

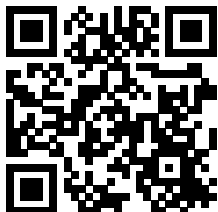
KOBLIK



CIRCULAR SPRINKLER IRRIGATION SYSTEMS

 CATALOG

KOBLIK GROUP





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BRIEFLY ABOUT THE SYSTEMS



Circular sprinkler irrigation system KOBlik. Arzamasskiy District, village Semenov. Crop yield growth - 70%, payback of the plant - in the first season used.

We carry out the technology development by taking into account the main criterion - a significant increase in the efficiency of individual operations in particular and the entire agribusiness of our clients as a whole. All machines from KOBlik make it possible to significantly increase the productivity of commodity production with their correct and rational use.

KOBlik irrigation systems are one of the best ways to increase yields for most crops, even when water resources are scarce.

ADVANTAGES OF USAGE



NON-STOP IRRIGATION

the standard of loading of each machine is at least 85% of the available working time, taking into account the calendar specifics of the agribusiness at the place of application, the reserve time for scheduled maintenance is no more than 8%



CUSTOMER SERVICE

warranty, service support and post-warranty services from the developer and manufacturer, based on a trade and service partner network with continuous training, certification and certification of technical personnel



STABLE QUALITY

continuous operation of the testing system, wholesale surveys and industrial testing of developments along with routine quality control for incoming shipments of manufactured products



DURABILITY AND RELIABILITY

a comprehensive selection system for suppliers of materials, parts and components according to the PPAP standard, without compromise in requirements - only top-end raw materials and proven components



DESIGN AND EXPERIENCE

design and engineering school in the production of agricultural machinery - more than a century of continuous experience in mechanical engineering



INCREASED PRODUCTIVITY

continuous improvement of manufactured models without termination of support from the manufacturer as a key rule of operation of all enterprises within the group of companies



CIRCULAR SPRINKLER INSTALLATIONS

INCREASED DURABILITY AND MAXIMUM SERVICE LIFE

ADVANTAGES

- **BETTER LOAD DISTRIBUTION AND INCREASED STABILITY EVEN IN EXTREME CONDITIONS**
due to the use of a transverse stabilizer between the spangles and compression pipes
- **MINIMUM LOAD ON THE PIPE**
due to supports welded using annular seams
- **THE LOWEST LOAD ON THE ENTIRE STRUCTURE**
by the optimized parabolic shape
- **QUICK AND EASY ASSEMBLY**
is ensured by the symmetry of the intermediate pipe sections
- **FULL COMPENSATION OF UNEVENNESS IN THE FIRST SPAN**
using
FLEXIBLE BEARING ELEMENT TECHNOLOGY
- **REDUCING THE IMPACT OF FORCES WITH SIGNIFICANT SLOPE AND TORSION**
due to forged steel ball joints



Круговая дождевальная установка KOBlik
Киреевский р-н, с. Бородинское



■ PROTECTION AGAINST LEAKS DURING ROTATION

by using three edge gaskets on a vertical pressure pipe (diameter 203 mm)

■ OPTIMAL WEIGHT DISTRIBUTION OVER THE SPANS

by using V-shaped corners

■ THE MOST DURABLE CONSTRUCTION ON THE MARKET

a 50 x 50 x 5 mm profile at the L-corners is used

■ PREVENTION OF POSSIBLE CORROSION PROBLEMS

due to the welds located at the top of the pipes

■ MINIMAL RISK OF DEFORMATION SPANS

through the use of high-strength steel spangles with hot-forged heads on both sides (diameter: 19.05 mm and 20.6 mm)

■ INCREASED RELIABILITY OF THE MOST EXPENSIVE INSTALLATION ELEMENTS

due to four diagonal rods connecting the pipe between the span and the tower using a high-strength pipe (diameter 63.5 mm)

■ PRECISE ROTATION OF THE SYSTEM WITHOUT DEVIATIONS

a one-piece swivel elbow (203 mm) made of galvanized steel is used

■ MAXIMUM RESISTANCE TO WIND LOADS

the support pillars of the tower are made of four V-shaped corners are the size of 75 x 75 x 8 mm

ELEMENTS OF CIRCULAR SPRINKLERS INSTALLATIONS



The design of **KOBLIK** circular sprinkler systems is developed to withstand the load that occurs when watering various crops.

The sprinkler system must remain as it was on the day of purchase. All structural elements, including pipes, are made of hot-dip galvanized steel, and the galvanizing process is carried out in full accordance with **GOST**(Russian All-Union State Standard) and technical specifications.



01. ROTARY ASSEMBLY

The base of the rotary assembly of the KOBlik circular irrigation system consists of four galvanized steel support posts made of a curved profile with a section of 102 x 102 mm with a wall thickness of 4 mm, reinforced with a strip with three rods on each side, also covered with a 5 mm layer of galvanized steel for reinforcement

STANDARD COMPONENT KIT

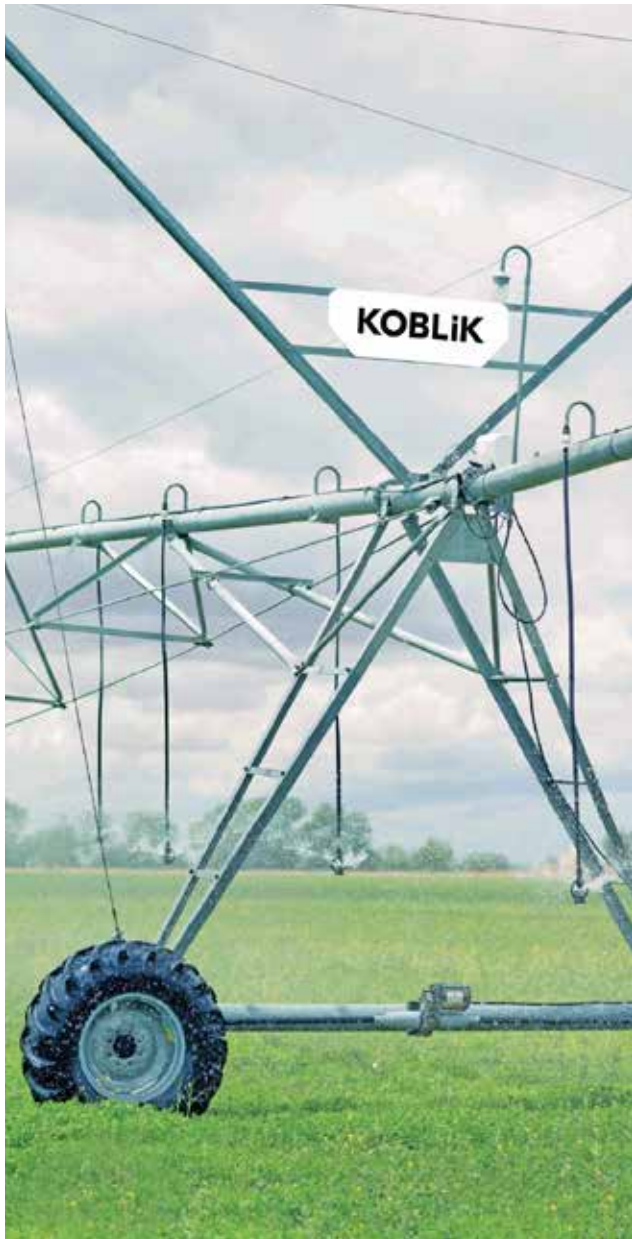
Anchor bolts and hinge supports reinforcing support posts and strip, ladder, swivel elbow, pressure pipe and lower elbow

AVAILABLE TURNING POINTS

- ROTARY ASSEMBLY FOR 127 MM SPANS
- STANDARD SWIVEL ASSEMBLY FOR SPANS OF 168 MM AND 219 MM PIPES
- MOBILE 4-WHEELED TROLLEY

FEATURES

- THE VERTICAL PRESSURE PIPE (203 MM) IS EQUIPPED WITH A THREE-EDGE GASKET, PREVENTING LEAKAGE DURING ROTATION
- THE SUPPORT OF THE SWIVEL ELBOW IS MADE OF STEEL PIPE WITH A 10 MM THICK WALL WITH PROVIDED LUBRICATION POINTS
- THE WATER INLET ON THE SWIVEL KNEE IS MADE OF STAINLESS STEEL
- THE SWIVEL ELBOW IS MADE OF A SINGLE 203MM GALVANIZED STEEL TAP
- THE TECHNOLOGY OF THE FLEXIBLE BEARING ELEMENT COMPENSATES FOR THE IRREGULARITIES OF THE TERRAIN ALONG WHICH THE FIRST SPAN MOVES
- VARIOUS PROFILES ARE PROVIDED FOR ANY TYPE OF CROPS: POTATOES, VARIOUS VEGETABLES, CORN, ETC.



02. SPANS AND CONSOLES

KOBLÍK circular irrigation systems have different span lengths, which allows you to adapt the length of the machine to the size of the field. The distance between the sprinklers is called the placement step. Typically if you do not take into account the arrangement of sprinklers directly on the field, the shorter the distance between the sprinklers, the better the uniformity of water distribution

Please note: The most significant influence on the uniformity of water distribution is directly exerted by the arrangement of sprinklers in the cultivated area. It is possible to achieve the greatest coverage with maximum absorbency, without the risk of water accumulation on the surface by installing the machines with an extended interval and taking into account the area covered by the nozzles on site (has the most positive effect when working with vegetable crops)

AVAILABLE PLACEMENT*

■ 2.9 M, STANDARD ■ 1.9 M ■ 0.96 M

* standard thickness is 2.8 mm
A 3 mm thickness is available as an option.

FEATURES

- CANTILEVER TRUSS OF PARABOLIC SHAPE TO MINIMIZE THE LOAD ON THE STRUCTURE
- FASTENING BY MEANS OF A BALL JOINT (FORGED STEEL)
 - ▶ provides compensation for significant slope and torsion
 - ▶ when one span falls, the next one does not fall
 - ▶ easy connection replacement
- THE MOST DURABLE CONSTRUCTION ON THE MARKET WITH V-SHAPED CORNERS FOR OPTIMAL WEIGHT DISTRIBUTION
- L-CORNERS MADE OF 50X50X5 MM PROFILE
- THE SUPPORTS ARE WELDED TO THE PIPE USING ANNULAR SEAMS THAT MINIMIZE THE LOAD ON THE PIPE
- HIGH-STRENGTH STEEL SPANGLES WITH HOT-FORGED HEADS ON BOTH SIDES
- INTERMEDIATE PIPES OF IDENTICAL SYMMETRICAL SECTIONS FOR QUICK ASSEMBLY
- TRAPEZOIDAL REINFORCEMENT PLATES FOR INCREASED STABILITY

GENERAL TECHNICAL DATA

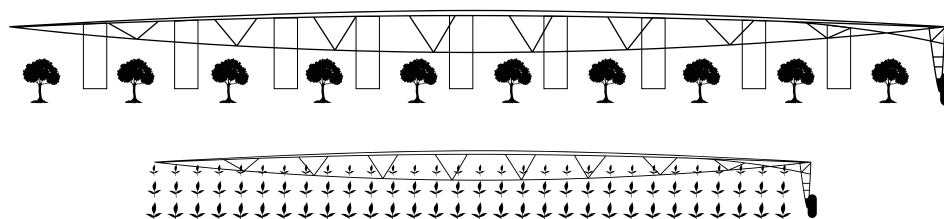
SPANS	
DIAMETER	LENGTH
mm	m
219,1	43,4
219,1	49,1
168,3	43,4
168,3	49,1
168,3	54,9
168,3	60,6
127	43,4
127	49,1
127	54,9
127	60,6

GENERAL TECHNICAL DATA

SPANS	
Sectional elevation	Height, m
Low	1,9
Standard	2,9
High	3,9
For cane sugar	4,1
Extra-high	4,9

CONSOLES	Length, m	2,7	5,5	8,2	11	16,5	19,2	25
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THE COVERAGE SCHEME OF THE CIRCULAR IRRIGATION SYSTEM



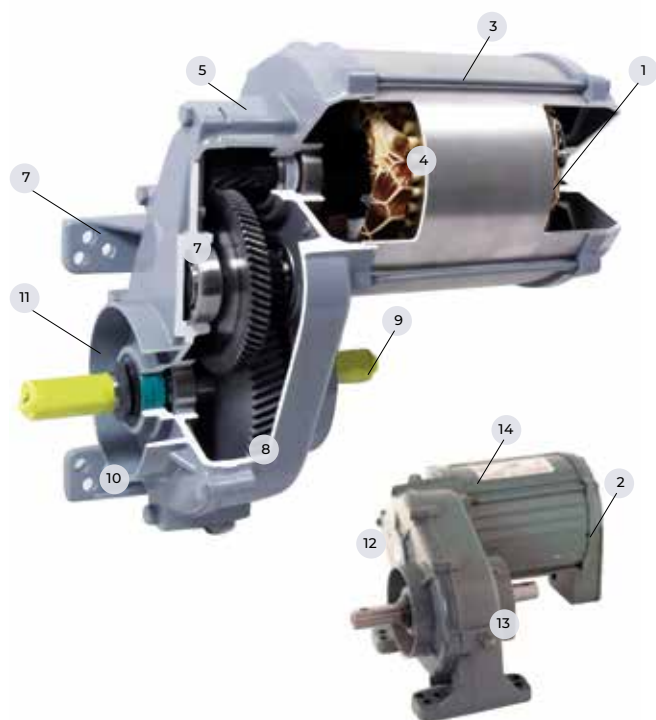
03. TOWER

The tower is designed in a such way to withstand the load created on the slopes

FEATURES

- THE SUPPORT PILLARS OF THE TOWER ARE MADE OF FOUR V-SHAPED CORNERS 75 X 75 X 8 MM
- THE SUPPORT STRUTS ARE CONNECTED BY THREE HORIZONTAL SPANGLES TO MAINTAIN BALANCE IN DIFFICULT TERRAIN
- FOUR BEAM TRUSSING RODS CONNECT THE PIPE BETWEEN THE SPAN AND THE TOWER
- A TRAPEZOIDAL REINFORCING PLATE IS INSTALLED AT THE L-CORNERS OF THE TOWER
- A TRANSVERSE STABILIZER IS INSTALLED BETWEEN THE SPANGLES AND THE COMPRESSION PIPES

GENERAL ARRANGEMENT



* Horizontal aluminum motors

04. ДВИГАТЕЛИ

Powerful engines with proven reliability. With an efficiency of 95%, small generators and cables of smaller cross-section can be used

- 1 Stamped aluminum housing
- 2 Thermal overload protection
- 3 Stator with aluminum blades prevents corrosion and also cooling the motor, extending its service life
- 4 One-piece rotor with hardened bevel gears
- 5 Larger rotor bearings
- 6 Primed internal surfaces, protected from corrosion
- 7 Hardened bevel gears for longer service life and quieter operation
- 8 High-pressure gear oil for maximum protection of parts
- 9 Double inlet pipe designed for high temperatures
- 10 Double exhaust pipe, providing increased protection
- 11 External nozzle for protection from dirt and chemicals
- 12 Upper tank with level indicator to ensure proper control of oil filling
- 13 Easy access to the drain plug for easy maintenance
- 14 Standard speed: **44 rpm at 0.75 hp**
Other speed parameters: 34 rpm (0.5 hp); 68 rpm (1.5 hp); 73 rpm (1.2 hp)

KINEMATICS



05. GEARBOXES

Gearboxes made of high-strength steel are designed to work in all conditions

- 1 A full-cycle membrane that minimizes pressure build-up and increases the service life of the joint; reducing the accumulation of excess moisture
- 2 Protective inlet pipe, providing protection from dust, water and chemicals
- 3 Two interchangeable left or right wheel drive shafts for easy installation and replacement
- 4 Stainless steel expansion chamber for oxidation protection, preventing breakage during transportation
- 5 High-strength forged steel worm gear
- 6 Large drain plug for easier maintenance, inspection and refilling
- 7 Internal connections are protected from water, dust and chemicals
- 8 Gearbox with 52:1 long axis (made of steel), compatible with other installations
- 9 Gearbox with 50:1 short axis is available
- 10 Option for towed vehicles



06. UNIVERSAL CONNECTION

FEATURES

- MADE OF HIGH-STRENGTH STEEL
- WITH HIGH-STRENGTH POLYURETHANE STAR-SHAPED SEAL
- FOR USE IN HARSH OPERATING CONDITIONS
- FOR USE IN HARSH OPERATING CONDITIONS



07. DRIVE SHAFT

The drive shaft with a square profile made of high-strength steel. It is completely covered with a plastic casing for protective safety, as well as for protection from dust and moisture



стандартное колесо (378 x 610 мм),
для высокой проходимости
опционально доступны другие размеры

08. WHEELS

Hot-dip galvanized steel discs (diameter 254 and 305 mm) and all-terrain tires for heavy field work are used

FEATURES

- HIGH PROFILE GROUND HOOKS (40 MM) FOR EXTRA GRIP EVEN ON MUDDY GROUND
- A LARGE NUMBER (40 PCS) OF GROUND HOOKS
- AN OPEN AREA IN THE CENTER OF THE TREAD TO FACILITATE SELF-CLEANING
- LARGE TREAD (UNIFORM WEAR)

09. CONTROL PANELS



The control panels are developed based on our long-term experience in mechanical engineering in agriculture, practical knowledge of the needs and problems of customers, taking into account the best international practices for managing similar installations. It has a full set of functions that ensure the convenience of work. Each panel - whether it is the most accessible and simple analog circuit, or an advanced and sophisticated computerized digital one - provides manual or automatic control of circular or sector irrigation installations and is easily integrated into automation systems

FEATURES

- MOUNTED IN STAINLESS STEEL HOUSINGS FOR MAXIMUM PROTECTION
- THE MAIN SWITCH "ON/OFF"
- THE PERCENTAGE TIMER DETERMINES THE AMOUNT OF WATER SUPPLIED PER REVOLUTION
- MANUAL OR AUTOMATIC START /
- DIRECTION OF ROTATION SELECTION
- SAFE STOP WITH 3-SECOND COUNTDOWN AND EXTERNAL VOLTMETER
- HOUR COUNTER
- ADDITIONAL AUTOMATIC SWITCH (FOR EXAMPLE, FOR FEEDING FERTILIZER SOLUTIONS)
- PRECISE, STABLE, DISCRETE AND MULTIFACTORIAL CONTROL OF THE OPERATING PARAMETERS OF THE INSTALLATION, TAKING INTO ACCOUNT FEEDBACK FROM THE MAIN COMPONENTS, DEPENDING ON THE GOALS AND SPECIFICS OF ON-SITE OPERATION (FOR COMPUTERIZED VERSIONS OF PANELS)

DESIGN OF THE CONTROL PANEL



OPTIONS

- PRESSURE START AND/OR STOP
- STOP BY TEMPERATURE LEVEL ($< 3^{\circ}\text{C}$)
- AUTOMATIC REVERSE SYSTEM / STOP
- CONTROL OF THE END WATER CANNON

10. SPRINKLERS



KOBLiK irrigation systems include a complete set of sprinklers, fixed and rotary, allowing you to adapt to any type of terrain, crops or weather conditions. Sprinklers operate at low pressure evenly throughout the sprinkler system, which reduces costs by efficiently using water and minimizing losses caused by evaporation, wind drift and surface runoff



FIXED SPRINKLERS

They provide high efficiency, especially on sandy soil. They operate at low pressure (from about 4 to 1.4 bar).

The diameter of the irrigation zone is 6-10 m, depending on the operating pressure and the height of the sprinklers



ROTARY SPRINKLERS

They guarantee highly efficient irrigation. They provide a low rate of simultaneous application, which is suitable for medium and heavy soils.

The rotational action allows water to be discharged over a long distance to obtain an irrigation zone with a diameter of 10-20 m

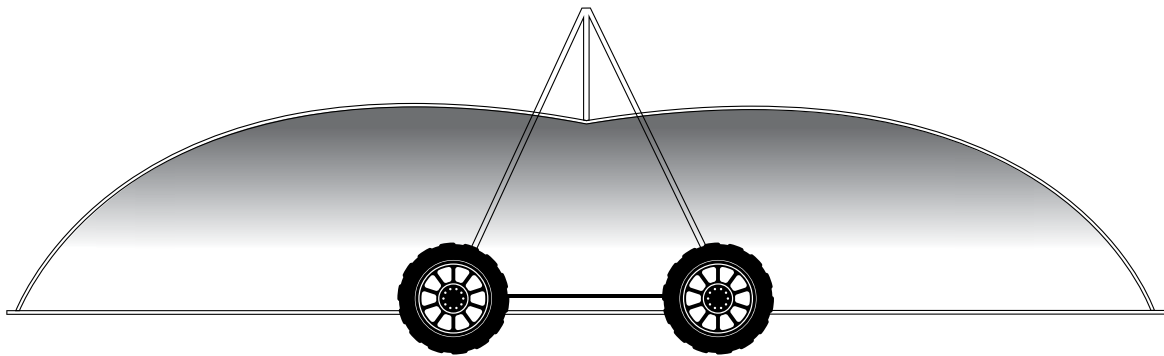


FEATURES OF NOZZLES

■ THE SPECIAL SET "DRY TRACK"

is a system installed on each side of the tower and prevents water from entering the nozzles on the wheels, thereby preventing the wheels from sliding, which leads to soil compaction on the surface

THE SCHEME OF OPERATION OF THE "DRY TRACK"



■ INCREASED DIAMETER OF THE IRRIGATION ZONE

we can develop sprinklers for you on a special order, with specific indicators and performance parameters, in full accordance with your needs, to solve specific tasks

■ ELIMINATION OF WIND DRIFT LOSSES

due to the nozzle using smaller trajectory angles and larger droplet sizes

■ MAINTAINING CONSTANT PRESSURE

and flow on terrain with a height difference through the use of pressure adjustments





METHODS OF APPLICATION

A set of nozzles is selected on site, taking into account the specifics of a particular farm, based on data of climate, soil type, actual yield, terrain.

- **UNIFORMITY OF WATERING IS ENSURED BY ACCURATE COMPUTERIZED DETERMINATION OF THE SIZE AND PITCH OF THE INJECTORS**
- **LOW PRESSURE INJECTORS OPERATE AT A PRESSURE OF ONLY 0.4 BAR (SAVING POWER AND REDUCING ENERGY CONSUMPTION)**
- **IRRIGATION EFFICIENCY CAN REACH 95% DEPENDING ON THE DESIGN OF SPRINKLERS**
- **ADDITIONAL SPRINKLER OPTIONS: END WATER CANNONS, DRIP SPRINKLERS, ROTATING SPRINKLERS AND CHEMICAL/FERTILIZER APPLICATION EQUIPMENT**

GENERAL TECHNICAL DATA

VALLEY TYPE SPRINKLERS

LOW-CONSUMPTION INJECTORS

- quick-change nozzles
- unique shape for moving through crops

PRESSURE ADJUSTMENT

- precision watering on hilly terrain
- 6 models are supplied, depending on the needs and specifics of the farm



NELSON TYPE SPRINKLER

ROTATING DRIP NOZZLES

- provide the greatest spray distance
- reduced average watering speed, increased holding time and reduced drainage due to variable water supply schemes

PRESSURE ADJUSTMENT

- resistance to the formation of plugs
- wide range of flow values



SENNINGER TYPE SPRINKLERS

UNIVERSAL PLATFORM FOR CIRCULAR IRRIGATION SYSTEMS

- simple nozzle design
- single base and bracket

HANGING PRESSURE GAUGE

- hanging pressure gauge: 0 - 200 kPa (0 - 2 bar) or 0 - 410 kPa (0 - 4.1 bar), glycerin pressure gauge with a diameter of 6.35 cm
- large coverage diameter, ultra-low watering intensity





11. CORROSION ACTIVE WATER PIPES

As it becomes increasingly difficult to access impurity-free water for soil irrigation, the primary problem is the corrosion resistance of sprinkler pipes. To solve it, we have developed two different types of anti-corrosion pipes

FEATURES

- SUITABLE FOR THE MOST SEVERE CONDITIONS
- HOT-DIP GALVANIZED STEEL
- INTERCHANGEABLE FOR MOST INSTALLATIONS ON THE MARKET

THIN-WALLED SPECIAL CARRIER PIPE

FEATURES

- HOT-DIP GALVANIZED STEEL BOTH INSIDE AND OUTSIDE FOR ADDITIONAL PROTECTION
- HIGH DENSITY PET INNER COATING (HIGH MOLECULAR WEIGHT WEAR-RESISTANT) 3.94 MM THICK
- DOES NOT REQUIRE JOINTS BETWEEN SPANS (MOLDED FLANGE TECHNOLOGY)
- OUTLET PIPE MADE OF SPECIAL HIGH-STRENGTH POLYMER FOR OUTLET TO THE NOZZLES
- A UNIQUE SYSTEM OF POLYETHYLENE CARGO ON NOZZLES
- THE GALVANIZING PROCESS IS CARRIED OUT ACCORDING TO EN ISO 1461 AND ASTM 123 STANDARDS

DELIVERY OPTIONS



TIRE SIZE

Choose the size and width of the tires depending on your needs: wheels with a radius of 571 - 965 mm and a width of 279 - 429.3 mm



UNIVERSAL ENGINE PROTECTION COVER

For all three-phase central drive electric motors with helical gear. Protects the engine housing from water, dust, etc.

(not available for worm gear motors or for central drives powered by a single-phase power supply)



STOP AT THE END OF THE FIELD / AUTOMATIC REVERSE AT THE END OF THE FIELD

Exact stop or reverse of the machine
fences in the form of racks and frames are supplied for circular and frontal irrigation installations

DESIGN OPTIONS*

STANDARD PROFILE TRACTION TROLLEYS

GROUND CLEARANCE: 2,8 - 3 m

LOW PROFILE TRACTION TROLLEYS

are used if standard clearance is not required

GROUND CLEARANCE: 1,85 - 1,95 m

HIGH PROFILE TRACTION TROLLEYS

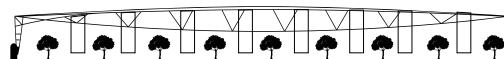
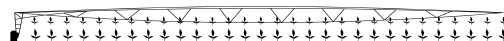
provide increased clearance between the plant and the plants

GROUND CLEARANCE: 3,9 - 4 m

ULTRA-HIGH PROFILE TRACTION TROLLEYS

provide increased clearance between the installation and plants

GROUND CLEARANCE: 4,9 - 5 m



* the actual value of ground clearance in the field depends on the depth of the wheel track, the length of the spans, the terrain of the field and various operating conditions

MAINTENANCE



KOBLIK irrigation systems are characterized by durability and reliability.

All systems are manufactured in accordance with the **ISO 9001** quality standard.

After purchasing a sprinkler system, we will carry out commissioning work directly on the farm, set up and put into operation to ensure maximum efficiency and durability of the purchased machine. If necessary, we will train your staff to reduce the risks of improper use of equipment, increase the effectiveness of its application, taking into account the nuances of your company and the practiced set of agrotechnical operations.

If sprinkler installations and irrigation systems from other manufacturers are used in your park, we can provide special training for employees to improve the effectiveness of sprinkler machines



BASIC WARRANTY STANDARDS

- 2 YEARS - FOR ALL ELECTRICAL AND MECHANICAL SYSTEMS
- 5 YEARS - FOR GALVANIZED PIPES (IN A NEUTRAL WATER ENVIRONMENT)
- 5 YEARS - FOR METAL STRUCTURES
- 10 YEARS - FOR PIPES



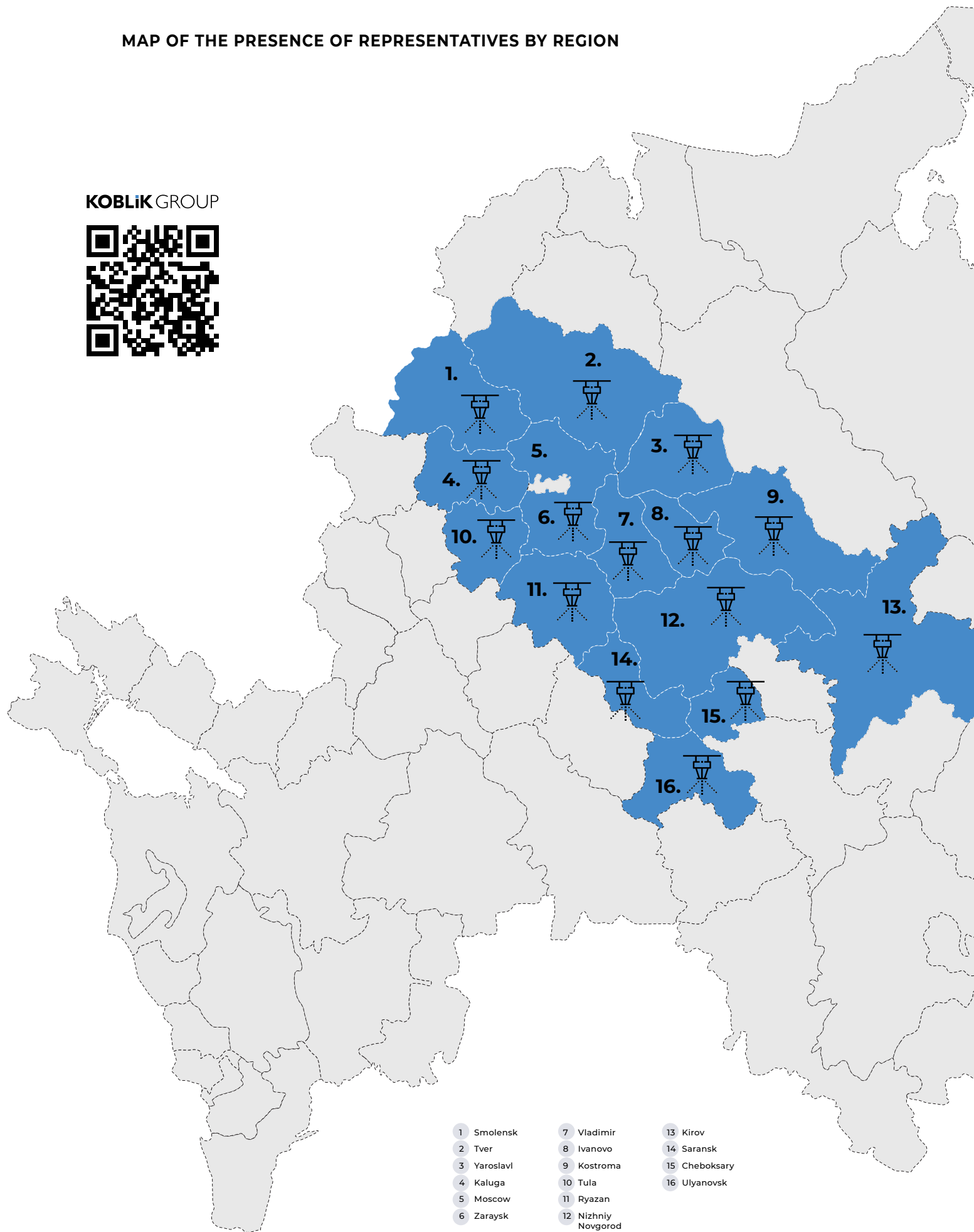
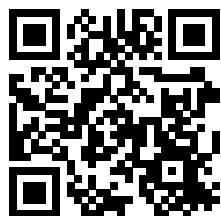
EXTENDED WARRANTY PROGRAM

- COVERAGE EXTENSION IS AVAILABLE FOR UP TO 10 YEARS

For more information, please contact our regional representative

MAP OF THE PRESENCE OF REPRESENTATIVES BY REGION

KOBLIK GROUP



FOR NOTES

FOR NOTES



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