

Let us present you the catalogue of XADO Industrial products!

Herein you can find useful and important information about all industrial products manufactured by XADO Chemical Group. Each product has a detailed description and a picture. Product characteristics, specifications, application instructions are also listed. Product article and information on packaging will also help you to make your order placement process more efficient.

The catalogue contains the following sections:

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04	ADVANTAGES AND FIELD OF USE
06	REVITALIZANT <sup>®</sup>
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We are sure that this edition will be useful for you and will help you to choose from the wide variety of XADO products those which will meet the unique needs of your vehicles and equipment.

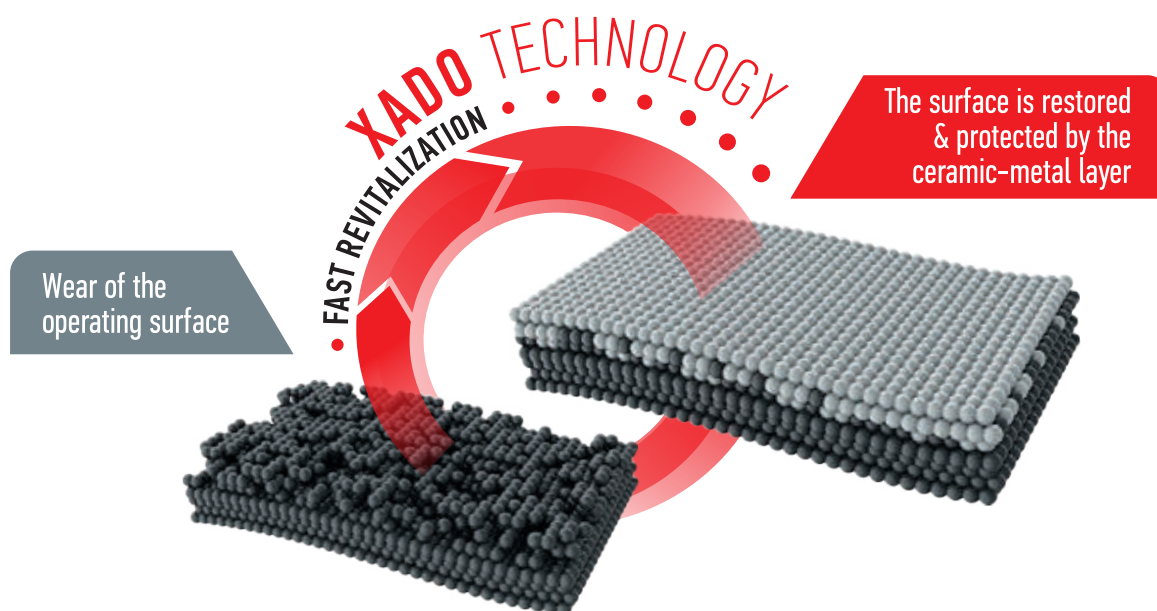
Customer care: [support@xado.com](mailto:support@xado.com)  
Technical assistance: [industry@xado.com](mailto:industry@xado.com)  
More product information: [www.xado.com](http://www.xado.com),  
[www.xado.info](http://www.xado.info), [www.revitalizant.com](http://www.revitalizant.com),  
[www.xadoindustrial.com](http://www.xadoindustrial.com)

XADO Research Lab can develop any products meeting your needs.

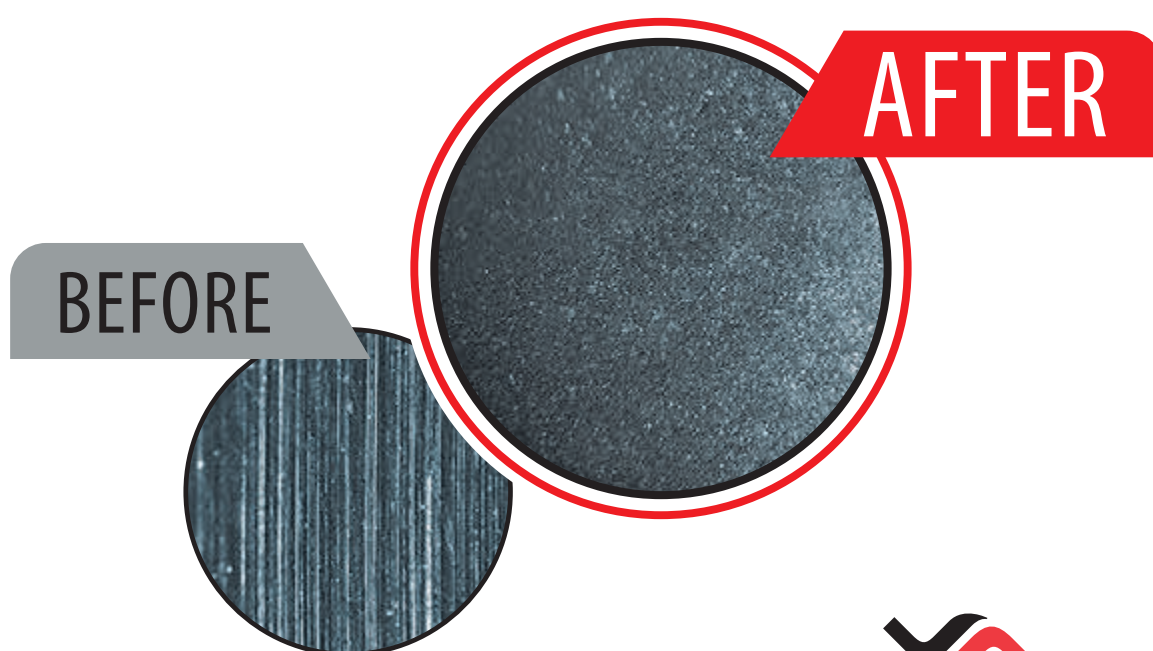
# REVITALIZATION®

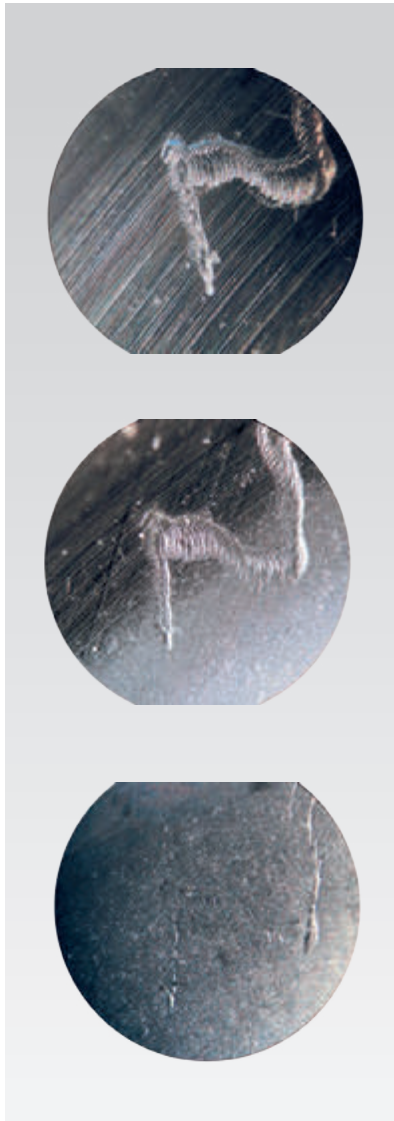
## TECHNOLOGY

REVITALIZANT® (from Latin *vita* – life, returning life) is a product added to lubricating materials, operating fluids and fuel. It forms a protective ceramic-metal coating with low friction coefficient on metal parts of mechanisms during their operation. REVITALIZANT® solves the problem of extension of the service life of machines and mechanisms.



The process of ceramic-metal coating formation can be tentatively compared with two simultaneous technologies of surface strengthening. The first one is cementation (surface saturation with carbon and metal carbides). The second is cold-work hardening during which the REVITALIZANT® particles act as strengthening bodies. The coating possesses low friction coefficient and high antiwear characteristics. The obtained coating is characterized by positive compressive stresses throughout all its depth and carbon concentration increasing up to the surface.



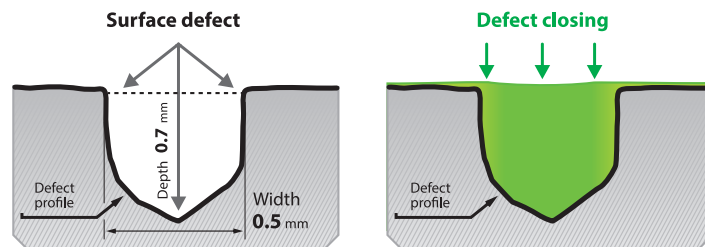


1. The rolling path of a bearing has been damaged with the help of an engraving cutter. The defects are of 0.5 mm in diameter and up to 0.7 mm in depth, and made specially for the test.

2. The bearing is filled with XADO Repairing Grease developed for heavily (up to 80%) worn units. The surface with the original nominal characteristics is rough, with deep traces made by a grinding tool.

3. The operating bearing filled with the grease is exposed to the 8,000 N force at the rotation frequency of 1,000 rpm within 15 minutes.

REVITALIZATION<sup>®</sup> itself takes place during operation of the bearing – it means elimination of the defect on the friction surface by creation of a protective ceramic-metal coating. The result of the experiment is shown on the pictures. Traces of the initial factory grinding have completely disappeared.



## TIME AND MONEY SAVINGS

### COSTS

**REVITALIZANT**<sup>®</sup>  
*x-tends and protects*

One treatment with  
REVITALIZANT<sup>®</sup>



### SAVINGS



Reduction of  
fuel consumption.



No expenses  
for overhaul repairs.



No losses  
resulting from  
equipment  
downtime.



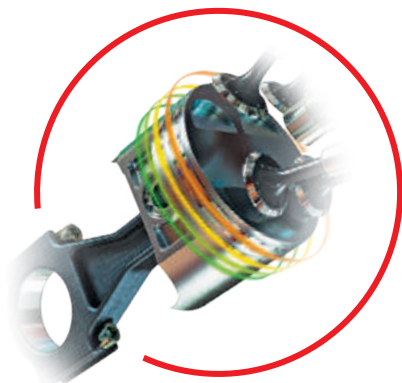
Extended service  
life. Increase in  
engine compression  
and power.



Ecological rationality,  
reduction of toxic  
emissions into  
the atmosphere.

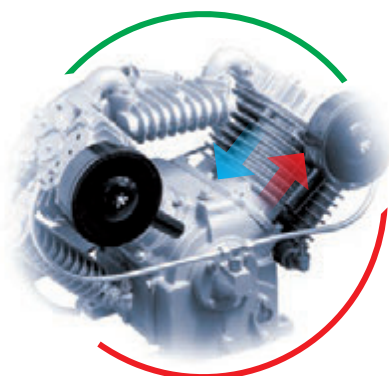
# Advantages and field of use of REVITALIZANT®

XADO INDUSTRIAL



## **INDUSTRIAL ENGINES** (lubricating and fuel systems)

- Eliminates ovality and taper of the inner surface of cylinders of up to 0.15 mm
- Fully eliminates scratches and microscuffs of up to 0.03 mm in depth on operating surfaces of cylinders
- Levels and increases compression and maximum combustion pressure in cylinders
- Saves by up to 14% of fuel
- Increases engine power by 9–12%
- Decreases CO and HC content in exhaust gases by 2–10 times
- Prolongs the service life by 1.5–2.5 times



## **COMPRESSORS** (reciprocating compressor)

- Eliminates ovality and taper of cylinders up to 0.5 mm
- Eliminates ovality of crankshaft necks up to 0.05 mm
- Eliminates scratches, blowholes and microscuffs of up to 0.04 mm in depth on surfaces of cylinders
- Improves performance by 25%
- Increases pressure and stabilizes oil operating temperature
- Reduces power consumption by 36%
- Prolongs the service life by 2–2.5 times



## **REDUCERS AND TRANSMISSIONS**

- Compensates wear of teeth of gear wheels (up to 0.8 mm)
- Decreases roughness and increases microhardness on tooth contact patterns up to 1,200 HV
- Eliminates pitting blowholes, scratches, microscuffs of up to 0.1 mm in depth on teeth contact patterns
- Decreases loads per unit surface on tooth contact patterns by 2–4 times
- Reduces radial clearances in bearings by 0.07 mm
- Reduces noise by 15% and vibration by 70%
- Prolongs the service life by 2–3 times

# XADO - INDUSTRIAL

# Advantages and field of use of REVITALIZANT®

**XADO®**  
CHEMICAL GROUP

XADO INDUSTRIAL

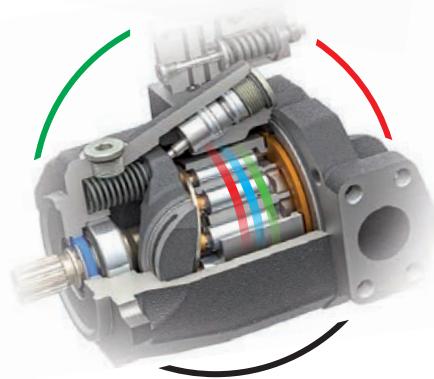
## BEARINGS

- Decreases radial clearances by up to 0.07 mm
- Decreases axial play by up to 0.03 mm
- Increases accuracy class of bearings
- Reduces vibration speed by 1.5–2.5 times
- Reduces noise by 35%
- Decreases vibratory displacement by 25–40%
- Increases running down of bearings by 30–70%
- Prolongs the service life by 2–4 times



## HYDRAULIC SYSTEMS

- Increases pressure and performance of hydraulic pumps
- Eliminates leaking through hydraulic control valves
- Increases operating pressure in hydraulic systems by 8–20%
- Improves efficiency of hydraulic machines by 15%
- Decreases temperature to nominal values
- Decreases power consumption by 12%
- Increases performance of hydraulic machines by 1.5–2 times



## MACHINES AND PRESSES

- Decreases roughness of workpiece surfaces by up to Ra 0.01
- Decreases radial clearances of spindles by up to 0.04 mm
- Decreases radial runout of spindles by up to 0.03 mm, face runout by up to 0.02 mm
- Decreases ovality and taper of compressor cylinders by up to 0.15 mm
- Reduces clearances and eliminates wear of guides
- Stabilizes operation of hydraulic systems
- Prolongs the service life by 1.5–2 times



Y APPRECIATED



XADO Gel-REVITALIZANT® is an innovative unique product, which allows repairing and restoring friction surfaces without unit disassembly. It converts excessive friction energy and involves it into formation of a durable ceramic-metal coating. This coating helps to eliminate defects, restores geometry of surfaces and provides high antifriction and antiwear properties.

Gel-REVITALIZANT® is applied in mechanisms with metal-to-metal friction pairs operating with lubricant, grease, hydraulic fluid or fuel. It can be any industrial unit or assembly: compressors of different types, industrial reduction gears and transmissions, hydraulic systems (oil pumps of any type), rolling and sliding bearings, open gear drives, metal-cutting machine tools and equipment, forging hammers, presses and die blocks, smoke exhausters and blower fans, open gear and open chain drives, forming and milling roll units, template-controlled systems, electric motor and generator units, industrial internal combustion engines, fuel equipment etc.

As a result of REVITALIZATION®, a new coating is formed on surfaces of friction pairs – parts restore their geometry. A new ceramic-metal coating possesses unique properties.

No.	Properties	Before treatment	After treatment
1	Microhardness, HV	800	1,200
2	Corrosion resistance	low	high
3	Roughness, Ra, $\mu\text{m}$	0.5	0.04
4	Coefficient of friction	0.04	0.003–0.007
5	Antiwear properties	normal	high

That is why after REVITALIZATION® parts guaranteedly serve 2–4 times longer. The revitalized mechanism will operate at its best!

Application instructions:

Treatment procedure is developed individually for particular industrial equipment based on its construction and wear rate of parts.

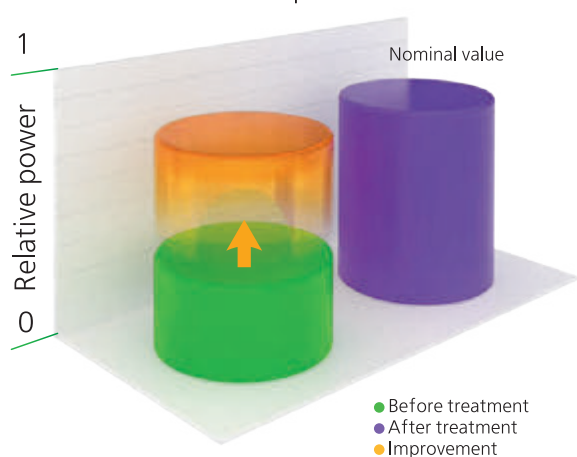
For additional information please contact us: [support@xado.com](mailto:support@xado.com), [export@xado.com](mailto:export@xado.com)

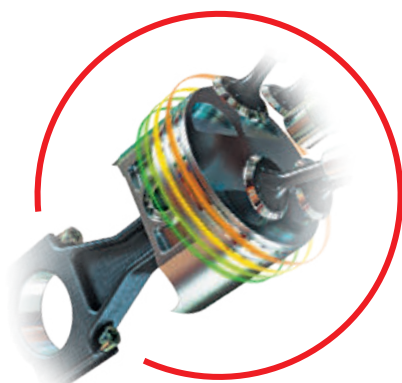
No.	Product name	Application	Packaging	Article
1	Gel-REVITALIZANT® for diesel engines	For industrial diesel engines (tractor, truck, locomotive, marine/building/ construction/mining equipment engines etc.)	aerosol can 10 ml tube 100 ml tube 125 ml can 1 L	XA 10502 XA 10402 XA 18402 XA 11702
2	Gel-REVITALIZANT® for gasoline engines	For industrial gasoline engines (tractor, truck, locomotive, marine/building/ construction/mining equipment engines etc.)	tube 9 ml aerosol can 10 ml tube 125 ml can 1 L	XA 10001 XA 10501 XA 10401 XA 11701
3	Gel-REVITALIZANT® for high pressure fuel pumps (fuel equipment)	For fuel equipment of diesel engines, high pressure fuel pumps (inline/distributor injection pumps, pump-injector units etc.)	tube 9 ml aerosol can 10 ml tube 100 ml can 1 L	XA 10008 XA 10508 XA 10408 XA 10708
4	Gel-REVITALIZANT® for gear boxes, transfer cases and differentials	For all types of industrial gearboxes (parallel shaft-type/bevel/planetary/ worm gearboxes) For transmission units of automotive transport and equipment (gearboxes, transfer cases, differentials)	tube 100 ml can 1 L	XA 19203 XA 19703
5	Gel-REVITALIZANT® for power steering pumps (hydraulic systems)	For hydraulic pumps, hydraulic motors and hydraulic distribution valves	tube 100 ml can 1 L	XA 10204 XA 18704
6	Gel-REVITALIZANT® for compressors and bearings	For units and parts of compressors of all types as well as for all types of bearings operating in the oil bath	tube 9 ml tube 100 ml can 1 L	XA 10906 XA 10206 XA 10706

### XADO APPLICATION IN INDUSTRY:

- Automobile transport
- Construction
- Metallurgy
- Mining
- Road-building
- Agriculture
- Food manufacturing and processing
- Medical industry
- Paper, print and packaging
- Railway
- River and sea transport
- Lifting and handling
- Oil and gas production and processing
- Military/Defense
- Energy
- etc.

RESULTS: Increase of power





Diesel or gasoline engines with the oil system capacity of up to 30 L are treated with XADO Gel-REVITALIZANT® for diesel engines or XADO Gel-REVITALIZANT® for gasoline engines in three stages (for every engine type correspondingly).

Engine oil system capacity, L	Number of 9 ml tubes of XADO Gel-REVITALIZANT® for diesel/gasoline engines, pcs.	Treatment scheme by stages
3–10	3	1+1+1
11–20	6	2+2+2
21–30	9	3+3+3

Accumulated operating time between the stages comprises 8–12 hours or 150–250 km of run.

The full treatment cycle makes at least 400 hours of accumulated operating time or at least 1,500 km of run beginning from the first treatment stage.

Diesel engines with the oil system capacity of more than 30 L are treated with XADO Gel-REVITALIZANT® for diesel engines in 3–8 stages in the amount of 0.6–1.8 ml of the gel for 1 L of operational oil for one treatment stage.

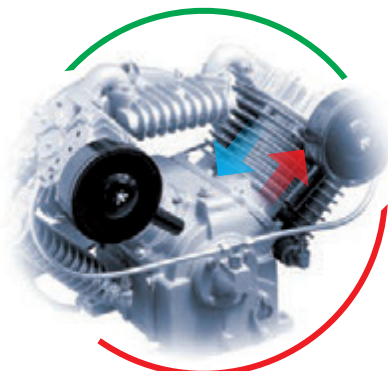
Before introducing the product, the engine should be warmed up to the operating temperature.

Number of the treatment stages depends on the wear rate and construction of the engine (see the table on page 11).

Treatment of fuel systems is conducted using XADO Gel-REVITALIZANT® for high pressure fuel pumps (fuel equipment) in one stage by introduction of the necessary amount of the gel into fuel according to the table below:

Diesel engine capacity, (L)	Amount of 9 ml tubes of XADO Gel-REVITALIZANT® for high pressure fuel pumps (fuel equipment), pcs.
< 5	2
5–15	4
15–30	7
30–75	10
75–100	14
100–140	18
140–175	22

The full treatment cycle makes at least 80 operating hours or 4,000 km of run.



Reciprocating compressors are treated with XADO Gel-REVITALIZANT<sup>®</sup> for compressors and bearings in 3–5 stages in the amount of 0.8–2 ml of the gel for 1 L of operational oil for one treatment stage (see the table on page 11 for clarification).

Screw and centrifugal compressors with the lubrication system including an oil pump are treated with XADO Gel-REVITALIZANT<sup>®</sup> for power steering pumps (hydraulic systems) in 5 stages in the amount of 0.8 ml of the gel for 1 L of operational oil for one treatment stage (see the table on page 11 for clarification).

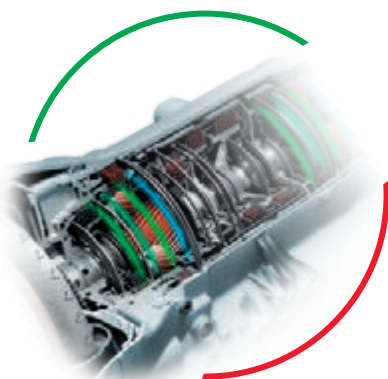
Screw and centrifugal compressors with the lubrication system without the oil pump are treated with XADO Gel-REVITALIZANT<sup>®</sup> for power steering pumps (hydraulic systems) in 8 stages in the amount of 0.5 ml of the gel for 1 L of operational oil for one treatment stage (see the table on page 11 for clarification).

Accumulated operating time between the stages comprises 12–24 hours.

The full treatment cycle makes at least 400–500 hours of accumulated operating time of the compressor beginning from the first treatment stage.

### Attention!

Centrifugal, scroll and screw compressors as well as turbocompressors are treated individually, according to the procedures developed by XADO technicians.

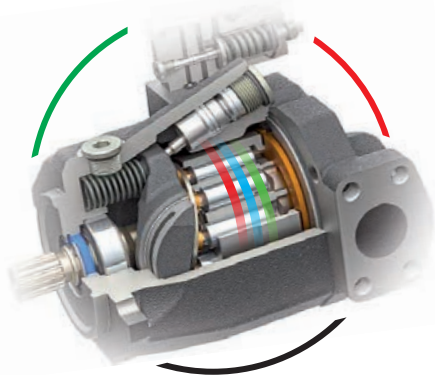


Reducers and gearboxes are treated with XADO Gel-REVITALIZANT<sup>®</sup> for gear boxes, transfer cases and differentials in 1–3 stages without the oil change in the amount of 3–6 ml of the gel for 1 L of operational oil for one treatment stage (see the table on page 11 for clarification).

Reducers operating with hydraulic system elements in the same oil bath are treated with XADO Gel-REVITALIZANT<sup>®</sup> for power steering pumps (hydraulic systems) in 6–10 stages in the amount of 1.5–2.5 ml of the gel for 1 L of operational oil for one treatment stage (see the table on page 11 for clarification).

Accumulated operational time between the stages comprises 12–24 hours.

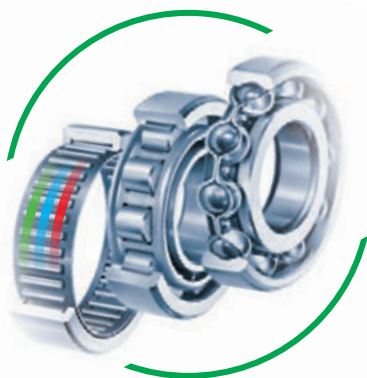
The full treatment cycle makes at least 450 hours of accumulated operational time beginning from the first treatment stage.



Hydraulic systems of industrial equipment are treated with XADO Gel-REVITALIZANT<sup>®</sup> for power steering pumps (hydraulic systems), which is added into hydraulic fluid in 6–10 stages in the amount of 0.5–1 ml for 1 L of operating fluid for one treatment stage.

Accumulated operating time between the stages makes 12–18 hours.

The full cycle of the hydraulic system treatment makes 550 hours of accumulated operating time beginning from the first treatment stage.



Rolling bearings in the oil bath are treated with XADO Gel-REVITALIZANT® for compressors and bearings in 3 stages without the oil change in the amount of 1.2 ml of the gel for 1 L of operational oil for one treatment stage. Sliding bearings are treated with XADO Gel-REVITALIZANT® for compressors and bearings in 6 stages in the amount of 1.5 ml of the gel for 1 L of operational oil for one treatment stage.

The interval of accumulated operating time between the stages makes 20–30 hours. The full cycle of bearings treatment makes 550 hours of accumulated operational time beginning from the first treatment stage.

For restoration of worn rolling bearings and slide assemblies lubricated with consistent lubricant, XADO Repairing Grease and XADO Restoring Grease are applied.



Spindle assemblies, gearboxes having the combined lubrication system, mechanisms of the grinding wheel head and control wheel head, a mechanism of the cartridge head and a spindle of internal grinding machines operating in the oil bath are treated with XADO Gel-REVITALIZANT® for compressors and bearings in 3 stages in the amount of 3 ml of the gel for 1 L of operational oil for one treatment stage.

Gearboxes and feed boxes, bearing brackets of milling machines with the separate lubrication system are treated with XADO Gel-REVITALIZANT® for gear boxes, transfer cases and differentials in 3 stages in the amount of 3 ml of the gel for 1 L of operational oil for one treatment stage.

Spindle bearings of grinding wheel heads of external grinding machines operating in the oil bath are treated with XADO Gel-REVITALIZANT® for compressors and bearings in 6 stages in the amount of 1.5 ml of the gel for 1 L of operational oil for one treatment stage.

Spindle assemblies of coordinate boring machines are treated with XADO Gel-REVITALIZANT® for power steering pumps (hydraulic systems) in 5 stages in the amount of 0.8 ml of the gel for 1 L of operational oil for one treatment stage.

Accumulated operating time between the stages comprises 8–12 hours.

The full treatment cycle of assemblies makes at least 450 hours of accumulated operating time of the machine beginning from the first treatment stage.

Treatment of screw spindles lubricated with oil is conducted by introducing XADO Gel-REVITALIZANT® for gear boxes, transfer cases and differentials into lubrication oil of the screw pair in the amount of 9 ml of the gel for 1 L of operational oil. The full treatment cycle makes at least 550 hours of accumulated operating time.

Sliding guides are treated with XADO Gel-REVITALIZANT® for compressors and bearings by introducing the gel in the amount of 9 ml for 1 L of operational oil for the whole operating time. The full cycle of sliding guides treatment makes at least 700 hours of machine accumulated operating time.

Hydraulic systems of machines. See hydraulic systems.

**Consumption rate of XADO Gel-REVITALIZANT® per 1 L of regular oil by treatment of industrial equipment and internal combustion engines with the oil system volume of over 30 L using XADO REVITALIZANT® compositions**

No.	Mechanism to be treated	XADO Gel-REVITALIZANT®	Amount of the gel per 1 L for one treatment stage (ml)	Number of treatment stages
1	Reciprocating compressors	Gel-REVITALIZANT® for compressors and bearings	1.5–2.5	3–6
2	Rotary-screw and centrifugal compressors	Gel-REVITALIZANT® for compressors and bearings	0.5–0.8	5–10
3	Rotary-screw compressors without the oil pump in the oil system	Gel-REVITALIZANT® for compressors and bearings	0.5	8–10
4	Industrial reducers	Gel-REVITALIZANT® for gear boxes, transfer cases and differentials	3–6	3–6
5	Reducers with the filtration system or hydraulic system components	Gel-REVITALIZANT® for power steering pumps (hydraulic systems)	1.5–3	6–10
6	Gearboxes and transmission assemblies of vehicles with the engine capacity of up to 20 L	Gel-REVITALIZANT® for gear boxes, transfer cases and differentials	4–6	1–3
7	Industrial hydraulic systems	Gel-REVITALIZANT® for power steering pumps (hydraulic systems)	0.5–1.5	6–10
8	Rolling bearings operating in the oil bath	Gel-REVITALIZANT® for compressors and bearings	1–3	3–8
9	Sliding bearings operating in the oil bath	Gel-REVITALIZANT® for compressors and bearings	0.5–2.5	6–12
10	Diesel internal combustion engines (oil system over 30 L)	Gel-REVITALIZANT® for diesel/gasoline engines	0.6–1.8	3–8
11	Cylinders of internal combustion engines	Gel-REVITALIZANT® for cylinders	25–45 ml per 1 L of the cylinder volume	1–5

To get more detailed information please contact us: [support@xado.com](mailto:support@xado.com), [export@xado.com](mailto:export@xado.com)

# INDUSTRIAL OILS

## HYDRAULIC OILS

# INDUSTRIAL OILS

XADO Industrial oils meet the highest requirements of the American Petroleum Institute (API), European Automobile Manufacturers Association (ACEA) and specifications of leading manufacturers.



### **MINERAL** XADO Hydraulic Oil VHLP VG 22/32/46/68/100

A series of hydraulic oils notable for their high antiwear properties and viscosity index and made from highly purified basic oils and a special additive package. Possessing high chemical stability in contact with water, they provide reliable protection from corrosion. Contain REVITALIZANT®.

HLP DIN 51524 part 3 (VHLP) | ISO class L-HV (according to ISO 6743/4) | Vickers I-286-S and M-2950-S VDMA 24318 | AFNOR NF E 48603 (HV) | FZG A/8.3/90>12 (ISO-VG 46 and 68) | ZF-TE ML 12 | FZG A/8.3/90=12 (ISO-VG 22 and 32) | Cincinnati Milacron | Thyssen TH-N-256132 | US Steel 126/127

<b>XADO Hydraulic VHLP 46</b>	
<b>20 L</b>	<b>XA 28554</b>
<b>60 L</b>	<b>XA 20654</b>
<b>200 L</b>	<b>XA 20754</b>

### **MINERAL** XADO Hydraulic Oil HLP VG 10/15/22/32/46/68/100/150

A series of hydraulic oils characterized by high antiwear properties, made from highly purified base oils and a special additive package. Contain REVITALIZANT®.

HLP DIN 51524 part 2 (HLP) | Cincinnati Milacron ISO class L-HM according to ISO 6743/4 | Vickers I-286-S and M-2950-S | VDMA24318 | FZG A/8.3/9012 (ISO-VG 46 and above) | Thyssen TH-N-256132 | FZG A/8.3/90=12 (ISO-VG15/22/ 32) | US Steel 126/127 | AFNOR NF E 48603 (HM) | ZF-TE ML 12

<b>20 L</b>
<b>60 L</b>
<b>200 L</b>

### **MINERAL** XADO Hydraulic Oil DAZ VG 46

Hydraulic oil made from high-performance base stocks and specially selected additives. The product is ashless, zinc-free and has strong detergent properties. Contains REVITALIZANT®.

DIN 51524 part 3 (VHLPD) (except demulsification) | Hagglunds | Denison | Vickers I-286-S/I-2952-S | Cincinnati Milacron

<b>20 L</b>
<b>60 L</b>
<b>200 L</b>

### **BIO** XADO Hydraulic Oil BIO RO VG 32/46

Plant-based biodegradable hydraulic oil. Specially developed for hydraulic systems with a risk of environmental oil contamination (agricultural equipment, forestry, food industry). Contains REVITALIZANT®.

Rexroth | Schaeff | Komatsu (-15 °C...+80 °C) | VDMA 24568 type HETG meets the requirements of Environmental List «Vamil-regulation», 1999

<b>20 L</b>
<b>60 L</b>
<b>200 L</b>

### **BIO** XADO Hydraulic Oil BIO Syn VG 32/46

Synthetic biodegradable hydraulic oil. Made from synthetic oil on the basis of esters and an additive package. Due to the high viscosity index (VI>185), can be used in systems operating at a wide temperature range. Contains REVITALIZANT®.

VDMA 24568 type HEES

<b>20 L</b>
<b>60 L</b>
<b>200 L</b>



### **SYNTHETIC** XADO Compressor Oil 100

Universally applied to all types of compressors, especially to reciprocating compressors, can be also used in vacuum pumps. Due to the synthetic polyalphaolefin base and a special additive package, provides extended oil change intervals and decrease of oil consumption by 3 to 4 times. Contains REVITALIZANT®.

ISO-VG 100 | DIN 51506: VDL | USDA H2

20 L	XA 28527
60 L	XA 20627
200 L	XA 20727

### **SYNTHETIC** XADO Compressor Syn Oil VG 32/46/68

Universally applied to all types of compressors, can be also used in vacuum pumps. Based on PAO base stocks and specially developed for lubrication of rotating oil cooled compressors (ISO-VG 32, 46 and 68) including very critical Hydrovane compressors. Contains REVITALIZANT®.

DIN 51506: VDL | USDA H2

60 L
200 L

### **MINERAL** XADO Mineral Compressor Oil VG 32/46/68/100

Developed on the basis of special mineral base oils and a special additive complex. Can be used as ashless hydraulic oil with improved antiwear and anticorrosive properties. Developed for all types of mobile and stationary compressors with the maximum delivery temperature of up to +220 °C. Contains REVITALIZANT®.

DIN 51506: VBL, VCL, VDL | AFNOR NFE 48-603 category HM | DIN 51524 part 2 (HLP) | Vickers I-286-S | ISO-L-DAA/DAB/DAG/DAH

20 L	XA 28556
60 L	XA 20656
200 L	XA 20756

### **MINERAL** XADO Vacuum-pump Oil VG 46/68/100/150/220/320

Developed for application in volumetric vacuum pumps (piston, liquid ring, rotary etc.). Possesses perfect antioxidant stability and is particularly applicable in industrial vacuum pumps operating in loaded modes. Contains REVITALIZANT®.

DIN 51506: VBL, VCL, VDL | AFNOR NFE 48-603 category HM | DIN 51524 part 2 (HLP) | Vickers I-286-S | ISO-L-DAA/DAB/DAG/DAH

60 L
200 L

### **SYNTHETIC** XADO Hydraulic Oil FG VG 32/46

**NEW**

Synthetic non-toxic hydraulic oil. Developed for hydraulic systems of food industry. Can be applied in food processing industries like poultry, meat, baking, brewing, dairy and petfood industry. Fully compatible with any gaskets and seals and can be mixed with mineral oils.

InS H1 | NSF H1

20 L
60 L
200 L

# INDUSTRIAL OILS

## GEAR OILS



## INDUSTRIAL OILS

### **MINERAL** XADO Gear EP VG 68/100/150/220/320/460/680

Gear unit oil with extreme pressure properties. Possessing extreme pressure and antiwear characteristics, properly lubricates and protects industrial equipment in loaded operation modes. Characterized by low foaming and high antioxidant properties. Contains REVITALIZANT®.

CLP DIN 51517 part 3 | US Steel 224 | Timken OK Load 75 lbs |  
AGMA 250.04 EP/9005-D94 | David Brown S1.53.101

60 L  
200 L

### **SYNTHETIC** XADO Gear SYN PAG VG 150/460

Synthetic (polyalkylene glycol) oil for high-loaded toothed and worm gears. Used in high-speed and high-loaded industrial transmissions, worm gears as well as circulating lubrication systems of units and bearings with the oil operating temperature of up to +200 °C. Contains REVITALIZANT®.

CLP DIN 51517 part 3

60 L  
200 L

### **SYNTHETIC** XADO Gear SYN PAO VG 150/220/320/460

Polyalphaolefin based gear oil developed for lubrication of all kinds of heavily loaded toothed gears, especially in high-temperature modes. Used in high-speed and high-loaded industrial transmissions, worm gears and bearings. Contains REVITALIZANT®.

CLP DIN 51517 part 3 | FZG geartest > 12 | US Steel 222, 223, 22 | Timken OK  
Load >70 Lb | AGMA 250.04 EP/9005-D94 | David Brown type H

60 L  
200 L

### **SYNTHETIC** XADO FG Gear VG 150/220/320/460

Developed specially for closed toothed gears of food industry equipment. Formulated on the basis of synthetic oil (PAO). Designed for toothed gears, rolling and sliding bearings of food industry equipment (where CLP oils are recommended). Does not form dangerous oxidation products at high temperatures. Contains REVITALIZANT®.

NSF/InS H1 | FZG =12 | Din 51517 part 3 (CLP)

60 L  
200 L



### **MINERAL** XADO Slideway VG 150/320

Developed on the basis of special mineral base oils and a special additive package. Special additives change the static and dynamic friction index eliminating irregularity of sliding, providing smooth treatment of the part and necessary precision. Contains REVITALIZANT®.

Cincinnati Milacron P47 (ISO-VG 68), P50 (ISO-VG 220), P53 (ISO-VG 32) | DIN 51517 part 3 (CLP) | DIN 51524 part 2 (HLP)

**60 L**  
**200 L**

### **MINERAL** XADO White Oil VG 10/15/32/46/68/100

White medical oil. Produced on the basis of highly purified paraffin base oils and a special additive package. Has no taste and odor. Perfectly transparent. White oil can also be applied as process oil in plastic, food and cosmetic industries. Contains REVITALIZANT®.

FDA CFR 172.878, 178.3620 (a) (US Food and Drug Administration) | United States Pharmacopoeia USP XXII | European Pharmacopoeia, 1983, second edition | German pharmacopoeia DAB 10 | British Pharmacopoeia BP, 1993 French Pharmacopoeia | Italian Pharmacopoeia | Chinese Pharmacopoeia, tenth edition for food industry

**5 L**  
**20 L**  
**60 L**  
**200 L**

### **MINERAL** Verylube THERM B

Thermal oil. Developed on the basis of purified paraffin base oils and a special additive package. Designed for closed circular heating systems with the expansion tank. Also can be used in open systems. Used at a wide temperature range of thermal fluid operation: from -15 to +315 °C.

DIN 51522-Q

**60 L**  
**200 L**

### **SYNTHETIC** XADO Refrigeration Oil 100

Produced on the basis of synthetic esters and a special additive package. Specially developed for car air conditioners operating with refrigerant R-134A. Used in apartment and commercial air conditioners with fluorocarbon refrigerants. Contains REVITALIZANT®.

ISO-VG 100

**60 L**  
**200 L**      **XA 60603**  
**XA 60703**

# GREASES

## MULTIPURPOSE GREASES



### GENERAL-PURPOSE

#### XADO Protective Grease

Universal consistent multipurpose lithium grease (colored orange). For new mechanisms and units with up to 10% wear rate. The patented formula of this modern grease is based on the combination of XADO REVITALIZANT® and EP (Extreme Pressure) package. The grease is particularly effective for protection of bearings from the ongoing wear (up to 10,000 rpm). Contains REVITALIZANT®.

NLGI 3 (ASTM D217)  
ISO-L-XB(F)CHB (ISO 6743-9)  
KP3K-20 (DIN 51502)

sachet 12 ml XA 30101  
tube 125 ml XA 30201  
aerosol can 400 ml XA 30401  
cartridge 450 ml XA 30001

can 1 kg XA 30501  
bucket 20 L XA 30901  
barrel 54 kg XA 30601  
barrel 180 kg XA 30701

### GENERAL-PURPOSE

#### XADO Restoring Grease

Universal consistent multipurpose lithium grease (colored green). For mechanisms and units with up to 50% wear rate. Designed for restoration of assemblies and mechanisms operating under high loads. Especially effective for antiwear protection of bearings (up to 10,000 rpm). Contains REVITALIZANT®.

NLGI 3 (ASTM D217)  
ISO-L-XB(F)CHB (ISO 6743-9)  
KP3K-20 (DIN 51502)

sachet 12 ml XA 30102  
tube 125 ml XA 30202  
aerosol can 400 ml XA 30402  
cartridge 450 ml XA 30002

can 1 kg XA 30502  
barrel 54 kg XA 30602  
barrel 180 kg XA 30702

### GENERAL-PURPOSE

#### XADO Repairing Grease

Universal consistent multipurpose lithium grease (colored red). For mechanisms and units with up to 80% wear rate. Designed for restoration of assemblies and mechanisms operating under high loads. Guarantees full restoration of high-loaded assemblies with low and average (up to 1,000 rpm) rotational speed which cannot be repaired by regular means. Contains REVITALIZANT®.

NLGI 3 (ASTM D217)  
ISO-L-XB(F)CHB (ISO 6743-9)  
KP3K-20 (DIN 51502)

sachet 12 ml XA 30103  
tube 125 ml XA 30203  
aerosol can 400 ml XA 30403  
cartridge 450 ml XA 30003

can 1 kg XA 30503  
barrel 54 kg XA 30603  
barrel 180 kg XA 30703

### GENERAL-PURPOSE

#### XADO Grease for CV Joints

Universal grease for high-loaded assemblies operating under conditions of increased dustiness and humidity. Developed based on mineral oil and a complex lithium-calcium thickener with polymer additives. Compensates the ongoing wear. Contains REVITALIZANT®.

NLGI 2 (ASTM D217)  
NLGI GC-LB  
ISO-L-XBDIB 2 (ISO 6743-9)  
GOGM2N-20 (DIN 51502)

tube 125 ml XA 30204  
aerosol can 400 ml XA 30404  
cartridge 450 ml XA 30004

can 1 kg XA 30504  
barrel 54 kg XA 30604  
barrel 180 kg XA 30704



### GENERAL-PURPOSE

### XADO Restoring Grease for CV Joints

Based on mineral oil and a complex lithium-calcium thickener with polymer additives. Designed for high-loaded toothed gears and roller bearings operating in regular and corrosive environment. Compensates wear of up to 50%. Contains REVITALIZANT®.

NLGI 2 (ASMT D217) NLGI GC-LB  
 ISO-L-XBDIB 2 (ISO 6743-9) GOGM2N-20 (DIN 51 502)

can 1 kg **XA 30515**  
 barrel 54 kg **XA 30615**

### GENERAL-PURPOSE

### XADO Supergrease

Universal lithium grease based on mineral oil with an EP package. Designed for restoration and protection of assemblies and mechanisms operating under high loads with the rotation speed of up to 10,000 rpm. Compensates wear of up to 30%. Contains REVITALIZANT®.

NLGI 2 (ASTM D217)  
 ISO-L-XCCFB 2 (ISO 6743-9) KPF2K-25 (DIN 51502)

sachet 7 ml **XA 30005**  
 tube 125 ml **XA 30205**  
 can 1 kg **XA 30505**

### GENERAL-PURPOSE

### XADO EP 00/000

Universal lithium grease with an EP additive package. Contains mineral oil, lithium thickener, EP additive complex and atomic REVITALIZANT®. High-quality multipurpose semi-liquid grease for centralized lubrication systems of trucks, special and industrial equipment. Compensates the ongoing wear. Contains REVITALIZANT®.

NLGI 00/000 (ASTM D217)  
 ISO-L-XCBFB 00 (ISO 6743-9) KP00H-30 (DIN 51502)

can 1 kg **XA 30213**  
 can 20 L **XA 38513**

### AEROSOL

### XADO Industrial Penetrating Lubricant

Universal penetrating spray grease. Designed to restore mobility of rusted joints, lubricate metal friction surfaces, clean parts from contaminations and protect them from corrosion.

can 320 ml **XA 78004**

### SPECIAL-PURPOSE

### XADO Open Gear Grease

Special aluminium grease with an EP additive package. Service lubricant for open gear drives, possesses very high load-carrying capacity and good adhesion. Restores assemblies and mechanisms with the wear of up to 50%. Contains REVITALIZANT®.

NLGI 0-00 (ASTM D217)  
 OGPF0R-10 (DIN 51502)

can 1 kg  
 barrel 54 kg

### SPECIAL-PURPOSE

### XADO PU Grease

Special polyurea grease for operation at high temperatures and loads. Possesses excellent water resistance and EP-properties. Recommended for application in mechanisms operating at the rotation speed of up to 15,000 rpm. Restores assemblies and mechanisms with the wear of up to 50%. Contains REVITALIZANT®.

NLGI 1-2 (ASTM D217)  
 KP1-2P-20 (DIN 51502)

can 1 kg  
 barrel 54 kg

# GREASES

## REGULAR GREASES

No.	Product name	Characteristics (specifications)	Packaging	Article
1	VERYLUBE Lithium Universal Grease (EP-Extreme Pressure)	Universal consistent multipurpose lithium grease with enhanced scoring resistance. NLGI 2 (ASTM D217) ISO-L-XBCEB 2 (ISO 6743-9) KP2K-20 (DIN 51502)	tube 125 ml cartridge 450 ml can 1 kg barrel 54 kg barrel 180 kg	XB 30250 XB 30050 XB 30650 XB 30450 XB 30750
2	VERYLUBE Lithium Complex Grease (with metal conditioner)	Universal consistent multipurpose complex lithium grease with enhanced scoring resistance. NLGI 2 (ASTM D217) ISO-L-XBDIB 2 (ISO 6743-9) KP2N-30 (DIN 51502)	tube 125 ml cartridge 450 ml can 1 kg barrel 54 kg barrel 180 kg	XB 30252 XB 30052 XB 30652 XB 30452 XB 30752
3	VERYLUBE Lithium Grease for CV Joints (with molybdenum disulfide)	Consistent grease with molybdenum disulfide for constant velocity joints (CV-joints). NLGI 2 (ASTM D217) ISO-L-XCCEB 2 (ISO 6743-9) KPF2N-25 (DIN 51502)	tube 125 ml cartridge 450 ml can 1 kg barrel 54 kg barrel 180 kg	XB 30251 XB 30051 XB 30651 XB 30451 XB 30751
4	VERYLUBE Brake Caliper Grease	High-temperature grease for brake calipers of different vehicles. NLGI 2 (ASTM D217)	can 320 ml	XB 40019
5	VERYLUBE Assembly Grease Paste	Assembly grease paste for easy assembling and disassembling of joints. Functions within the temperature range of -35 °C...+1,100 °C. NLGI 1-2 (ASTM D 217)	can 320 ml	XB 40021



No.	Product name	Characteristics (specifications)	Packaging	Article
6	VERYLUBE Universal Silicone Lubricant	Universal thick silicone spray grease. Lubricates and penetrates joints made of different materials.	can 150 ml can 320 ml can 500 ml	XB 40205 XB 40005 XB 40105
7	VERYLUBE Universal Penetrating Lubricant	Universal penetrating grease spray. "Liquid key".	can 150 ml can 320 ml can 500 ml	XB 40203 XB 40003 XB 40103
8	VERYLUBE Lithium Universal White PTFE Grease	Contains refined mineral oil, lithium thickener with PTFE. The grease was developed to significantly reduce friction and wear.	can 150 ml can 320 ml	XB 40421 XB 40221
9	VERYLUBE PTFE Spray	The product forms on friction parts an easily sliding dry antifriction coating based on polytetrafluoroethylene.	can 150 ml can 320 ml	XB 40321 XB 40121
10	VERYLUBE Chain Lube	For lubrication and antiwear protection of chains of motor equipment and bicycles.	can 150 ml	XB 40343
11	VERYLUBE Lithium Consistent Grease	Designed for assemblies and mechanisms operating at high pressure.	can 320 ml	XB 40018
12	VERYLUBE Conserving Grease	Used for conservation, cleaning, lubrication and protection from corrosion of metal parts of assemblies and mechanisms.	can 600 ml	XB 40504

\* VERYLUBE products don't contain REVITALIZANT®



# GREASES

## HIGH-SPEED GREASES



### HIGH-SPEED

#### XADO Protective Grease 20K

Based on mineral oil. Recommended instead of regular greases in assemblies and mechanisms operating at rotating speeds up to 20,000 rpm. Restores assemblies and mechanisms with up to 10% wear. Contains REVITALIZANT®.

NLGI 3 (ASTM D217)

tube 125 ml	XA 30210	can 1 kg	XA 30510
aerosol can 320 ml	XA 30810	barrel 54 kg	XA 30610
cartridge 450 ml	XA 30010	barrel 180 kg	XA 30710

### HIGH-SPEED

#### XADO Protective Grease 60K

Based on mineral oil. Recommended instead of regular greases in assemblies and mechanisms operating at rotating speeds up to 60,000 rpm. Restores assemblies and mechanisms with up to 30% wear. Contains REVITALIZANT®.

NLGI 1 (ASTM D217)

tube 125 ml	XA 30212	barrel 54 kg	XA 30612
can 1 kg	XA 30512	barrel 180 kg	XA 30712
bucket 20 L	XA 30812		

### HIGH-SPEED

#### XADO Restoring Grease 20K

Based on mineral oil. Recommended instead of regular greases in assemblies and mechanisms operating at rotating speeds up to 20,000 rpm. Restores assemblies and mechanisms with up to 50% wear. Contains REVITALIZANT®.

NLGI 3 (ASTM D217)

tube 125 ml	XA 30211	barrel 54 kg	XA 30611
cartridge 450 ml	XA 30011	barrel 180 kg	XA 30711
can 1 kg	XA 30511		

### THERMO

#### XADO Thermospecial U

High-temperature grease paste. Based on mineral oil. Applied within the temperature range of -25 °C ...+250 °C. Compensates up to 30% wear of parts. Contains REVITALIZANT®.

NLGI 2 (ASTM D217)

cartridge 450 ml	XA 30017
can 1 kg	XA 31317



### THERMO

#### Grease XADO 250

Semi-fluid mineral grease paste for assemblies and mechanisms operating at the temperature of up to +250 °C. Removes heat from the friction zone and withstands high speed rotation (up to 36,000 rpm). Compensates up to 30% wear of parts. Contains REVITALIZANT®.

tube 125 ml  
can 1 kg

XA 30206  
XA 30506

barrel 54 kg  
barrel 180 kg

XA 30606  
XA 30706

### THERMO

#### Grease XADO 300

Semi-fluid mineral grease paste for assemblies and mechanisms operating at the temperature of up to +300 °C. Designed for lubrication of hermetically sealed bearings of slow-speed loaded equipment. Compensates up to 30% wear of parts. Contains REVITALIZANT®.

tube 125 ml  
cartridge 450 ml  
can 1 kg

XA 30207  
XA 30007  
XA 30107

barrel 54 kg  
barrel 180 kg

XA 30607  
XA 30707

### THERMO

#### XADO Thermolube 300

High-temperature mineral grease for assemblies and mechanisms operating at the temperature of up to +300 °C. Designed for wide application in industrial equipment, recommended as a high-temperature grease. Compensates up to 30% wear of parts. Contains REVITALIZANT®.

NLGI 2 (ASTM D217)

tube 125 ml  
cartridge 450 ml  
can 1 kg

XA 30208  
XA 30008  
XA 30508

barrel 54 kg  
barrel 180 kg

XA 30608  
XA 30708

### THERMO

#### XADO Thermolube 1000

High-temperature grease paste. Designed for lubrication of thermally loaded sliding bearings with maximum operating temperature of up to +1,100 °C. Application is allowed in low-speed (up to 1,000 rpm) rolling bearings. Compensates up to 30% wear of parts. Contains REVITALIZANT®.

NLGI 1-2 (ASTM D217)

tube 125 ml  
cartridge 450 ml  
can 1 kg

XA 30209  
XA 30009  
XA 30509

barrel 54 kg  
barrel 180 kg

XA 30609  
XA 30709

# CLEANERS

## REGULAR CLEANERS



### CLEANER

### XADO VitaFlush

VitaFlush is designed to clean the oil system of fuel and diesel engines of all types (including turbocharged ones) as well as transmission units. Comprehensively cleans all contaminations, tar deposits and removes them with used oil. Applied during the oil change as prophylactic measures for cleaning and protecting from wear. Also can be used as an adaptive cleaner after changing for oil of different viscosity (i.e. from mineral to synthetic) or manufacturer.

Application instructions:

1. Introduce the necessary amount of VitaFlush into the warmed up mechanism through the oil filler neck or opening of the dipstick.
2. Start the engine and let it idle within 10–15 minutes or drive 20 km (~15 miles). If intensive cleaning is required (in case of heavy contamination), drive 200–300 km (150–200 miles).
3. Change the oil and the oil filter.

**can 250 ml**  
**bucket 20 L**  
**barrel 60 L**  
**barrel 200 L**

**XA 40201**  
**XA 48501**  
**XA 40601**  
**XA 40901**

#### Note

In order to achieve the maximum effect, it is recommended to apply the cleaner by every oil change.  
Compatible with all types of oils.  
Does not contain acid, acetone or solvents.  
Safe for non-metal engine parts, lambda probes and catalyst converters.

### CLEANER

### VERYLUBE Anticarbon

Decarbonization of stuck piston rings.

Used for deep cleaning of the cylinder-piston group of gasoline and diesel engines (including turbocharged ones) from all types of contaminations (carbon deposits, soot, lacquer, tars).

Application instructions:

1. Warm up the engine. The engine should be warm but not hot.
2. Unscrew the plugs (nozzles). Disconnect the wire of the ignition timing sensor, Hall sensor or commutator.
3. Spray the substance (up to 5 seconds) through a nozzle hose (or introduce the content of 1 tube) into each cylinder. Screw the plugs back. Wait for 10–20 minutes. Unscrew the plugs. Cover the plugholes with absorbing fabric to avoid dirt flying out and getting onto the paint. Rotate the engine with the starter for several seconds.
4. Reinstall the spark plugs (nozzles).
5. Start the engine and let it run at increased rpm of the crankshaft for up to 15 minutes. During this time, residues of the softened carbon will be removed through the exhaust system.

**tube 10 ml**  
**can 320 ml**  
**can 1 L**

**XB 40051**  
**XB 40011**  
**XB 40251**

**CLEANER**

### XADO Universal Industrial Flush

Designed for cleaning and degreasing of bearing assemblies, chains, flexible joints of technological equipment and vehicles. Can be used as a cleaning agent or dissolvent of surfactants. Used as an anticorrosive agent by metal production and for localization and preservation of corrosion spots by technological equipment operation.

Application instructions:

1. Manually remove the old grease or accumulated deposits from the surface.
2. Shake the aerosol can.
3. Spray the agent onto the assembly (part) from a distance of 10–15 cm.
4. Wipe the surface dry. To remove the rest of deposits repeat spraying of the cleaning agent.
5. After the deposits removing, pack equipment with the new operating grease.

can 320 ml

**XA 78006**

**CLEANER**

### VERYLUBE Industrial Flush for Bearing Units

Flush for bearings on the basis of dearomatized dissolvent.

Designed for flushing and removing of old hydrocarbon and other deposits, residues of old grease from bearing assemblies and flexible joints.

Application instructions:

1. Manually remove the old grease or accumulated deposits from the surface.
2. Shake the aerosol can.
3. Spray the agent abundantly onto the assembly (part) from a distance of 10–15 cm.
4. Wipe the surface dry.
5. To remove the rest of deposits repeat spraying of the cleaning agent.
6. After removing the deposits, pack equipment with the new operating grease.

can 320 ml  
barrel 200 L

**XA 78001**  
**XB 40572**

**CLEANER**

### VERYLUBE Contact Cleaner with Moisture Removing Effect

Aerosol contact cleaner.

Used for cleaning, degreasing and dehydration of contacts in electric engines, generators, starters, actuators, regulators, stabilizers, key boards, condensers and spoolings, mechanism parts, polygraphic matrices, equipment for air conditioning systems.

Application instructions:

1. Shake the aerosol can.
2. Spray the agent abundantly from a distance of 10–15 cm onto the assembly (part) surface.
3. By insufficient cleaning effect repeat application of the agent.

can 320 ml

**XB 40064**

**CLEANER**

### VERYLUBE Conveyor Flush

Aerosol cleaner for bearings.

Developed for cleaning, degreasing of bearing assemblies, removing of deposits from operating surfaces of slip joints of technological equipment and vehicles.

Application instructions:

1. Manually remove the old grease or accumulated deposits from the surface.
2. Shake the aerosol can.
3. Abundantly spray the agent onto the assembly (part) from a distance of 10–15 cm.
4. Wipe the surface dry.
5. To remove the rest of deposits repeat spraying of the cleaning agent.
6. After removing the deposits, pack equipment with the new operating grease.

can 320 ml

**XB 78003**

# ATOMIC PRO-INDUSTRY OILS

## XADO ATOMIC PRO-INDUSTRY OILS — special top-grade automotive oils with REVITALIZANT® [RF 5.5].

Due to the high content of the REVITALIZANT® nanocomponent [REVITALIZATION® Factor RF 5.5], all ATOMIC oils provide the maximum possible level of antiwear protection, as well as efficiently compensate the ongoing wear during operation of assemblies and aggregates. RF – the REVITALIZATION® Factor is a value for efficiency of restoration and antiwear protection of the engine. The higher is the RF, the more reliable are antiwear and restoring properties of the coating obtained as a result of REVITALIZATION®.

**ATOMIC®**  
PRO-INDUSTRY MOTOR OIL w / REVITALIZANT®

### SYNTHETIC

#### 15W-40 SN/CK-4

Special top-grade synthetic motor oil with REVITALIZANT® [RF 5.5]. Applied to naturally aspirated as well as turbocharged four-stroke diesel and gasoline engines operating under severe service and a wide range of climatic conditions. Fully backwards compatible with API CJ-4, API CI-4+, CI-4 oils as well as previous specifications.

SAE 15W-40 | API CK-4 | API SN | ACEA E6/E7/E9 | MB 228.31 | MAN M 3275/3575 | Volvo VDS-4.5 | **20L**  
Caterpillar ECF-3 | Cummins CES 20081/86 | Ford WSS-M2C171-E/F | MTU type 2.1 | Detroit Diesel **60 L**  
DDC 93K218/222 | JASO DH-2 | Mack EO-O Premium Plus | Renault VI RLD-3/4 | Deutz DQC III-10 LA **200 L**

### SYNTHETIC

#### 10W-30 SN/CK-4

Full synthetic motor oil with REVITALIZANT® [RF 5.5]. The oil is applied to a wide range of modern trucks, because it meets a wide performance spectrum. Developed according to the latest oil consumption and exhaust emission regulations.

SAE 10W-30 | API CK-4/CJ-4 | API SN (SFU) | ACEA E9-2016 | MB 228.31 | CES 20081 | Cat ECF-3 | **20L**  
Volvo VDS-4 | Mack EO-O PP | Renault RLD-3 | DDC 93K218 | MAN M3575 | MTU Type 2.1 | **60 L**  
DQC III-10 LA | Ford WSS-M2C171-F1 **200 L**

### SEMI-SYNTHETIC

#### 15W-40 SM/CJ-4

Semi-synthetic motor oil with REVITALIZANT® [RF 5.5]. Applied to all types of diesel engines of trucks and other vehicles. Particularly recommended for diesel engines of trucks, including those equipped with the exhaust gas recirculation system (EGR) and/or diesel particulate filter (DPF).

SAE 15W-40 | API CJ-4 | API SM | ACEA E7/E9 | Global DHD-1 | MB 228.31 | **60 L** **XA 20647**  
CES 20081 | Cat ECF-3 | Volvo VDS-4 | Mack EO-O PP | Renault RLD-3 | **200 L** **XA 20747**  
DDC 93K21 | MAN M3275 | MTU Type 2

### MINERAL

#### 15W-40 CI-4 DIESEL

Special top-grade mineral motor oil with REVITALIZANT® [RF 5.5]. Applied to diesel engines of passenger cars, trucks and other vehicles.

SAE 15W-40 | API CI-4/CH-4/CG-4/CF-4/CF | ACEA A3/B4/E7 | Global DHD-1 | **20L** **XA 28514**  
JASO DH-1 | MB 228.3 | CES 20076/77/78 | Cat ECF-1a | Volvo VDS-2/3 | **60 L** **XA 20614**  
Mack EO-M PP | Renault Truck RLD-2 | MAN M3275 | MTU Type 2 | DQC-III **200 L** **XA 20714**

# ATOMIC PRO-INDUSTRY OILS

**XADO**  
CHEMICAL GROUP



*XADO ATOMIC oils meet the highest requirements of the American Petroleum Institute (API), European Automobile Manufacturers Association (ACEA) and specifications of the leading car manufacturers.*



## SEMI-SYNTHETIC

### 10W-40 DIESEL TRUCK

Semi-synthetic motor oil with REVITALIZANT® [RF 5.5]. Applied to all types of diesel engines of trucks and other vehicles. Particularly recommended for Euro 4 (3) engines of freight trucks and buses operating under the conditions of extended oil change intervals.

SAE 10W-40   API CI-4   ACEA E4/E7   Global DHD-1   JASO DH-1   MB 228.5	20L	XA 20510
CES 20076/77/78   Cat ECF-2   Volvo VDS-2/3   Mack EO-N/M PP	60 L	XA 20610
Renault RLD-2/RXD   MAN M3277/3377   MTU Type 3   DQC IV-10   Scania LDF	200 L	XA 20710

## SEMI-SYNTHETIC

### 10W-40 SL/CI-4

Semi-synthetic motor oil with REVITALIZANT® [RF 5.5]. Applied to gasoline and diesel engines of passenger cars and trucks.

SSAE 10W-40   API SL/CI-4   ACEA A3/B4/E7   Global DHD-1   JASO DH-1	20L	XA 28509
MB 228.5   CES 20076/77/78   Cat ECF-2   DDC 93K215   Volvo VDS-3	60 L	XA 20609
Mack EO-N   Renault RLD-2/RDL   MAN M3275/3271   MTU Type 2	200 L	XA 20709
DQC IV-10   Allison C4   Voith Class A		

## MINERAL

### 10W-40 SG/CF-4 SILVER

Universal top-grade mineral motor oil with REVITALIZANT® [RF 5.5]. Applied to gasoline and diesel engines (including those with turbocharging and direct injection) of passenger cars and trucks.

SAE 10W-40   API SG/CF-4   MIL-L-46152 EC   MIL-L-2104 D	20L	XA 28523
CCMC G4/D4/PD-2   FORD M2C-153C   GM 6085-M	60 L	XA 20623
	200 L	XA 20723

## MINERAL

### 80W-90 GL-3/4/5

Mineral transmission oil with REVITALIZANT® [RF 5.5]. Applied to all transmission assemblies of passenger cars and trucks: gearboxes, transfer cases, axles.

SAE 80W-90   API GL 3/4/5   API MT-1   SAE J2360   MIL-L-2105 D	20L	XA 28519
MIL-PRF-2105E   MB 235.0   MAN 342 Type M-2   Mack GO-J   Scania STO 1:0	60 L	XA 20619
ArvinMeritor 076-A, 076-D   ZF TE-ML 02B, 05A, 07A, 07B, 08, 12E, 16B, 16C, 16D, 17B, 19B	200 L	XA 20719

**ATOMIC**®  
PRO-INDUSTRY OIL w / REVITALIZANT®  
RF 5.5

# ATOMIC METAL CONDITIONER

## XADO MAXIMUM FOR DIESEL TRUCK

The compound is specially designed for restoration, repair and active protection of diesel engines of heavy-duty vehicles. This innovative 3-component product combines the advantages of two-phase complex metal conditioner and 1 Stage REVITALIZANT®.



**950 ml**  
Art. XA 40712  
can, box

up to **45 Liters**  
oil system capacity

### ADVANTAGES

- Restores surfaces of parts and compensates the ongoing wear.
- Increases and levels compression in cylinders.
- Increases pressure in the oil system to the nominal level.
- Creates an active system of parts protection against loads and overheating.
- Improves lubricating properties of oil and tribological characteristics of engine assemblies.
- Reduces fuel consumption.
- Increases engine power and acceleration capability.
- Decreases noise and vibrations.
- Guarantees engine protection for 100,000 km (60,000 miles) of run.

As a result of application of the product the engine has undergone a complete REVITALIZATION® cycle; it is securely protected from wear for 100,000 km (60,000 miles) of run.



### APPLICATION INSTRUCTIONS

1. Shake the can.
2. Introduce\* its contents into the oil filler neck of the engine warmed up to the operating temperature.
3. Start the engine and let it idle for 3–5 minutes.

\* By negative ambient temperature the product should be previously warmed up to the room temperature.

### NOTE

The compound is specially developed and tested in high-loaded turbocharged diesel engines. The compound is compatible with motor oils of all types. REVITALIZATION® takes place during 1,000–1,500 km (600–900 miles) of run. It is not recommended to change oil during this period. The repeated application of XADO Maximum for Diesel Truck is recommended after 100,000 km (60,000 miles) of run.

## XADO HIGHWAY FOR DIESEL TRUCK

The compound is specially developed for active protection of diesel engines of heavy-duty vehicles operating in high-speed and loaded operation modes. This three-component product combines the advantages of a two-phase complex metal conditioner and the REVITALIZANT® nanocomponent (RF=5.5)\*.

### ADVANTAGES

- Compensates the ongoing wear of friction parts.
- Reduces friction losses, thus increasing power and acceleration capability of the engine.
- Creates an active system of parts protection against loads and overheating.
- Improves lubricating properties of oil and tribological characteristics of engine assemblies.
- Reduces fuel consumption.
- Prolongs the engine service life.

RF (REVITALIZATION® Factor) is a value for efficiency of restoration and antiwear protection of the engine. RF=5.5 means that the engine is reliably protected from the ongoing wear.



### APPLICATION INSTRUCTIONS

1. The temperature of the composition before application should not be lower than +25 °C. Shake the can.
2. Introduce its contents into the oil filler neck of the engine warmed up to the operating temperature.
3. Start the engine and idle it for 3–5 minutes. Operate your car in regular mode.

### NOTE

The compound can be also applied to engines of off-road vehicles, buses, marine diesel engines, diesel generators etc. To achieve the better effect, it is recommended to use XADO Highway for Diesel Truck by every oil change.

To achieve complete REVITALIZATION® and provide the highest level of antiwear protection, it is recommended to apply XADO Maximum for Diesel Truck (RF=100) every 100,000 km of run.



# ATOMIC METAL CONDITIONER

## XADO MAXIMUM TRANSMISSION FOR DIESEL TRUCK

Designed for repair, restoration and antiwear protection of mechanical transmission assemblies of trucks directly during operation.



**50 ml**

Art. XA 40017  
syringe

up to **25 Liters**  
oil system capacity

### ADVANTAGES

- Restores surfaces of parts and compensates the ongoing wear.
- Eliminates blowholes and scratches on operating surfaces.
- Optimizes contact patterns in gear engagements.
- Reduces noise and vibrations of assemblies up to 10 times.
- Improves lubricating properties of oil and tribological characteristics of the driving gear.
- Improves operation of synchronizers, increases gear shifting accuracy.
- Ensures prolonged operation of transmission assemblies (up to 1,000 km (600 miles) of run) in case of catastrophic oil loss.

As a result of this product application the transmission assembly has undergone a complete REVITALIZATION® cycle; it is reliably protected from wear for 100,000 km (60,000 miles) of run.



### APPLICATION INSTRUCTIONS

1. Introduce the contents of the syringe into the oil filler neck of the transmission, transfer case or axle gearbox warmed up to the operating temperature.
2. Drive for 3–5 minutes. Operate your car in regular mode.

### NOTE

A typical sign of beginning of the REVITALIZATION® process is noise reduction during mechanism operation starting from the first kilometers of run after the treatment. The compound is compatible with all types of automobile oils for mechanical transmission assemblies. REVITALIZATION® takes place during 1,000–1,500 km (600–900 miles) of run. It is not recommended to change oil during this period.

# ATOMIC METAL CONDITIONER



## XADO MAXIMUM AUTOMATIC TRANSMISSION FOR DIESEL TRUCK

Designed for repair, restoration and antiwear protection of automatic transmissions. As a result, the geometry of parts is restored. Universal for all types of automatic transmissions of trucks, buses and other vehicles.

### ADVANTAGES

- Provides restoration and antiwear protection of friction metal parts.
- Eliminates surface defects.
- Increases operation reliability and prolongs the service life.
- Reduces noise and vibrations.
- Damps extreme loads.
- Improves smoothness of gear shifting.

As a result of this product application the transmission assembly has undergone a complete REVITALIZATION® cycle; it is reliably protected from wear for 100,000 km (60,000 miles) of run.



### APPLICATION INSTRUCTIONS

1. Introduce the contents of the syringe into the operating fluid in the automatic transmission warmed up to the operating temperature.
2. Operate your car in regular mode.

### NOTE

A typical sign of beginning of the REVITALIZATION® process is noise reduction during mechanism operation starting from the first kilometers of run after the treatment. The compound is compatible with all types of automobile oils for mechanical transmission assemblies. REVITALIZATION® takes place during 1,000–1,500 km (600–900 miles) of run. It is not recommended to change oil during this period.



# ATOMIC METAL CONDITIONER

## XADO MAXIMUM FOR DIESEL TRUCK FOR ALL TYPES OF FUEL EQUIPMENT

Designed for repair, restoration and antiwear protection of fuel equipment in diesel engines of heavy-duty vehicles and machinery. During the treatment of fuel pumps REVITALIZANT® forms a ceramic-metal coating on surfaces of friction parts. Universal application in all injection systems, including Common Rail and Unit Injector/Pumpe-Düse.

### ADVANTAGES

- Restores surfaces and protects friction parts of the fuel pump from wear.
- Reliably protects from low-quality fuel.
- Reduces fuel consumption.
- Increases engine power.
- Decreases noise and vibrations.
- Reduces exhaust toxicity.
- Enhances lubricating properties of fuel, provides additional level of antiwear protection.



**30 ml**

Art. XA 40026  
syringe

up to **15 Liters**  
engine capacity

As a result of this product application the fuel equipment has undergone a complete REVITALIZATION® cycle; it is reliably protected from wear for 100,000 km (60,000 miles) of run.



### APPLICATION INSTRUCTIONS

1. Introduce the contents of the syringe into the fuel tank before fueling.
2. Pour at least 150 L of fuel into the tank.
3. Operate your car in regular mode.

### NOTE

The temperature of the compound before application should not be lower than +25 °C. It is recommended to clean the fuel system of the engine before applying the product.

## XADO MAXIMUM POWER STEERING FOR DIESEL TRUCK

Designed for repair, restoration and antiwear protection of power steering booster of trucks and other hydraulic equipment. Innovative two-component product of the new generation combining the advantages of metal conditioner and 3<sup>rd</sup> generation REVITALIZANT®.

### ADVANTAGES

- Improves pump performance.
- Reduces the steering effort.
- Eliminates pump howling caused by wear.
- Increases operation precision of the power steering booster already after 50–100 km after application.
- Reduces noise and vibrations of power steering pump.
- Increases power pressure in the hydraulic system.
- Protects parts from wear by low oil level.

As a result of this product application the fuel equipment has undergone a complete REVITALIZATION® cycle; it is reliably protected from wear for 100,000 km (60,000 miles) of run.



### APPLICATION INSTRUCTIONS

1. Introduce the contents of the syringe into the fluid in the reservoir of the power steering booster warmed up to the operating temperature.
2. 2–3 minutes after introducing the mixture turn the steering wheel for 5 minutes by operating engine.
3. Operate your car in regular mode. Treatment is completed after 50 hours of mechanism operation (1,500 km of run).

### NOTE

Before applying the product, you should CHANGE the fluid in the power steering booster and drive at least 200 km if: the fluid is contaminated (unclear, changed its original color etc.); the fluid had been used over the run of more than 40,000 km (more than 3 years) or its operating time isn't known.



# Xtreme ADDITIVES

## Xtreme CLEANER

Effective fuel system cleaner for diesel engines of trucks.

Xtreme Cleaner is an agent for complex care of the fuel system of diesel engines of modern trucks. Effectively removes deposits from all parts of the fuel supply system. Facilitates engine start and eliminates the problem of irregular engine operation at idle. Improves fuel combustion and contributes to its economy. Reduces exhaust toxicity.



can 500 ml  
Art. XA 42375

### ADVANTAGES

- Cleans nozzles, pistons, combustion chamber.
- Increases engine power.
- Removes water from the fuel system.
- Reduces fuel consumption.
- Universally applied to all types of fuel injection systems, incl. accumulator injection systems (Common Rail), as well as unit injector systems (Pumpe-Düse).

### APPLICATION INSTRUCTIONS

Introduce the product into the fuel tank before fueling.

### DOSAGE

1 can (500 ml) of the product for 500 L of fuel.

### NOTE

It is recommended to use the product by every fueling.

## Xtreme FLUSH

Complex oil system cleaner for engines of heavy-duty trucks with the piston rings decarbonization effect. Contains REVITALIZANT®.

The formula of the compound contains special detergent and dispersant components and REVITALIZANT®. Due to the presence of the detergent components, the agent easily eliminates all types of deposits and cleans the oil system to the level of technical purity; removes carbon deposits from grooves and restores mobility of piston rings. When flushing the oil system, REVITALIZANT® creates a protective antiwear coating on the surfaces of parts.



can 500 ml  
Art. XA 42301

### ADVANTAGES

- Thoroughly cleans the engine oil system.
- Removes deposits, soot and sludge.
- Restores mobility of piston rings.
- Due to the presence of REVITALIZANT®, creates the antiwear protection reserve of the engine.

### APPLICATION INSTRUCTIONS

1. Introduce the product into the oil system of the engine warmed up to the operating temperature.
2. In case of severe engine contamination, for deep cleaning of the oil system and anticarbon treatment of piston rings: drive 150–200 km (100–150 miles) in regular mode.
3. In case of regular application: idle the engine for 10–15 minutes or drive 20 km (~15 miles).
4. Change the motor oil.

### DOSAGE

500 ml of the product for 35–45 L of motor oil.

### NOTE

The compound is compatible with all types of motor oils, safe for turbocharging units. Regular application of the product is recommended by every oil change.

## Xtreme ECONOMY

Additive for maximum fuel economy.

Xtreme Economy is a complex agent for diesel fuel. Designed to improve fuel economy of engines of heavy-duty trucks. Contains friction modifiers and highly effective detergent additives. Additional fuel economy is provided due to accumulation of friction modifiers and action of detergent additives cleaning the nozzles from contaminations and deposits. Thus fuel atomization efficiency in the combustion chamber is improved.

### ADVANTAGES

- Reduces instantaneous friction losses in the cylinder piston group during engine operation.
- Provides prolonged effect due to accumulation of friction modifiers.
- Keeps the engine fuel system as well as the EGR valve clean.
- Safe for diesel particulate filters (DPF), catalytic converters and equipment for selective catalytic reduction of exhaust gases (SCR).
- Improves lubricating properties of diesel fuel and provides protection of fuel equipment by application of low-sulfur fuel.

### APPLICATION INSTRUCTIONS

Introduce the necessary amount of the product into the tank before fueling.

### DOSAGE

1 can (500 ml) of the product for 1,000 L of diesel fuel.

### NOTE

To achieve better effect, it is recommended to apply the product by every fueling.

**can 500 ml**

Art. XA 40278



## Xtreme ANTIGEL

Complex agent for improvement of low-temperature properties of diesel fuel. Contains REVITALIZANT®.

Effectively decreases the pour point of the summer diesel fuel from -10 °C to -22 °C; winter diesel fuel from -35 °C to -47 °C. Improves fuel pumpability through the filter and facilitates start of the diesel engine by cold weather. Contains a cetane rating modifier and reduces knocking. REVITALIZANT® protects the plunger pair of the high-pressure fuel pump.

### ADVANTAGES

- Decreases the pour point of diesel fuel.
- Increases cetane rating.
- Effectively protects the high-pressure fuel pump from wear.
- Universally applied to all types of supply systems of diesel engines, incl. Common Rail and Unit Injector (Pumpe-Düse).

### APPLICATION INSTRUCTIONS

Introduce the product warmed up to +20...+25 °C into transparent (non-cloudy) fuel in the ratio of 1 ml of the product for 1 L of fuel.

### DOSAGE

1 can (500 ml) of the product for 500 L of diesel fuel.

**can 500 ml**

Art. XA 42002



### NOTE

It is recommended to use the product in winter and by temperature drops.

# TECHNICAL INFORMATION

PRODUCT DATA	Multipurpose Greases					
	XADO Protective Grease	XADO Restoring Grease	XADO Repairing Grease	XADO Grease for CV Joints	XADO Restoring Grease for CV Joints	XADO Supergrease
NLGI Grade ASTM D 217/DIN 51818	3	3	3	2	2	2
Thickener type	Lithium	Lithium	Lithium	Li-Ca Complex	Li-Ca Complex	Lithium
Base oil	Mineral	Mineral	Mineral	Mineral	Mineral	Mineral
Color, visual	Orange	Green	Red	Light amber	Light amber	Light brown
REVITALIZANT®	Contained	Contained	Contained	Contained	Contained	Contained
Compensates wear by	10%	50%	80%	10%	50%	30%
Penetration at 25 °C with stirring, mm <sup>-1</sup> ISO 2137/GOST 5346	255	255	255	275	275	265
Dropping point, °C, not less ISO 2176/GOST 6793	>189	>188	>188	>230	>225	>180
Viscosity of base oil, cSt @ 40° C, ASTM D 445	180	180	180	460	460	280
Speed factor (NDM)	350,000	350,000	350,000	200,000	200,000	300,000
Density at 25 °C, kg/L	0.97	0.97	0.97	0.92	0.92	0.97
Lower service temperature, °C	-20	-20	-20	-20	-20	-20
Upper service temperature, °C	130	130	130	140	140	150
4-ball machine test: Weld load, N Wear index, mm ASTM D 2596/D 2266/ GOST 9490	>2,450 <0.6	>2,450 <0.6	>2,450 <0.6	>6,850 <0.5	>6,850 <0.5	>3,000 <0.6
Water content, % wt. ISO 3733/GOST 2477	Absent	Absent	Absent	Absent	Absent	Absent
Corrosion prevention, ASTM D 1743/GOST 9080	Passed	Passed	Passed	Passed	Passed	Passed
Specifications: DIN 51502 ISO 6743-9	KP3K-20 L-XB(F)CHB 3	KP3K-20 L-XB(F)CHB 3	KP3K-20 L-XB(F)CHB 3	GOGM2N-20 L-XBDIB 2	GOGM2N-20 L-XBDIB 2	KPF2K-30 L-XCCFB 2
Recommended for:	Extreme load operation	Extreme load operation	Extreme load operation	High- temperature/ extreme/ shock load operation.	High- temperature/ extreme/ shock load operation	Extreme load operation
PRODUCT DATA	Multipurpose Greases					

# TECHNICAL INFORMATION

	High-Speed Greases			Thermo Greases		
XADO Grease EP 00/000	XADO Protective Grease 20K	XADO Protective Grease 60K	XADO Restoring Grease 20K	XADO Thermolube 300	XADO Thermolube 1000	XADO Thermospecial U
00/000	3	1	3	2	1–2	2
Lithium	Lithium	Polyurea	Lithium	Non-organic	Solid lubricant	Solid lubricant
Mineral	Mineral	Synthetic	Mineral	Mineral	Mineral	Mineral
Yellow-brown	Yellow-brown	Yellow-brown	Light yellow	Soft white	Silver/Copper	White
Contained	Contained	Contained	Contained	Contained	Contained	Contained
30%	10%	10%	50%	30%	30%	30%
400–430	250	320	250	265–295	270	260
>150	>225	>230	>225	>250	>230	>205
200	105	50	105	—	—	—
350,000	600,000	750,000	200,000	—	—	—
0.93	0.92	0.91	0.92	—	1.34	—
-30	-40	-60	-40	-20	-35	-25
110	140	180	140	160	1,100	250
>2,220 <0.5	—	—	—	>1,850 <0.95	—	>2,650 <1.1
Absent	Absent	Absent	Absent	Absent	Absent	Absent
Passed	Passed	Passed	Passed	Passed	Passed	Passed
KP00H-30 L-XCBFB 00	—	—	—	—	—	—
Extreme load operation. Semi-fluid grease	High-speed/ extreme load operation	High-speed/ high-temperature/ extreme load operation	High-speed/ extreme load operation	High-temperature/ extreme load operation	High-temperature grease paste	High-temperature grease paste
	High-Speed Greases			Thermo Greases		

# TECHNICAL INFORMATION

PRODUCT DATA	Regular Greases					
	VERYLUBE Lithium Universal Grease	VERYLUBE Lithium Complex Grease	VERYLUBE Lithium Grease for CV Joints	VERYLUBE Brake Caliper Grease	VERYLUBE Assembly Grease Paste	VERYLUBE Lithium Universal White PTFE Grease
NLGI Grade ASTM D 217/DIN 51818	2	2	2	2	1–2	2
Thickener type	Lithium	Lithium	Li-Ca Complex	Li-Ca Complex	Solid lubricant	Li-Ca Complex
Base oil	Mineral	Mineral	Mineral	Mineral	Mineral	Mineral
Color, visual	Light brown	Light brown	Black	Green	Silver	Beige
REVITALIZANT®	Absent	Absent	Absent	Absent	Absent	Absent
Compensates wear by	—	—	—	—	—	—
Penetration at 25 °C with stirring, mm <sup>-1</sup> ISO 2137/GOST 5346	280	275	285	285	315	270
Dropping point, °C, not less ISO 2176/GOST 6793	>180	>280	>280	>280	>1,000	>280
Viscosity of base oil, cSt @ 40° C, ASTM D 445	280	200	460	460	—	460
Speed factor (NDM)	300,000	350,000	200,000	200,000	—	200,000
Density at 25 °C, kg/L	0.97	0.97	0.96	0.92	1.34	0.88
Lower service temperature, °C	-20	-30	-20	-20	-35	-20
Upper service temperature, °C	150	200	140	140	1,100	140
4-ball machine test: Weld load, N Wear index, mm ASTM D 2596/D 2266/ GOST 9490	>3,050 <0.6	>3,050 <0.7	>6,850 <0.5	>6,850 <0.5	>2,350 <0.7	>3,080 <0.55
Water content, % wt. ISO 3733/GOST 2477	Absent	Absent	Absent	Absent	Absent	Absent
Corrosion prevention, ASTM D 1743/GOST 9080	Passed	Passed	Passed	Passed	Passed	Passed
Specifications: DIN 51502 ISO 6743-9	KP2K-20 L-X-XBCEB 2	KP2N-30 L-XCDIB 2	KPF2N-25 L-XCCEB 2	—	—	—
Recommended for:	Extreme load operation	Extreme load operation	Extreme load operation. Grease with MoS <sub>2</sub>	High- temperature/ extreme/ shock load operation	High- temperature/ extreme load operation	High-speed/ extreme load operation
PRODUCT DATA	Regular Greases					