.070

POWER CURVE



■ DESCRIPTION OF THE MARKING PLATE



Sames **13 Chemin de Malacher** **38240 Meylan - France**	Name and address of the manufacturer
www.sames.com	Website of the manufacturer
CE	**CE** : European conformity
0080	Quality Assurance Notification number issued by the notified body 0080 for INERIS
UK CA	**UK CA** : UK Conformity Assesment Marking required for certain products placed on the market in Great Britain (England, Wales, Scotland) on January 2021
CML 2503	Quality Assurance Notification number issued by the notified body 2503 for CML
	Hot surface pictogram
Réchauffeur produit / Fluid Heater	Description of the device
No. de série / Serial No.	Number given by **Sames**. The 2 first numbers indicate the manufacturing year.
Power features	U : voltage - 1 or 3 phase(s) - f : Frequency in Hertz - I : amperage in ampere - P : Power in Watt
bar	Maximum pressure in bar
psi	Maximum pressure in psi
ID9	Internal diameter 9 mm / 0.35 inch
ID14HV	Internal diameter 14 mm / 0.55 inch
CE Ex **II 2 G**	**CE**: European conformity Ex: For use in explosive area **II**: group II **2**: class 2 **G**: gas Surface equipment meant to an area where explosive atmospheres due to gas, vapours, mists are liable to appear from time to time in usual operating.
Ex db IIB T4 Gb	**Ex**: Marking of conformity with European standards **db**: Frameproof enclosure **IIB**: Gas group **T4**: Temperature class - Maximum surface temperature : 135°C / 275°F **G** : Equipment protection level (Gas zone 1)
EPS 18 ATEX 1 115 X **Revision 0**	EU certificate examination de type / Notified by: Bureau Veritas **X :** Special conditions that apply for a safe use. Refer to instructions listed in the instruction manuals accompanying your purchase.
CML 22UKEX1262X Issue	UK Type examination certificate

10.APPENDICES

(1) **EU - Type Examination Certificate**

(2) Equipment and protective systems intended for use in potentially explosive atmospheres – **Directive 2014/34/EU**

(3) EU - Type Examination Certificate Number

EPS 18 ATEX 1 115 X **Revision 0**

(4) Equipment: Magma 500

(5) Manufacturer: Sames Kremlin

(6) Address: 13 Chemin de Malacher
38240 Meylan
France

(7) This equipment and any acceptable variation thereto are specified in the annex to this certificate and the documentation therein referred to.

(8) Bureau Veritas Consumer Products Services Germany GmbH, notified body No. 2004 in accordance with Article 21 given in the Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014, certifies that this equipment has been found to comply with the essential health and safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II of the Directive. The examination and test results are recorded in the confidential documentation under the reference number 18TH0279.

(9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN 60079-0:2012 **EN 60079-1:2014**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the annex to this certificate.

(11) This EU - Type Examination Certificate relates only to the design and examination of the specified equipment in accordance with Directive 2014/34/EU. Further requirements of this Directive apply to the manufacture of this equipment and its placing on the market. Those requirements are not covered by this certificate.

(12) The marking of the equipment shall include the following:

II 2G Ex db IIB T4 Gb

Certification department of explosion protection Nuremberg, 2018-06-18

H. Schaffer

BUREAU VERITAS Thurn-und-Taxis-Straße 18, 90411 Nürnberg, Germany cps-nuernberg@de.bureauveritas.com

(13) # Annex

(14) **EU - Type Examination Certificate EPS 18 ATEX 1 115 X** **Revision 0**

(15) Description of equipment:

The Magma 500 is used for heating of liquid fluids which are not sprayable at normal temperature. The main part (flameproof enclosure) includes all electrical switching and heating elements. External to the main part a heat exchanger is fitted. The maximum surface temperature of 130°C is limited by a safety temperature switch.

Electrical data:

115 V	16 A	1800W	50/60 Hz
230 V	16 A	3500W	50/60 Hz
400 V	10 A	3780W	50/60 Hz

Voltages up to 400-690V can be also used. Therefore the switching operation is performed with an external certified control box.

(16) Reference number: 18TH0279

(17) Special conditions for safe use:

Connection to external circuits shall be established by suitable temperature resistant wiring and cable glands. Loose leads connected inside hazardous location shall be protected by suitable type of protection. All unused openings shall be closed by certified blind plugs.

A repair of flameproof joints is only allowed according to manufacturer´s requirements. A repair according to the values of table 2 and 3 of EN 60079-1 is not allowed.

The used cable gland and the cable must have a minimum operating temperature of +80°C. Alternative cable glands and cables can be used.

(18) Essential health and safety requirements:

Met by compliance with standards.

Certification department of explosion protection Nuremberg, 2018-06-18

H. Schaffer

BUREAU VERITAS Thurn-und-Taxis-Straße 18, 90411 Nürnberg, Germany cps-nuernberg@de.bureauveritas.com

UK Type Examination Certificate CML 22UKEX1262X Issue 0

United Kingdom Conformity Assessment

1 Product or Protective System Intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

2 Equipment **Magma 500**

3 Manufacturer **Sames Kremlin**

4 Address **13 Chemin de Malacher**
38240 Meylan
France

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom, Approved Body Number 2503, in accordance with Regulation 43 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to specific conditions of use (affecting correct installation or safe use). These are specified in Section 14.

8 This UK Type Examination certificate relates only to the design and construction of the specified equipment. Further requirements of the Regulations apply to the manufacturing process and supply of the product. These are not covered by this certificate.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN 60079-0:2018 EN 60079-1:2014

10 The equipment shall be marked with the following:

Refer to attached certificate EPS 18ATEX1115X, Issue 0 for specific marking of explosion protection symbols.

Refer to attached certificate EPS 18ATEX1115X, Issue 0 for marked code and ambient temperature range.

L. A. Brisk
Certification Officer

11 Description

For product description refer to attached certificate EPS 18ATEX1115X, Issue 0.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	25 May 2022	R15232A/00	Issue of the prime certificate. EPS 18ATEX1115X, Issue 0 is attached and shall be referred to in conjunction with this certificate.

Note: Drawings that describe the equipment are listed or referred to in the Annex.

13 Conditions of Manufacture

For conditions of manufacture, refer to attached certificate EPS 18ATEX1115X, Issue 0.

Any routine tests/verifications required by the ATEX certification shall be conducted.

14 Specific Conditions of Use

For specific conditions of use, refer to attached certificate EPS 18ATEX1115X, Issue 0.

Certificate Annex

Certificate Number	CML 22UKEX1262X
Equipment	Magma 500
Manufacturer	Sames Kremlin

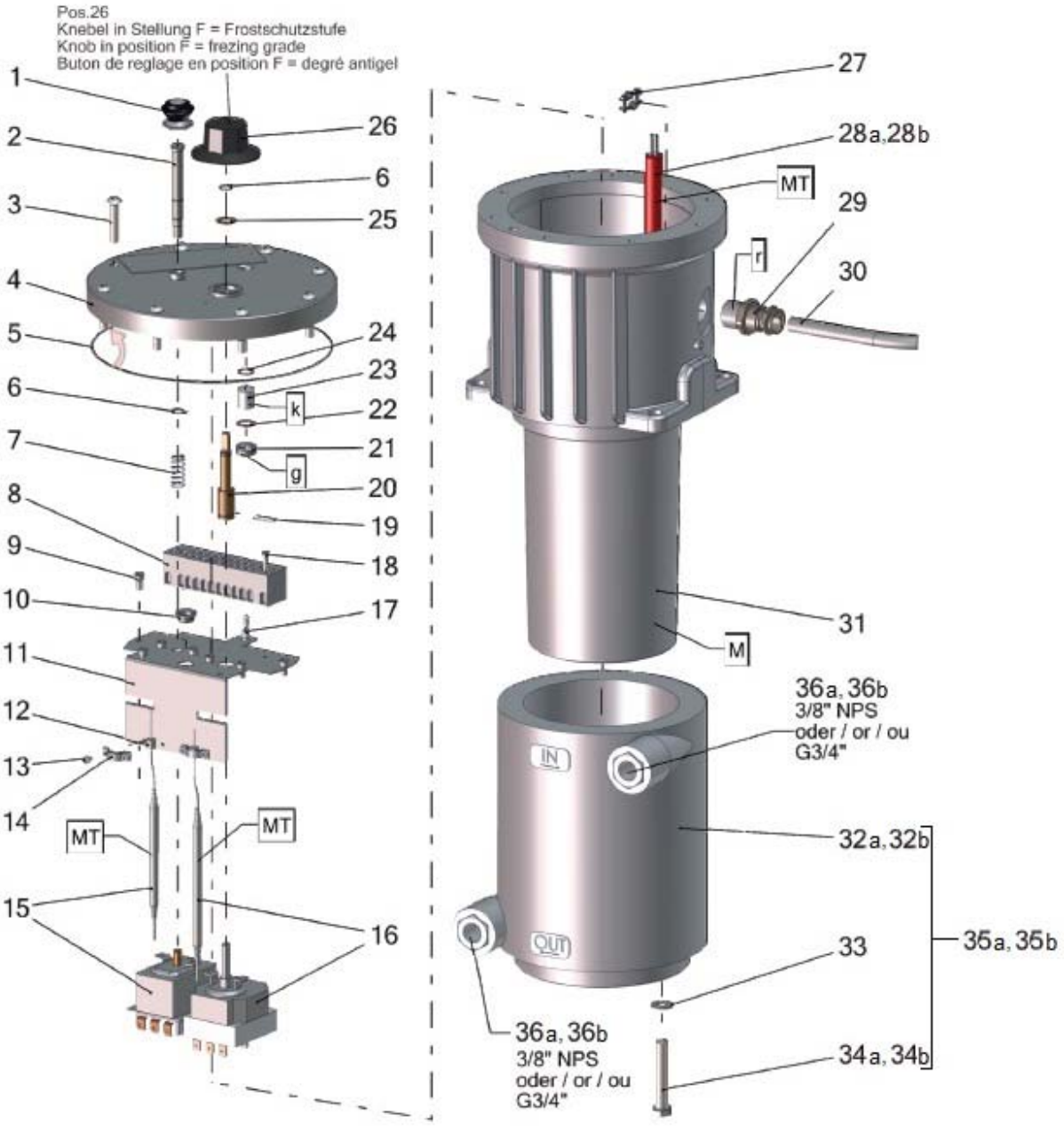
The following documents describe the equipment defined in this certificate:

Issue 0

For all drawings, refer to attached certificate EPS 18ATEX1115X.

Doc. 573.515.050 Date/Datum/Fecha : 25/10/18 Annule/Cancels/ Ersetzt/Anula : 27/09/18	**Modif. / Änderung :** 480V → 440V	**Pièces de rechange** **Spare parts list** **Ersatzteilliste** **Piezas de repuesto**

RECHAUFFEUR, **modèle MAGMA 500**	**PAINT HEATER,** **model MAGMA 500**
ERHITZER, **Modell MAGMA 500**	**CALEFACTOR,** **tipo MAGMA 500**



RECHAUFFEUR, modèle MAGMA 500 DI9 230V 3500W M 1/2 JIC	**PAINT HEATER, model MAGMA 500 ID9 230V 3500W M 1/2 JIC**	**#**
ERHITZER, Modell MAGMA 500 DI9 230V 3500W M 1/2 JIC	**CALEFACTOR, tipo MAGMA 500 DI9 230V 3500W M 1/2 JIC**	**156.160.040**

RECHAUFFEUR, modèle MAGMA 500 DI9 115V 1800W M 1/2 JIC	**PAINT HEATER, model MAGMA 500 ID9 115V 1800W M 1/2 JIC**	**#**
ERHITZER, Modell MAGMA 500 DI9 115V 1800W M 1/2 JIC	**CALEFACTOR, tipo MAGMA 500 DI9 115V 1800W M 1/2 JIC**	**156.160.050**

RECHAUFFEUR, modèle MAGMA 500 DI9 400V 3800W M 1/2 JIC	**PAINT HEATER, model MAGMA 500 ID9 400V 3800W M 1/2 JIC**	**#**
ERHITZER, Modell MAGMA 500 DI9 400V 3800W M 1/2 JIC	**CALEFACTOR, tipo MAGMA 500 DI9 400V 3800W M 1/2 JIC**	**156.160.060**

RECHAUFFEUR, modèle MAGMA 500 DI14 HV 230V 3500W M 3/4 JIC	**PAINT HEATER, model MAGMA 500 ID14 HV 230V 3500W M 3/4 JIC**	**#**
ERHITZER, Modell MAGMA 500 DI14 HV 230V 3500W M 3/4 JIC	**CALEFACTOR, tipo MAGMA 500 DI14 HV 230V 3500W M 3/4 JIC**	**156.160.010**

RECHAUFFEUR, modèle MAGMA 500 DI14 HV 115V 1800W M 3/4 JIC	**PAINT HEATER, model MAGMA 500 ID14 HV 115V 1800W M 3/4 JIC**	**#**
ERHITZER, Modell MAGMA 500 DI14 HV 115V 1800W M 3/4 JIC	**CALEFACTOR, tipo MAGMA 500 DI14 HV 115V 1800W M 3/4 JIC**	**156.160.020**

RECHAUFFEUR, modèle MAGMA 500 DI14 HV 400V 3800W M 3/4 JIC	**PAINT HEATER, model MAGMA 500 ID14 HV 400V 3800W M 3/4 JIC**	**#**
ERHITZER, Modell MAGMA 500 DI14 HV 400V 3800W M 3/4 JIC	**CALEFACTOR, tipo MAGMA 500 DI14 HV 400V 3800W M 3/4 JIC**	**156.160.030**

RECHAUFFEUR, modèle MAGMA 500 DI14 HV 440V 3500W M 3/4 JIC	**PAINT HEATER, model MAGMA 500 ID14 HV 440V 3500W M 3/4 JIC**	**#**
ERHITZER, Modell MAGMA 500 DI14 HV 440V 3500W M 3/4 JIC	**CALEFACTOR, tipo MAGMA 500 DI14 HV 440V 3500W M 3/4 JIC**	**156.160.070**

Pièces communes - Common parts - Gleiche Teile - Partes comunes

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
1	156 160 119	Bouton poussoir	Push-button cap	Drucktaster Kappe	Botón empujador	1
2	NC / NS	Bouton	Button	Taster	Botón	1
3	NC / NS	Vis	Screw	Schraube	Tornillo	8
4	NC / NS	Couvercle	Cover	Deckel	Tapa	1
*5	156 160 104	Joint torique	O-Ring	O-Ring	Junta tórica	1
*6	156 160 101	Circlips (x 2)	Retaining ring (x 2)	Sicherungsring (2 St.)	Anillo truarc (x 2)	2
7	NC / NS	Ressort	Spring	Feder	Muelle	1
8	NC / NS	Bloc de jonction d'appareils	Connection label	Klemme	Bloque de unión de equipos	1
9	NC / NS	Vis	Screw	Schraube	Tornillo	8
10	NC / NS	Douille	Bush	Busche	Manguito	1
11	NC / NS	Porte-outil	Holder	Halter	Soporte herramienta	1
12	NC / NS	Joint	Gasket	Gummidichtung	Junta	1
13	NC / NS	Vis	Screw	Schraube	Tornillo	4
14	NC / NS	Bride pour tube	Pipe clip	Rohrschelle	Brida para tubo	2
*15	156 160 105	Sécurité thermique	Heat limiter	Temperaturbegrenzer	Seguridad térmica	1
*16	156 160 106	Contrôleur pour tube capillaire	Capillary tube regulator	Kapillarrohrregler	Controlador para tubo capilar	1
*17	156 160 107	Lampe	Glow lamp	Glimmlampe	Lámpara	1
18	NC / NS	Vis	Screw	Schraube	Tornillo	2
19	NC / NS	Goupille de sécurité	Safety retainer	Federstecker	Pasador de séguridad	1
20	NC / NS	Demi-arbre	Plug-in axle	Steckachse	Semieje	1
21	NC / NS	Bouchon fileté	Threaded plug	Gewindestopfen	Tapón roscado	1
22	NC / NS	Joint	Gasket	Gummidichtung	Junta	1
23	NC / NS	Cylindre de verre	Glass cylinder	Glaszylinder	Cilindro de cristal	1
24	NC / NS	Joint	Gasket	Gummidichtung	Junta	1
*25	156 160 102	Rondelle	Washer	Scheibe	Arandela	1
*26	156 160 103	Bouton de réglage	T-handle	Knebel	Botón de ajuste	1

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
27	NC / NS	Réducteur de tension	Strain relief clamp	Zugentlstungsschelle	Reductor de tensión	1
29	NC / NS	Raccord de câble à vis	Cable fitting	Kabelverschraubung	Racor de cable	1
30	NC / NS	Câble	Cable	Kabel	Cable	1
31	NC / NS	Logement	Housing	Gehäuse	Alojamiento	1
-	901 180 024	Câble de masse	Ground cable	Erdungskabel	Cable de masa	1
-	156 160 112	Support mural	Wall mounted bracket	Wandhalter	Soporte mural	1
*****	**156 160 120**	**Kit de régulation (Rep. 8, 9 (x4), 10, 12, 13 (x4), 14 (x2), 15, 16, 18(x2))**	**Regulation kit (Ind. 8, 9 (x4), 10, 12, 13 (x4), 14 (x2), 15, 16, 18(x2))**	**Reglersatz (Pos. 8, 9 (x4), 10, 12, 13 (x4), 14 (x2), 15, 16, 18(x2))**	**Kit de regulación (Ind. 8, 9 (x4), 10, 12, 13 (x4), 14 (x2), 15, 16, 18(x2))**	**1**

Pièces spécifiques - Specific parts - Spezifische Teile - Partes específicas

MAGMA 500 230V

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
28a	NC / NS	Cartouche	Cartidge	Heizpatrone	Cartucho	7

MAGMA 500 115V / 400V / 440V

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
28b	NC / NS	Cartouche	Cartidge	Heizpatrone	Cartucho	6

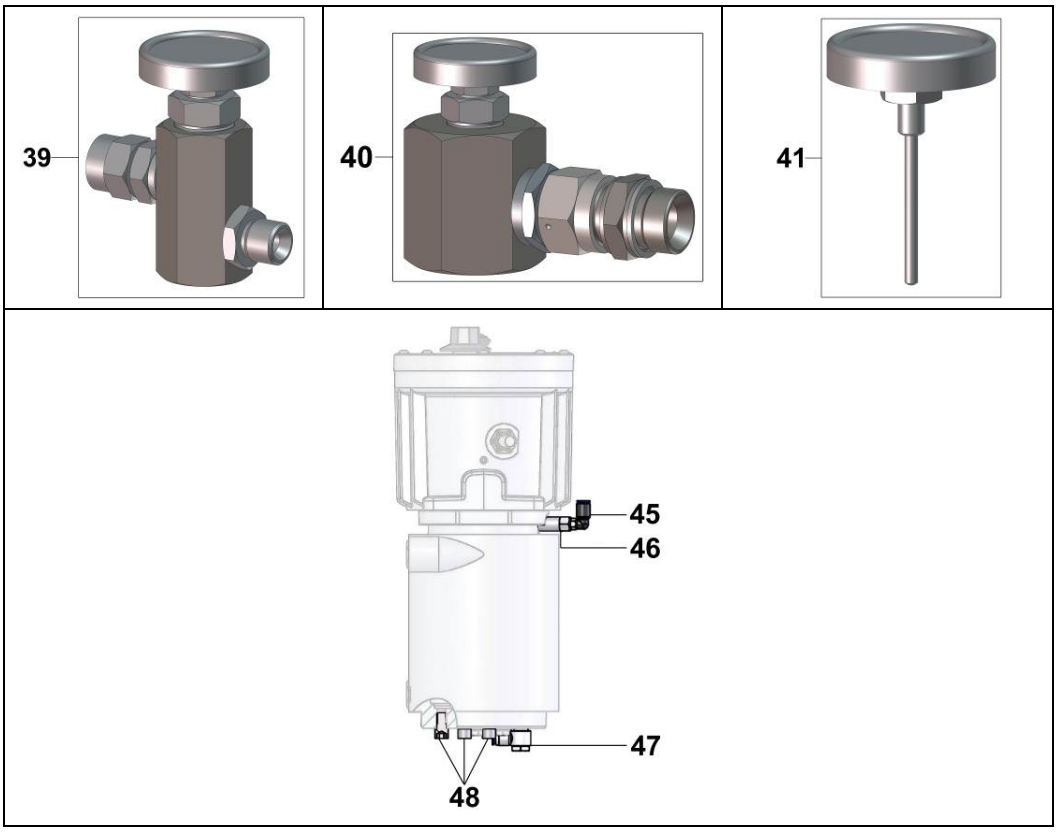
MAGMA 500 DI9 / ID9

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
35a	**156 160 108**	**Kit échangeur thermique DI9**	**Heat exhanger kit for ID9**	**Wärmetauscher ID9**	**Kit intercambiador térmico DI9**	**1**
32a	NC / NS	▪ Echangeur thermique	▪ Heat exchanger	▪ Wärmetauscher	▪ Intercambiador térmico	1
33	NC / NS	▪ Rondelle	▪ Washer	▪ Scheibe	▪ Arandela	2
34	NC / NS	▪ Vis	▪ Screw	▪ Schraube	▪ Tornillo	2
36a	156 160 117	Manchon inox M 3/8" NPSM - M 1/2" JIC	Nipple, stainless steel, model double male 3/8" NPSM - 1/2" JIC	Nippel 3/8" NPSM - 1/2" JIC	Manguito de inox M 3/8" NPSM - M 1/2" JIC	2

MAGMA 500 DI14 HV / ID14 HV

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
35b	**156 160 109**	**Kit échangeur thermique DI14 HV**	**Heat exhanger kit for ID14 HV**	**Wärmetauscher ID14 HV**	**Kit intercambiador térmico DI14 HV**	**1**
32b	NC / NS	▪ Echangeur thermique	▪ Heat exchanger	▪ Wärmetauscher	▪ Intercambiador térmico	1
33	NC / NS	▪ Rondelle	▪ Washer	▪ Scheibe	▪ Arandela	2
34	NC / NS	▪ Vis	▪ Screw	▪ Schraube	▪ Tornillo	2
36b	156 160 116	Manchon inox M 3/4" - M 3/4" JIC	Nipple, stainless steel, model double male 3/4" - 3/4" JIC	Nippel 3/4" - 3/4" JIC	Manguito de inox M 3/4" - M 3/4" JIC	2

OPTIONS - ON REQUEST - OPTIONEN - OPCIONES



Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
39	156 160 110	Indicateur de température DI9	Temperature indicator ID9	Temperaturanzeige ID9	Indicador de temperatura DI9	1
40	156 160 111	Indicateur de température DI14 HV	Temperature indicator ID14 HV	Temperaturanzeige ID14 HV	Indicador de temperatura DI14 HV	1
41	156 160 115	Thermomètre à aiguille	Dial thermometer	Thermometer	Termómetro con aguja	1
-	156 160 114	Kit de chauffe de l'air d'atomisation	Kit for heating atomizing air	Bausatz Zerstäuberluftterwärmung	Conjunto de calefacción del aire de atomización	1
45	NC / NS	▪ L-vissage à air comprimé	▪ L-plug-in connector	▪ L-Steckverschraubung	▪ L-enroscado de aire comprimido	1
46	NC / NS	▪ Raccord de manchon	▪ Cocket nipple	▪ Muffennippel	▪ Racor de manguito	1
47	NC / NS	▪ L-vissage à air comprimé	▪ L-plug-in connector	▪ L-Steckverschraubung	▪ L-enroscado de aire comprimido	1
48	NC / NS	▪ Vis	▪ Screw	▪ Schraube	▪ Tornillo	4

ACCESSOIRES - ACCESSORIES - ZUBEHÖR - ACCESORIOS

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
M	156 160 118	Pâte de cuivre	Copper paste	Kupferpaste	Pasta de cobre	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.