THE STRENGTH OF THE COMPANY ISKRA LIES NOT ONLY IN ITS PRODUCTS AND TECHNOLOGY, BUT ALSO IN THE COMPANY'S HISTORY, WRITTEN BY INVENTORS, WORKERS AND SKILLED ENGINEERS.

TODAY ISKRA COMPANY IS PRESENT IN MORE THAN 80 COUNTRIES WITH A GLOBAL SALES NETWORK, IT IS THE REGIONAL LEADING MANUFACTURER OF INDUSTRIAL SOLUTIONS AND CUTTING EDGE ELECTROTECHNICAL PRODUCTS.


GENERAL DATA ABOUT ISKRA

CAPACITORS FOR AUTOMOTIVE APPLICATIONS

- MKP CAPACITORS
- MKT CAPACITORS
- X2 CAPACITORS
- Y2 CAPACITORS
- POWER CAPACITORS
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- FOUNDED IN 1946, 70 YEARS OF TRADITION,
- 1133 EMPLOYEES,
- 7 PRODUCTION PLANTS:
  Kranj, Semič, Otoče, Šentvid Pri Stični, Glinek, Ljubljana, Laktaši (BIH),
- 81 R&D EMPLOYEES,
- 4 R&D DEPARTMENTS
- 1 LABORATORY FOR CALIBRATION IN OTOČE (ACCORDING TO IEC 17025:2005 STANDARD),
- CERTIFICATES: CE, VDE, UL, NF, SEMKO, CRS, GOST, LLOYDS, CQC, CSA, ATEX QAN, IECEx,
ABOUT CAPACITORS

- **MODIFICATION CAPACITORS** FOR CUSTOMER REQUEST
- **DESIGN ALL SEMI-PRODUCTS** FOR CAPACITOR
- **AUTOMATIZATION OF IMPORTANT PROCESSES** (METALLIZATION, WINDING, SPRAYING, IMPREGNATION, ASSEMBLING, SEALING, MEASUREMENTS)
- **HIGH SAFETY PRODUCTS** - DESIGN ACCORDING TO INTERNATIONAL SAFETY STANDARDS
- **APPROVALS FOR OUR PRODUCTS** (UL, EN, CSA) AND USE OF UL APPROVED MATERIALS
- **PROCESS STABILITY**
- **QUALITY CERTIFIED ACCORDING TO ISO 9001 AND ISO 14001**
- **DEVELOPMENT** **NEW TECHNOLOGY** AND **MEASURING PROTOCOL**
- **BUILT IN THE** **ECOLOGICAL SUITABLE ROW MATERIALS**
- **USE OF** **MODERN QUALITY TOOLS**
- **FLEXIBILITY AND QUICK RESPONSIVENESS** - OWN CONSTRUCTION AND PRODUCTION OF TOOLS AND MACHINERY

CAPACITORS FOR AUTOMOTIVE APPLICATIONS

- **APPLICATIONS**
  - ELECTRIC WINDOWS
  - ELECTRIC MIRROR
  - WINDSCREEN WIPER
  - FUEL PUMP
  - ELECTRIC SEAT
  - BRAKING SYSTEM
  - TIRE PRESSURE MONITORING
  - HID LIGHTING
  - ELECTRIC DRIVES
  - DC/DC CONVERTER
MODIFICATION CAPACITORS FOR CUSTOMER REQUEST
DESIGN ALL SEMI-PRODUCTS FOR CAPACITOR
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DEVELOPMENT
NEW TECHNOLOGY AND MEASURING PROTOCOL BUILT IN THE ECOLOGICAL SUITABLE ROW MATERIALS
USE OF MODERN QUALITY TOOLS

FLEXIBILITY AND QUICK RESPONSIVENESS - OWN CONSTRUCTION AND PRODUCTION OF TOOLS AND MACHINERY

CAPACITORS FOR AUTOMOTIVE APPLICATIONS

- KEYLESS ENTRY
- ELECTRIC WINDOWS
- POWER STEERING
- ELECTRIC MIRROR
- WINDSCREEN WIPER
- FUEL PUMP
- DC/DC CONVERTER
- ELECTRIC DRIVES
- ELECTRIC SEAT
- BRAKING SYSTEM
- TIRE PRESSURE MONITORING
- HID LIGHTING

APPLICATIONS
- ELECTRIC WINDOWS
- POWER STEERING
- WINDSCREEN WIPER
- FUEL PUMP
- ELECTRIC SEAT
- BRAKING SYSTEM
- TIRE PRESSURE MONITORING
- HID LIGHTING

ELECTRIC DRIVES
### Capacitors for Automotive Applications

#### Use in Electronics

**Application**
- Powertrain
- Safety Application
- Comfort Application

**Powertrain**
- DC/DC converter
- Inverter
- Fuel pump
- Braking system (ABS/ESC)
- Tread pressure monitoring
- HD lamps

**Safety Application**
- Electric mirror
- Keyless entry
- Electric seat
- Electric windows
- Windscreen wiper
- Power steering

**Comfort Application**
- Electric mirror
- Keyless entry
- Electric seat
- Electric windows
- Windscreen wiper
- Power steering

**Capacitor Types**
- **MKP Capacitors**
- **MKT Capacitors**
- **X2, Y2 Capacitors**
- **Power Capacitors**

### MKP Capacitors

- **KLI1910**
  - **Dielectric:** Polypropylene film
  - **Electrodes:** Metal foil and metallized
  - **Capacitor Range:** 1000 pF - 0.22 µF
  - **Rated DC Voltage:** 100 - 2000 V
  - **Capacitance Tolerance:** ±5 %, ±10 %, ±20 %
  - **Pulse Loading:** 2200 - 20500 V/µs
  - **Climatic Category:** 55/100/56
  - **Pitch:** 7.5 - 27.5 mm
  - **Standards/Approvals:** IEC 60384-13, IEC 60384-16, AEC-Q200 (on request)

- **KNI1910**
  - **Dielectric:** Polypropylene film
  - **Electrodes:** Double metallized and metallized
  - **Capacitor Range:** 680 pF - 0.22 µF
  - **Rated DC Voltage:** 250 - 2000 V
  - **Capacitance Tolerance:** ±5 %, ±10 %, ±20 %
  - **Pulse Loading:** 300 - 7000 V/µs
  - **Climatic Category:** 55/100/56
  - **Pitch:** 7.5 - 27.5 mm
  - **Standards/Approvals:** IEC 60384-16, IEC 60384-17, AEC-Q200 (on request)

- **KNU1910**
  - **Dielectric:** Polypropylene film
  - **Electrodes:** Metalized
  - **Capacitor Range:** 0.47 µF - 2.2 µF
  - **Rated DC Voltage:** 100 V
  - **Capacitance Tolerance:** ±10 %
  - **Pulse Loading:** 5 V/µs
  - **Climatic Category:** -40 °C to 100 °C
  - **Standards/Approvals:** IEC/UL 60384-14, AEC-Q200 (on request)
MKT CAPACITORS

**KEU1910**

- **DIELECTRIC:** POLYESTER FILM
- **ELECTRODES:** METALLIZED
- **CAPACITOR RANGE:** 1000 pF - 22 µF
- **RATED DC VOLTAGE:** 63 - 2000 V
- **CAPACITANCE TOLERANCE:** ±5 %, ±10 %, ±20 %
- **PULSE LOADING:** 2.5 - 90 V/µs
- **CLIMATIC CATEGORY:** 55/100/56
- **PITCH:** 10 - 27.5 mm
- **STANDARDS/APPROVALS:** IEC 60384-2
  
  AEC-Q200 (ON REQUEST)

**KEA1xxx**

- **DIELECTRIC:** POLYESTER FILM
- **ELECTRODES:** METALLIZED
- **CAPACITOR RANGE:** 0.47 µF - 2.2 µF
- **RATED DC VOLTAGE:** 100 V
- **CAPACITANCE TOLERANCE:** ±20 %
- **PULSE LOADING:** 5 V/µs
- **CLIMATIC CATEGORY:** -40 °C to 100 °C
- **PITCH:**
- **STANDARDS/APPROVALS:** IEC/UL 60384-14
  
  AEC-Q200 (ON REQUEST)

Y2 CAPACITORS

**KNB252x**

- **DIELECTRIC:** POLYPROPYLENE FILM
- **RATED AC VOLTAGE:** 250 V, 300 V
- **CAPACITANCE RANGE:** 1000 - 150000 pF
- **CAPACITANCE TOLERANCE:** ±10 %, ±20 %
- **CLIMATIC CATEGORY:** 40/100/56
- **STANDARDS/APPROVALS:**
  
  IEC/UL 60384-14
  
  AEC-Q200 (ON REQUEST)
X2 CAPACITORS

**KNB156x**
- **Dielectric:** Polypropylene Film
- **Rated AC Voltage:** 275 V, 300 V
- **Capacitance:** 0.01 - 6.8 µF
- **Capacitance Tolerance:** ±10 %, ±20 %
- **Climatic Category:** 40/110/56, 40/125/56
- **Standards/Approvals:** IEC/UL 60384-14, AEC-Q200 (On Request)

**KNB153x**
- **Dielectric:** Polypropylene Film
- **Rated AC Voltage:** 275 V, 300 V
- **Capacitance:** 0.01 - 10 µF
- **Capacitance Tolerance:** ±10 %, ±20 %
- **Climatic Category:** 40/100/56
- **Standards/Approvals:** IEC/UL 60384-14, AEC-Q200 (On Request)

**KNR153x**
- **Dielectric:** Polypropylene Film
- **Rated AC Voltage:** 275 V
- **Capacitance:** 0.01 - 0.47 µF, R = 2.2 - 470 Ω
- **Capacitance Tolerance:** ±10 %, ±20 %
- **Climatic Category:** 40/100/56
- **Standards/Approvals:** IEC/UL 60384-14, AEC-Q200 (On Request)

**KNB158x**
- **Dielectric:** Polypropylene Film
- **Rated AC Voltage:** 310 V
- **Capacitance:** 0.01 - 15 µF
- **Capacitance Tolerance:** ±10 %, ±20 %
- **Climatic Category:** 40/110/56
- **Standards/Approvals:** IEC/UL 60384-14, AEC-Q200 (On Request)

**RC-units**
- **Life Expectancy:** >100 000 hours at U_NDC
- **Terminal:** Fixing lugs for M6 or M8 screws

**NEW**
**POWER CAPACITORS**

### KNG191x
- **DIELECTRIC:** POLYPROPYLENE FILM
- **ELECTRODES:** METALLIZED
- **RATED CAPACITANCE:** 0.1 - 480 µF
- **CAPACITANCE TOLERANCE:** ±5 %, ±10 %
- **RATED DC VOLTAGE:** 450 - 1300 V
- **CLIMATIC CATEGORY:** 40/110/56
- **LIFE EXPECTANCY:** >100 000 HOURS AT $U_{acc}$
- **TERMINAL:** PARALLEL TINNED COPPER WIRE (2, 4 or 12 pins)
- **STANDARDS/APPROVALS:** IEC 61071, AEC-Q200 (ON REQUEST)

### KNG204x
- **DIELECTRIC:** POLYPROPYLENE FILM
- **ELECTRODES:** METALLIZED
- **RATED CAPACITANCE:** 75 - 1740 µF
- **CAPACITANCE TOLERANCE:** ±5 %, ±10 %
- **RATED DC VOLTAGE:** 600 - 2200 V
- **CLIMATIC CATEGORY:** 40/085/56
- **LIFE EXPECTANCY:** >100 000 HOURS AT $U_{acc}$
- **TERMINAL:** FEMALE: M6x10, MALE: M8x23
- **STANDARDS/APPROVALS:** IEC 61071, UL 810

### HEV/EV
- **DIELECTRIC:** POLYPROPYLENE FILM
- **ELECTRODES:** METALLIZED
- **RATED CAPACITANCE:** 300 - 1100 µF
- **CAPACITANCE TOLERANCE:** ±5 %, ±10 %
- **RATED DC VOLTAGE:** 450 - 800 V
- **CLIMATIC CATEGORY:** -40 °C to 85 °C
- **LIFE EXPECTANCY:** >100 000 HOURS AT $U_{acc}$
- **TERMINAL:** TINNED COPPER
- **STANDARDS/APPROVALS:** IEC 61071, AEC-Q200 (ON REQUEST)

**SNUBBER CAPACITORS**

### KNO19Ax
- **DIELECTRIC:** POLYPROPYLENE FILM
- **ELECTRODES:** DOUBLE METALLIZED AND METALLIZED
- **RATED CAPACITANCE:** 0.047 - 8 µF
- **CAPACITANCE TOLERANCE:** ±5 %, ±10 %
- **RATED DC VOLTAGE:** 630 - 3000 V
- **CLIMATIC CATEGORY:** 40/085/56
- **LIFE EXPECTANCY:** >100 000 HOURS AT $U_{acc}$
- **TERMINAL:** FIXING LUGS FOR M6 OR M8 SCREWS
- **STANDARDS/APPROVALS:** IEC 61071, AEC-Q200 (ON REQUEST)

### KNO19Bx
- **DIELECTRIC:** POLYPROPYLENE FILM
- **ELECTRODES:** DOUBLE METALLIZED AND METALLIZED
- **RATED CAPACITANCE:** 0.047 - 8 µF
- **CAPACITANCE TOLERANCE:** ±5 %, ±10 %
- **RATED DC VOLTAGE:** 630 - 3000 V
- **CLIMATIC CATEGORY:** 40/085/56
- **LIFE EXPECTANCY:** >100 000 HOURS AT $U_{acc}$
- **TERMINAL:** FIXING LUGS FOR M6 OR M8 SCREWS
- **STANDARDS/APPROVALS:** IEC 61071, AEC-Q200 (ON REQUEST)

### KNO191x
- **DIELECTRIC:** POLYPROPYLENE FILM
- **ELECTRODES:** DOUBLE METALLIZED AND METALLIZED
- **RATED CAPACITANCE:** 0.047 - 8 µF
- **CAPACITANCE TOLERANCE:** ±5 %, ±10 %
- **RATED DC VOLTAGE:** 630 - 3000 V
- **CLIMATIC CATEGORY:** 40/085/56
- **LIFE EXPECTANCY:** >100 000 HOURS AT $U_{acc}$
- **TERMINAL:** PARALLEL TINNED COPPER WIRE (2 or 4 pins)
- **STANDARDS/APPROVALS:** IEC 61071, AEC-Q200 (ON REQUEST)