

BETAP  **BETAR**
SMART METERS MANUFACTURING

MCC BETAR LTD.

MANUFACTURING OF SMART METERS AND METERING
EQUIPMENT FOR ENERGY RESOURCES





BETAP  **BETAR**

- MORE THAN **40 TYPES OF PRODUCTS**
- TOTAL OCCUPIED PRODUCTION AREA – MORE THAN **17 200 M²**
- **52%** OF ALL WATER METERS IN RUSSIA HAVE BETAR LOGO
- IT HAS BEEN PRODUCED MORE THAN **60 000 000** UNITS OF METERS
- THE NUMBER OF STUFF – **600**, **25%** AMONG THEM HAVE HIGHER EDUCATION
- ANNUAL REVENUE – **3 BILLION** RUB.



QUALITY
MANAGEMENT SYSTEM

ISO 9001

THE ENVIRONMENTAL
MANAGEMENT SYSTEM

ISO 14001

OCCUPATIONAL HEALTH AND SAFETY
MANAGEMENT SYSTEM

OHSAS 18001

ENERGY
MANAGEMENT SYSTEM

ISO 50001

BUREAU VERITAS
Certification



QUALITY
MANAGEMENT SYSTEM
(IN THE FIELD OF AUTOMOTIVE INDUSTRY)

ISO/TS 16949

LEAN
MANUFACTURING

GOST R 56404





2002

BETAR RECEIVED THE DIPLOMA IN COMPETITION IN CANDIDACY FOR THE PRIZE OF THE RUSSIAN FEDERATION GOVERNMENT IN THE FIELD OF QUALITY



2012

BETAR RECEIVED THE DIPLOMA OF LAUREATE OF THE PRIZE OF GOVERNMENT IN THE REPUBLIC OF TATARSTAN FOR QUALITY



2004

BETAR RECEIVED THE DIPLOMA OF LAUREATE IN COMPETITION IN CANDIDACY FOR THE PRIZE OF THE RUSSIAN FEDERATION GOVERNMENT IN THE FIELD OF QUALITY



2012

BETAR RECEIVED THE DIPLOMA OF LAUREATE IN COMPETITION IN CANDIDACY FOR THE PRIZE OF THE RUSSIAN FEDERATION GOVERNMENT IN THE FIELD OF QUALITY



2010

BETAR RECEIVED THE DIPLOMA IN COMPETITION IN CANDIDACY FOR THE PRIZE OF GOVERNMENT IN THE REPUBLIC OF TATARSTAN FOR QUALITY



2014

BETAR RECEIVED THE DIPLOMA OF LAUREATE IN COMPETITION IN CANDIDACY FOR THE PRIZE OF THE CIS COUNTRIES IN THE FIELD OF GOODS AND SERVICES QUALITY



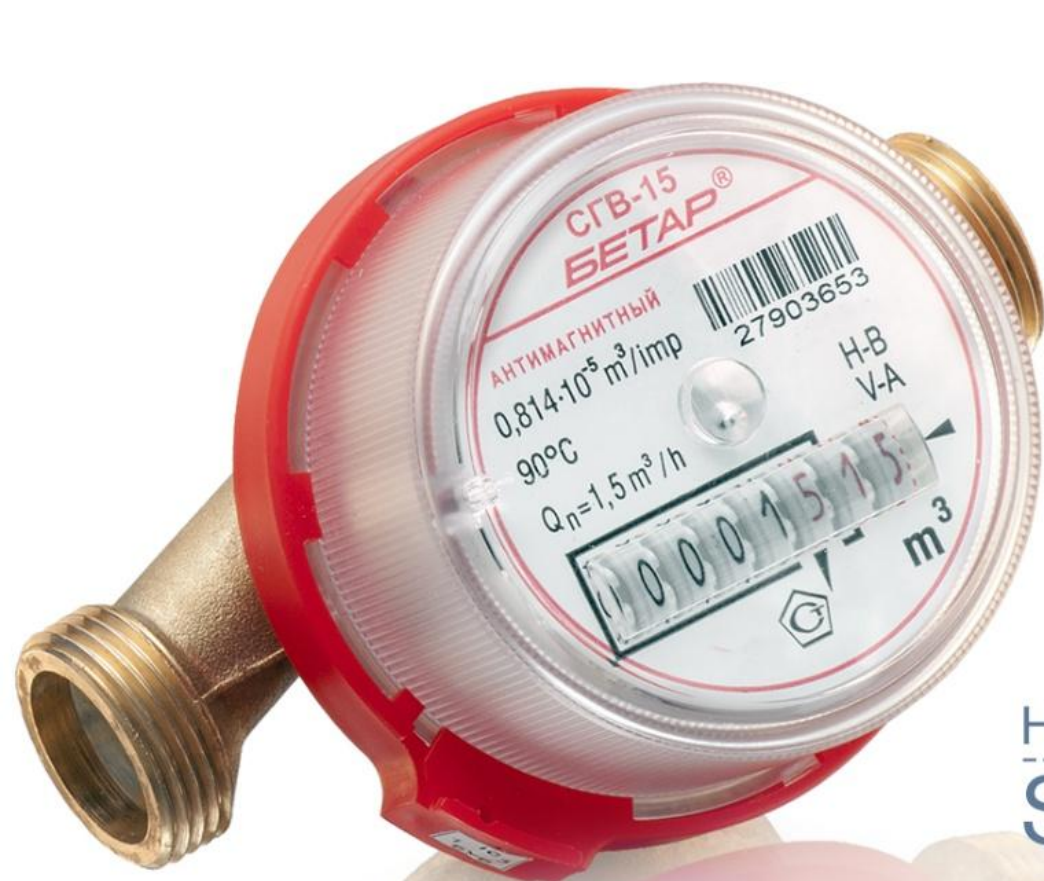
2012

THE COMPANY'S ACTIVITY WAS ASSESSED ON EXCELLENCE MODEL CRITERIA OF EUROPEAN FOUNDATION FOR QUALITY MANAGEMENT (THE EFQM EXCELLENCE MODEL) AND RECEIVED THE HIGHEST APPRAISAL – 5 STARS!



2014

BETAR HAS BEEN INCLUDED IN THE HALL OF FAME OF THE ALL-RUSSIAN ORGANIZATION FOR QUALITY (ROQ).



VERSIONS

WITH ANTIMAGNETIC PROTECTION

WITH PULSE PUTPUT

WITH RETURN VALVE

HOUSEHOLD WATER METER
SGV-15, SHV-15
SGV-20, SHV-20



INDUSTRIAL WATER METERS
SVM-25, SVM-32,
SVM-40, SVM-T-50



VERSIONS

WITH PULSE PUTPUT

WITH HIGHER CLASS "C" OF ME-
TROLOGICAL MEASUREMENT AC-
CURITY



VERSIONS

WITH PULSE PUTPUT

WITH TEMPERATURE OFFSET

HOUSEHOLD GAS METERS
SGBM-1,6 SGBM-2,5
SGBM-3.2 SGBM-4

HOUSEHOLD ULTRASONIC GAS METER
G-1.6, G-2.5, G-4, G-6



VERSIONS
WITH TEMPERATURE OFFSET
WITH RF DATA COMMUNICATION



HOUSEHOLD HEAT METER
STK-15 WITH PULSE OUTPUT





ELECTRIC METER

ESO-211 MULTIRATE

ESO-111.1 A2 SINGLE-RATE

BARS1M-111 MULTIRATE

JOINTING PRODUCTS

PIPE FITTINGS

PRESSURE CONTROL VALVE

PVM-15 MAGNETIC WATER TRANSDUCER



AUTOMATED METER READING SYSTEM

- DATA COLLECTING
- BILLING
- MONITORING AND PLANNING OF ENERGY CONSUMPTION
- ONLINE CHECK OF METERS OPERABILITY

AUTOMATED METER READING SYSTEM

THE SYSTEM INCREASES THE WORK EFFICIENCY AND RELIABILITY OF HOUSING AND UTILITIES SECTOR BY MEANS OF:

- EXCLUSION OF HUMAN FACTOR WHILE COLLECTING AND TRANSMISSION OF METERED DATA AND BILLING FOR HOUSING AND UTILITIES SERVICES
- TRANSPARENT BILLING FOR COMMUNAL USE
- ELIMINATE TAMPERING (THE SYSTEM INFORMS ABOUT POSSIBLE EXTERNAL MAGNETIC EFFECTS ON SMART METERS)



SAKLAU



DESIGN, DEVELOPING, MANUFACTURING OF SPECIAL TEST EQUIPMENT ACCORDING TO THE REQUIREMENTS OF PRODUCTION PROCESSES BOTH IN MANUFACTURING OF BASIC PRODUCTS AND DEVELOPMENT OF PROSPECTIVE ITEMS.



COMPLETED PROJECTS:

- TEST BENCHES FOR VERIFICATION OF METER FLOW PARTS BY HYDRAULIC PRESSURE

- SET OF MEASURING TEST BENCHES FOR ADJUSTING, ACCEPTANCE TESTS AND CALIBRATION OF WATER METERS

- TEST EQUIPMENT FOR WATER METERS WITHIN THE PROGRAM OF AMR DEVELOPMENT AND TESTING

- BENCH EQUIPMENT FOR TECHNOLOGICAL TESTS

DESIGN-ENGINEERING DEPARTMENT

DESIGN AND MANUFACTURE OF ADVANCED, HIGH-PRECISION ROBOTIC SYSTEMS AND AUTOMATED PRODUCTION LINES

TOOL-MAKING DEPARTMENT

DESIGN, MANUFACTURE AND REPAIR OF INJECTION MOLDS, DIES AND CUTTING TOOLS (TYPICAL AND PROFILED)

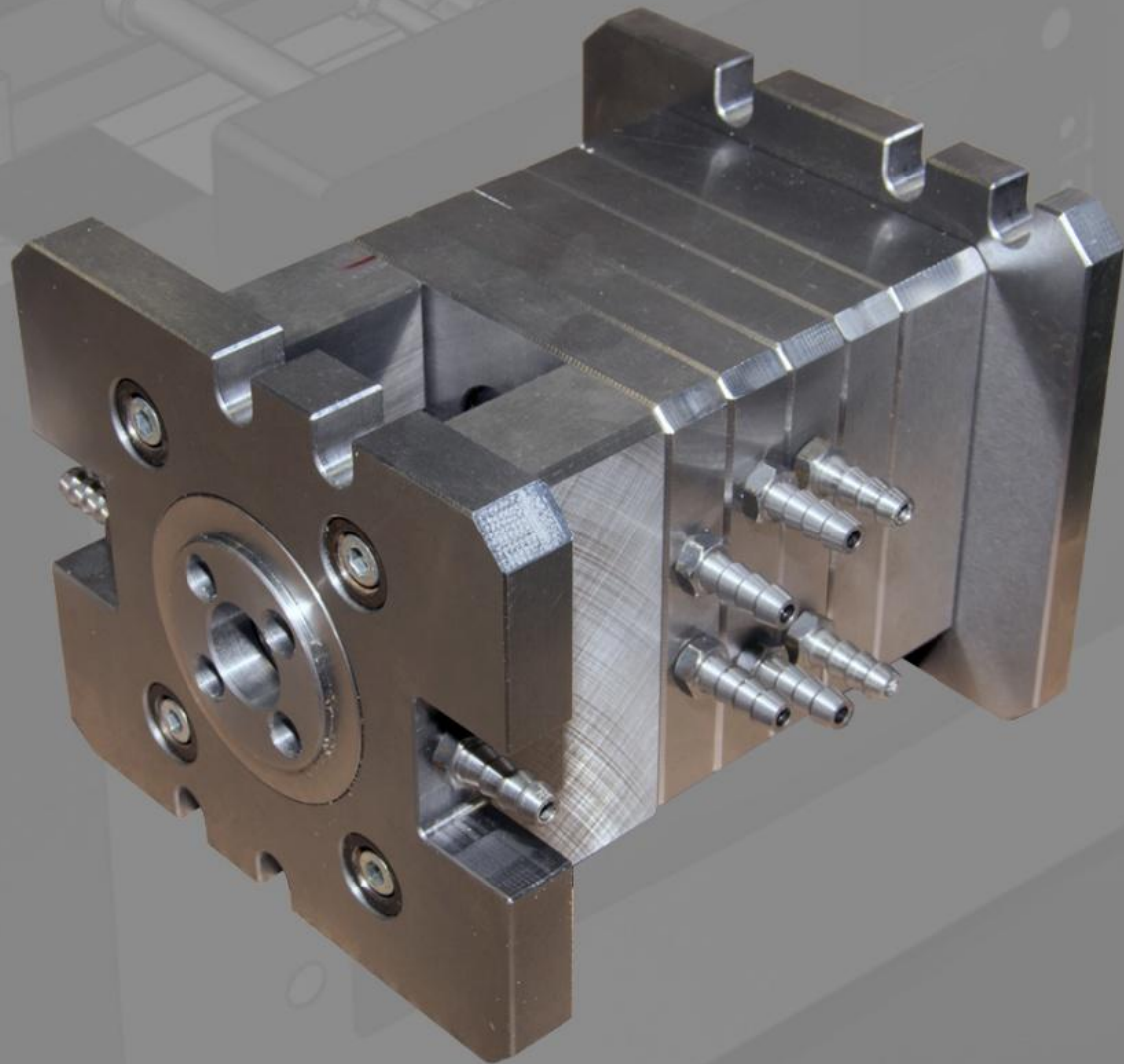
MECHANICAL DEPARTMENT

DESIGN AND MANUFACTURE OF STAINLESS STEEL PRODUCTS



DESIGN-ENGINEERING DEPARTMENT COMPLETED PROJECTS:

- ROBOT-MANIPULATORS FOR PLASTIC PRODUCTION
- HOT-STAMPING MACHINES FOR APPLICATION OF GRAPHIC IMAGE ON COUNTER DRUM
- TEST-BENCHES FOR GAS METERS PRESSURE CHECK
- PROFILED DRILLING MACHINE DESIGNED AND PRODUCED TO DRILL HOLES FOR SEALS
- DIFFERENT DEVICES FOR AUTOMATION AND ASSEMBLING OF METALWORKS
- THERMOCONTROLLER FOR MOLDS
- GRINDING MACHINE
- MILLING MACHINE FOR SOFT METALS MACHINING



DESIGN OF INJECTION MOLDS

IS MADE WITH THE HELP OF MODERN CAD/CAM SYSTEMS, SOLID EDGE AND KOMPAS 3D USING DATA BASES OF STANDARDISED HASCO AND FODESCO ELEMENTS

INTEROPERATIONAL INSPECTION AND FINAL CHECKOUT

ARE PROVIDED BY UP-TO-DATE MONITORING SYSTEMS AND MEASUREMENT, AS WELL AS INTEGRATED IN EQUIPMENT



MOLD CONSTRUCTION

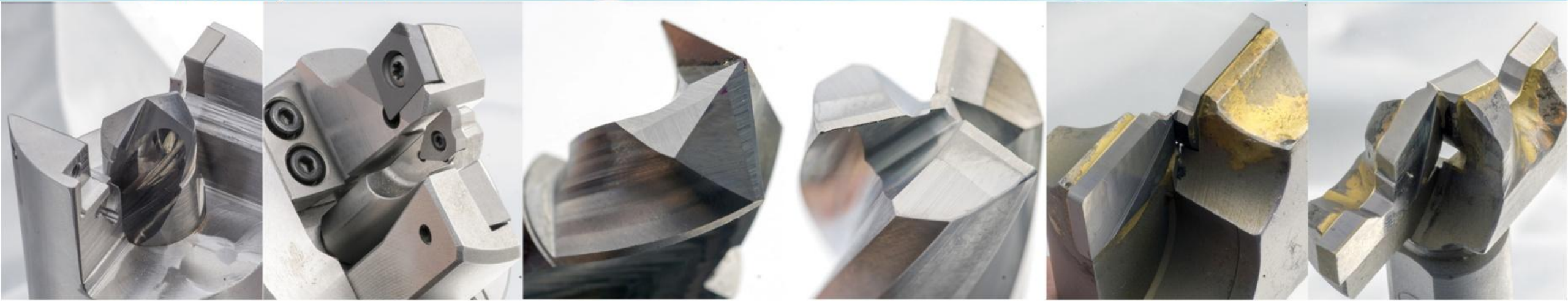
PARK OF HI-TECH AND POWERFUL EQUIPMENT:
DMG, SODICK, FERRARI, ANKA

SPECIFICATIONS:

- TYPES OF MOLDS: WITH HOTRUNNER AND COLDRUNNER SYSTEMS
- OPERATION LIFE: FROM 500 000 CLAMPINGS
- MAXIMUM MOLD BASES SIZE: 720x650

WE OFFER:

- DESIGN AND MANUFACTURE OF MOLDS
- DESIGN OF MOLDS USING BOTH STANDART MOLD BASES (FODESCO, HASCO) AND CUSTOMER'S DRAWINGS
- QUOTATION IS OFFERED IN 2 DAYS



TYPICAL AND SPECIALIZED CUTTING TOOLS – MILLING CUTTERS, DRILLS, CUTTING TOOLS ARE USED FOR MACHINING OF STEEL, BASE METALS, PLASTICS AND WOOD

- MANUFACTURE OF STANDART SOLID, AXLE TOOLS
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- PRODUCTION OF GEOMETRICALLY-COMPLEX TOOLS
- DESIGN AND MANUFACTURE OF TOOLS WITH REPLACEABLE INSERTS
- CHANGEOVER THE EXISTING SPECIALIZED TOOLS WITH BRAZED PLATES TO THE TOOLS WITH REPLACEABLE INSERTS

METALWORKS

- WE MANUFACTURE PRODUCTS ACCORDING TO OUR OWN DRAWINGS, AS WELL AS CUSTOM DESIGN SKETCHES, IN THIS CASE ALL SKETCHES PASS THROUGH THE NECESSARY UPDATING BY OUR ENGINEERS
- PRODUCTS ARE DESIGNED IN CAD/CAM PROGRAM OF THE MODERN KOMPAS 3D SYSTEM
- WE BUY MATERIALS OF HIGHEST QUALITY ONLY
- THE USE OF A VARIETY OF LATEST, HIGH-PRECISION EQUIPMENT ^ PIPE-BENDING MACHINE NUMERICALLY OPERATED, LATHE MACHINE, MILLING MACHINE



AUTOMATED METER READING SYSTEM

- PRODUCTION AREA – **4300 M²**
- OVER **40** UP-TO-DATE ITEMS OF INJECTION MOLDING MACHINE (IMM)
- CLAMPING FORCE FROM 10 TONS TO 300 TONS WITH INJECTION VOLUME FROM **8 CM³** TO **1155 CM³**
- MONTHLY AVERAGE RUN-OUT PRODUCTION – **14 MLN** ITEMS
- UP TO **32** CAVITIES
- ANNUAL VOLUME OF RECYCLABLE MATERIALS **550** TONES



APPLYING TECHNOLOGIES:

- PLASTICS INJECTION MOLDING
- MOLDING OF TWO COMPONENT LIQUID SILICONE
- RAW COMPOUND PROCESSING
- WASTE REMOVAL FROM RUBBER COMPONENTS ON THE CRYOGENIC MACHINERY



AUTOMATED LINE FOR SURFACE MOUNTING

TECHNICAL CHARACTERISTICS:

- WE WORK WITH PRINTED CIRCUIT BOARD UP TO 740X460 MM
- MINIMUM DETAIL'S TYPICAL SIZE 01005
- HEIGHT OF INSERTED DETAILS: UP TO 15 MM
- ASSEMBLY SPEED UP TO 28 000 DETAILS PER HOUR
- ACCURACY OF CHIPS INSERTION ± 30 MICRON WITH 3 SIGMA
- EXCELLENT ASSEMBLY FREQUENCY



YOU CAN COUNT ON US TO OFFER YOU THE FOLLOWING:

- AUTOMATED SURFACE ASSEMBLY
- MANUAL LEAD-OUT ASSEMBLY USING MODERN SOLDERING STATIONS

MCC BETAR LTD.

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METERING EQUIPMENT FOR ENERGY RESOURCES

MCC BETAR LTD., ENGELS STR., 129T, CHISTOPOL, 422980, REPUBLIC OF TATARSTAN,
RUSSIAN FEDERATION

8 800 500 45 45 (TOLL-FREE CALL FOR RUSSIA)

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