

DOCUMENTATION

PUMP 20F440

FLOWMAX[®]

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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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<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 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 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"> • Lesen Sie alle Dokumente sorgfältig durch, bevor Sie die Anlage in Betrieb nehmen, • 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 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 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 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"> • Lees alle documenten zorgvuldig door voordat u de apparaatuur in gebruik neemt, • 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 alla dokument noggrant innan utrustningen tas i bruk, • Läs 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"> • Lue kaikki asiakirjat huolellisesti ennen laitteen 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"> • Przed uruchomieniem urządzenia należy dokładnie przeczytać wszystkie dokumenty, • 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 pečlivě přečtěte všechny dokumenty, • 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"> • pred začetkom uporabe opreme natančno preberite vse dokumente, • inštalirati, 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 align="center">SK</p> <p>V záujme bezpečného je vašou povinnosťou:</p> <ul style="list-style-type: none"> • pred uvedením zariadenia do prevádzky si pozorne prečítajte všetky dokumenty, • 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"> • Olvassa el figyelmesen az összes dokumentumot, mielőtt a berendezést üzembe helyezi, • 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 alkalmazták 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 înainte de a pune echipamentul în funcțiune, • 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.

Declaración(s) de conformidad 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 hrbtni 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 acestui document



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DECLARACIÓN UE DE CONFORMIDAD
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DECLARAȚIA 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 / erklart 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 / Oświadczam, że wymienione poniżej urządzenia / Prohlašuje, že níže uvedené vybavení / Izjavljam, da je opisana oprema spodaj / Vyhlasuje, že zariadenie uvedené nižšie / Kijelentem, hogy a megjelölt anyag a továbbiakban / Declară că echipamentul precizat mai jos:

POMPE PNEUMATIQUE FLOWMAX® & POMPE AIRMIX® FLOWMAX® A MOTEUR AVEC INVERSEUR
/ AIRMIX® FLOWMAX® PUMP & FLOWMAX® LOW PRESSURE PUMP - AIR MOTOR WITH REVERSING BLOCK
/ AIRMIX® PUMPE UND PNEUMATISCHE PUMPE MIT UMSTEUERMOTOR - FLOWMAX®
/ BOMBA NEUMÁTICA FLOWMAX® & BOMBA AIRMIX® FLOWMAX® CON MOTOR CON INVERSOR

20F440

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 odnośnymi 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 skodě 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 18/01/2021 - 01/18/2021



INSTALLATION AND SAFETY INSTRUCTIONS

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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1. 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 shut down 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 KREMLIN 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 KREMLIN 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 KREMLIN can not 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 KREMLIN shall not be liable for physical injuries, direct or indirect material damages caused by the use of chemicals.

2. HANDLING



Check the weight and the dimensions of the equipment

(☞ refer to 'Technical features' section of the instruction manual

If weight and dimensions are too important, the unloading must be carried out by means of a forklift or any other appropriate means with a qualified personnel and in a clear horizontal area to prevent from risks of damage injury or an accident.

The centre of gravity is not in the centre of the machine : carry out by hand a stability-test after having lifted the whole at 10 cm / 3.937" maximum.

After the unloading, the handling of the whole (eg: elevator pump) is carried out by means of a pallet truck taking the bottom part of the frame.

Remark : Each pump motor is fitted with a ring. The ring is designed for the hoisting of one pump and can not be used for the handling of the complete assembly.

3. STORING

Storing before installation :

- Storing ambient temperature : 0 / +50 °C / 0 / +122°F
- Protect the whole against dust, water trickling, dampness and shocks.

Storing after installation :

- Operating temperature : +15 / +35 °C / +59 / +138.2° F
- Protect the whole against dust, water trickling, dampness and shocks.

4. INSTALLATION OF THE EQUIPMENT

The machine is installed on a stable horizontal floor (for eg a concrete flag).

The machine shall be made stable by the use of holding down bolts or by the use of other anchoring methods, strong enough to prevent unintended bodily movement of the equipment.



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

- **For the pumping equipments** (pumps, pneumatic rams, frame...), a section wire of 2.5 mm² is fixed on the material. Use this wire to connect the material to "the general ground". In case of severe environments (mechanical protection of the wire of earthing insufficient, vibrations, mobile material...) where function damages at the ground are probable, the user have to replace the provided wire of 2.5 mm² by a device more adapted to its environment (wire with a more important section, bonding strip, fixing by thimble with eyelet...).

The continuity of the ground must be controlled by a qualified electrician. If the continuity of the ground is not ensured, check the terminal, the wire and the earthing point. **Never** use the material without have solved this problem.

- In the severe cases of environments (mechanical protection of the wire of earthing insufficient, vibrations, mobile material...) where damages of the function put at the ground are probable, the user will have to replace the wire of 2.5 mm² provided, by a device more adapted to its environment (wire of more important section, bonding strip, fixing by thimble with eyelet...),
- **The gun** must be 'grounded' via a material hose or an air hose. In case of spraying by means of a gun with cup, the air hose must be conductive,
- **The materials to be painted** must also be grounded.

All the materials situated in the working area shall be grounded.



- **Never store** more than necessary inflammable materials inside the working area,
- The materials must be stored into **approved drums** and grounded,
- Use only grounded **metals containers** for the use of cleaning solvents,
- **Cardboard and paper are prohibited.**

5. MARKING OF THE EQUIPMENT



Each equipment has a label plate with the name of the manufacturer, the equipment part number, the interesting informations to use correctly the equipment (pressure, voltage,...) and sometimes 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 in accordance with local rules and **do not dispose of old equipment with household wastes**. A correct disposal of old equipment will help prevent negative consequences for the environment and health.



FLOWMAX® PUMP

20F440

Disassembly / Reassembly

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CAUTION :

Before any action on the pump, shut off the compressed air supply and depressurize the system.

The pump is manufactured under the ATEX agreement and can not be modified. SAMES KREMLIN will not be held responsible for any failure to comply with that instruction.

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

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

▪ **FLUID MOTOR OR AIR MOTOR REPLACEMENT (REFER TO DOC. 573.176.050)**

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

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

Disassemble all the accessories of the pump.

Disassemble the pump from the bracket by removing the nuts that hold on the U-bolts.

Put aside the pump (the pump is fitted with an hoisting ring).

To replace the fluid section (2) or the air motor (1), the pump must be removed (see bellows) :

- **Remove the FLUID SECTION (refer to Doc. 573.175.050)**
Disassemble the connecting rod (41), the suction valve (30), the cylinder (21).
Remove the 3 nuts (11) that hold on the 3 tie-rods (7) and slide the upper flange (1). Hold on the guide rod of the air motor and unscrew the piston (22).
- **Remove the COUPLING part.**
- **Remove the air motor.**

DISASSEMBLY / REASSEMBLY OF THE FLUID SECTION

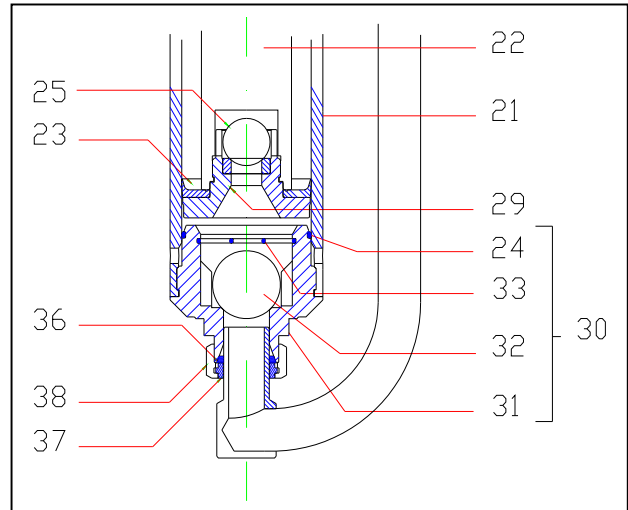
Guards (air motor cover, coupling shields, housings ...) have been designed for safe use of the equipment.

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

Unscrew the fitting (38) and the screws (43 and 45) to remove the attachment fluid tube (41).

■ **SUCTION VALVE**

Unscrew the suction valve (30).
 (If the cylinder (21) remains attached to the suction valve, unscrew both parts, then hold cylinder (21) by inserting a rod into the cylinder holes designed for this purpose).
 The ball (32) is secured on the valve by means of a circlips (33).
 Clean the parts.
 Reinstall the suction valve (30) and the seal (24). Replace the parts if it is necessary.



■ **CYLINDER**

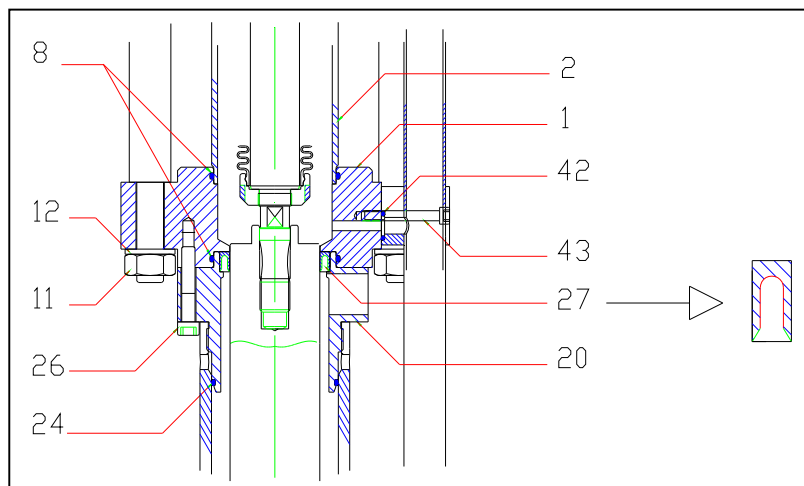
In order to make easier the disassembly, a hole is drilled in the cylinder (21) at each end.
 Depending on the part that it is unscrewed first, insert a rod into one of these holes to unscrew the other part.
 When reassembling, make sure the two seals (24) are installed.

■ **EXHAUST VALVE AND MOBILE PACKING**

Unscrew the cylinder (21) and pull it downwards.
 Unscrew the exhaust valve (29) by holding the piston (22).
 Remove the ball (25) and the mobile packing (cup seal 23).
 Clean all the parts and replace them by changing the seals if it is necessary.

■ **UPPER TIGHTNESS SEAL**

Unscrew the 4 screws (26).
 Remove the tightness seal (27) by pulling the exhaust flange (20) downwards.
 Change the tightness seal (27), the O Rings (8 and 24).
 Remount the parts in the reverse order of the disassembly sequence.
 Comply with GT seal orientation order.



DISASSEMBLY / REASSEMBLY OF THE COUPLING (WITH BELLOWS)

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

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

Disassemble the fluid section prior to carrying out the following procedure.

■ BELLOWS (REFER TO DOC. 573.175.050)

Unscrew the nuts (11) from the coupling tie-rods.

Remove the suction flange (1) and the cylinder by pulling them downwards.

Disassemble the piston (22) from the air motor rod.

Unscrew the skirt (6) to remove the low part of the bellows.

Disassemble the suction bearing (3) of the air motor by unscrewing the screws (9).

Remove bellows coupling part by sliding it off the air motor rod.

Disassemble the bellows flange (4) by removing the screws (10) to take off the upper part of the bellows.

Change the bellows (5).

When installing bellows, push it into skirt (6) firmly. Insert the bellows into the bearing (3).

Assemble the flange (4) in the bearing (3) and tighten the assembly with the screws (10).

Slide them along the air motor rod.

Screw the skirt (6) on the air motor rod.

➔ **Rotate the bellows coupling part and the motor rod until suction bearing (3) matches the lower support of the air motor. Be careful not to twist the bellows.**

Secure the suction bearing (3) on the lower support of the air motor by means of the screws (9).

Remount the fluid section piston (22) on the air motor rod.

Change the seals (8) then remount the cylinder (2) and the suction flange (1).

Install the assembly on the tie-rods (7) and tighten the nuts (11).

AIR MOTOR

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

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

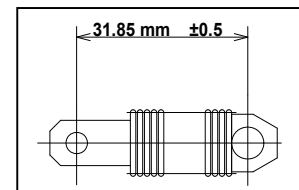
■ REVERSING BLOCK (REFER TO DOC. 573.174.050)

Disassemble the air motor cover (31) by removing the CHc screw (33).

Dissociate the female yoke (14) from the reversing block lever (10).

Dismount the reversing -block by removing the screws (11).

Reinstall the new reversing-block in the reverse order of the disassembly sequence.



➔ **CAUTION : the number of spirals must equally be distributed on each fastening parts in order to get the above dimension.**

Before reassembling the different components :

- **Clean the parts with the appropriate cleaning solvent.**
- **Install new seals if it is necessary, after having lubricated them with PTFE grease.**
- **Lubricate the piston and the inside of the cylinder to prevent from damaging the seals.**
- **Install new parts if it is necessary.**

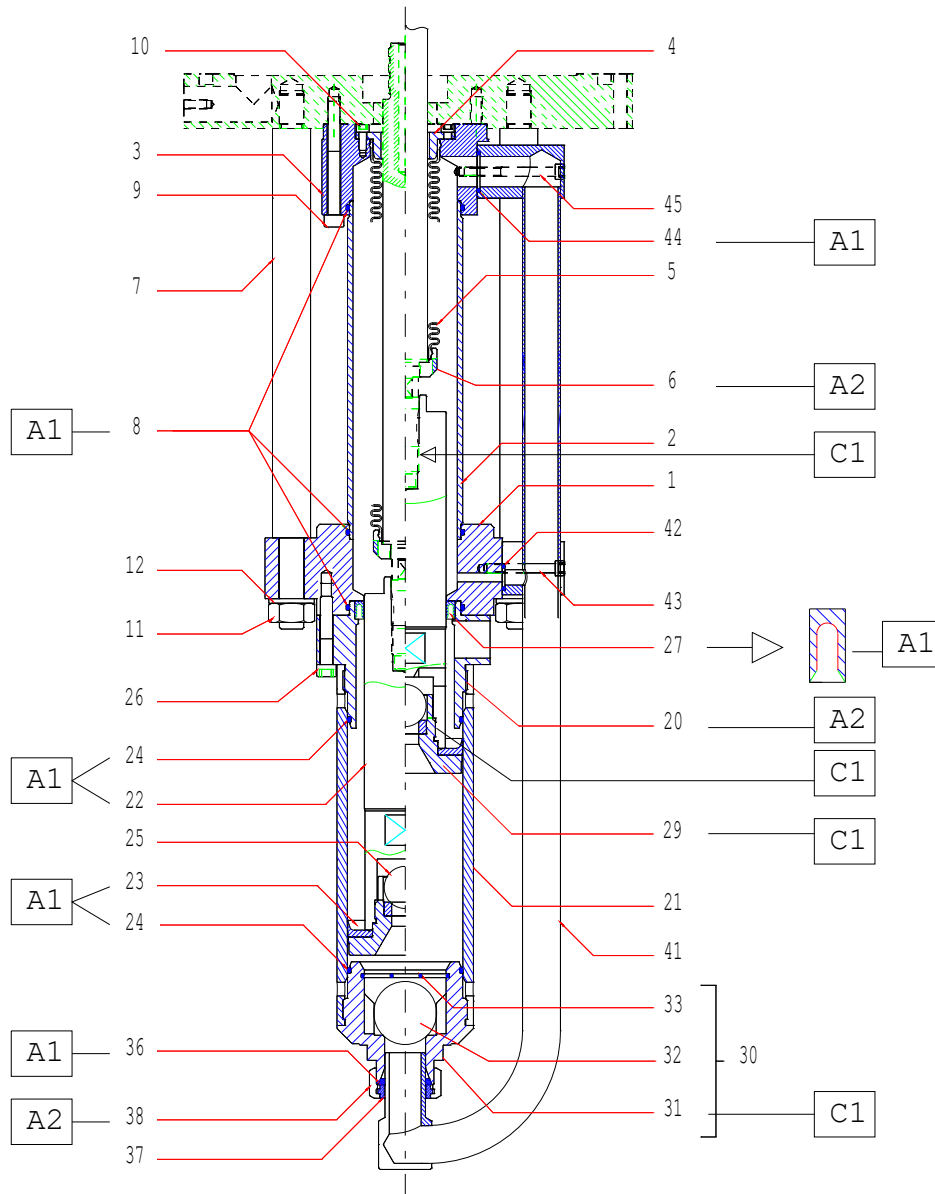
▪ **DEGREES OF WEAR**

The wetted parts in contact with the material are subject to wear with time. It depends, of course, on the rates and duration of pump operating; also on the material handled.

Under normal operating and servicing conditions, with standard filled material not including foreign matters or chemically aggressive, the average working life can be estimated as :

- **1 million strokes for the tightness seals.**
- **10 millions strokes for the bellows.**

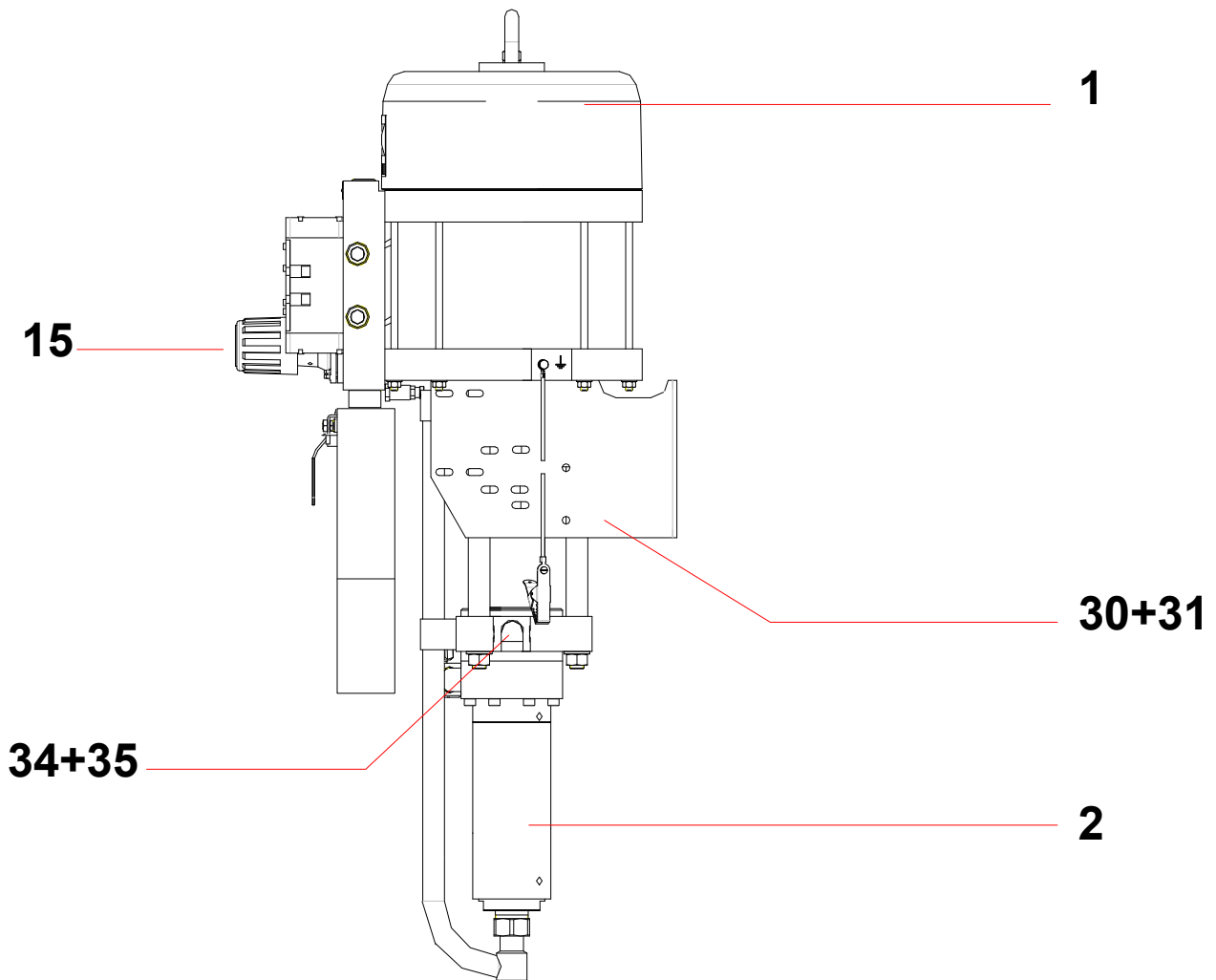
ASSEMBLY INSTRUCTIONS



Index	Instruction	Description	Part number
A 1	PTFE grease	PTFE grease (10 ml / 0.3 oz)	560.440.101
A 2	Anti-seize grease	Grease box (450 g / 0.99 lb)	560.420.005
C 1	Medium strength Aneorobic Pipe sealant	Loctite 5772 (50 ml / 1.7 oz)	554.180.015

Doc. 573.176.050 Date/Datum/Fecha : 04/07/19 Annule/Cancela/ Ersetzt/Anula : 16/02/12	Modif. / Änderung : Mise à jour / Update / Aktualisierung / Actualización + 20.220 F → 20F440	Pièces de rechange Spare parts list Ersatzteilliste Piezas de repuesto
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20F440	POMPE FLOWMAX® / FLOWMAX® PUMP FLOWMAX® PUMPE / BOMBA FLOWMAX®
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POMPE MURALE, modèle 20F440	WALL MOUNTED PUMP, model 20F440	#
WANDANLAGE, Modell 20F440	BOMBA MURAL, tipo 20F440	151.860.200

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
-	NC / NS	Pompe 20F440 nue	Bare pump, model 20F440	Pumpe 20F440 nackt	Bomba sola, tipo 20F440	1
*1	146 280 100	▪ Moteur 5000-4 (voir Doc. 573.174.050)	▪ Air motor, model 5000-4 (refer to Doc. 573.174.050)	▪ Luftmotor, 5000-4 (siehe Dok. 573.174.050)	▪ Motor, 5000-4 (consultar Doc. 573.174.050)	1
*2	144 990 200	▪ Hydraulique F440 inox (voir Doc. 573.175.050)	▪ Fluid section, model F440 (stainless steel) (refer to Doc. 573.175.050)	▪ Hydraulikteil F440 Edelstahl (siehe Dok. 573.175.050)	▪ Hidráulica F440 inox (consultar Doc. 573.175.050)	1
15	-	Equipement d'air (voir détails)	Air supply equipment (refer to detail)	Luftausrüstung (siehe Detail)	Equipo de aire (consultar detalle)	1
30	051 341 206	Support de pompe	Pump bracket	Wandhalterung	Soporte de bomba	1
31	NC / NS	Etrier avec rondelles et écrous	U-bolt with washers and nuts	Schelle mit Scheiben und Muttern	Tirante con arandelas y tuercas	3
34	905 210 404	Coude MF 1"	Elbow, MF 1"	Winkelnippel AG 1" - IG 1"	Codo, MH 1"	1
35	050 102 449	Raccord inox M 1" - M 38 x 150 (entrée produit)	Fitting, stainless steel, double male 1" - 38 x 150 (fluid inlet)	Nippel, Edelstahl AG 1" - M 38 x 1,50 (Materialeingang)	Racor inox M 1" - M 38 x 150 (entrada producto)	1

POMPE MURALE, modèle 20F440 avec filtre	WALL MOUNTED PUMP, model 20F440 with filter	#
WANDANLAGE, Modell 20F440 mit Filter	BOMBA MURAL, tipo 20F440 con filtro	151.860.300

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
-	151 860 200	Pompe murale, type 20F440	Wall mounted pump, model 20F440	Wandanlage, Modell 20F440	Bomba mural, tipo 20F440	1
-	155 581 400	Filtre 3/4 équipé (voir Doc. 573.327.050)	Filter, model 3/4 equipped (refer to Doc. 573.327.050)	Ausgerüsteter Filter, Modell 3/4 (siehe Dok. 573.327.050)	Filtro, 3/4 equipado (consultar Doc. 573.327.050)	1

POMPE MURALE, modèle 20F440 avec joints PU	WALL MOUNTED PUMP, model 20F440 with PU seals	#
WANDANLAGE, Modell 20F440 mit PU-Dichtungen	BOMBA MURAL, tipo 20F440 con juntas PU	151.860.500

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
-	NC / NS	Pompe 20F440 nue avec joints PU	Bare pump, model 20F440 with PU seals	Pumpe 20F440 nackt mit PU-Dichtungen	Bomba sola, tipo 20F440 con juntas PU	1
*1	146 280 100	▪ Moteur 5000-4 (voir Doc. 573.174.050)	▪ Air motor, model 5000-4 (refer to Doc. 573.174.050)	▪ Luftmotor, 5000-4 (siehe Dok. 573.174.050)	▪ Motor, 5000-4 (consultar Doc. 573.174.050)	1
*2	144 990 205	▪ Hydraulique F440 avec joints PU (voir Doc. 573.175.050)	▪ Fluid section, model F440 with PU seals (refer to Doc. 573.175.050)	▪ Hydraulikteil F440 mit PU-Dichtungen (siehe Dok. 573.175.050)	▪ Hidráulica F440 con juntas PU (consultar Doc. 573.175.050)	1
30	051 341 206	Support de pompe	Pump bracket	Wandhalterung	Soporte de bomba	1
31	NC / NS	Etrier avec rondelles et écrous	U-bolt with washers and nuts	Schelle mit Scheiben und Muttern	Tirante con arandelas y tuercas	3
-	953 010 016	Ecrou HM 6	Nut HM 6	Mutter HM 6	Tuerca HM 6	6

POMPE MURALE, modèle 20F440 avec joints PU	WALL MOUNTED PUMP, model 20F440 with PU seals	#
WANDANLAGE, Modell 20F440 mit PU-Dichtungen	BOMBA MURAL, tipo 20F440 con juntas PU	151.860.600

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
-	151 860 500	Pompe murale 20F440 avec joints PU	Wall mounted pump, model 20F440 with PU seals	Wandanlage 20F440 mit PU-Dichtungen	Bomba mural, tipo 20F440 con juntas PU	1
*1	146 280 100	▪ Moteur 5000-4 (voir Doc. 573.174.050)	▪ Air motor, model 5000-4 (refer to Doc. 573.174.050)	▪ Luftmotor, 5000-4 (siehe Dok. 573.174.050)	▪ Motor, 5000-4 (consultar Doc. 573.174.050)	1
*2	144 990 205	▪ Hydraulique F440 avec joints PU (voir Doc. 573.175.050)	▪ Fluid section, model F440 with PU seals (refer to Doc. 573.175.050)	▪ Hydraulikteil F440 mit PU-Dichtungen (siehe Dok. 573.175.050)	▪ Hidráulica F440 con juntas PU (consultar Doc. 573.175.050)	1
15	-	Equipement d'air (voir détails)	Air supply equipment (refer to detail)	Luftausrüstung (siehe Detail)	Equipo de aire (consultar detalle)	1
30	051 341 206	Support de pompe	Pump bracket	Wandhalterung	Soporte de bomba	1
31	NC / NS	Etrier avec rondelles et écrous	U-bolt with washers and nuts	Schelle mit Scheiben und Muttern	Tirante con arandelas y tuercas	3
34	905 210 404	Coude MF 1"	Elbow, MF 1"	Winkelnippel AG 1" - IG 1"	Codo, MH 1"	1
35	050 102 449	Raccord inox M 1" - M 38 x 150 (entrée produit)	Fitting, stainless steel, double male 1" - 38 x 150 (fluid inlet)	Nippel, Edelstahl AG 1" - M 38 x 1,50 (Materialeingang)	Racor inox M 1" - M 38 x 150 (entrada producto)	1

POMPE MURALE, modèle 20F440 avec joints PU, avec filtre	WALL MOUNTED PUMP, model 20F440 with PU seals, with filter	#
WANDANLAGE, Modell 20F440 mit PU-Dichtungen, mit Filter	BOMBA MURAL, tipo 20F440 con juntas PU, con filtro	151.860.700

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
-	151 860 600	Pompe murale 20F440 avec joints PU	Wall mounted pump, model 20F440 with PU seals	Wandanlage 20F440 mit PU-Dichtungen	Bomba mural, tipo 20F440 con juntas PU	1
*1	146 280 100	▪ Moteur 5000-4 (voir Doc. 573.174.050)	▪ Air motor, model 5000-4 (refer to Doc. 573.174.050)	▪ Luftmotor, 5000-4 (siehe Dok. 573.174.050)	▪ Motor, 5000-4 (consultar Doc. 573.174.050)	1
*2	144 990 205	▪ Hydraulique F440 avec joints PU (voir Doc. 573.175.050)	▪ Fluid section, model F440 with PU seals (refer to Doc. 573.175.050)	▪ Hydraulikteil F440 mit PU-Dichtungen (siehe Dok. 573.175.050)	▪ Hidráulica F440 con juntas PU (consultar Doc. 573.175.050)	1
30	051 341 206	Support de pompe	Pump bracket	Wandhalterung	Soporte de bomba	1
31	NC / NS	Etrier avec rondelles et écrous	U-bolt with washers and nuts	Schelle mit Scheiben und Muttern	Tirante con arandelas y tuercas	3
-	155 581 400	Filtre 3/4 équipé (voir Doc. 573.327.050)	Filter, model 3/4 equipped (refer to Doc. 573.327.050)	Ausgerüsteter Filter, Modell 3/4 (siehe Dok. 573.327.050)	Filtro, 3/4 equipado (consultar Doc. 573.327.050)	1

OPTIONS - ON REQUEST - OPTIONEN - OPCIONES

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
-	155 581 400	Filtre 3/4 équipé (voir Doc. 573.327.050)	Filter, model 3/4 equipped (refer to Doc. 573.327.050)	Ausgerüsteter Filter, Modell 3/4 (siehe Dok. 573.327.050)	Filtro, 3/4 equipado (consultar Doc. 573.327.050)	1
-	049 597 100	Canne d'aspiration inox (Ø 25) avec crépine	Suction rod (stainless steel) with strainer	Saugschläuche mit Siebkörbe	Caña de aspiración (inox) con piña	1
-	149 591 400	▪ Crépine avec manchon	▪ Strainer with sleeve	▪ Siebkörbe	▪ Piña con manguito	1
-	051 231 000	Chariot	Cart	Fahrgestell	Carretilla	1

* Pièces de maintenance préconisées.

* Preceding the index number denotes a suggested spare part.

* Bezeichnete Teile sind empfohlene Ersatzteile.

* Piezas de mantenimiento preventivas.

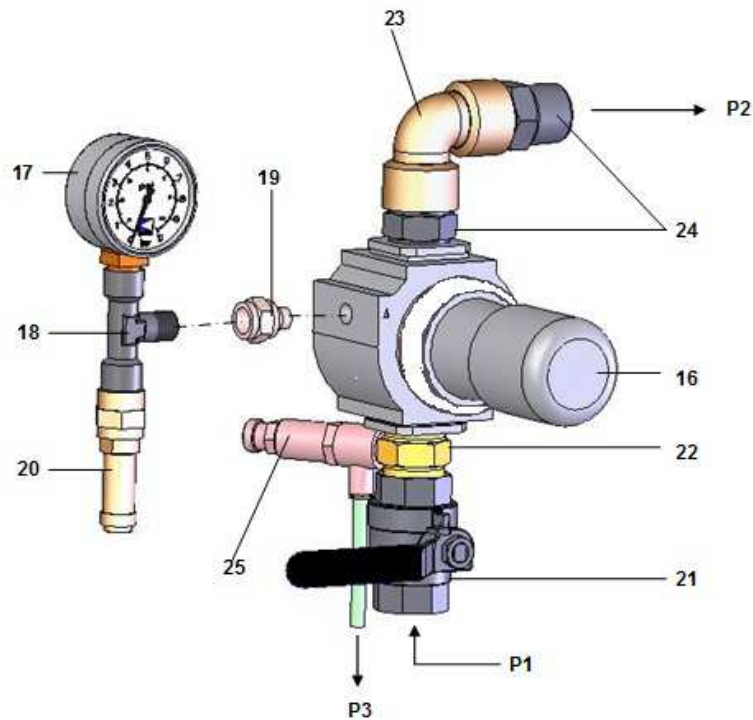
N C : Non commercialisé.

N S : Denotes parts are not serviceable.

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

N S : no suministrado.

EQUIPEMENT D'AIR (ind. 15)	AIR SUPPLY EQUIPMENT (ind. 15)
LUFTAUSRÜSTUNG (ind. 15)	EQUIPO DE AIRE (ind. 15)



Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*16	016 480 000	Détendeur d'air 3/4 0 - 10 bar (volant phosphore)	Air regulator, model 3/4 0 - 10 bar / 0 - 145 psi (pantone 382 knob)	Druckminderer, 3/4 0 - 10 bar (pantone 382 Stellglocke)	Manorreductor, tipo 3/4 0 - 10 bar (pomo de color 382)	1
*17	910 011 402	Manomètre 0 - 10 bar	Gauge, model 0 - 10 bar / 0 - 145 psi	Manometer 0 - 10 bar	Manómetro, tipo 0 - 10 bar	1
18	552 441	Té 1/4"	Tee, model 1/4"	T-Stück, 1/4"	Té, tipo 1/4"	1
19	552 491	Raccord F 1/4" - M 1/8"	Fitting, model F 1/4" - M 1/8"	Nippel, IG 1/4" - AG 1/8"	Racor, tipo H 1/4" - M 1/8"	1
20	903 080 401	Soupape de décharge	Discharge-valve	Sicherheitsventil	Válvula de seguridad	1
21	903 090 208	Robinet F 3/4	Valve, F 3/4	Absperrhahn, IG 3/4	Grifo, tipo H 3/4	1
22	051 870 151	Raccord MM 3/4 BSP avec piquage	Fitting, model double male, 3/4 BSP	Doppelnippel AG 3/4 BSP	Racor, tipo MM 3/4 BSP	1
23	552 429	Coude FF 3/4"	Elbow, model FF 3/4"	Winkelnippel IG 3/4"	Codo, tipo HH 3/4"	1
24	050 102 215	Raccord MM 3/4 BSP	Fitting, model double male, 3/4 BSP	Doppelnippel AG 3/4 BSP	Racor, tipo MM 3/4 BSP	2
25	903 130 508	Régulateur de pression	Pressure air regulator	Druckreduzierventil	Regulador de presión	1

Réglage / Adjustment / Einstellung / Ajuste

P1 = 6 bar max. / 87 psi

P2 = 1 → 5,5 bar / 14.5 → 80 psi

(air de puissance / power air / Arbeitsluft / aire de potencia)

P3 = 4 bar max. / 58 psi max.

(air de pilotage / pilot air / Steuerluft / aire de pilotaje)

Le régulateur (25) est pré-réglé en usine pour délivrer une pression de 4 bar max.

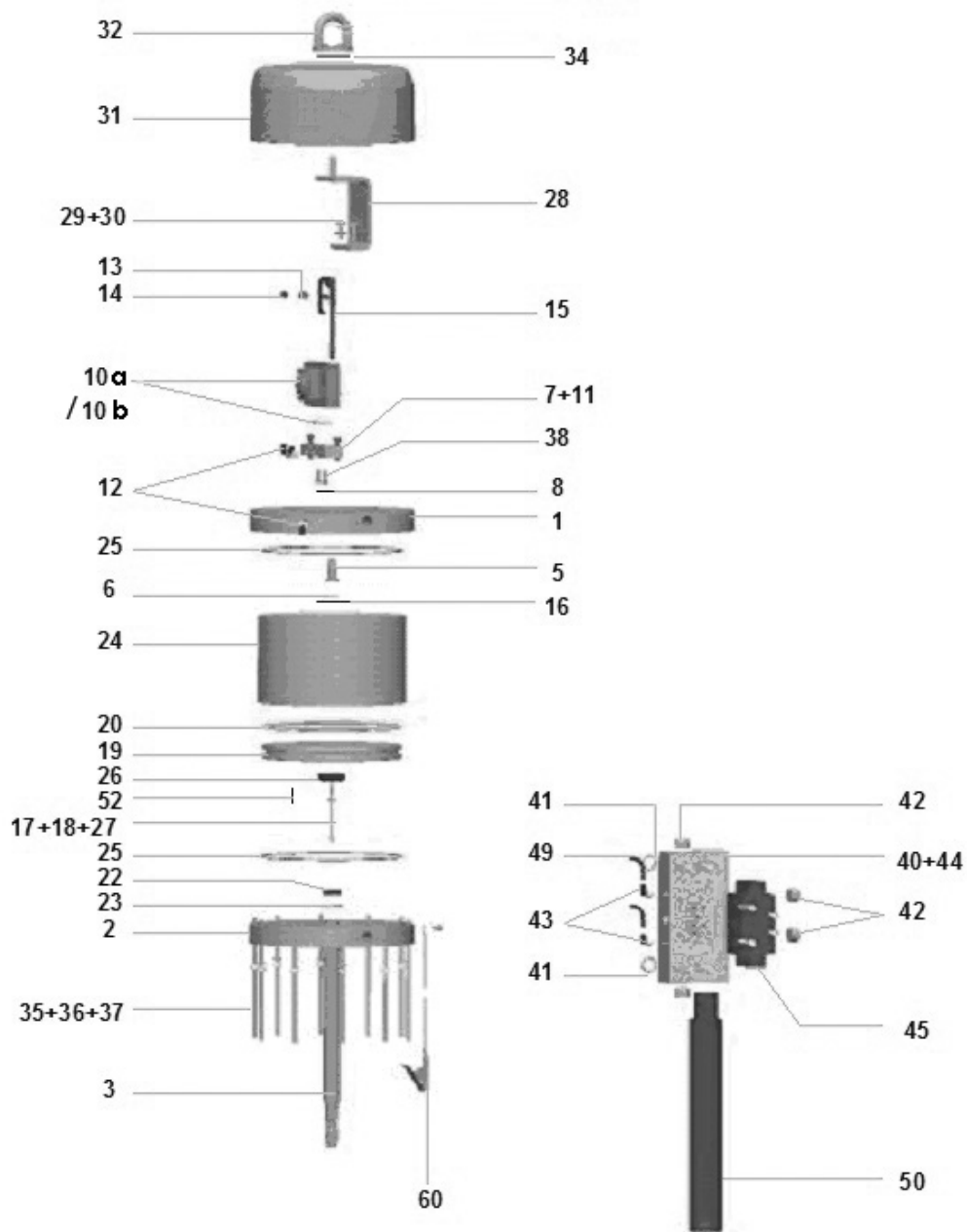
The regulator (25) is preset in the factory to give a maximum pressure of 4 bar / 58 psi.

Der Druckregler (25) ist werksseitig auf einen maximalen Steuerluftdruck von 4 bar eingestellt.

El regulador (25) se regula en la fábrica para aportar una presión máxima de 4 bar.

Doc. 573.174.050 Date/Datum/Fecha : 30/07/19 Annule/Cancela/ Ersetzt/Anula : 16/02/12	Modif. / Änderung : Mise à jour / Update / Aktualisierung / Actualización + # 044 630 400 → NC (ind. 10a / Pos. 10a) + # 144 630 720 (ind. 10b / Pos. 10b)	Pièces de rechange Spare parts list Ersatzteilliste Piezas de repuesto
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MOTEUR A AIR, modèle 5000-4	AIR MOTOR, model 5000-4	#
LUFT MOTOR, Modell 5000-4	MOTOR DE AIRE, tipo 5000-4	146.280.100



Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
1	046 280 001	Fond supérieur	Support, upper	Oberer Zylinderflansch	Fondo superior	1
2	146.280.110	Fond inférieur avec bague de guidage (rep. 22)	Lower support with bushing guide (ind. 22)	Unterer Zylinderflansch mit Führungsbuchse (Pos. 22)	Fondo inferior con anillo guía (ind. 22)	1
3	046 280 101	Tige d'accouplement	Coupling rod	Kopplungsstange	Eje de acoplamiento	1
5	044 570 106	Bague de guidage	Bushing guide	Führungsbuchse	Anillo guía	1
6	144 579 923	Bague R 8 bis (x 10)	Ring, R 8 bis (x 10)	O Ring, R 8 bis (Satz à 10 Stück)	Anillo R 8 bis (bolsa de 10)	1
7	046 271 002	Embase du bloc inverseur	Base, reversing-block	Grundplatte, Umsteuerblock	Base bloque inversor	1
8	109 420 257	Bague O Ring (x 10)	O Ring (x 10)	O Ring (Satz à 10 Stück)	Anillo O Ring (bolsa de 10)	1
*10 a	NC / NS	Bloc inverseur (voir Doc. 573.087.040)	Reversing block (refer to Doc. 573.087.040)	Umsteuerblock (siehe Dok. 573.087.040)	Bloque inversor (consultar Doc. 573.087.040)	1
*10 b	144 630 720	Bloc inverseur droit avec deux roulements (voir Doc. 573.087.040)	Right reversing-block with two bearings (refer to Doc. 573.087.040)	Rechter Umsteuerblock mit zwei Lagerbuchsen (siehe Dok. 573.087.040)	Bloque inversor derecho con dos rodamientos (consultar Doc. 573.087.040)	1
11	930 151 446	Vis CHc M 8x35	Screw, CHc M 8x35	Schraube M 8 x 35	Tornillo CHc M 8x35	2
12	905 120 905	Raccord coudé M 1/4 BSP - tuyau 4x6	Elbow, M 1/4 BSP - hose 4x6	Winkelanschluss AG 1/4" - Schlauch 4x6	Racor codo, M 1/4 BSP - tubería 4x6	3
13	146 199 902	Ressort (x 10)	Spring (x 10)	Feder (x 10)	Muelle (x 10)	1
14	044 570 131	Chape femelle	Linkage, female	Federhalterung	Unión hembra	1
15	044 570 900	Fourchette de commande	Fork assembly control	Umsteuerstange	Horquilla de mando equipada	1
16	902 202 002	Anneau de retenue Ø 24	Retaining ring Ø 24	Sicherungsring Ø 24	Anillo truarc Ø 24	1
17	046 180 003	Tige de pilotage	Rod, driving	Steuerstange	Eje de pilotaje	1
18	046 144 907	Ecrou	Nut	Mutter	Tuerca	1
*19	046 280 102	Piston moteur	Piston, air motor	Motorkolben	Pistón de motor	1
20	909 130 378	Joint de piston	Seal, piston	Kolbendichtung	Junta de pistón	1
23	909 420 114	Joint	Seal	Dichtung	Junta	1
*24	046 280 007	Cylindre moteur	Cylinder, air motor	Luftzylinder	Cilindro de motor	1
25	909 420 293	Joint de cylindre	Seal, cylinder	Zylinderdichtung	Junta de cilindro	2
26	NC / NS	Ecrou inférieur	Lower nut	Untere Mutter	Tuerca inferior	1
27	044 570 107	Butée	Stop	Anschlag	Tope	1
28	046 280 010	Support de cloche	Cover support	Glockenhalterung	Soporte de campana	1
29	933 011 337	Vis CHc M 10x25	Screw, CHc M 10x25	Schraube CHc M 10x25	Tornillo CHc M 10x25	2
30	963 040 021	Rondelle MN 10	Washer, MN 10	Scheibe 10	Arandela MN 10	2
31	046 280 012	Cloche	Cover	Glocke	Campana	1
32	91 422	Anneau de levage	Ring, cover	Hebering	Anillo de transporte	1
34	046 280 108	Rondelle	Washer	Scheibe	Arandela	1
35	044 710 007	Tirant moteur	Tie-rod, air motor	Stehbolzen	Tirante motor	10
36	963 040 019	Rondelle MN 8	Washer, MN 8	Scheibe MN 8	Arandela MN 8	10
37	953 010 019	Ecrou HM 8	Nut, HM 8	Mutter HM 8	Tuerca HM 8	10
38	933 151 277	Vis CHc M 6x20	Screw, CHc M 6x20	Schraube CHc M 6x20	Tornillo CHc M 6x20	2

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
40	046 280 009	Embase distributeur	Base, distributor	Grundplatte, Pneumatikventil	Base distribuidor	1
41	144 585 354	Joint d'embase (x 10)	Seal, base (pack of 10)	Dichtscheibe (Satz à 10)	Junta de la base (bolsa de 10)	2
42	906 333 105	Bouchon 3/4 BSP	Plug, 3/4 BSP	Blindstopfen 3/4"	Tapón 3/4 BSP	4
43	905 120 905	Raccord coudé M 1/4 BSP - tuyau 4 x 6	Elbow, M 1/4 BSP - hose 4 x 6	Winkelanschluss AG 1/4" - Schlauch 4x6	Racor codo M 1/4 BSP - tubería 4 x 6	2
44	930 151 548	Vis CHc M 6 x 50	Screw, CHc M 6 x 50	Schraube M 6 x 50	Tornillo CHc M 6 x 50	4
45	903 050 511	Distributeur ISO 5/2 - T3	Distributor ISO 5/2 - T3	5/2 Wege Pneumatikventil	Distribuidor, ISO 5/2 - T3	1
49	050 371 001	Tuyau 4x6 (long. 25 m)	Hose 4x6 / 5/32" x 1/4" (25 m / 984" length)	Schlauch 4 x 6 (Länge: 25 m)	Tubería 4x6 (25 m de largo)	1
*50	046 250 015	Silencieux	Silencer	Schalldämpfer	Silenciador	1
52	932 173 145	Vis M 6 x 10	Screw, M 6 x 10	Schraube, M 6 x 10	Tornillo M 6 x 10	1
60	901 180 024	Câble de mise à la terre (Lg. 5m) avec rondelle et vis	Cable ground (5 m / 197" length) with washer and screw	Erdungskagel (5 m) mit scheibe und Schraube	Cable de puesta a tierra (5m de largo) con arandela y tornillo	1

*	146 280 991	Pochette de joints moteur (ind. 6, 8(x3), 13, 20, 22, 23, 25(x2), 41(x2) + pochette de joints inverseur)	Package of seals, air motor (ind. 6, 8(x3), 13, 20, 22, 23, 25(x2), 41(x2) + package of seals, reversing-block)	Dichtungssatz für Luftmotor (beinhaltet Pos. 6, 8(x3), 13, 20, 25(x2), 41(x2), und den Dichtungssatz für Umsteuerblock)	Bolsa de juntas motor (ind. 6, 8(x3), 13, 20, 22, 23, 25(x2), 41(x2) + bolsa de juntas inversor)	1
*	146 280 996	Pochette de maintenance (ind. 5 + pochette de joints moteur + ind. 2, 4, 7, 8, 13 de l'inverseur)	Servicing kit (ind. 5 + package of seals, air motor + ind. 2, 4, 7, 8, 13 of the reversing- block)	Reparatursatz (beinhaltet Pos. 5 + den Dichtungssatz für Luftmotor + Pos. 2, 4, 7, 8, 13 für Umsteuerblock)	Bolsa de reparación (ind. 5 + bolsa de juntas motor + ind. 2, 4, 7, 8, 13 del inversor)	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.

Nota : Les pompes dont le numéro de série est > à 17 L 1064 sont équipées du bloc inverseur # 144.630.720. Ne monter l'ind. 2 (bague de guidage du bloc inverseur) que si votre bloc comporte un R.

Nota : The pumps with serial number is > to 17 L 1064 are fitted with the reversing-block # 144.630.720. Install ind. 2 (guide ring of the reversing-block) only if your reversing-block has R.

Hinweis: Die Pumpen mit der Fertigungsnummer > bis 17 L 1064 sind mit dem Umsteuerblock # 144.630.720 bestückt. Die Pos. 2 (Führungsbuchse des Umsteuerblocks) nur am Umsteuerblock mit R Markierung montieren.

Nota : Las bombas cuyo número de serie es > a 17 L 1064 tienen el bloque inversor # 144.630.720. Montar el ind. 2 (anillo guía del bloque inversor) sólo si su bloque tiene un R.

Nota : Pour rep. 49, préciser la longueur à la commande

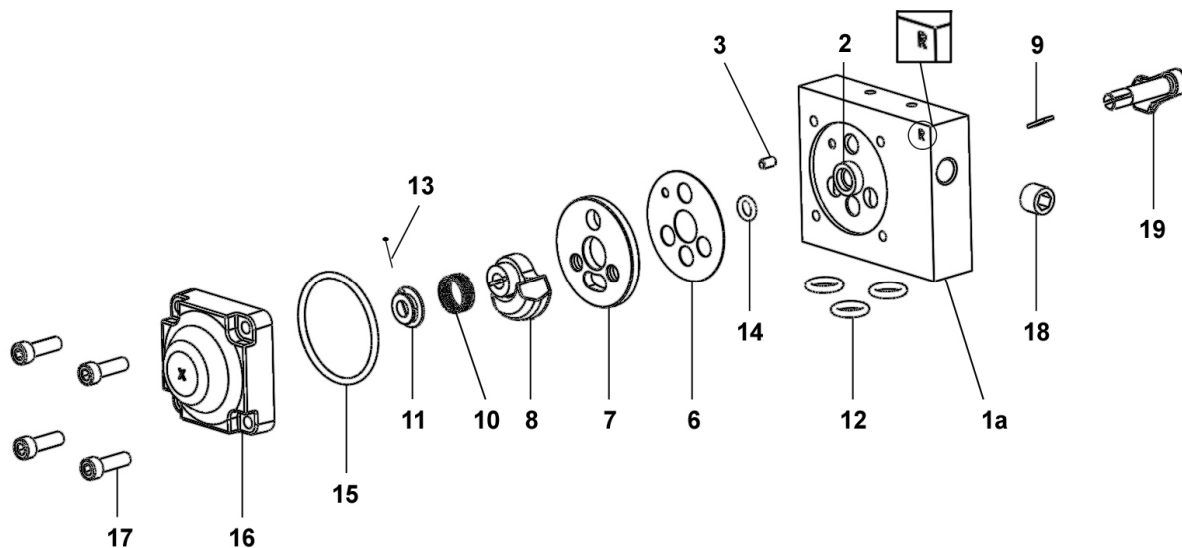
Nota : For ind. 49, specify the required length.

Hinweis : Für Pos. 49, muss die Länge angegeben werden.

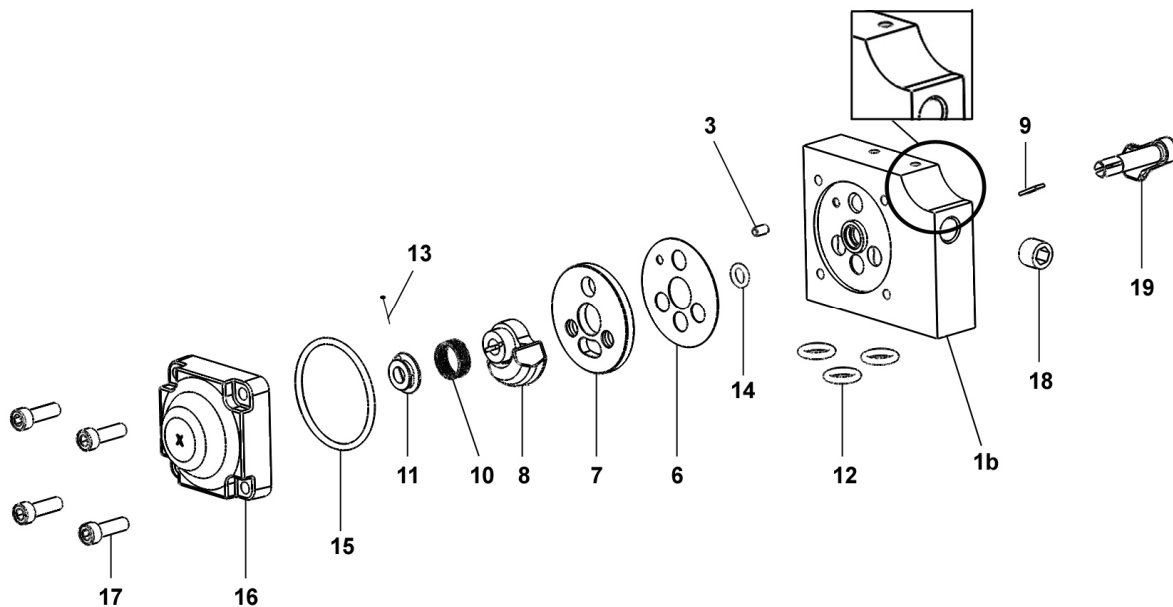
Nota : Para ind. 49, precise Vd. la longitud necesaria.

Doc. 573.087.040 Date/Datum/Fecha : 11/05/17 Annule/Cancela/ Ersetzt/Anula : 03/06/14	Modif. / Änderung : Mise à jour / Update / Aktualisierung / Actualización + 144.630.720	Pièces de rechange Spare parts list Ersatzteilliste Piezas de repuesto
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BLOC INVERSEUR	REVERSING-BLOCK	#
UMSTUEURBLOCK	BLOQUE INVERSOR	NC / NS



BLOC INVERSEUR DROIT AVEC DEUX ROULEMENTS	RIGHT REVERSING-BLOCK WITH TWO BEARINGS	#
RECHTER UMSTUEURBLOCK MIT ZWEI LAGERBUCHSEN	BLOQUE INVERSOR DERECHO CON DOS RODAMIENTOS	144.630.720



BLOC INVERSEUR	REVERSING-BLOCK	#
UMSTUEERBLOCK	BLOQUE INVERSOR	NC / NS

BLOC INVERSEUR DROIT AVEC DEUX ROULEMENTS	RIGHT REVERSING-BLOCK WITH TWO BEARINGS	#
RECHTER UMSTUEERBLOCK MIT ZWEI LAGERBUCHSEN	BLOQUE INVERSOR DERECHO CON DOS RODAMIENTOS	144.630.720

Pièces communes - Common parts - Gleiche Teile - Partes comunes

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*6	144 579 912	Joint de glace fixe (x 10)	Gasket seal (x 10)	Flachdichtung (10 x)	Junta de espejo fijo (x 10)	1
*7	046 170 508	Glace fixe	Base, fixed	Ventilplatte	Espejo fijo	1
*8	044 570 324	Glace mobile	Base, mobile	Ventilschieber	Espejo móvil	1
9	044 570 325	Clavette	Pin	Paßfeder (Keil)	Pasador	1
10	921 140 102	Ressort	Spring	Feder	Muelle	1
11	044 571 006	Butée de ressort	Stop, spring	Federführung	Tope de muelle	1
*12	144 579 922	Bague R 10 (x 10)	Ring, model R 10 (x 10)	O Ring R 10 (x 10)	Anillo, tipo R 10 (x 10)	3
*13	144 579 911	Goupille fendue (pochette de 10 goupilles + 1 butée ind. 11)	Pin (package of 10 pins + 1 stop ind. 11)	Splint (Satz à 10 Stück + 1 Führung Pos. 11)	Pasador (bolsa de 10 pasadores + 1 tope ind. 11)	1
*14	144 579 910	Bague R 6a (x 10)	Ring, model R 6a (x 10)	O Ring, R 6a (10 x)	Anillo, tipo R 6a (x 10)	1
*15	N C / N S	Joint de couvercle	Seal, cover	Deckeldichtung	Junta de tapa	1
16	144 630 415	Couvercle	Cover	Deckel	Tapa	1
17	933 151 277	Vis CHc M 6x20	Screw, model CHc M 6x20	Schraube, CHc M 6x20	Tornillo, tipo CHc M 6x20	4
18	906 333 102	Bouchon 1/4 BSP	Plug, model 1/4 BSP	Blindstopfen, 1/4 BSP	Tapón, tipo 1/4 BSP	1
19	046 170 510	Levier	Lever, control	Umsteuerhebel	Leva	1

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*	146 270 950	Pochette de joints (ind. 6, 12(x3), 14, 15)	Package of seals (ind. 6, 12(x3), 14, 15)	Dichtungssatz (bestehend aus Pos. 6, 12(x3), 14, 15)	Bolsa de juntas (ind. 6, 12(x3), 14, 15)	1
*	144 630 425	Pochette de maintenance glaces (ind. 7, 8)	Servicing kit - bases (ind. 7, 8)	Servicekit - Ventil (Pos. 7, 8)	Bolsa de mantenimiento - espejos (ind. 7, 8)	1

Pièces spécifiques - Specific parts - Spezifische Teile - Partes específicas

Pour / for / für / para # NC / NS

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*	144 630 410	Corps équipé	Block assembly, reversing	Umsteuerblock komplett	Cuerpo equipado	1
1a	N C / N S	▪ Corps	▪ Body	▪ Körper	▪ Cuerpo	1
2	N C / N S	▪ Bague de guidage	▪ Guide ring	▪ Führungsbuchse	▪ Anillo guía	1
3	N C / N S	▪ Goupille Ø 4 x 8	▪ Pin Ø 4 x 8	▪ Splint Ø4 x 8	▪ Pasador Ø 4 x 8	1
-	N C / N S	▪ Butée (collée sur corps ind.1a)	▪ Stop (glued on part ind. 1a)	▪ Anschlag (auf Körper geklebt ind.1a)	▪ Tope (pegado en cuerpo ind. 1a)	2
-	N C / N S	▪ Roulement à bille	▪ Ball bearing	▪ Kugellager	▪ Rodamiento de bolas	1

Pour / for / für / para # 144.630.720

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*	144 630 715	Corps équipé	Block assembly, reversing	Umsteuerblock komplett	Cuerpo equipado	1
1b	N C / N S	▪ Corps	▪ Body	▪ Körper	▪ Cuerpo	1
3	N C / N S	▪ Goupille Ø 4 x 8	▪ Pin Ø 4 x 8	▪ Splint Ø4 x 8	▪ Pasador Ø 4 x 8	1
-	N C / N S	▪ Butée (collée sur corps ind.1b)	▪ Stop (glued on part ind. 1b)	▪ Anschlag (auf Körper geklebt ind.1b)	▪ Tope (pegado en cuerpo ind. 1b)	2
-	N C / N S	▪ Roulement à bille	▪ Ball bearing	▪ Kugellager	▪ Rodamiento de bolas	2

* Pièces de maintenance préconisées.

* Preceding the index number denotes a suggested spare part.

* Bezeichnete Teile sind empfohlene Ersatzteile.

* Piezas de mantenimiento preventivas.

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N S : Denotes parts are not serviceable.

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

N S : no suministrado.

Nota : Ne monter l'ind. 2 (bague de guidage du bloc inverseur) que si votre bloc inverseur comporte un R.

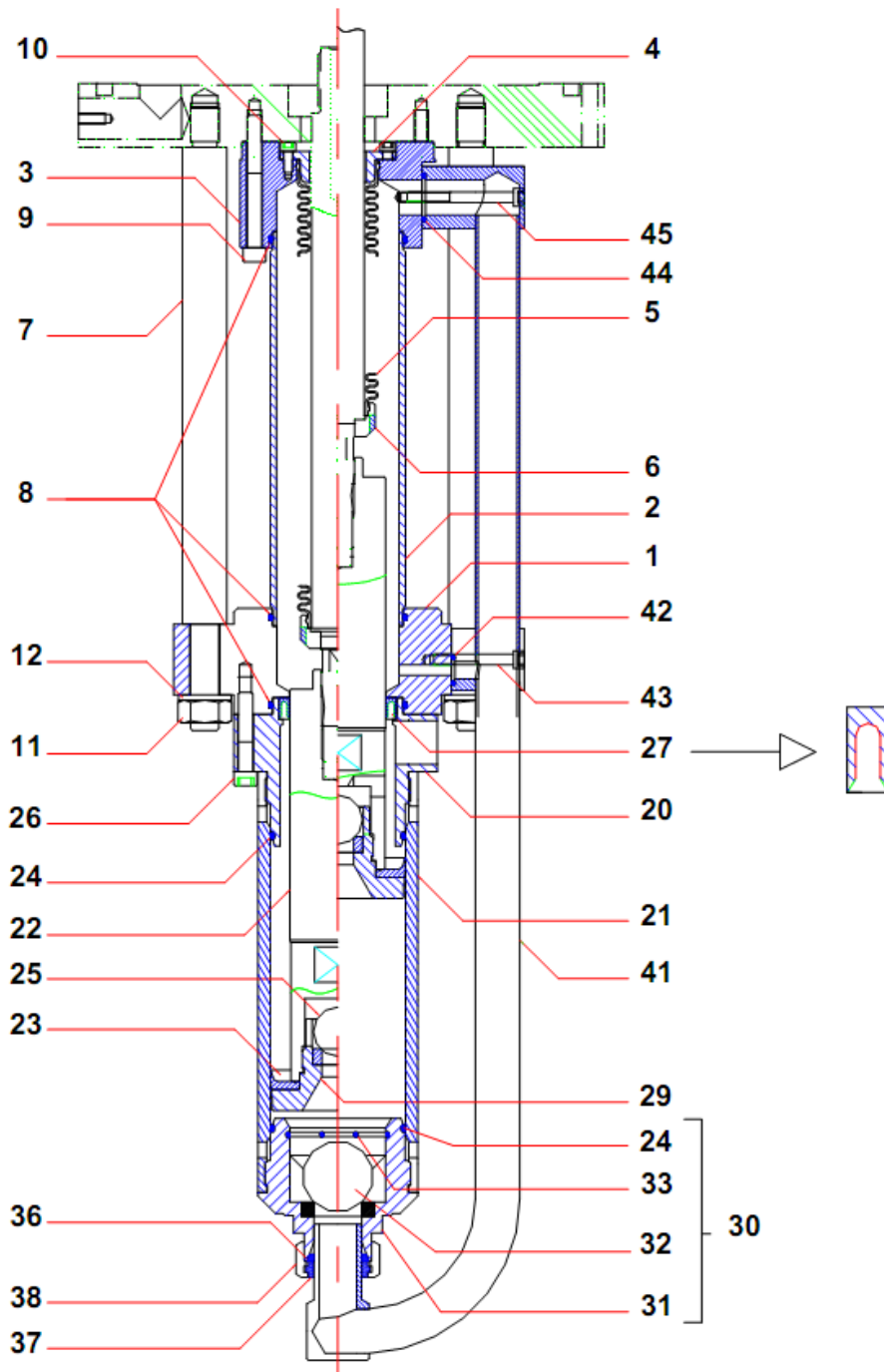
Nota : Install ind. 2 (guide ring of the reversing-block) only if your reversing-block has R.

Hinweis: Die Pos. 2 (Führungsbuchse des Umsteuerblocks) nur am Umsteuerblock mit R Markierung montieren.

Nota : Montar el ind. 2 (anillo guía del bloque inversor) sólo si su bloque inversor tiene un R.

Doc. 573.175.050 Date/Datum/Fecha : 09/02/21 Annule/Cancela/ Ersetzt/Anula : 14/08/19	Modif. / Änderung : + Ind. / Pos. 61, 64 # 144 990 130, + # 144 990 131	Pièces de rechange Spare parts list Ersatzteilliste Piezas de repuesto
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HYDRAULIQUE FLOWMAX®, modèle F440	FLOWMAX® FLUID SECTION, model F440
FLOWMAX® HYDRAULIKTEIL, Modell F440	HIDRÁULICA FLOWMAX®, tipo F440



HYDRAULIQUE FLOWMAX®, modèle F440 pour montage avec moteur 5000-4	FLOWMAX® FLUID SECTION, model F440 for mounting on the 5000-4 air motor	#
FLOWMAX® HYDRAULIKTEIL, Modell F440 für Montage mit Luftmotor 5000-4	HIDRÁULICA FLOWMAX®, tipo F440 para montaje con el motor 5000-4	144.990.200

HYDRAULIQUE FLOWMAX®, modèle F440 pour montage avec moteur 1000-4 ou 2000-4T	FLOWMAX® FLUID SECTION, model F440 for mounting on the 1000-4 or 2000-4T air motors	#
FLOWMAX® HYDRAULIKTEIL, Modell F440 für Montage mit Luftmotor 1000-4 oder 2000-4T	HIDRÁULICA FLOWMAX®, tipo F440 para montaje con el motor 1000-4 o 2000-4T	144.990.250

Pièces communes - Common parts - Gleiche Teile - Partes comunes

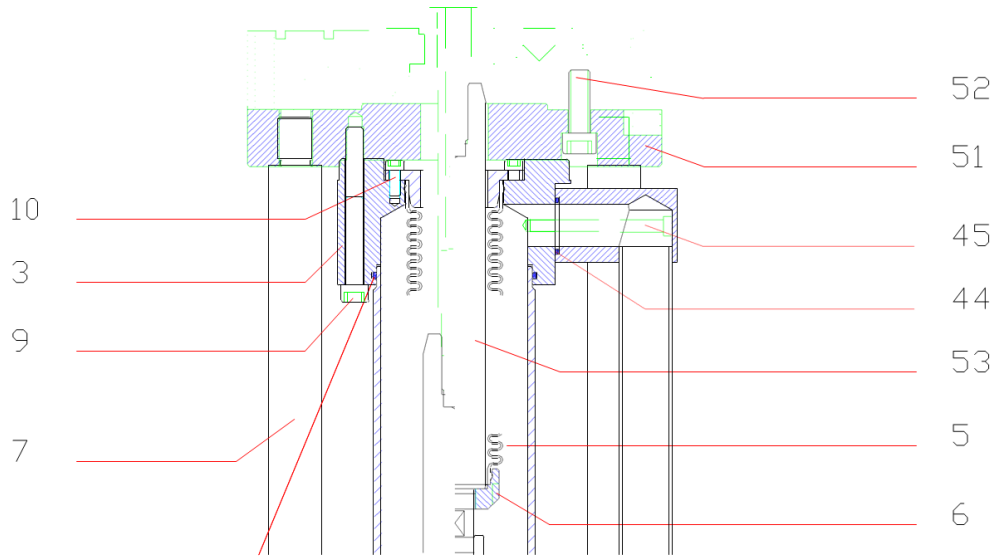
Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
1	044 990 011	Bride d'aspiration	Suction flange	Unterer Flansch	Brida de aspiración	1
2	044 990 012	Cylindre	Cylinder	Ansaugzylinder	Cilindro	1
3	044 990 013	Palier d'aspiration	Suction bearing	Oberer Flansch	Palier de aspiración	1
4	044 970 046	Bride soufflet	Flange, bellows	Faltenbalg-Flansch	Brida fuelle	1
*5	044 970 055	Soufflet	Bellows	Faltenbalg	Fuelle	1
6	044 990 211	Jupe	Skirt	Klemmstück	Faldón	1
7	044 990 016	Tirant d'accouplement	Coupling rod	Kupplungsstange	Tirante de acoplamiento	3
8	050 040 325	Joint PTFE	Seal (PTFE)	Dichtung PTFE	Junta (PTFE)	3
9	933 151 671	Vis CHc M 8 x 75	Screw, model CHc M 8 x 75	Schraube M 8 x 75	Tornillo, tipo CHc M 8 x 75	3
10	931 151 168	Vis CHc M 5 x 12	Screw, model CHc M 5 x 12	Schraube M 5 x 12	Tornillo, tipo CHc M 5 x 12	4
11	953 010 025	Ecrou HM 16	Nut, model HM 16	Mutter M 16	Tuerca, tipo HM 16	3
12	963 020 025	Rondelle ZU 16	Washer, model ZU 16	Scheibe 16	Arandela, tipo ZU 16	3
20	044 990 021	Bride de refoulement	Discharge flange	Druckflansch	Brida de expulsión	1
*21	044 990 022	Cylindre	Cylinder	Materialzylinder	Cilindro	1
*22	044 990 221	Piston	Piston	Kolben	Pistón	1
23	044 990 024	Joint coupelle (PEHD)	Cup seal (UHMW)	Kolbenmanschette (PEHD)	Junta copa (PEHD)	1
24	050 040 326	Joint (PTFE)	Seal (PTFE)	Dichtung (PTFE)	Junta (PTFE)	1
25	907 414 269	Bille Ø 27, inox 440C	Ball, model 27, stainless steel 440C	Kugel Ø 27, Edelstahl 440C	Bola, tipo Ø 27 de inox 440C	1
26	932 151 551	Vis CHc M 8 x 50	Screw, model CHc M 8 x 50	Schraube M 8 x 50	Tornillo, tipo CHc M 8 x 50	8
27	909 150 223	Joint GT	GT seal	Dichtung GT	Junta GT	1
29	044 990 025	Clapet de refoulement	Exhaust valve	Druckventil	Válvula de expulsión	1

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*30	144 990 030	Clapet d'aspiration équipé	Suction valve assembly	Ansaugventil komplett	Válvula de aspiración montada	1
31	044 990 031	▪ Corps de clapet avec siège carbure	▪ Suction valve body with carbide seat	▪ Ansaugventilkörper mit Karbide-Sitz	▪ Cuerpo de válvula con asiento de carburo	1
32	907 414 297	▪ Bille Ø 40, inox 440C	▪ Ball, model Ø 40, stainless steel 440C	▪ Kugel Ø 40, Edelstahl 440C	▪ Bola, tipo Ø 40 de inox 440C	1
33	044 990 032	▪ Jonc	▪ Stop ring	▪ Sicherungsring	▪ Anillo de retención bola	1
24	050 040 326	▪ Joint (PTFE)	▪ Seal (PTFE)	▪ Dichtung (PTFE)	▪ Junta (PTFE)	1
36	144 970 106	Joint (les 10)	Seal (pack of 10)	O-Ring (10 St.)	Junta (bolsa de 10)	1
37	044 970 107	Bague de serrage	Tightening ring	Klemmring	Anillo de apriete	1
38	049 595 306	Ecrou raccord M 38 x 150	Nut fitting, model M 38 x 150	Überwurfmutter M 38x1,5	Tuerca racor, tipo M 38 x 150	1
41	044 990 051	Tube de liaison	Fluid tube, attachment	Verbindungsrohr	Tubo de unión	1
42	129 489 902	Joint PTFE (les 10)	PTFE seal (x 10)	Dichtung PTFE (10 St.)	Junta PTFE (bolsa de 10)	1
43	933 151 523	Vis CHc M 6 x 45	Screw, model CHc M 6 x 45	Schraube M 6x45	Tornillo, tipo M 6 x 45	2
44	150 040 321	Joint PTFE (les 10)	PTFE seal (x 10)	Dichtung PTFE (10 St.)	Junta PTFE (bolsa de 10)	1
45	930 151 598	Vis CHc M 6 x 60	Screw, model CHc M 6 x 60	Schraube M 6x60	Tornillo, tipo M 6 x 60	2

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*	144 990 090	Pochette de joints (ind. 8 (x3), 23, 24 (x2), 25, 27, 32, 33, 36, 42, 44)	Package of seals (ind. 8 (x3), 23, 24 (x2), 25, 27, 32, 33, 36, 42, 44)	Dichtungssatz (beinhaltet Pos. 8 (x3), 23, 24 (x2), 25, 27, 32, 33, 36, 42, 44)	Bolsa de juntas (ind. 8 (x3), 23, 24 (x2), 25, 27, 32, 33, 36, 42, 44)	1
*	144 990 095	Pochette de maintenance (ind. 29, 30 + pochette de joints # 144 990 090)	Servicing kit (ind. 29, 30 + package of seals # 144 990 090)	Servicekit (beinhaltet Pos. 29, 30 und den Dichtungssatz # 144 990 090)	Bolsa de mantenimiento (ind. 29, 30 + bolsa de juntas # 144 990 090)	1

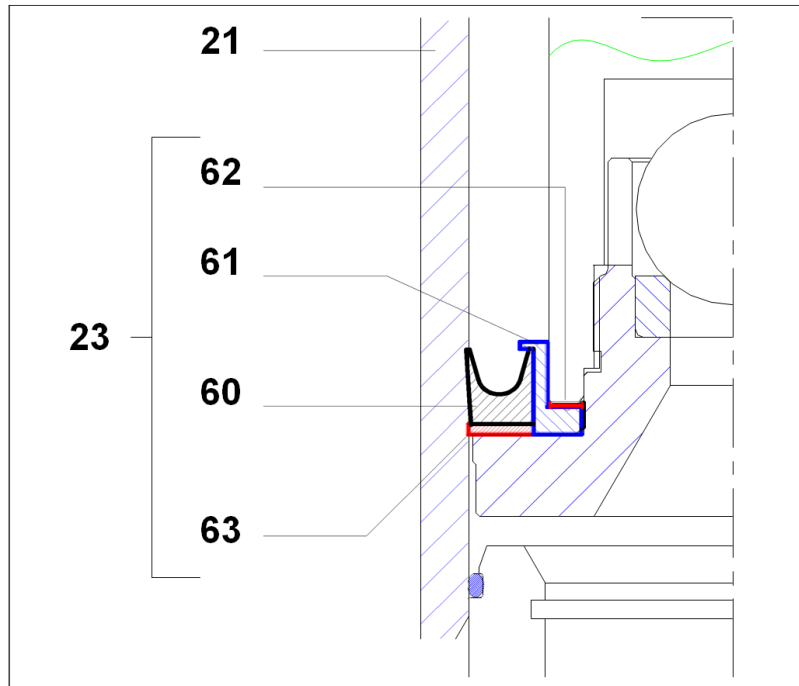
Pièces spécifiques - Specific parts - Spezifische Teile - Partes específicas

Pour / for / für / para # 144.990.250



Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
51	044 990 111	Bride d'accouplement	Coupling flange	Steuerflansch	Brida de acoplamiento	1
52	932 151 392	Vis CHc M 10 x 30	Screw, model CHc M 10 x 30	Schraube CHc M 10 x 30	Tornillo, tipo CHc M 10 x 30	4
53	044 990 261	Piston intermédiaire	Intermediate piston	Zwischenkolben	Pistón intermediario	1

**POUR PRODUIT HYDRO / FOR HYDRO MATERIAL / FÜR HYDROMATERIALEN
/ PARA PRODUCTO HIDRO**



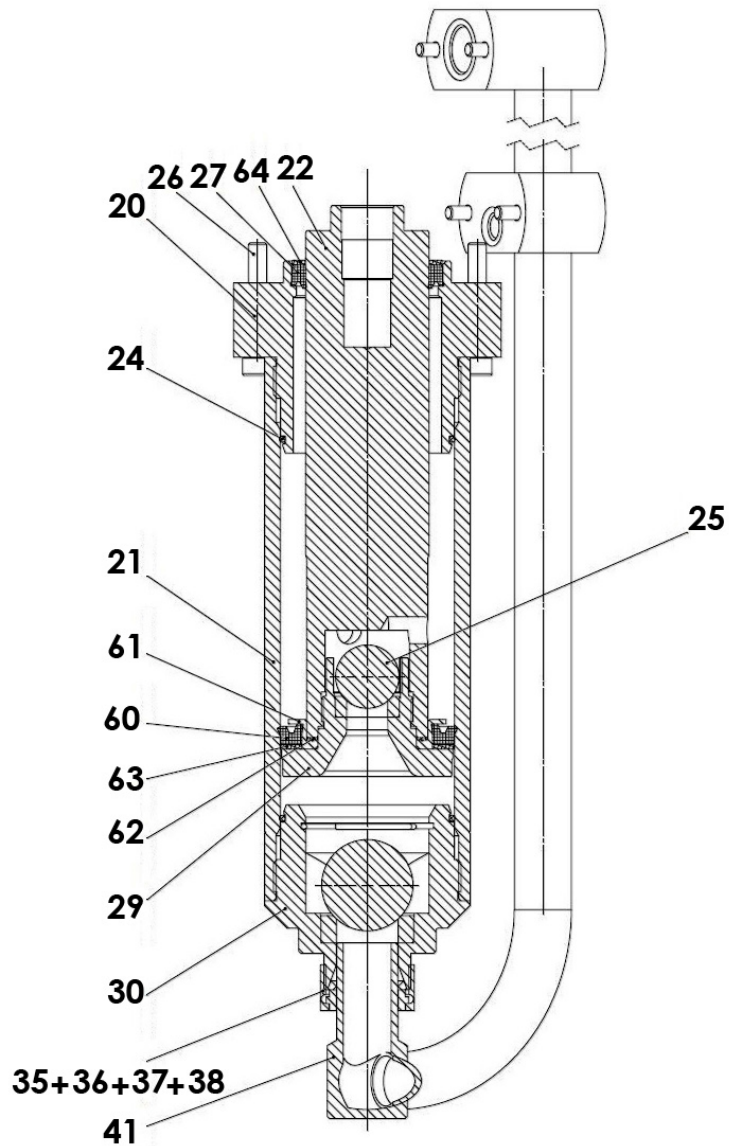
Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*-	144 990 120	Ensemble adaptation pour joints PU	Adaptation assembly for Polyurethane seals	Anpassungseinheit für PU-Dichtungen	Conjunto adaptación para juntas de Poliuretano	1
27	909 060 306	▪ Joint PU	▪ Polyurethane seal	▪ PU-Dichtung	▪ Junta Poliuretano	1
60	909 060 305	▪ Joint de piston (PU)	▪ Piston seal (Polyurethane)	▪ Kolbendichtung (PU)	▪ Junta de pistón (Poliuretano)	1
61	NC / NS	▪ Porte-joint	▪ Seal holder	▪ Dichtungshalterung	▪ Porta junta	1
62	NC / NS	▪ Joint (PTFE)	▪ Seal (PTFE)	▪ Dichtung (PTFE)	▪ Junta (PTFE)	1
63	NC / NS	▪ Bague anti-extrusion	▪ Anti-extrusion ring	▪ Anti-Extrusion Ring	▪ Anillo anti-extrusión	1

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*	144 990 130	Pochette de joints PU (ind. 8 (x3), 24 (x2), 25, 27, 32, 33, 36, 42, 44, 60, 61, 62, 63, 64)	Package of seals (Polyurethane) (ind. 8 (x3), 24 (x2), 25, 27, 32, 33, 36, 42, 44, 60, 61, 62, 63, 64)	PU-Dichtungssatz (beinhaltet Pos. 8 (x3), 24 (x2), 25, 27, 32, 33, 36, 42, 44, 60, 61, 62, 63, 64)	Bolsa de juntas Poliuretano (ind. 8 (x3), 24 (x2), 25, 27, 32, 33, 36, 42, 44, 60, 61, 62, 63, 64)	1
*	144 990 131	Pochette de maintenance - PU (ind. 29, 30 + pochette de joints # 144 990 130)	Servicing kit (Polyurethane) (ind. 29, 30 + package of seals # 144 990 130)	PU - Reparatursatz (Pos. 29, 30 + Dichtungssatz # 144 990 130)	Bolsa de mantenimiento Poliuretano (ind. 29, 30 + bolsa de juntas # 144 990 130)	1

- * Pièces de maintenance préconisées
- * Preceding the index number denotes a suggested spare part.
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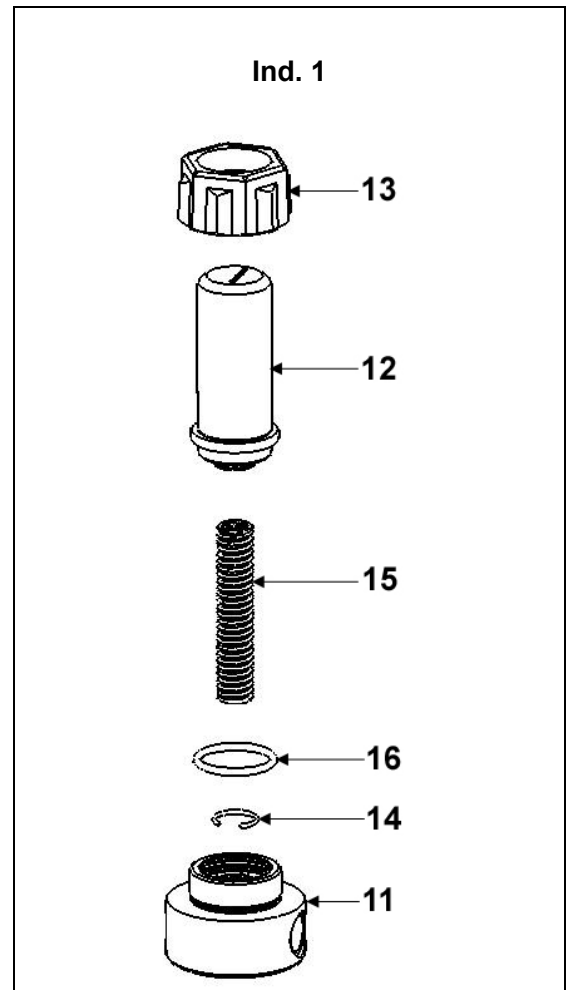
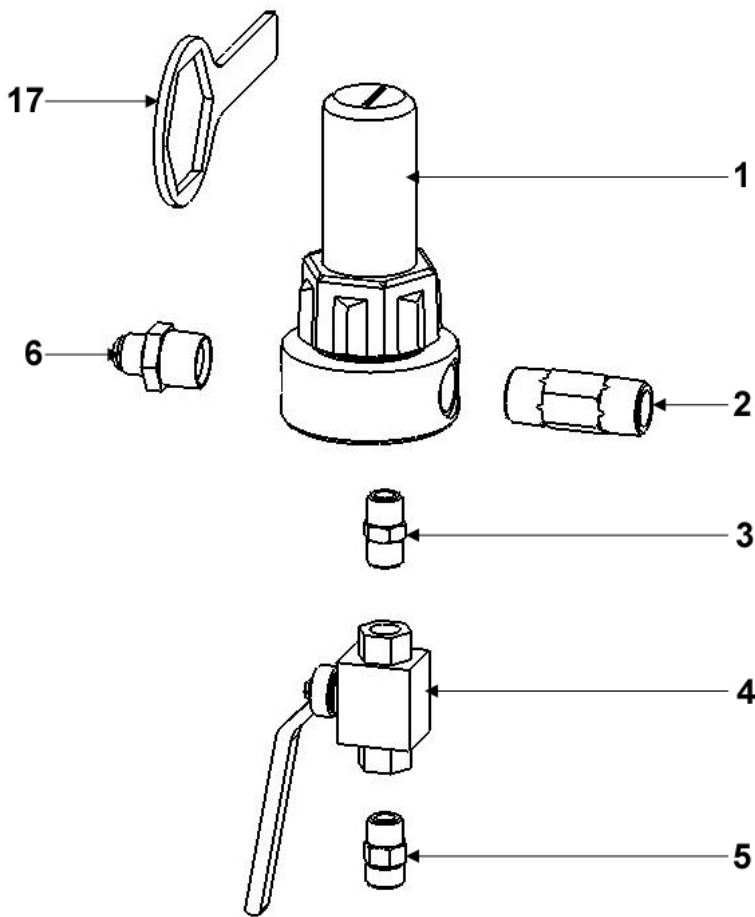
HYDRAULIQUE FLOWMAX® , modèle F440 avec joints PU pour montage avec moteur 5000-4	FLOWMAX® FLUID SECTION , model F440 with PU seals for mounting on the 5000-4 air motor	#
FLOWMAX® HYDRAULIKTEIL , Modell F440 mit PU-Dichtungen für Montage mit Luftmotor 5000-4	HIDRÁULICA FLOWMAX® , tipo F440 con juntas PU para montaje con el motor 5000-4	144.990.230



Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
20	044 990 021	Bride de refoulement	Discharge flange	Druckflansch	Brida de expulsión	1
*21	044 990 022	Cylindre	Cylinder	Materialzylinder	Cilindro	1
*22	044 990 221	Piston	Piston	Kolben	Pistón	1
24	050 040 326	Joint (PTFE)	Seal (PTFE)	Dichtung (PTFE)	Junta (PTFE)	1
25	907 414 269	Bille Ø 27, inox 440C	Ball, model 27, stainless steel 440C	Kugel Ø 27, Edelstahl 440C	Bola, tipo Ø 27 de inox 440C	1
26	932 151 551	Vis CHc M 8 x 50	Screw, model CHc M 8 x 50	Schraube M 8 x 50	Tornillo, tipo CHc M 8 x 50	8
27	909 060 306	Joint PU	Polyurethane seal	PU-Dichtung	Junta Poliuretano	1
29	044 990 025	Clapet de refoulement	Exhaust valve	Druckventil	Válvula de expulsión	1
*30	144 990 030	Clapet d'aspiration équipé	Suction valve assembly	Ansaugventil komplett	Válvula de aspiración montada	1
31	044 990 031	▪ Corps de clapet avec siège carbure	▪ Suction valve body with carbide seat	▪ Ansaugventilkörper mit Karbide-Sitz	▪ Cuerpo de válvula con asiento de carburo	1
32	907 414 297	▪ Bille Ø 40, inox 440C	▪ Ball, model Ø 40, stainless steel 440C	▪ Kugel Ø 40, Edelstahl 440C	▪ Bola, tipo Ø 40 de inox 440C	1
33	044 990 032	▪ Jonc	▪ Stop ring	▪ Sicherungsring	▪ Anillo de retención bola	1
24	050 040 326	▪ Joint (PTFE)	▪ Seal (PTFE)	▪ Dichtung (PTFE)	▪ Junta (PTFE)	1
*30	044 990 040	Raccord aspiration équipé	Suction fitting assembly	Anschlüsse für Ansaugventil	Racor aspiración montado	1
36	144 970 106	▪ Joint (les 10)	▪ Seal (pack of 10)	▪ O-Ring (10 St.)	▪ Junta (bolsa de 10)	1
37	044 970 107	▪ Bague de serrage	▪ Tightening ring	▪ Klemmring	▪ Anillo de apriete	1
38	049 595 306	▪ Ecrou raccord M 38 x 150	▪ Nut fitting, model M 38 x 150	▪ Überwurfmutter M 38x1,5	▪ Tuerca racor, tipo M 38 x 150	1
60	909 060 305	Joint de piston (PU)	Piston seal (Polyurethane)	Kolbendichtung (PU)	Junta de pistón (Poliuretano)	1
61	NC / NS	Porte-joint	Seal holder	Dichtungshalterung	Porta junta	1
62	NC / NS	Joint (PTFE)	Seal (PTFE)	Dichtung (PTFE)	Junta (PTFE)	1
63	NC / NS	Bague anti-extrusion	Anti-extrusion ring	Anti-Extrusion Ring	Anillo anti-extrusión	1
64	NC / NS	Bague anti-extrusion	Anti-extrusion ring	Anti-Extrusion Ring	Anillo anti-extrusión	1

Doc. 573.327.050 Date/Datum/Fecha : 15/11/18 Annule/Cancela/ Ersetzt/Anula : 10/10/11	Modif. / Änderung : Mise à jour / Update / Aktualisierung / Actualización	Pièces de rechange Spare parts list Ersatzteilliste Piezas de repuesto
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FILTRE PRODUIT HP, modèle 3/4 inox	HP FLUID FILTER, model 3/4 stainless steel
HP MATERIALFILTER, Modell 3/4 Edelstahl	FILTRO PRODUCTO AP, tipo 3/4 inox



FILTRE EQUIPÉ pour pompes AIRLESS®	EQUIPPED FILTER for AIRLESS pumps	# 155.581.400
AUSGERÜSTETER FILTER für AIRLESS-Pumpen	FILTRO EQUIPADO para bombas AIRLESS	

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
*1	155 581 450	Filtre nu inox (voir détail)	Bare filter, stainless steel (see detail)	Nackter Filter - Edelstahl (Siehe Detail)	Filtro solo, inox (consultar detalle)	1
2	055 581 401	Mamelon inox 3/4 NPS	Nippel 3/4 NPS, stainless steel	Rohnippel 3/4 NPS, Edelstahl	Pivote de centrado inox 3/4 NPS	1
3	905 240 002	Raccord inox MM 3/8 NPT	Fitting, double male, 3/8 NPT	Doppelnippel AG 3/8 NPT	Racor inox, MM 3/8 NPT	1
*4	903 090 220	Vanne HP FF 3/8 BSP	HP valve FF 3/8 BSP	Kugelhahn, IG 3/8 BSP	Válvula AP, HH 3/8 BSP	1
5	050 102 436	Raccord inox M 18 x 125 - M 3/8 BSP	Adaptor, stainless steel, double male 18x125 - 3/8BSP	Doppelnippel - Edelstahl AG 3/8 BSP - M 18x1,25	Racor inox, M 18 x 125 - M 3/8 BSP	1
6	905 210 515	Raccord inox M 3/4 NPT - M 3/4 JIC	Adaptor, stainless steel, double male, 3/4 NPT - # 8 JIC (3/4 JIC)	Doppelnippel Edelstahl 3/4 NPT - 3/4 JIC	Racor, inox M 3/4 NPT - M 3/4 JIC	1
*7	000 161 112	Tamis n° 12 (280 µ)	Screen n° 12 (280 µ - 55 Mesh)	Filterelement Sieb Nr. 12 (280 µ)	Tamiz n° 12 (280 µ)	1

FILTRE NU (sans tamis)	BARE FILTER (without screen)	# 155.581.450
NACKTER FILTER (ohne Sieb)	FILTRO SOLO (sin tamiz)	

Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
11	055 581 451	Embase 3/4	Base, model 3/4	Grundblock, Modell 3/4	Base, tipo 3/4	1
12	055 580 202	Cuve	Bowl	Filterglocke	Cubeta	1
13	055 280 002	Ecrou	Nut	Überwurfmutter	Tuerca	1
14	055 190 007	Jonc	Stop ring	Sicherungsring	Clips	1
15	055 190 005	Ressort	Spring	Feder	Muelle	1
*16	150 040 327	Joint (les 5)	Seal (pack of 5)	Dichtung (5 St.)	Junta (bolsa de 5)	1
17	049 030 018	Clé de démontage	Wrench	Schlüssel	Llave de desmontaje	1

* Pièces de maintenance préconisées.

* Preceding the index number denotes a suggested spare part.

* Bezeichnete Teile sind empfohlene Ersatzteile.

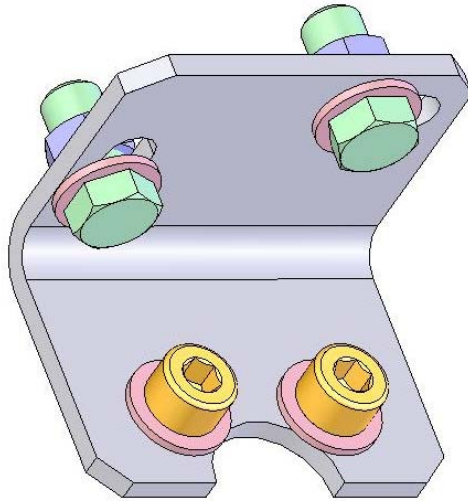
* Piezas de mantenimiento preventivas.

Ind. 7



Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
-	000 161 101	Tamis n° 1 (37 µ)	Screen n° 1 (37 µ)	Sieb Nr. 1 (37 µ)	Tamiz n° 1 (37µ)	1
-	000 161 102	Tamis n° 2 (77 µ)	Screen n° 2 (77 µ)	Sieb Nr. 2 (77 µ)	Tamiz n° 2 (77 µ)	1
-	000 161 104	Tamis n° 4 (99 µ)	Screen n° 4 (99 µ)	Sieb Nr. 4 (99 µ)	Tamiz n° 4 (99 µ)	1
-	000 161 106	Tamis n° 6 (168 µ)	Screen n° 6 (168 µ)	Sieb Nr. 6 (168 µ)	Tamiz n° 6 (168 µ)	1
-	000 161 108	Tamis n° 8 (210 µ)	Screen n° 8 (210 µ)	Sieb Nr. 8 (210 µ)	Tamiz n° 8 (210 µ)	1
7	000 161 112	Tamis n° 12 (280 µ)	Screen n° 12 (280 µ)	Sieb Nr. 12 (280 µ)	Tamiz n° 12 (280 µ)	1
-	000 161 115	Tamis n° 15 (360 µ)	Screen n° 15 (360 µ)	Sieb Nr. 15 (360 µ)	Tamiz n° 15 (360 µ)	1
-	000 161 020	Tamis n° 20 (510 µ)	Screen n° 20 (510 µ)	Sieb Nr. 20 (510 µ)	Tamiz n° 20 (510 µ)	1
-	000 161 030	Tamis n° 30 (750 µ)	Screen n° 30 (750 µ)	Sieb Nr. 30 (750 µ)	Tamiz n° 30 (750 µ)	1

OPTION - ON REQUEST - OPTIONEN - OPCIÓN



Ind	#	Désignation	Description	Bezeichnung	Denominación	Qté
-	155 190 105	Support filtre avec vis, rondelles et écrous	Mounting bracket with screws, washers and nuts	Filterhalterung mit Schrauben, Scheiben und Muttern	Soporte filtro con tornillos, arandelas y tuercas	1



**AIRMIX ® PUMP and
LOW-PRESSURE PUMP
air motor with reversing block
*PREVENTIVE MAINTENANCE***

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

www.sames-kremlin.com

■ PUMP

Make sure that the pump is clean and in good condition to increase equipment working life.

If the pump is an intensive™ one :

- Regularly clean the wetting-cup with "T" lubricant (this "T" lubricant will normally be coloured by the paint).
- Regularly clean the wetting-cup with solvent after having drained the lubricant (unscrew the plug on the upper flange).

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

Make sure that the suction strainer is clean and in good condition. Regularly clean it and change it if necessary.

Flush the pump as often as necessary, specially when spraying pigment-filled material.

**Whatever the case, when stopping the pump, always leave it filled with material.
For a short duration shutdown, if the flushing has not been carried out, leave the pump filled with material.
For a short duration shutdown, after flushing the pump, leave it filled with solvent.**

■ SPRAY GUN

Comply with the usual instructions of spray gun servicing (refer to spray gun instruction manual).

■ FILTER

If the pump is mounted with a filter at the fluid outlet, comply with the usual instructions of filter servicing (refer to filter instruction manual)



**AIRMIX ® PUMP and
LOW-PRESSURE PUMP
air motor with reversing block
*TROUBLESHOOTING***

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CAUSE	SOLUTION
The pump does not start.	Check the pump air supply.
Priming trouble : → Air is always coming out from the spray gun. → Air (or material) does not come out from the spray gun.	Be sure that the spray gun is fully opened and air evacuated through this one. Air intake at the fitting or at the suction rod. Check the pump valves. If a valve is stucked by dry paint, it can be unsticked without disassembling it. Blow air pressure directly by suction fitting.
The pump does not stop at once when shutting off the spray gun : → The pump stops only on down stroke. → The pump stops only on up stroke.	Check exhaust valve or valve seal. Check suction valve or upper cartridge.
The pump does not reverse.	Check spring of the air motor reversing block. Lubricate reversing-block with HP 150 oil. Check is there is pilot air (depending on air motor model).
On intensive™ pump, the lubricant into the cup is fastly coloured.	Check the upper packing (tighten the cup or change seals if it is necessary).
On FLOWMAX ® pump, leakage of fluid at the bottom of the air motor.	Check bellow.
Spraying trouble.	Refer to spray gun instruction manual.
Decrease of material flow.	Refer to filter instruction manual.



**AIRMIX ® PUMP
and LOW-PRESSURE PUMP
air motor with reversing block
*OPERATING PRINCIPLE AND START-UP***

TRANSLATION FROM THE ORIGINAL MANUAL

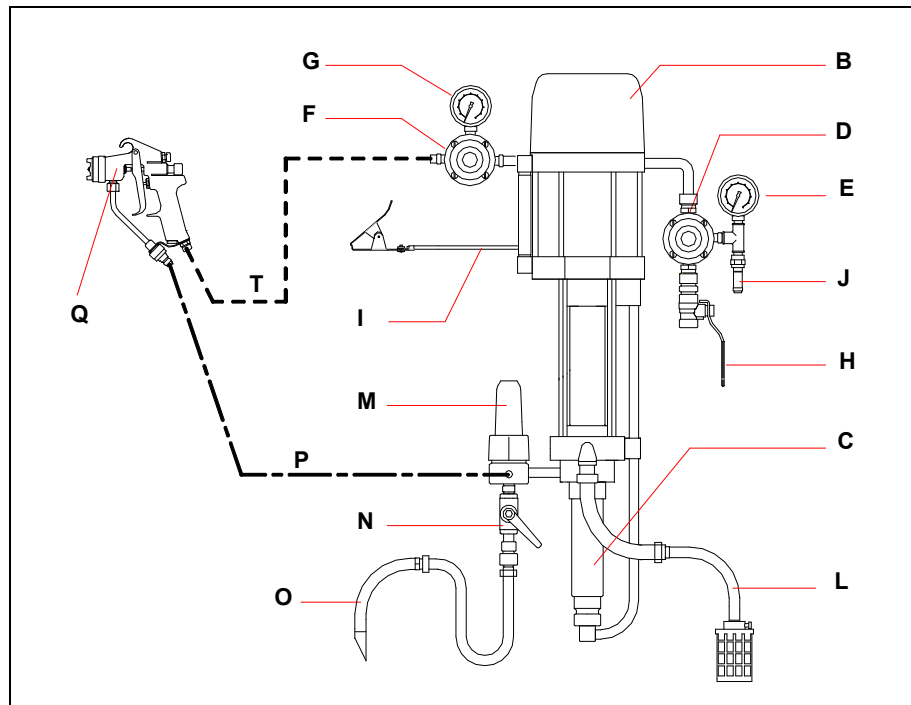
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FLOWMAX® PUMP



Captions :

A	Intensive™ or FLOWMAX® pump (B + C)	L	Suction rod (depending on version)
B	Air motor	M	Accumulator filter (depending on version)
C	Fluid section	N	Drain valve (depending on version)
D	Air regulator "MOTOR AIR"	O	Drain rod (depending on version)
E	Gauge	P	HP Fluid hose
F	Air regulator "GUN AIR" (depending on version)	Q	Spray gun
G	Gauge (depending on version)	R	"T" lubricant (1/4 l / 0.07 US gal) (only for intensive™ pump)
H	Air inlet valve	S	Wetting-cup (only for intensive™ pump)
I	Ground	T	Air hose (static conductor)
J	Discharge valve		

(For specific installation, please contact your SAMES KREMLIN representative).

Nota : If the pump is equipped with an accumulator filter (M), the filter is supplied with a stainless steel screen n° 6 (filtration size : 168 microns or 85 mesh). The screen is recommended for the use of an AIRMIX gun fitted with a nozzle model n° 6. If the fluid spraying is carried out by means of an other nozzle, choose an other screen (refer to the filter instruction manual). Adjust the screen to the application.

Start up procedure :

- 1 - Ground the pump.
- 2 - **If the pump is a intensive™ one, fill up the wetting-cup (S) with "T" lubricant (R) or with an appropriate solvent.**
- 3 - Unscrew the air regulators (D and F).
- 4 - Interconnect the air equipment with the air pressure network (clean air - Pressure < 6 bar / 87 psi). Install a water drop, model 3/4" (or model 3/8" if the pump is equipped with an air motor, model 500/4), if it is necessary.
- 5 - Connect all the hoses, air hose and fluid hose (P), as well as the spray gun (Q).
Nota : Comply with the diameters of hoses recommended in the specifications of the pump.
- 6 - Remove the nozzle from the spray gun.

■ FLUSHING WITH SOLVENT

- 7 - Immerse suction rod (L) and the drain rod (O) into the material container.
- 8 - Open the air shut off valve (N).
- 9 - Open the valve (H) of the pump air equipment to supply the air motor.
Nota : If the pump air motor is a 5000 version, it needs pilot air to operate. The pump air equipment supplies pilot air to the air motor. The air supply pressure is adjusted previously in the factory to 4 bar / 58 psi maximum.
- 10 - Increase **progressively** the air regulator (D) so that the pump runs slowly (Pressure between 0.5 to 1 bar / 7.25 to 14.503 psi).
- 11 - Observe the drain (O); air bubbles come out from it. When bubbles no longer come out from it, shut off the drain valve (N).

■ PRIMING WITH MATERIAL

- 12 - Remove the suction rod (L) and the drain rod (O) from the material container and immerse them in a solvent filled container.
- 13 - Open the drain valve (N), wait until the material flows out regularly, then shut off the drain valve (N).
- 14 - Point the spray gun towards the material container and trigger the spray gun until the material flows out regularly.

■ WORK

- 15 - Reinstall the ring and the aircap on the spray gun.
- 16 - Adjust air regulator (D) to obtain the appropriate material pressure and flow rate.
- 17 - **Gradually** open the air regulator (F) to adjust the spraying air to obtain the required spray pattern.

Nota : Some of these pumps are not equipped in the intensive™ version with the air regulator (F).

A spraying air kit can be mounted on the pump air equipment in order to supply compressed air to the spray gun if it is necessary.

2-2 PUMP SUPPLIED IN FILLING (CIRCULATING)

Interconnect the pump fluid inlet with the circulating supply hose and start up the pump as it is specified previously.

If the pump is a FLOWMAX® one :

WARNING:

- **Fluid section filling pressure** : 2 bar / 29 psi maximum
- **WARNING : Do not create overpressure**
- **NEVER use** the pump when **an isolating gate on the supply circuit** (upstream from the FLOWMAX® fluid section) is shut : **it would damage the bellows.**
- **Do not install** a material regulator on the supply circuit or any arrangement that could perform as a non-return valve.

3. SHUTDOWN AT THE END OF THE WORK

▪ SHORT DURATION SHUTDOWN

- 1 - Decrease the material pressure of air regulator (D) until reading **0 bar / 0 psi** on the gauge (E).
- 2 - Trigger the spray gun to depressurize the system.
- 3 - Unscrew the spray gun air regulator (F) or disconnect the spray gun air inlet.
- 4 - Remove the aircap from the spray gun, (aircap and nozzle for Airmix ® spray gun) and soak it into solvent.

▪ LONG DURATION SHUTDOWN

- 1 - Decrease the air regulator (D) until reading **1 bar / 14.503 psi** on gauge (E).
- 2 - Unscrew the spray gun air regulator (F) or disconnect the spray gun air inlet.
- 3 - Remove the spray gun aircap, (aircap and nozzle for AIRMIX ® spray gun) and soak it into solvent.
- 4 - Open the drain valve. The pump must operate slowly. If the speed is too high, decrease the air regulator (D) pressure.
- 5 - Remove the suction rod and the drain rod from the material container and immerse them in a solvent-filled container. Take all the appropriate precautions in the presence of flammable solvents.
- 6 - When the solvent flows out regularly, close the drain valve.
- 7 - Point the spray gun towards the material container and press the gun trigger. When the solvent flows out, point the spray gun towards the recovery container.
- 8 - When the solvent flows out, release the spray gun trigger.
Nota : If the pump is a intensive™ one, release the spray gun trigger when the pump is in a low position. To prevent from damaging the seals when starting the pump, the piston must be immersed into solvent.
- 9 - Fully unscrew the air regulator (D) and shut off the main compressed air valve (valve H).
- 10 - Press the spray gun trigger to decompress the hoses. Therefore, the pump and the hose remain filled with solvent at the atmospheric pressure

4. SAFETY DEVICE

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

A relief-valve (setting : 6.5 bar / 94 psi) is fitted on the pump air motor - thus protecting this one from an overpressure which could damage it.



FLOWMAX® PUMP

20F440

TECHNICAL FEATURES

TRANSLATION FROM THE ORIGINAL MANUAL

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1. DESCRIPTION

- Air operated piston pump with a bellows seal fluid packing for high output
- Low maintenance and ease of use. Use without lubrication

Designed for :

- Supplying one or several spray guns
- Water-based or solvent-based paints
- Circulating

2. TECHNICAL FEATURES

Motor type5000-4
 Body pump type.....F440
 Theoretical pressure ratio20/1

Wetted parts :

Hard chrome stainless steel
 Stainless steel, carbide

Tightness packings :

Bellows : polyethylene
 Upper fixed : GT seal (polyethylene) or PU
 Lower, mobile : polyethylene

Air motor stroke	100 mm	4"
Air motor section	490 cm ²	76 sq.in
Fluid section	22 cm ²	3.41 sq.in
Delivery per cycle	440 cm ³	15,5 oz
Number of cycle	2,3 per liter	8.6 per gallon
Flow (20 cycles)	8,8 l	2.33 US gal
Maximum air operating pressure	6 bar	88 psi
Maximum discharge pressure	120 bar	1740 psi
Weighted sound pressure (LAeq)	85 dBa	85 dBa
Maximum operating temperature	60° C	140° F

Weight : Wall mounted pump 66 kg / 145.5 lb

▪ FITTINGS

		Bare pump	Pump assembly
Air	Inlet	F 3/4 BSP (vanne)	F 3/4 BSP (valve)
Fluid	Inlet	F 1" BSP	Fitting MM 1" - 38x150 + Suction rod (fitting F 38x150)
	Outlet	F 3/4 NPS	-

▪ HOSES WITH FITTINGS

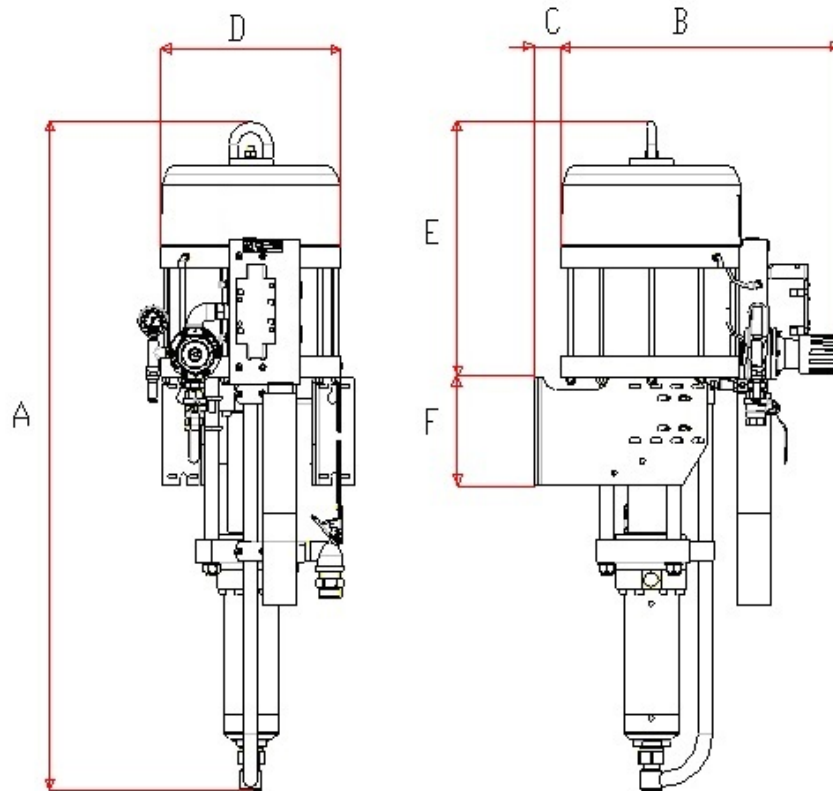
Pump air supply hose (minimum Ø for a 5m / 16.5 ft length) :

Ø 20 mm / 3/4 " dia.

HP fluid hose (pump fluid outlet) :

minimum ID 9,52 mm / 3/8 " dia.

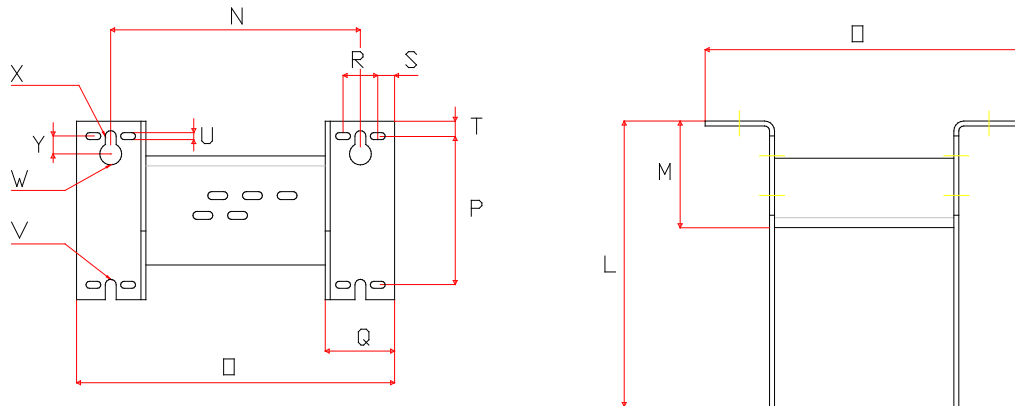
▪ **DIMENSIONS**



WALL MOUNTED BRACKET OF THE PUMP

FRONT VIEW

ABOVE VIEW



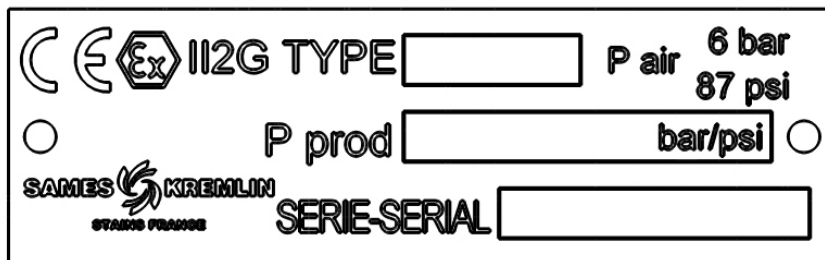
Ind.	mm	"	Ind.	mm	"	Ind.	mm	"
A	1120	44.09	B	510	20.07	C	44	
D	Ø 300	Ø 11.81	E	414	16.30	F	180	7.08
L	288	11.34	M	107.5	4.23	N	251	9.88
O	321	12.64	P	150	5.90	Q	70	2.75
R	35	1.38	S	17	0.67	T	15	0.59
U	7 x 15	0.27 x 0.59	V	Ø 11	Ø 0.43 - 7/16	W	Ø 22	Ø 0.87 - 7/8
X	Ø 11	Ø 0.43 - 7/16	Y	18	0.71			

3. INSTALLATION

The pumps are designed to be installed in a spray booth.

■ DESCRIPTION OF THE LABEL MARKING

Marking in accordance with the ATEX regulation

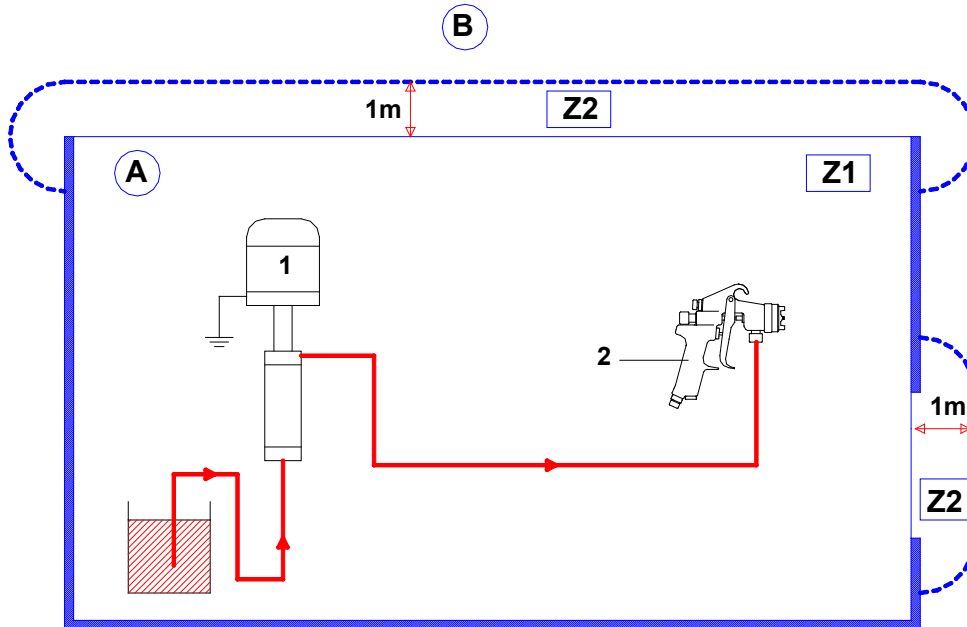


SAMES KREMLIN STAINS FRANCE	Name and address of the manufacturer
TYPE xx	Pump model
CE Ex II 2 G	CE : European conformity Ex : For use in explosive area II : group II 2 : class 2 G : gas Surface equipment meant to an area where explosive atmospheres due to gas, vapours, mists are liable to appear from time to time in usual operating.
P prod : xx bar / xx psi	Maximum fluid pressure at the pump outlet
P air : 6 bar / 87 psi	Air supply maximum pressure of the pump motor
Serie / Serial	Number given by SAMES KREMLIN. The 2 first numbers indicate the manufacturing year.

■ TEMPERATURE CLASS

Temperature class	Maximum surface temperature
T3	191.4°C / 375.8 °F

■ INSTALLATION INSTRUCTIONS



Ind.	Description
A	Explosive area area 1 (Z1) or area 2 (Z2) : spray booth
B	Non explosive area

Ind.	Description
1	Pump
2	Spray gun



The 1 m / 39.37" distance indicated in these diagrams is given for information purposes only and hold harmless to SAMES KREMLIN. The user is responsible for the extraction and conditioning of the painting area where the equipment is used, for working conditions (refer to EN 60079-10 standard). The 1 m / 39.37" distance may be modified if trials carried out by the user deem this necessary.



NB: Choose the appropriate pump to ensure that the working pressure supplied is suitable for the selected gun.