



# SWISSLINE

INDUSTRY RANGE



# PERFORMANCE, PROCESS SECURITY AND EFFICIENCY: MOTOREX SWISSLINE

In recent years, the metal-working industry has been defined by a pronounced drive in innovation. With state-of-the-art materials, increasingly complex machining processes, groundbreaking tools and highly efficient machining centres, the entire branch now operates in completely new dimensions of quality and efficiency. At the same time, costs also have to be reduced and the effects on people and the environment minimised wherever possible. Right in the centre of this area of conflict, machining fluids and liquid materials that deliver maximum performance around the clock are in use behind the scenes.

With their core competence in industrial lubrication technology, MOTOREX AG has been a top choice for both small businesses and global corporations for decades. Thanks to close cooperation with machine and tool manufacturers in MOTOREX Synergy Projects, each MOTOREX product is packed with valuable practical expertise. This is reflected in highly innovative solutions such as PMC® technology (precious metal catalyst) and Vmax technology, whilst the "Swiss Made" label guarantees top quality at all times.

This brochure contains the most important product groups in the comprehensive MOTOREX SWISSLINE range. Your MOTOREX partner will be happy to help if you require any further information or suggestions for your lubrication needs.

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Miscible, high-performance metal-working fluids for all applications.



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Pioneering, universal grinding oils and metal-working fluids.



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The perfect solution for all areas of the spindle system – long-life spindle oils and coolants.



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MOTOREX SPRAYS

The spray solution for all applications.



# SWISSCOOL METAL-WORKING FLUIDS

All MOTOREX SWISSCOOL products are distinguished as universal, miscible metal-working fluids with an incredibly high cutting performance. Above-average stability combined with excellent wettability ensures optimum cooling and lubrication with soft or hard water. A durable protective film also offers long-term protection against corrosion for machines, tools and workpieces.

MOTOREX thus meets the requirements for the efficient, cost-effective machining of all metal materials, plastics and even aluminium alloys. SWISSCOOL metal-working fluids are ideally suited to drilling, turning, milling and grinding applications on modern CNC machining centres with internal cooling, not to mention conventional machine tools from all manufacturers.

#### Advantages of MOTOREX SWISSCOOL

- High performance
- Low consumption
- Compatibility with man and machine
- Universal use
- Safety and adherence to applicable legal regulations
- Simple handling and long service life
- Reduction of production costs



This 3500 kg impeller made from durable CrNiMo134 has been perfectly machined using with PMC® technology.

#### SWISSCOOL MAGNUM UX METAL-WORKING FLUIDS

High-performance, universal metal-working fluid

SWISSCOOL MAGNUM UX are universal, miscible metal-working fluids with an extremely high performance. Above-average stability combined with excellent wettability ensures optimum cooling and lubrication, even with very hard water.

- Can be used in soft to very hard water
- High emulsion stability
- Very good skin friendliness
- Low foaming tendency
- Low disposal costs thanks to long-term use
- Complies with TRGS 611 requirements
- Chlorine free

#### SWISSCOOL PMC® METAL-WORKING FLUIDS

Universal, miscible high-performance metal-working fluid with PMC® technology

SWISSCOOL PMC® are miscible, universal, high-performance metal-working fluids which include the pioneering PMC® technology from MOTOREX. By combining highly sophisticated base oils with innovative PMC® additives, a constant performance at the highest level can be achieved.

- PMC® technology (precious metal catalyst) with a biostatic effect enables sustained stability of the metal-working fluid and an extended service life
- Free of harmful substances
- Chlorine free

- Highest levels of compatibility with skin, machines and the environment
- Versatile use in terms of materials, tools and machining processes
- Low foaming tendency with exceptional corrosion protection
- Adheres to numerous biocide directives and guidelines (Switzerland: VBP/01.07.2012, EU: 98/8 EC in accordance with Biocide Directive 528/2012 EC)
- Complies with TRGS 611 requirements and EU biocide regulations applicable from 2014

# (i) TechTip

#### **HOW MOTOREX PMC® TECHNOLOGY WORKS**

PMC technology uses encapsulated silver compounds in a biocompatible matrix. Put simply, precious metal particles release silver when needed, thus creating inhospitable conditions for micro-organisms. The metal-working fluid thus remains in biostatic balance, meaning the growth of bacteria and fungi is seriously restricted and their metabolism is significantly reduced. As the growth rate of bacteria in this dormant state is very small, endotoxin exposure is also reduced to a minimum. This benefits both staff working on the machine and also the end product – such as implants, for example. As the precious metal always remains a precious metal, the catalytic effect does not weaken over time. This allows for an extremely economical, extended metal-working fluid life.







## SWISSCUT CUTTING OILS

With the development of the pioneering SWISSCUT cutting oil range, MOTOREX has made an important contribution towards a performance-oriented production process. This is not only the work of the lubrication technology specialists and engineers at MOTOREX – it is the result of the Synergy Project launched by MOTOREX working in close cooperation with machine manufacturers and workshops. Each SWISSCUT cutting oil now contains more experience and expertise than ever before, such as the unique MOTOREX Vmax technology, for example.

SWISSCUT cutting oils from MOTOREX open up whole new dimensions in all production sequences. In most applications, the most varied materials – such as light metals and non-ferrous metals, high-alloyed steels, titanium, implant steels and co-balt-chromium alloys – can be machined using the same cutting oil without making any compromises. SWISSCUT machining fluids are extremely durable and have excellent wear limits, even at extreme temperatures.

#### **Advantages of MOTOREX SWISSCUT**

- Exceptional performance
- Low consumption
- Compatibility with man and machine
- Universal use
- Safety and adherence to applicable legal regulations
- Top marks in medical technology and uncomplicated validation
- Simple handling and long service life
- High ageing resistance
- Reduction of production costs



Artificial hip joint made from an innovative special alloy.

#### SWISSCUT ORTHO CUTTING OILS

Universal, high-performance cutting oil

SWISSCUT ORTHO cutting oils have been developed according to the strictest requirements for use in medical technology. Different products which correspond exactly to the widest possible range of customer requirements and performance classes can then be derived. ORTHO NF-X can be described as an absolute first in modern manufacturing technology. This universal cutting oil is ideally suited for use with high-alloyed steels, non-ferrous metals and aluminium. It eliminates the need for various costly operations, such as separate production lines for mixed processing and pre-washing non-ferrous workpieces. The Vmax technology developed by MOTOREX is integrated in ORTHO NF-X, thus also enabling optimised cutting data to be generated for all materials and shorter workpiece processing times.

SWISSCUT ORTHO is recommended by leading machine manufacturers and corresponds to the negative\* lists from Bosch and DaimlerChrysler, together with VDA guidelines.

#### Advantages of ORTHO cutting oils:

- Vmax technology
- Universal cutting oils for all materials
- Significantly extended tool life
- Optimum workpiece surface finishes
- Cutting data can be adjusted optimally
- Very friendly to skin
- Low evaporation
- Extremely cost effective

#### SWISSCUT MICRO LUBRICANTS

Minimum quantity lubricants for high-pressure spray systems

SWISSCUT MICRO are minimum quantity lubricants (MQL) that are ideally suited for use in high-pressure spray systems. With only a few products, the SWISSCUT MICRO range covers the full range of applications and materials. The products are based on high-quality base fluids and special additives that guarantee optimal results when machining both with and without chips.

- Improvement in tool life and surface finish
- Improvement in performance and capacity of tools and machines
- Economical use
- Dry machines, tools, workpieces and chips
- Clean workplaces
- Reduced environmental impact and elimination of disposal problems

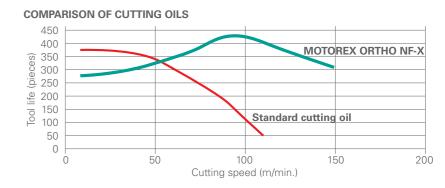


#### INCREASED EFFICIENCY THANKS TO VMAX TECHNOLOGY

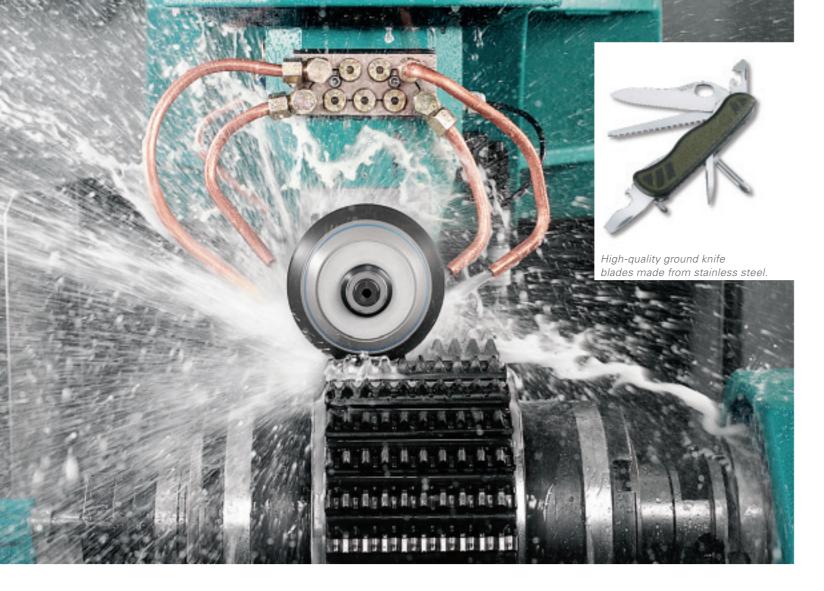
Those working in the metal-working industry are well aware of the saying "time is money". Thanks to the optimised cutting data, workpiece processing times can be significantly reduced when using the right product from the SWISSCUT range – especially on materials that are difficult to machine. With the

MOTOREX Vmax technology in the SWISSCUT cutting oils, the generated heat can be used systematically at exactly the right moment. This results in positive chemical synergy effects for improved performance. Take advantage of the potential for optimising your business!





<sup>\*</sup> approved products



# SWISSGRIND GRINDING OILS AND METAL-WORKING FLUIDS

Grinding is a discipline that has to be carried out perfectly. In doing so, components such as the grinding centre, grinding wheel and grinding fluid must complement each other optimally. Only then can a high-quality, economically convincing performance be achieved. By using products from the MOTOREX SWISSGRIND range, you can benefit from the latest in industrial lubrication technology for grinding applications.

Whether internal or external grinding, deep grinding, swing grinding or gear grinding – the machining fluid is applied between the workpiece and grinding wheel in each grinding process. The requirements of new and increasingly faster machining processes are increasing exponentially. SWISSGRIND ZOOM products have been developed for all of today's production requirements and have impressed our international customers for years.

#### Advantages of MOTOREX SWISSGRIND

- Proven products for every grinding application
- Constant performance
- Reduction of production costs
- Universal use
- Safety and adherence to applicable legal regulations
- Compatibility with man and machine
- High ageing resistance
- Optimal filterability



Camshafts have to be machined precisely with a suitable grinding oil.

#### SWISSGRIND ZOOM GRINDING OILS

Universal, high-performance grinding oils

MOTOREX SWISSGRIND ZOOM are clear, chlorine-free and aroma-free grinding oils designed to meet the highest demands. They are characterised by extraordinary cooling that takes full effect when large quantities of material are involved. SWISSGRIND ZOOM grinding oils are available in different performance classes. All SWISSGRIND ZOOM products have a specially selected combination of additives, resulting in minimal oil mist formation during the grinding process. The grinding wheels are flushed out well and thus remain abrasive throughout.

- Excellent cooling
- Extremely low oil mist formation
- Odourless
- Excellent filterability
- Friendly to skin
- Clear colour

#### SWISSGRIND ZOOM AQUA METAL-WORKING FLUIDS

Universal, miscible metal-working fluids for grinding applications.

SWISSGRIND ZOOM AQUA are miscible metal-working fluids that are free of chlorine and mineral oils and produce a clear solution when mixed with water. SWISSGRIND ZOOM AQUA fluids guarantee good protection against corrosion, have extremely low foaming tendencies, leave no sticky residues and also have a good wetting and rinsing effect. They are also characterised by excellent skin friendliness thanks to the careful selection and combination of active ingredients.

- Chlorine free
- No cobalt solubility (ZOOM AQUA HM)
- Very stable solution
- Friendly to skin

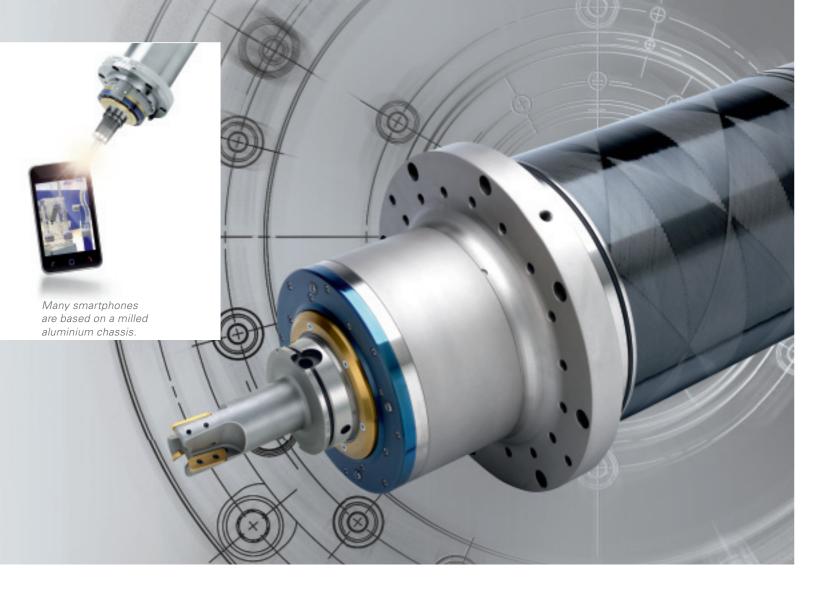


#### SWISSGRIND ZOOM SYNT MAKES THE DIFFERENCE

With the introduction of the universal, high-performance ZOOM SYNT grinding oil, MOTOREX has made a quantum leap in the field of grinding technology. This aroma-free grinding oil in the "Synthetic Performance" class is suitable for all grinding operations. ZOOM SYNT cools and rinses perfectly even with large quantities of material and produces virtually no oil mist. It can also be mixed with synthetic PAO grinding oils (polyalphaolefin). The attractive price/performance ratio means that ZOOM SYNT also offers convincing arguments from an economic perspective.







# SPINDLE LINE: PRECISION SPINDLE FLUIDS

The intensive research and development work made by MOTOREX is reflected in the comprehensive range of spindle products. Production professionals no longer run the risk of losing a spindle through the use of an unsuitable spindle coolant or hydraulic oil.

Increasingly powerful spindle systems are at the heart of modern machining centres. When the spindle rotates at between 10,000 and > 45,000 rpm, then the spindle bearing and coolant are pushed to their limits. MOTOREX works together with well-known spindle manufacturers from all over the world. These make use of a range of MOTOREX spindle products, thus guaranteeing users problem-free operation according to the highest quality standards.

#### Advantages of MOTOREX SPINDLE LINE

- Complete product range for all spindle types
- Development partnership with spindle manufacturers
- Numerous manufacturer approvals and recommendations
- Long-life spindle coolant
- Available as ready-to-use fluids or concentrates
- Simple handling thanks to ready-to-use mixtures
- Good compatibility with man and machine



Aluminium aircraft part milled using high-performance spindles.

#### MOTOREX "READY" SPINDLE COOLANT

Ready-to-use MOTOREX spindle coolants are a sure thing. They are prepared using treated water, meaning the quality remains clearly defined at the same high levels all around the world – regardless of the local water quality. The handling of ready-to-use spindle coolants is child's play and eliminates possible sources of errors and spindle damage as a result of incorrect use.

These coolants offer exceptional heat dissipation, passivate the different materials and offer maximum protection against

corrosion. They are suitable for cooling high-performance spindles and also for servo, torque and linear motors on machine tools

- Ready to use
- Guaranteed water quality and maximum biostability
- Efficient protection against corrosion and electrolysis
- Simple handling and safe application
- Low maintenance thanks to long-life technology

#### MOTOREX "CONCENTRATE" SPINDLE COOLANT

MOTOREX concentrates for spindle coolants are fully synthetic, water-soluble one-stop solutions for corrosion protection. When mixed with clean drinking water they produce efficient, fully synthetic coolants with exceptional corrosion protection characteristics.

- Efficient heat dissipation
- Prevention of electrochemical corrosion
- Protects non-ferrous, ferrous and light metals from corrosion

#### SPINDLE LUBE HYPERCLEAN

Ultra-fine-filtered spindle oils for bearing lubrication in high-frequency spindles

MOTOREX SPINDLE LUBE are ultra-fine-filtered spindle oils. The purity class is specified as 15/13/10 in accordance with the ISO standard. They are characterised by excellent detergent and dispersing characteristics.

- Ultra-fine filtration of purity class 15/13/10 (ISO 4406)
- Marked wear-reducing ingredients
- Effective EP characteristics
- Fast air separation capacity
- Good anti-foaming action with detergent effects
- Special dispersion capacity and water absorption capacity of up to 5 %

#### **OIL PURITY CLASSES ACCORDING TO ISO 4406**

Microscopic image with 100x magnification. One scale line is equal to  $10\,\mu m$ . Explanation of counting range and number of particles per unit. To the left is a standard oil with a purity class of 20/18/15 according to ISO 4406. To the right is MOTOREX SPINDLE LUBE with a purity of 15/13/10.



Standard spindle oil 20/18/15



MOTOREX SPINDLE LUBE 15/13/10



#### PRACTICAL AND RELIABLE: MOTOREX READY-TO-USE FLUIDS

With all miscible coolants, the quality of the added water is usually decisive for the service life of the coolant and its corrosion protection characteristics. It also remains the case that



most examples of contamination are caused by improper manipulation or a lack of maintenance. Additionally, the drinking water and service water used for mixing with the spindle coolant are not always of the required quality in all countries.

For these reasons, MOTOREX offers ready-to-use fluids that meet the demands of leading spindle manufacturers.



# SWISSGLIDE FLUIDS FOR LOW-FRICTION OPERATION

Even in the most diverse industrial applications, the goal remains the same: Moving parts must operate with as little friction as possible and also be protected against long-term wear. The trusty old oil can is no longer sufficient when dealing with increasingly challenging lubrication requirements. MOTOREX analyses the existing machinery at first, before creating lubrication solutions that are exactly tailored to the existing conditions. In combination with the correct lubricants, these lubrication concepts form the basis for the highest possible operating security and friction-free operation.

#### The MOTOREX SWISSGLIDE range includes:

- Waylube oils
- Gear oils
- Hydraulic oils
- Industrial greases



#### **SWISSGLIDE SUPERGLISS**

Waylube oils for plastic-coated waylubes

SUPERGLISS waylube oils contain surface-active substances that improve the coefficient of friction and prevent stickslip even at slow feed rates and heavy loads. MOTOREX SUPERGLISS K are lubricating oils that form a pressure-resistant, adhesive lubricating film. This film is ideally suited even for vertical guide rails as no droplet formation occurs.

- Superior adhesion strength
- Reduction of stick-slip
- Excellent extreme pressure (EP) absorption capacity
- Outstanding wear protection

#### **GEAR COMPOUND PLUS**

Gear oils with exceptional high-pressure characteristics

Zinc-free and lead-free high-pressure gear oils based on mineral oil. Prescribed for gear units with components made from bronze or other copper base alloys. These oils have proven particularly suitable for industrial use.

- Fully compatible with all metals
- Economical thanks to extremely long oil change intervals

#### COREX HYDRAULIC OILS

Hydraulic oils with exceptional high-pressure characteristics

Single-grade and multi-grade hydraulic oils with extremely varied areas of application as hydraulic oils in industrial systems. Thanks to their extremely stable viscosity, COREX hydraulic oils are also suitable for use in high-precision hydraulic power transmission, regulation and control systems. Their excellent detergent and dispersing characteristics prevent malfunctions.

- Available as single-grade or multi-grade hydraulic oil
- Very shear stable (stay-in-grade)
- Optimal wear protection
- Compatible with other hydraulic oils based on mineral oil
- Neutral behaviour with seals

# (i) TechTip

#### PREVENTING STICK-SLIP WITH MOTOREX EASY GLIDE

Stick-slip is the specialist term used to describe the spontaneous jerking motion that can occur while two objects are sliding over each other. This occurs when the static friction coefficient is larger than the kinetic friction coefficient. If an applied force is large enough to overcome the static friction, then this results in a jump in the velocity of the movement. This causes vibrations that have a negative effect on the machining process and dimensional stability. The special additives in the waylube oils developed by MOTOREX change the friction coefficient and prevent stick-slip optimally, even at low speeds.





# SWISSPROTECT CORROSION PROTECTION PRODUCTS

Whether used in semi-finished products, automatic turning parts, machines or metal tools, high-performance corrosion protection is a vital part of industrial production processes. Thanks to ongoing research and development in corrosion protection, MOTOREX has been able to gain practical insights in the field for many years. The result is a remarkable technological advantage, as seen in the development of VOC-free INTACT corrosion protection fluids. INTACT products are also the result of a MOTOREX Synergy Project with the metal-working industry.

If corrosion protection is not taken seriously, then the product quality visibly suffers and the rejection rate increases significantly. It is not uncommon to also see irreparable damages to products, machines and tools. This is something that no business can afford. With the right consultation and corrosion protection products from MOTOREX, your company is always on the safe side!

#### Advantages of MOTOREX SWISSPROTECT

- Highly effective corrosion protection
- Comprehensive range for every application
- Use of VOC-free active ingredients
- Maximum cost efficiency



With top protection, parts and components retain their value up to the point of use.

#### SWISSPROTECT INTACT

Corrosion protection fluid, VOC-free (volatile organic compounds)

SWISSPROTECT INTACT corrosion protection fluids actively infiltrate water and leave behind a highly effective protective film. The various formulations in the INTACT range cover the full range of applications. The requirements and storage conditions at the customer dictate whether the corrosion protection has to be slightly oily, dust dry or particularly thick and dry. INTACT corrosion protection fluids are also free of most dutiable solvents (VOCs).

#### INTACT corrosion protection fluids are

- VOC free
- Highly effective against corrosion
- Extremely water-repellent
- Easy to use
- Very economical
- Virtually odourless
- Not classified as hazardous goods
- Easy to remove

#### SWISSPROTECT FLUID

Corrosion protection fluid containing VOCs

All SWISSPROTECT FLUIDS offer exceptional corrosion protection with excellent dewatering properties. Depending on the product, an extremely thin, durable protective film remains after the application (spraying, brushing, dipping, galvanising). This film is non-adhesive and does not attract dust. The range includes a variety of formulations that ideally cover • Can be removed easily each field of application. The MOTOREX FLUID film can be removed easily using a solvent cleaner (e.g. REX CLEANER).

#### All MOTOREX FLUIDS

- Protect against corrosion
- Repel water
- Do not emulsify
- Do not react to paintwork



#### **VOC-FREE CORROSION PROTECTION IMPRESSES IN PRACTICE**

Whether used in series parts or high-precision metal tools, high-performance corrosion protection is a vital part of the industrial production process. If corrosion protection is not taken seriously, then the product quality visibly suffers, the



rejection rate increases significantly or the product may even be completely destroyed. For environmental reasons, many products are free of VOCs (volatile organic compounds). This means that all metal materials can be protected optimally with significant cost savings due to the omission of VOC duties in certain countries. Dewatering in particular was barely imaginable without VOCs up to now, which is exactly why INTACT products are so innovative. They have impressive dewatering properties and good corrosion protection without solvents (VOCs). Your MOTOREX partner will be happy to help you find the right product for your application.



# SWISSCLEAN CLEANER: A SPARKLING IDEA

The cleaning of parts, machine, tools and facilities now requires more know-how than ever. More and more applications now also require cleaning processes that can be reproduced and validated. The SWISSCLEAN range from MOTOREX includes different products for the cleaning work of today. Wherever possible, we ensure that the active ingredients are both effective and environmentally friendly. In addition to many VOC-free cleaners, specially developed and proven products are available for each cleaning process.

For cleaning in particular, it is worthwhile to make an analysis of the requirements in advance together with the MOTOREX partner. All added costs associated with the cleaning process and the increasing costs for material disposal must also be taken into account here. In many cases, the number of different products used can be reduced to just a few universal SWISS-CLEAN cleaners. Get in touch with your MOTOREX partner!

#### Advantages of MOTOREX SWISSCLEAN

- Wide range of products for all cleaning applications
- Effective and mild product formulations
- Use of VOC-free active ingredients
- Low disposal costs
- Maximum cost efficiency



High-precision automatic turning parts have to be cleaned correctly.

#### SWISSCLEAN SWASH CLEANER

Highly effective A3 industrial cleaner

MOTOREX SWASH CLEANER is a solvent cleaner made from isoparaffinic hydrocarbons. It has a universal cleaning power, especially for oily dirt. The low aroma content makes the cleaner virtually odourless.

#### SWISSCLEAN SWASH CLEANER

- Removes grease, oil and waxes
- Is virtually odourless and can be distilled when undecomposed
- Narrow boiling range
- No danger of corrosion on any metals
- Residue-free drying
- Non-toxic

#### SWISSCLEAN REX CLEANER

Universal cleaner containing aromas

MOTOREX REX CLEANER is an aromatic solvent cleaner containing white spirit. It is suitable for degreasing metal and plastic parts, and is ideal for use in cleaning devices for small parts.

#### SWISSCLEAN REX CLEANER

- Removes grease, oil and waxes
- Does not affect electric windings
- Dries quickly

#### SWISSCI FAN RFFO CI FANFR

Universal VOC-free cleaning concentrate

MOTOREX REFO CLEANER is a VOC-free cleaning concentrate. This high-performance cleaner removes oil, grease and general industrial contamination. It is well suited to machine applications and does not generate foam thanks to special MOTOREX low-foam additives. It is quickly biodegradable.

#### SWISSCLEAN REFO CLEANER is

- Biodegradable
- Suitable for cleaning machines
- Compatible with plastics, varnish and metal
- Free of solvents (VOCs)

#### SWISSCLEAN OPAL 5000

Universal VOC-free cleaner

MOTOREX OPAL 5000 is a low-odour universal cleaner. It has similar cleaning characteristics to normal VOC-dutiable solvent cleaners, but is composed of active ingredients that are not subject to VOC levies. MOTOREX OPAL 5000 is particularly suited to cleaning and degreasing components and is ideal for use in cleaning devices for small parts and ultrasound systems.

#### **SWISSCLEAN OPAL 5000**

- Removes grease, oil and waxes
- Does not affect electric windings
- Dries slowly, thus offering temporary protection from corrosion
- Is not VOC dutiable
- Is virtually odourless



#### MOTOREX LOW FOAM FOR CLEANING WITH MINIMAL FOAM BUILD-UP

Foam is a hindrance in many cleaning tasks and in cleaning machines in particular. Foam build-up also slows down all cleaning processes. MOTOREX thus offers special low-foam cleaners such as REFO CLEANER in their product portfolio. Low-foam formulations produce 90 % less foam compared to standard cleaners.





Standard cleaner

MOTOREX low-foam cleaner

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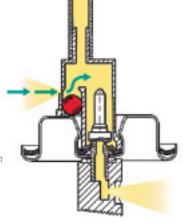
# MOTOREX SPRAYS: TOOLS IN A CAN

As a manufacturer of spray products, MOTOREX has over 40 years experience. Tool sprays are now absolutely indispensable in a variety of tasks. MOTOREX has used CFC-free propellants from the outset. The spray head with its clever ball valve, allows the contents of the spray to be used up completely, even when turned upside down. This means that even hard-to-reach areas can always be accessed reliably during maintenance. Where appropriate, the products are equipped with an extended spray nozzle. This is especially practical when carrying out precise relubrication of exposed lubrication points.

Motorex sprays include all the applications needed for industrial and service needs. The sprays are manufactured to the highest "Swiss Made" quality at Motorex.



A ball valve in the spray head ensures perfect spraying - even when the can is turned 180°. This means that even the most inaccessible lubrication points can be reached easily and the contents can be used right up to the last drop.



#### INTACT MX 50 SPRAY

Universal industrial spray



Indispensable for industry, trade, workshops and service stations. Lubricates all moving parts. Perfect for protecting metal surfaces and preserving tools. Stops squeaking. Leaves behind a very effective protective film. Repels and infiltrates water, thus preventing corrosion.

#### **SPRAY 2000**

Adhesive lubricant



Fully-synthetic, high-pressure-resistant lubricant with long-term effect for universal application. Penetrates rapidly and protects from corrosion. Thermally stable from -30 °C to +200 °C. Adhesive, water resistant, silicone free, pressure and impact resistant, colourless.

#### **ANTIRUST SPRAY**

Rust remover and screw-releasing agent



Rust remover and screw-releasing agent with outstanding penetration. Releases metal parts that are seized with rust. Protects against corrosion and repels moisture. Removes rust, repels water and lubricates.

#### SPRAY WITH PTFE

Dry lubricant



Dry lubricant which can be used as an anti-seize and release agent and does not leave behind any oily marks. The extremely thin Teflon layer with a particle size of 5 µm prevents parts sticking to moulds and stops mounted parts becoming seized on machine tools. Almost unlimited chemical resistance and suitable for use over a very wide range of temperatures (+265°C). Antistatic.

#### TOOL GUARD

Creates a thin protective film (< 0.4 µm) that is an excellent preservative for tools, equipment, machines etc. Infiltrates water and provides invisible, dry and non-slip protection against moisture and sweaty hands. Ideal protection for internal bearings. No longterm protection or protection for external bearings.

#### SILICONE SPRAY

Silicone oil

Protection spray



Lubricant, care product and preservative for rubber, plastic and all metal parts. Plastic parts are given a high-gloss finish and rubber parts are maintained and protected. Thermally stable from -50°C to +200°C. Antistatic, water repellent and prevents oxidation.

#### PROWELD SPRAY

Weld protection



Air spray, free of silicone and solvents, non-flammable. Prevents welding beads from sticking, protects welded items and equipment from corrosion, leaves behind no ash residue and is easily washed off with water.

#### EASY CUT PUMP SPRAY

Drilling and cutting spray



Oil spray for use with all high-alloyed steel grades as well as non-ferrous metals and aluminium. For drilling, thread cutting, sawing, turning, milling and stamping. Pump spray does not use propellant.

#### POWER CLEAN

Cleaner/degreaser



Cleans and removes even the most stubborn dirt. Eliminates oil, grease, tar etc. Does not affect rubber, plastic and varnishes.

# (i) TechTip

#### **MOTOREX INTACT MX 50 IN LABORATORY TEST**

Among other methods, the water emulsification test shows noticeable differences between universal lubricants. In figure (A) to the left, the lubricant and water separate visibly. After shaking, the standard lubricant emulsifies (mixes) with the water (B) and does not separate again - even after a long rest period. In contrast, MOTOREX INTACT MX 50 repels the water effectively (C) and separates again immediately after shaking (D).



MOTOREX INTACT MX 50

(A) Before test (B) After test (C) Before test (D) After test

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# INTO THE FUTURE WITH PIONEERING SPIRIT



For over 95 years, BUCHER MOTOREX has been synonymous with pioneering lubricants of the highest quality. With the foundation of subsidiary MOTOREX AG at the start of the 1970s, the independent Swiss company began to focus on industrial applications.

As the largest and most innovative fresh-oil blending company in Switzerland, MOTOREX now sells its comprehensive product portfolio on the global market. In doing so, the precisely defined quality is constantly monitored according to the stringent ISO 9001:14001 standard.

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