

Cleaning solutions for the transport industry

Industry guide of Bio-Circle Surface Technology GmbH



**MAKING
GREEN
WORK.**

DIAGNOSIS

Pre-washing area

TYPE

chassis, bogie,
underbody

CONTAMINATION

oils, greases, environmental influences,
brake dust, soot, bitumen

TREATMENT

MANUAL CLEANING



SCHAUMINJEKTOR 200 L drum & 1000 L IBC

The Foam Injector is easy to use, virtually maintenance-free, with up to 10 m of hose and foam lance – the perfect tool for cleaning large areas. The firm and long-lasting foam dissolves stubborn dirt, even on vertical surfaces, depending on the mode of action of the cleaning agent.

The benefits at a glance:

- + Compressed air: 6.5 to 7.5 bar adjustable
- + Efficiency: 3.1 m² per minute
- + With pneumatic diaphragm pump
- + Incl. adapter

AUTOMATIC CLEANING



HTW HOT-WATER PARTS WASHER

The fully automatic Hot-Water Parts Washers (available in various sizes) are characterised by their high cleaning performance and easy handling.

The benefits at a glance:

- + Perfect for single-stage cleaning and degreasing
- + Economical: energy-efficient
- + Powerful: three-dimensional nozzle system, electrically driven rotating basket etc.



Shock absorber for a tram chassis

MANUAL CLEANING



CLEAN BOX MAX

The various CLEAN BOX models are suitable for the effective pre-cleaning of small parts, as well as large and unwieldy ones. This makes the concept applicable in many factory and production areas, such as maintenance, mechanical engineering and industrial construction.

The benefits at a glance:

- + Immersion bath for parts cleaning, degreasing, soaking, derusting
- + For pre-cleaning small and bulky parts
- + Long service life of the cleaning agent due to circulation system
- + Reduces physical strain
- + Easy handling and transport
- + For cleaning heavy parts

CLEANING AGENTS

ALUSTAR 500

The water-based machine cleaner can do what classic alkaline cleaners cannot: The removal of extreme oil and grease carbonisation from aluminium, brass and copper! *Order no.: A02021*

pH value: ~7.3



CB100

CB 100 is a water-based, low-foaming cleaner based on renewable raw materials. The natural active ingredients powerfully dissolve dirt without attacking the surfaces. *Order no.: A02025*

pH value: ~10.8



UNO AV

UNO AV is the only intensive cleaner in the UNO range that is applied over a large area using an application system and that is also VOC-free. Only for the most extreme soiling in the energy and transport sectors. *Order no.: A02033*

pH value: ~13



DIAGNOSIS

Component cleaning area

TYPE

Soiled small parts, components

CONTAMINATION

Oils, greases, carbonisation, brake dust, soot

TREATMENT

MANUAL CLEANING

BIO-CIRCLE GT – PARTS WASHERS

The optimum solution for natural, bio-chemical parts cleaning. The simple, fast, safe and environmentally friendly cleaning process makes the parts washer ideal for pre-cleaning and maintenance of production parts. The BIO-CIRCLE systems work without solvents.

The benefits at a glance:

- + Solvent-free, environmentally friendly
- + Long service life thanks to liquid series
- + Suitable for apprentices
- + High level of occupational safety
- + Efficient cleaning performance



AUTOMATIC CLEANING



ULTRASONIC CLEANING DEVICES

Ultrasonic waves remove dirt from even the smallest nooks, edges and recesses. The cleaning performance is enhanced by setting the optimum temperature. Ideal for cleaning small parts such as screws and injection nozzles.

The benefits at a glance:

- + Non-abrasive technology
- + Ideal for cleaning small, geometric parts
- + Reduction of maintenance times through parallel working
- + Tailored to your requirements: different sized device models

MANUAL CLEANING



BIO-CIRCLE HP VIGO

The HP Vigo – manual parts cleaning at high-pressure level in a closed washing chamber: For pre-cleaning or high-pressure cleaning of all types of parts.

The benefits at a glance:

- + Perfect for parts with coils such as extruder screws
- + Effective: removes the heaviest soiling
- + Precise work with a high-pressure nozzle (up to 80 bar)
- + Only one work step: subsequent drying using a compressed air gun

BIO-CIRCLE L range

Everyday soiling*

Persistent soiling*

TOP SELLER

The right choice for your applications

	BIO-CIRCLE L	BIO-CIRCLE L EVO	BIO-CIRCLE L Ultra
Mechanism	Parts washing system with flow brush	Parts washing system with flow brush, parts washer, high-pressure parts washer	Parts washing system with flow brush
Operating temperature	41 °C	41 – 45 °C	41 °C
Residues	virtually residue-free	virtually residue-free	Forms a light protective film
Aluminium protection	–	yes	–
Can be used in food areas	yes 	yes 	yes 
Corrosion protection	temporary	temporary	temporary
Environmental aspect of raw material	free from volatile organic compounds according to VOCV	reduced in volatile organic compounds	free from volatile organic compounds according to VOCV
pH value	~8.5	~8	~8.5 – 9.5
Other seals	   	  	  

* Everyday soiling: oils, greases

* Persistent soiling: bitumen, anti-corrosion wax, burnt-on grease and oil, oil carbon, paint

DIAGNOSIS

Interior cleaning area

TYPE

Interior, superstructure,
service recipient

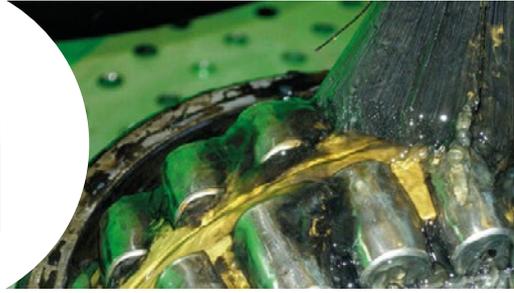
CONTAMINATION

Grease, oil, soot, dust,
traffic pollution



TREATMENT

CLEANING AGENTS



OMNI RANGE

The products in the OMNI range are multifunctional oils that can be used for the following applications:

- + Lubricating moving parts
- + Protecting workpieces from corrosion
- + Cleaning components

The products have a capillary effect that allows them to penetrate and loosen dirt. This helps to reach sensitive areas even with complex geometries.

Eco-friendly

Products in the OMNI range contain no hydrocarbon solvents such as petroleum and are free from acids, silicones and Teflon.

Differences

The OMNI range consists of two products: OMNI 200 is a multi-functional spray with a light penetrating effect that does not require labelling under the CLP Regulation.

OMNI is a labelled multifunctional spray with a strong penetrating effect. The strong penetrating effect of OMNI allows heavy soiling to be removed, and the protective effect also unfolds on complex components.

OMNI 200 has a reduced penetrating effect but is therefore not labelled. As a result, the product has a slightly reduced cleaning performance and is suitable for protecting components without complex geometries. It protects the parts from rust and is therefore suitable for the protection and care of tools, machines, electronic circuits and motors.

FT – FINAL TOUCH RANGE

The ready-to-use, manually applicable cleaners in the FT range are all label-free and fast-drying. They remove all types of oil and grease stains from many materials.

- FT 100** Residue and streak-free, NSF-certified, VOC-reduced, perfect for use before painting, labelling and bonding
- FT 200** Virtually residue- and streak-free, NSF-certified, VOC-reduced, temporary corrosion protection
- FT 300** Residue- and streak-free, even faster evaporation than FT 100, VOC-reduced
- FT 400** Virtually residue- and streak-free, excellent dissolving power for heavy oil- and grease soiling, release agents and adhesive residues

By cleaning power: FT 100 ► FT 300 ► FT 200 ► FT 400



* FT 400 is not VOC-reduced / only FT 100+FT 200 are NSF-certified

FOR CLEAN RANGE

FOR CLEAN cleaners have what safety officers, purchasers and users want: They are all label-free and water-miscible, can be used anytime and anywhere, and will remove soiling from all materials.

- FOR CLEAN** Manual application
- FOR CLEAN F** Low-foaming, also for machine application: Ultrasonic Cleaning Device, HTW, floor cleaning machine and pressure washer
- FOR CLEAN V** Ideal for vertical surfaces, for safe and unrestricted working, even overhead
→ Slightly viscous formulation



*FOR CLEAN is not NSF-certified

DIAGNOSIS



Spray can alternative area



TYPE

Spraying large areas, flooding, rinsing and overhead work

ACTION

Removal of oils, release agents, grease, adhesive residues, abrasion and sanding dust

AIR FORCE

Sustainability through the refillable spray bottle



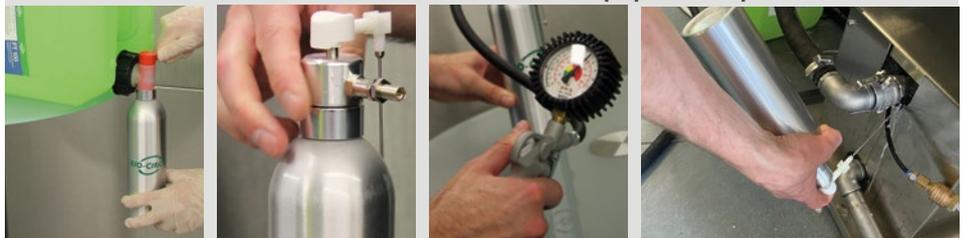
Air Force is a refillable aluminium spray bottle - every foamless cleaner's best friend! 'From the canister to the bottle' is the new way of thinking in manual surface cleaning. *Order no.: H65000*



Air Force with AF Clean

- ✓ REMOVES oils, greases, abrasion, sanding dust, release agents and adhesive residues
- ✓ CLEANS steel, stainless steel, aluminium, plastic and painted surfaces
- ✓ SAFE: label-free, VOC-reduced according to the CLP Regulation
- ✓ Foamless
- ✓ Pleasant menthol smell

Unscrew bottle – fill with cleaner – screw shut – top up with compressed air



AF CLEAN

AF Clean is the best buddy of the refillable Air Force aluminium spray bottle! The alkaline, label-free cleaner is a must-have for your manual surface cleaning, as it has a strong cleaning performance and is still low in residue. *Order no.: A02059*

pH value: ~9.9





DIAGNOSIS

Sewage pipework & vacuum WC area

TYPE

Internal circulation systems (pipes, tanks and heat exchangers)

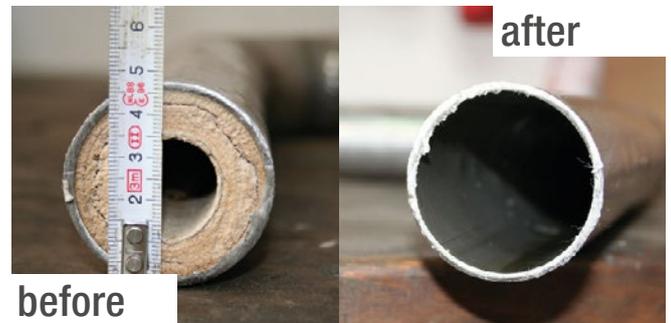
CONTAMINATION

Limescale, rust (mineral), oil, grease

RWR SYSTEMS (PIPE AND HEAT EXCHANGER CLEANING SYSTEMS AS WELL AS PIPE AND TANK CLEANING FOR WC SYSTEMS)

The RWR systems are the optimum solution for cleaning internal circulation systems without dismantling.

- ✓ Descales and derusts internal circuits
- ✓ Cleans and rinses (even complex pipe geometries) through circulation rinsing
- ✓ Simple and pleasant to use:
- ✓ Space-saving, quiet and easy to operate
- ✓ Mobile, application without dismantling
- ✓ Odour-free thanks to the fully enclosed system



DIAGNOSIS

Paint shop area



TYPE

Soiled small parts

CONTAMINATION

Varnish and paint residues



PROLAQ CONVERSION KIT FOR EXISTING SYSTEMS

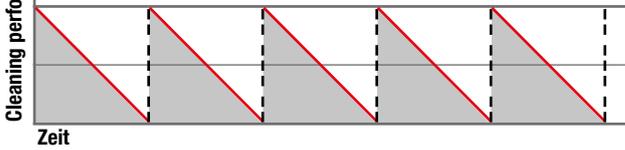
The PROLAQ Conversion Kit for existing systems can be installed quickly and easily in all spray gun cleaning systems. The label-free PROLAQ L 400 paint remover, for example, replaces conventional solvents and removes tiny particles from the cleaning fluid by sedimentation

TREATMENT

CLEANING AGENTS

CLEANING AT A CONSISTENTLY HIGH LEVEL WITH PROLAQ

The cleaning performance of conventional solvents decreases drastically in a short time. As a result, the thinner must be replaced very frequently with fresh one.



The PROLAQ system offers a consistently high cleaning performance over a long period of time.



PROLAQ L 400

The PROLAQ L 400 paint remover is characterised by its strong cleaning power for water-based and solvent-based paints and varnishes, as well as its fast and virtually residue-free drying.

Order no.: A02069



PROLAQ L 500

PROLAQ L 500 is a highly effective paint remover that is particularly suitable for removing paints and varnishes containing water and solvents. With its low VOC content, it is an excellent alternative to nitro thinner, which protects the health of employees and the environment.

Order no.: A02017



MANUAL CLEANING



PROLAQ COMPACT PAINT APPLICATION TOOL CLEANING

PROLAQ Compact is a manual cleaning system for flow cup guns and guns with external material supply.

The semi-automatic system can be used flexibly, works without electricity and has a flow brush, a compressed air gun and a funnel for emptying the gun.

The benefits at a glance:

- + Clean and safe workplace
- + VOC-reduced PROLAQ L paint remover
- + Economical
- + Long service life of the cleaning fluid
- + 3-stage treatment system
- + With compressed air gun for drying the cleaned parts
- + Mobile, can be set up anywhere, no Ex zone requirement

AUTOMATIC CLEANING



PROLAQ AUTO PAINT APPLICATION TOOL CLEANING

PROLAQ Auto is a compact cleaning station for the manual and automatic cleaning of all paint application and processing tools.

Paint spray guns and hoses are also cleaned quickly and effectively.

The benefits at a glance:

- + Manual and automatic cleaning also in EX and non-Ex-protected areas
- + For water-based paints and solvent-based paints
- + Simultaneous automatic cleaning of 2 guns
- + Automatic gun cleaning via timer
- + For suction and gravity feed guns
- + Subsequent air rinsing
- + Manual cleaning with flow brush also possible
- + Can be closed by means of a lid
- + Sedimentation- and filter unit included

Success Stories

Markus Schürch, Project Manager in Production Development
Basler Verkehrs-Betriebe [Basel Municipal Transport Services]

BASEL ERFAHREN  BVB

«Thanks to clarifications with the specialist from Bio-Circle, it was possible to replace 100 per cent of the cleaning product for the spray gun cleaning system with PROLAQ L 400, a non-hazardous agent. Previously, around 100 litres of thinner were used annually to clean the spray guns and other painting utensils. As a result, the impact on the environment and employees has been massively reduced. Even just the absence of odour emissions in the area surrounding the system that were caused by the evaporating solvent feels very good for the employees.»

Kilian Rotzetter, Head of Cleaning
Verkehrsbetriebe Zürich [Zurich Municipal Transport Services]

VBZ  Zürich Linie

«We use the Hot-Water Parts Washer to clean our heavily soiled small parts in a time-saving and efficient manner. The machine is easy to operate and fully automatic, which takes the strain off our employees. Among other things, we use the ALUSTAR 500 water-based machine cleaner in the parts washer, which also removes burnt-on grease and caked-on oil from sensitive materials.»



Nature Boost

Optimum performance, protection for employees and reduction of environmental influences. Successful cleaning in industry through the power of nature. Nature Boost cleaners are based on renewable raw materials. They convince with their excellent dissolving power, especially for strong greases, oils, adhesives and paint. Nature Boost is so impressive because it stands for non-flammable, VOC-free, label-free products.



VOC-free, VOC-reduced

The European Solvent Regulation (1999/13/EC) aims to significantly reduce the use of solvents and the emissions of volatile organic compounds into the environment, thereby protecting human health. When developing and manufacturing our products, we take care to develop and produce VOC-free or VOC-reduced products. With the water-based Bio-Circle products, solvents can be completely replaced in many applications.



Label-free

Thanks to efficient systems and label-free products, we are able to optimise our customers' processes. Although cleaning is carried out using label-free products, the cleaning quality is maintained. The very time-consuming handling of hazardous substances is eliminated. There is no need for hazardous substance storage, hazardous substance training or the creation of operating instructions. The health of employees and the environment are protected. Trainees can also work with the products.



NSF – Cleaning in the food industry

The NSF-certified, water-based Bio-Circle cleaners can be mixed with water and are suitable for use in the food industry due to their residue-free rinsing properties.



Miscible with water

Many of our cleaning agents are concentrates. They are easy to mix with water and therefore very economical. Please adjust the mixing ratio depending on the application and soiling.



Clean Blue – Energy efficiency

The low-temperature cleaners from Bio-Circle - Clean Blue - have been developed for machine and manual use. They save energy and powerfully remove heavy soiling even at room temperature. The cleaning agents can be used flexibly at all temperatures.



Ready to Use

These cleaning agents are ready to use. Depending on the cleaner, they can be applied manually or mechanically. The user is relieved of one work step, as there is no need to calculate the mixing ratio.

Our delivery service (Germany)

Delivery time: Approx. 2-3 days.

Delivery:

Free delivery incl. packaging from an order value of € 600.-. For orders under € 600.- order value (OV) we charge the following service fees (SF):

Service fee:	Up to € 100.- OV SF € 16.50
	Up to € 200.- OV SF € 19.50
	Up to € 600.- OV SF € 22.50

Collection by the customer:

You can collect your products directly from our production facility in **Gütersloh from Mondays to Thursdays between 8.00 am and 4.30 pm and Fridays between 8.00 am and 3.00 pm.**

Please call us in advance on **+ 49 (0) 52 41 / 9 44 30**, so that we can prepare your order for collection.

Payment:

Within 8 days with 2% discount or within 30 days net without deduction. On request, we will debit the invoice amount from your account. You will receive a 3% discount within 8 days.

To do this, please give us your direct debit authorisation.

Reservation of ownership:

All delivered items shall remain our property until all our claims arising from the business relationship with the customer have been settled in full.

The prices do not include the currently applicable VAT.



TECHNICAL CENTRE



IN OUR WELL-EQUIPPED TECHNICAL CENTRE, YOU HAVE THE OPPORTUNITY TO CONVINCE YOURSELF OF THE QUALITY AND CLEANING PERFORMANCE OF OUR PRODUCTS ON SITE.

Carry out washing tests on your parts under the guidance of our application engineer and find the right cleaning solution for your needs.

Other services we offer you:

- Telephone hotline for chemical, biotechnological and technical questions as well as application information on our products
- Analysis of your Bio-Circle cleaning baths
- Product training for dealers and training for users at the Bio-Circle Academy
- On site or digital
- Support in complying with legal regulations (e.g. VOC reduction, substitution of hazardous substances)

We are looking forward to seeing you!



*Picture credits entire document:
internal, zfg*





BIO-CIRCLE THE PIONEER IN ITS INDUSTRY

BIO-CIRCLE
bio-chem
Hauptingang
Werkverkauf
Warenannahme
Abholung

Bio-Circle Surface Technology GmbH from Gütersloh is an expert in biological cleaning solutions for industry. The company specialises in the distribution of highly efficient, hazardous substance-free and solvent-reduced cleaners and cleaning systems. This means more occupational safety, more productivity, higher efficiency, protection of the environment, lower operating costs for occupational safety measures, storage and disposal. The environmentally friendly, sustainable and user-friendly products stand out thanks to over 30 years of experience in research and development.

PHILOSOPHY

Our corporate philosophy 'MAKING GREEN WORK.' makes it clear that we not only want to create a green area for ourselves, but also for other companies through our products and technologies.

By developing suitable systems and system solutions in parts cleaning, we want to increase occupational safety, fulfil the needs of users and use resources in such a way that they are preserved for future generations.



**SAFETY IN
PRODUCTION**



**EASY
HANDLING**



**HIGH ECONOMIC
EFFICIENCY**



**EMPLOYEE PRO-
TECTION**

An overview of popular products

	pH value from MSDS	VOC content subject to levy (Switzerland)	Flash point in °C	BIO-CIRCLE GT	BIO-CIRCLE HP, HP Vigo	BIO-CIRCLE Turbo, HTW	CLEAN BOX	PROLAQ	Ultrasound	RWR	Steel/stainless steel	Aluminium	Non-ferrous metals	Plastics	Varnished surfaces	Zinc-coated surfaces	Hazard symbol	VOC-free acc. to VOCV	VOC-reduced	NSF	Label-free	Water-miscible	Ready to use		
AF Clean	9.9	10.4	54																VOC reduced		NSF	Label-free		READY TO USE	
ALUSTAR 300	13-14	0	-																	VOC reduced			H ₂ O	READY TO USE	
ALUSTAR 500	7.3	0	-																	VOC reduced			H ₂ O	READY TO USE	
BIO-CIRCLE L	8.5	0	-																VOC free!		NSF	Label-free		READY TO USE	
BIO-CIRCLE L Evo	8	0	-																	VOC free!		NSF	Label-free	READY TO USE	
BIO-CIRCLE L Ultra	8.5-9.5	0	-																	VOC free!		NSF	Label-free	READY TO USE	
CB 100	10.5-11	0	-																	VOC free!		NSF	Label-free	READY TO USE	
CB 100 Alu	8.6	0	-																	VOC free!		NSF	Label-free	READY TO USE	
FOR CLEAN	10	0	-																	VOC free!			H ₂ O	READY TO USE	
FOR CLEAN F	9	0	-																	VOC free!		NSF	Label-free	H ₂ O	READY TO USE
FOR CLEAN V	10	0	-																	VOC free!		NSF	Label-free	H ₂ O	READY TO USE
FT 100	10.8	12	48																	VOC reduced		NSF	Label-free	READY TO USE	
FT 200	11.4	10.6	52																	VOC reduced		NSF	Label-free	READY TO USE	
FT 300	10.8	17.3	41																	VOC reduced			Label-free	READY TO USE	
FT 400	11.4	32.8	49																				Label-free	READY TO USE	
Corrosion Protection 100	8.6	0	-																	VOC free!			H ₂ O	READY TO USE	
OMNI	-	5	>100																	VOC reduced				READY TO USE	
OMNI 200	-	0	240																	VOC free!			Label-free	READY TO USE	
Power Cleaner DB	<1	2.6	-																	VOC free!		NSF	H ₂ O	READY TO USE	
PROLAQ L 400	-	44	63																				Label-free	READY TO USE	
PROLAQ L 500	-	8.4	61-65																					READY TO USE	
Smoke Resin Remover DB	14	0	-																	VOC free!			H ₂ O	READY TO USE	
UNO AV	13	0	-																	VOC free!			H ₂ O	READY TO USE	
UNO X	14	1.5	-																	VOC free!			H ₂ O	READY TO USE	
Air Force																									
AUTRASYS application system																									
CLEAN BOX MAX																									
V2A stainless-steel foam sprayer																									
PROLAQ conversion kit																									
Foam injector																									

AUFTRAGSSYSTEME

 recommended  limited use  not usable

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24 hours at your service and free shipping for orders over € 600.

Try it out right now.
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