



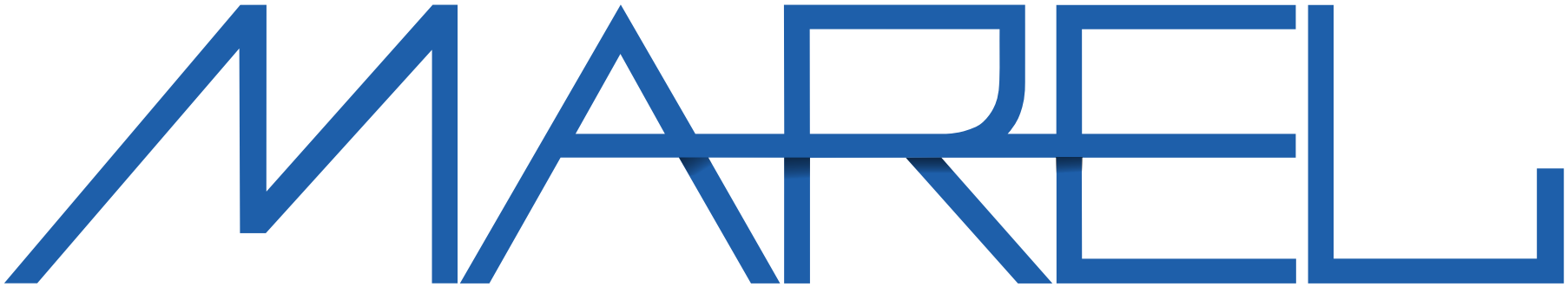





MAREL

EUROPE - SERBIA

KATALOG PROIZVODA / PRODUCT CATALOGUE 2026 V3


MAREL

ISTORIJAT

Privredno društvo MAREL d.o.o. osnovano je 1994. kao porodična trgovina elektromaterijalom. Prateći rastuću potražnju za kablovskom opremom, kao i uzimajući u obzir sopstvenu viziju, privredno društvo MAREL d.o.o. u Januaru 1997. godine pokreće sopstvenu proizvodnju. Prvi proizvod bio je Vijačna kablovska papučica, koja je proizvedena u porodičnoj garaži. Zahvaljujući visokom kvalitetu proizvoda i dobroj tržišnoj orijentaciji, asortiman se 1998. godine proširio na Bakarne papučice i čaure, dok se 1999. godine proširio i na NN SKS pribor. Broj zaposlenih je od 2, tokom ove dve godine porastao na 10 zaposlenih, a izgrađen je i prvi proizvodni pogon veličine 200 m².

U narednim godinama, privredno društvo MAREL d.o.o. fokusiralo se na razvoj novih proizvoda iz oblasti NN SKS pribora, uključujući prvi model IVS 16-35/35-70mm² (poznat i kao 2,5–35/16–95 mm² CBS/CT 95). Njegova unapređena verzija, u potpunosti usklađena sa savremenim tržišnim zahtevima, danas je najprodavaniji proizvod. Pored toga, razvijeni su i proizvodi poput zateznih stezaljki PA 1500, nosećih stezaljki PS 1500, kao i zateznih stezaljki PA 25. Godine 2005. celokupan sistem poslovanja je usklađen sa zahtevima standarda ISO 9001. Kao rezultat adekvatnog planiranja i razvoja proizvodnje, 2010. godine realizovan je prvi veliki izvozni ugovor. Od tog trenutka, svaki segment poslovanja privrednog društva MAREL d.o.o. usmeren je na specifične tehničke i tehnološke zahteve koji proizilaze iz različitih delova globalnog tržišta.

Prateći rastuće zahteve tržišta i trendove automatizacije proizvodnje, 2012. godine započeta je izgradnja novih proizvodnih pogona površine 2000 m², a 2015. godine nova fabrika počinje sa radom.

RAZVOJ I INOVACIJE

Dugogodišnje iskustvo u razvoju i konstrukciji NN SKS opreme rezultiralo je i razvojem opreme za SN izolovane elektrodistribucione vodove, čiji razvoj i usavršavanje čine ključne aspekte našeg trenutnog i budućeg poslovanja.

Ključna karakteristika poslovanja MAREL d.o.o. je dinamičnost, stalna inovacija proizvodnog programa, razvoj savremenog dizajna proizvoda, kao i optimizacija i unapređenje efikasnosti proizvodnih procesa.

Prateći i analizirajući kretanja tržišnih trendova, kao i kroz aktivno učešće na međunarodnim sajmovima u oblasti elektroenergetike, MAREL d.o.o. se, zahvaljujući posvećenosti svih zaposlenih u svakom segmentu poslovanja – od razvoja i istraživanja, marketinga i prezentacije, do proizvodnje, prodaje i tehničke podrške u postprodaji – kontinuirano fokusira na pronalaženje novih tehničkih rešenja za svoje proizvode.

KVALITET I MEĐUNARODNI STANDARDI

Kvalitet naših proizvoda garantuje njihovu trajnost i pouzdanost u svim vremenskim uslovima, dok precizno tehničko oblikovanje omogućava laku montažu i dugotrajnu upotrebu.

Svi proizvodi kompanije MAREL d.o.o. ispitani su u skladu sa relevantnim međunarodnim standardima EN 50483:2009 - Zahtevi za ispitivanje pribora za niskonaponske vazdušne usnopljene kablove, EN 61238-1:2020 - Stezni i mehanički konektori za energetske kablove: Metode ispitivanja i zahtevi, SRPS EN 61284:2009 - Nadzemni vodovi - Zahtevi i ispitivanja za opremu nadzemnih vodova za napone iznad 45 kV, spojnica nazivnih vodova nižih napona i sličnih spojnica za transformatorske stanice, SRPS EN ISO 1461:2022 - Prevlake cinka nanesene toplim postupkom na proizvode od gvožđa i čelika. Ispitivanja su sprovedena u nezavisnoj, akreditovanoj laboratoriji prema standardu SRPS EN ISO/IEC 17025, čime se obezbeđuje pouzdanost, objektivnost i verifikovana usaglašenost proizvoda sa važećim tehničkim zahtevima.

MAREL d.o.o posluje u skladu sa Integrisanim sistemom menadžmenta kvalitetom (IMS) koji obuhvata sistem menadžmenta kvalitetom (QMS), zaštitu životne sredine (EMS) i zaštitu zdravlja i bezbednosti na radu (OH&S). Ovaj sistem implementiran je u skladu sa zahtevima standarda ISO 9001:2015, ISO 14001:2015 i ISO 45001:2018. IMS se primenjuje u svim funkcijama organizacije prilikom realizacije svih poslovnih aktivnosti.

DELATNOST I TRŽIŠTA

Danas je osnovna delatnost Privrednog društva MAREL d.o.o. projektovanje, razvoj i proizvodnja elektroenergetske i telekomunikacione opreme, uključujući kablovske papučice i čaure, opremu za NN neizolovane mreže do 1 kV, opremu za NN SKS do 1 kV, kao i ostali kablovski pribor.

Trenutno, privredno društvo MAREL d.o.o. izvozi svoje proizvode u više od 74 zemlje širom sveta. Pored portfolija vezanog za elektroenergetiku, MAREL d.o.o. je prisutan i u sektoru nadzemnih telekomunikacionih mreža, solarnih polja, kao i mreža za napajanje električnih vozila.

ODRŽIVOST I ODGOVORNOST

MAREL d.o.o., u skladu sa pozitivnom poslovnom praksom, aktivno se posvećuje očuvanju bezbednog i zdravog radnog okruženja, obuci i edukaciji zaposlenih, kao i na povećanju svesti o značaju bezbednosti na radu, negujući pritom odnose sa lokalnom zajednicom i poštujući principe cirkularne ekonomije. U svom poslovanju, MAREL d.o.o. sprovodi kontinuirane investicije u energetski efikasnu proizvodnu opremu, takođe odgovorno i pravilno upravlja resursima i otpadom, čime doprinosi smanjenju potrošnje energije, implementaciji programa obnovljivih izvora energije i smanjenju emisije CO_2, odnosno smanjenju svog karbonskog otiska.

PROIZVODNJA I KAPACITETI

Proizvodni procesi odvijaju se u savremeno opremljenom proizvodnom prostoru površine 3000 m², koji se sastoji od sledećih radnih celina:

- Pogon livnice obojenih metala sa kovačnicom
- Pogon za brizganje termoplastičnih masa
- Pogon preseraja sa radionicom održavanja
- Pogon mehaničke obrade metala sa alatnicom
- Pogon montaže, ambalažiranja i pakovanja
- Pogon obrade metala na CNC strugovima
- Laboratorija za razvojna testiranja i analizu
- Laboratorija za fabrička ispitivanja, procesnu kontrolu i finalnu kontrolu
- Služba magacinskog poslovanja i proizvodnih koordinatora
- Služba prodaje i nabavke
- Služba za ljudske resurse
- Služba razvoja i istraživanja tržišta, novih proizvoda i novih tehnologija
- Služba marketinga i tehničke podrške u postprodaji

COMPANY HISTORY

MAREL was founded in 1994 as a family -owned company engaged in the trade of electrical materials. Following the growing demand for cable accessories and guided by its own business vision, MAREL launched its own production in January 1997. The first product was a Screw-type mechanical cable lug, manufactured in the family garage. Thanks to high product quality and strong market orientation, the product range was expanded in 1998 to include Tubular copper cable lugs and joints, and in 1999 to include LV ABC (Aerial Bundled Cable) accessories. During this two-year period, the number of employees increased from 2 to 10, and the first production facility with an area of 200 m² was constructed.

In the following years, MAREL focused on the development of new products in the field of LV ABC accessories, including the first model of IPC 16–35/35–70 mm² (also known as 2,5–35/16–95 mm² CBS/CT 95). Its improved version, fully aligned with modern market requirements, is today the company's best-selling product. In addition, products such as dead end clamps PA 1500, suspension clamps PS 1500 and anchoring clamps PA 25 were developed. In 2005, the entire business system was aligned with the requirements of the ISO 9001 standard. As a result of adequate planning and production development, the first major export contract was realized in 2010. Since then, every segment of MAREL's operations has been oriented toward specific technical and technological requirements arising from various parts of the global market.

Following increasing market demands and production automation trends, construction of new production facilities with an area of 2,000 m2 began in 2012, and the new factory started operations in 2015.

DEVELOPMENT AND INNOVATION

Many years of experience in the development and design of LV ABC accessories have also resulted in the development of accessories for MV insulated distribution lines, whose further development and improvement represent key aspects of our current and future business activities.

A key characteristic of MAREL's operations is dynamism, continuous innovation of the product range, development of modern product design, as well as optimization and improvement of production process efficiency.

By continuously monitoring and analyzing market trends and through active participation in international power trade fairs, MAREL, thanks to dedicated work of all employees in every segment of the business - from research and development, marketing and presentation, to production, sales, and after-sales technical support - remains consistently focused on finding new technical solutions for its products.

QUALITY AND INTERNATIONAL STANDARDS

The quality of our products guarantees durability and reliability under all weather conditions, while precise technical design enables easy installation and long service life.

All MAREL's products have been tested in accordance with relevant international standards: EN 50483:2009 – Test requirements for low voltage aerial bundled cable accessories, EN 61238-1:2020 – Test methods and requirements for compression and mechanical connectors for power cables, EN 61284:2009 – Overhead lines - Requirements and tests for fittings for overhead lines of nominal voltage above 45 kV, fittings for overhead lines of lower nominal voltage and similar fittings for substations. EN ISO 1461:2022 – Hot dip galvanized coatings on fabricated iron and steel articles. Testings were carried out in an independent, accredited laboratory in accordance with EN ISO/IEC 17025, ensuring reliability, objectivity, and verified compliance of the products with applicable technical requirements.

MAREL operates in accordance with an Integrated Management System (IMS), which includes the Quality Management System (QMS), Environmental Management System (EMS), and Occupational Health and Safety Management System (OH&S). This system has been implemented in compliance with the requirements of ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018, and is applied across all organizational functions and business activities.

BUSINESS ACTIVITIES AND MARKETS

The core business activity of MAREL is the design, development, and manufacturing of power and telecommunications accessories, including cable lugs and joints, accessories for LV non-insulated networks up to 1 kV, accessories for LV ABC up to 1 kV, as well as other cable accessories.

Currently, MAREL exports its products to more than 74 countries worldwide. In addition to the product portfolio related to power distribution networks, MAREL is also present in the sectors of overhead telecommunications networks, solar power plants, and electric vehicle charging networks.

SUSTAINABILITY AND RESPONSIBILITY

In accordance with best business practices, MAREL is actively committed to maintaining a safe and healthy working environment, employee training and education, and raising awareness of occupational safety, while fostering strong relationships with the local community and respecting the principles of the circular economy. In its operations, MAREL continuously invests in energy-efficient production equipment and responsibly manages resources and waste, thereby contributing to reduced energy consumption, implementation of renewable energy programs, reduction of CO2 emissions, and overall reduction of its carbon footprint.

PRODUCTION AND CAPACITIES

Production processes take place in a modernly equipped manufacturing facility covering an area of 3,000 m2, consisting of the following units:

- Non-ferrous die casting plant with forging facility
- Thermoplastic injection molding plant
- Metal fabrication plant with maintenance workshop
- Metal machining plant with mold shop
- Assembly line with packaging
- CNC turning plant
- Laboratory for development testing and analysis
- Laboratory for factory testing, process control, and final inspection
- Warehouse management and production coordination department
- Sales and procurement department
- Human resources department
- Research and development of markets, new products, and new technologies department
- Marketing and after-sales technical support department



ZAŠTITNA OPREMA ZA NN SKS

NETWORK PROTECTION DEVICES FOR LV ABC

MAREL

EUROPE - SERBIA

PRODUCT CATALOGUE 2026 V.3

SRB.

IZOLOVANA VODONEPROPUSNA STEZALJKA EBB AlCu 10-150/1,5-70mm²

Marel izolovana vodonepropusna stezaljka EBB AlCu 10-150/1,5-70mm² se koristi za ostvarenje kontakta istovremenim probijanjem izolacije na provodnicima NN SKS-a kao glavnog voda i na priključnom izolovanom provodniku objekta uz istovremeno postavljanje i vezu odvodnika prenapona i sa glavnim i sa priključnim vodom.
Upotreba stezaljke je dozvoljena samo uz odvodnik prenapona.
Nije dozvoljeno stezaljku koristiti bez odvodnika prenapona.

MAREL izolovana vodonepropusna stezaljka EBB AlCu 10-150/1,5-70mm² tako izrađena da omogućava spajanje NN SKSa i priključnog voda nezavisno da li je to Al ili Cu provodnik.
Umetak od elastomera eliminiše pojavu elektrolitičke korozije jer sprečava pojavu vlage na kontaktnim tačkama. Kontakti su zaštićeni elektrkontaktnom mašću.

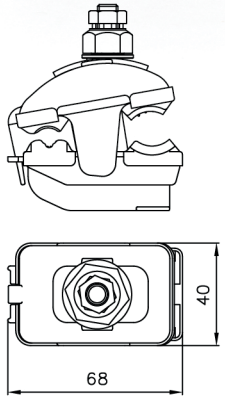
Prilikom stezanja moment navrtke MAREL izolovane vodoneprospusne stezaljke EBB AlCu 10-150/1,5-70mm² zubi kontaktnih pločica prodiru kroz izolaciju NN SKS-a i ostavaruju odličan kontakt zahvaljujući dubokom prodoru u provodnik i velikom dodirnom površinom sa njim.
Kontaktne pločice su izrađene od elektrolitičkog lima odlične provodljivosti i veoma velike mehaničke čvrstoće tako da je probijanje izolacije moguće i na veoma niskim temperaturama.

Pritezanje MAREL izolovane vodonepropusne stezaljke EBB AlCu 10-150/1,5-70mm² vrši se dok ne dođe do mehaničkog oštećenja moment navrtke.
Dotezanje stezaljke je dozvoljeno do maksimalnog mehaničkog opterećenja, maksimalno 1,5 krug od momenta kidanja moment navrtke.
Moguća je montaža pod naponom ali uz obaveznu upotrebu propisane zaštitne opreme.

MAREL izolovana vodonepropusna stezaljka :

- ne sadrži delove koji mogu da otpadnu pri radu na visini;
- namenjena je samo za jednu upotrebu - montažu;
- poseduje anti rotacioni element (anti rotation device - ARD) , što omogućava laku i pravilnu montažu jer ne dozvoljava rotaciju gornjeg i donjeg dela stezaljke oko svoje ose što za rezultat ima lak i dubok prodor kontaktnih pločica kroz izolaciju NN SKS-a pri montaži stezaljke;





Ključ za montažu OK 13
Ključ za demontažu OK 17
Ključ za prihvat donjeg dela pri montaži OK 22



ENG

INSULATION PIERCING WATERPROOF CONNECTOR EBB AlCu 10-150/1,5-70mm²

MAREL Insulation piercing waterproof connector EBB AlCu 10-150/1,5-70mm² is used to establish electrical contact by simultaneously piercing the insulation on LV ABC conductors of main power distribution line and of network connection insulated conductor. It enables simultaneous installation and connection of surge arrester to both main and tap-off line. It is allowed to use the connector only with a surge arrester.

It is not allowed to use the connector without a surge arrester.

MAREL Insulation piercing waterproof connector EBB AlCu 10-150/1,5-70mm² is designed in such a way that it enables connection of LV ABC and branch conductor regardless of whether it is an aluminum or a copper conductor.

The elastomer insert eliminates the appearance of electrolytic corrosion since it prevents the appearance of moisture at contact points.

The contact plates are protected with electrical contact grease. When tightening the shear-off nut of MAREL Insulation piercing waterproof connector EBB AlCu 10-150/1,5-70mm² the "teeth" of contact plates penetrate through the insulation and make a perfect contact, thanks to deep penetration into the conductor and large contact surface with it.

The contact plates are made of electrolytic sheet of excellent conductivity and very high mechanical strength.

Therefore, the penetration through insulation is possible even on very low temperatures.

Tightening of MAREL Insulation piercing waterproof connector EBB AlCu 10-150/1,5-70mm² is done until mechanical damage of shear-off nut occurs. Additional tightening is allowed up to maximum mechanical load, maximum 1.5 circle from the moment of damage of shear-off nut.

Installation under voltage is possible but it is necessary to use adequate protective equipment.





MAREL Insulation piercing waterproof connector:

- does not contain parts which could fall off during installation;
- can be used / installed only once;
- has an anti-rotation device (ARD), which enables easy and proper installation because it doesn't allow rotation of upper and lower part of the connector around its axis, which results in easy and deep penetration of contact plates through insulation of LV ABC conductor during installation of the connector;

Installation wrench: 13
Dismantling wrench: 17
Wrench to hold the lower part during installation: 22

SRB.

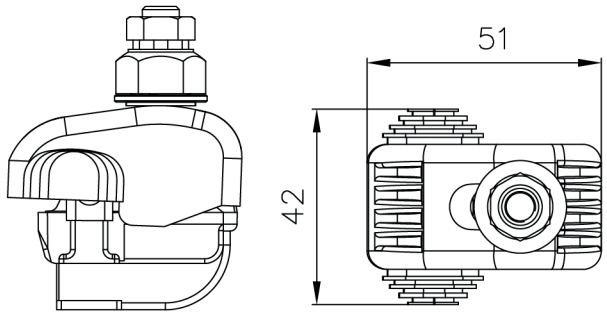
IZOLOVANA STEZALJKA RBB AlCu 10-150mm²

Marel izolovana stezaljka RBB AlCu 10-150mm² se koristi za direktno postavljanje odvodnika prenapona na izolovanu električnu NN mrežu.
Upotreba stezaljke je dozvoljena samo uz odvodnik prenapona.
Nije dozvoljeno stezaljku koristiti bez odvodnika prenapona. Kontakti su zaštićeni elektrkontaktnom mašću.
Prilikom stezanja moment navrtke MAREL izolovane stezaljke RBB AlCu 10-150mm² kontaktnih pločica prodiru kroz izolaciju NN SKS-a i ostavaruju odličan kontakt, zahvaljujući dubokom prodoru u provodnik, i velikom dodirnom površinom sa njim
Kontaktne pločice su izrađene elektrolitičkog materijala odlične provodljivosti i veoma velike mehaničke čvrstoće tako da je probijanje izolacije moguće i na veoma niskim temperaturama.
Pritezanje MAREL izolovane stezaljke RBB AlCu 10-150mm² vrši dok ne dođe do mehaničkog oštećenja moment navrtke.
Dotezanje stezaljke je dozvoljeno do maximalnog mehaničkog opterećenja, maximalno 1,5 krug od momenta kidanja moment navrtke.
Moguća je montaža pod naponom ali uz obaveznu upotrebu propisane zaštitne opreme.

MAREL Izolovana stezaljka je tako konstruisana da omogućava brzu , laku i pouzdanu montažu nezavisno od spoljne temperature.
Kućište je izrađeno od Poliamida PA 6.6 (armiran staklenim vlaknima od 30-50%) otpornog na UV zračenja, vremenske prilike, promene temperature, starenje.

MAREL izolovana stezaljka :
- ne sadrži delove koji mogu da otpadnu pri radu na visini;
- namenjena samo za jednu upotrebu - montažu;
- poseduje anti rotacioni element (anti rotation device - ARD) , što omogućava laku i pravilnu montažu jer ne dozvoljava rotaciju gornjeg i donjeg dela stezaljke oko svoje ose što za rezultat ima lak i dubok prodor kontaktnih pločica kroz izolaciju NN SKS.

Ključ za montažu OK 13
Ključ za demontažu OK 17
Ključ za prihvat donjeg dela pri montaži OK 24





ENG.

INSULATION PIERCING CONNECTOR RBB AlCu 10-150mm²

MAREL Insulation Piercing Connector RBB AlCu 10-150mm² is used to install a surge arrester directly onto insulated LV power distribution network. It is allowed to use the connector only with a surge arrester. It is not allowed to use the connector without a surge arrester.

The contacts are protected with electrical contact grease. When tightening the shear-off nut of MAREL Insulation piercing connector RBB AlCu 10-150mm² the “teeth“ of contact plates penetrate through the insulation and make a perfect contact, thanks to deep penetration into the conductor and large contact surface with it.

The contact plates are made of electrolytic sheet of excellent conductivity and very high mechanical strength.
Therefore, the penetration through insulation is possible even on very low temperatures.

Tightening of MAREL Insulation piercing connector RBB AlCu 10-150mm² is done until mechanical damage of shear-off nut occurs.
Additional tightening is allowed up to maximum mechanical load, maximum 1.5 circle from the moment of damage of shear-off nut.
Installation under voltage is possible but it is necessary to use adequate protective equipment.







MAREL Insulation piercing waterproof connector is designed in such a way that it enables fast, easy and reliable installation regardless of outdoor temperature.
The housing of the connector is made of Polyamide PA 6.6 (30-50% glass fiber reinforced), resistant to UV rays, weather conditions, temperature changes and aging.

MAREL Insulation Piercing Connector:
- does not contain parts which could fall off during installation;
- can be used / installed only once;
- has an anti-rotation device (ARD), which enables easy and proper installation because it doesn’t allow rotation of upper and lower part of the connector around its axis, which results in easy and deep penetration of contact plates through insulation of LV ABC.

Installation wrench: 13
Dismantling wrench: 17
Wrench to hold the lower part during installation: 24

SRB.

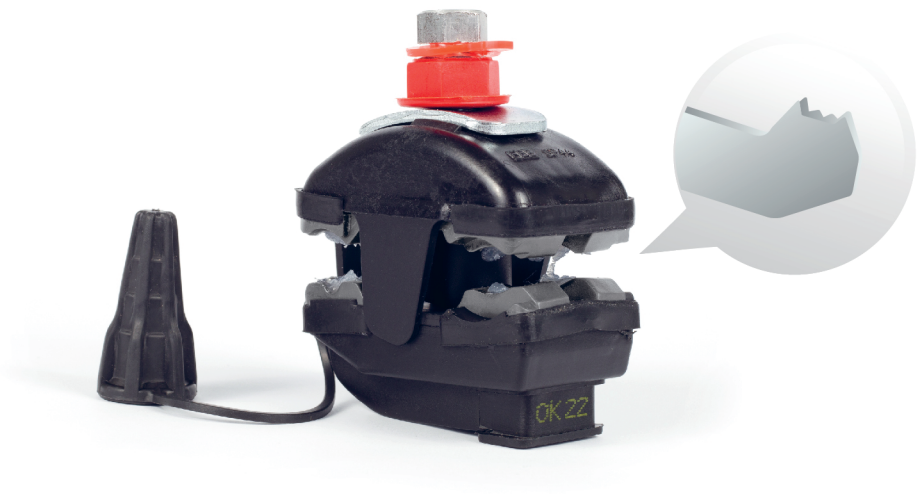
IZOLOVANA STEZALJKA ZA NEIZOLOVANI GLAVNI VOD EBB N AlCu 10-150/1,5-70mm²

Marel izolovana vodonepropusna stezaljka za neizolovani glavni vod EBB N AlCu 10-150/1,5-70mm² se koristi za ostvarenje kontakta istovremeno na AlČe ili Cu neizolovanim nedzemnim vodovima sa jedne strane kao glavnog voda i na priključnom izolovanom provodniku objekta uz istovremeno postavljanje i vezu odvodnika prenapona i sa glavnim i sa priključnim vodom.
Upotreba stezaljke je dozvoljena samo uz odvodnik prenapona.
Nije dozvoljeno stezaljku koristiti bez odvodnika prenapona.

MAREL izolovana vodonepropusna stezaljka za neizolovani glavni vod EBB N AlCu 10-150/1,5-70mm² tako izrađena da omogućava spajanje neizolovanog AlČe ili Cu nadzemnog voda i priključnog voda nezavisno da li je to Al ili Cu provodnik.
Umetak od elastomera eliminiše pojavu elektrolitičke korozije jer sprečava pojavu vlage na kontaktnim tačkama. Kontakti su zaštićeni elektrkontaktnom mašću.

Prilikom stezanja moment navrtke MAREL izolovane vodoneprospusne stezaljke za neizolovani glavni vod EBB N EBB AlCu 10-150/1,5-70mm² zubi kontaktnih pločica naležu na AlČe ili Cu glavni vod nadzemnog provodnika a na odcepnom vodu prodiru kroz izolaciju NN SKS-a i ostavaruju odličan kontakt zahvaljujući dubokom prodoru u provodnik i velikom dodirnom površinom sa njim.
Kontaktne pločice su izrađene od elektrolitičkog lima odlične provodljivosti i veoma velike mehaničke čvrstoće tako da je probijanje izolacije moguće i na veoma niskim temperaturama.

Pritezanje MAREL izolovane vodonepropusne stezaljke za neizolovani glavni vod EBB N AlCu 10-150/1,5-70mm² vrši se dok ne dođe do mehaničkog oštećenja moment navrtke.
Dotezanje stezaljke je dozvoljeno do maksimalnog mehaničkog opterećenja, maksimalno 1,5 krug od momenta kidanja moment navrtke.
Moguća je montaža pod naponom ali uz obaveznu upotrebu propisane zaštitne opreme.



MAREL izolovana vodonepropusna stezaljka za neizolovani glavni vod :
- ne sadrži delove koji mogu da otpadnu pri radu na visini;
- namenjena je samo za jednu upotrebu - montažu;
poseduje anti rotacioni element (anti rotation device ARD) što omogućava laku i pravilnu montažu jer ne dozvoljava rotaciju gornjeg i donjeg dela stezaljke oko svoje ose što za rezultat ima lak i dubok prodor kontaktnih pločica kroz izolaciju otcepnog provodnika pri montaži

Ključ za montažu OK 13
Ključ za demontažu OK 17
Ključ za prihvat donjeg dela pri montaži OK 22

ENG.

INSULATION PIERCING CONNECTOR FOR BARE MAIN LINE EBB N AlCu 10-150/1,5-70mm²

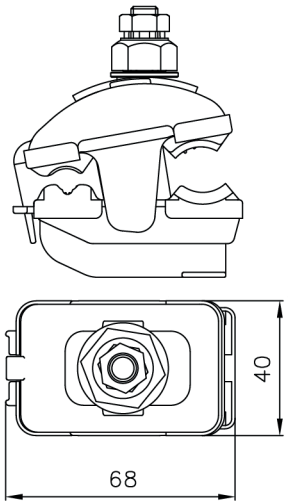
MAREL Insulated connector for bare main line EBB N AlCu 10-150/1,5-70mm² is designed to establish electrical contact simultaneously on non-insulated overhead ACSR or copper main power distribution line on one side and on insulated network connection conductor, with simultaneous installation and connection of a surge arrester on both main and tap line.
It is allowed to use the connector only with a surge arrester.
It is not allowed to use the connector without a surge arrester.

MAREL Insulated connector for bare main line EBB N AlCu 10-150/1,5-70mm² is manufactured in such a way that it enables connection of non-insulated overhead ACSR or copper conductor and branch conductor regardless of whether it is an aluminum or a copper conductor.
The elastomer insert eliminates the appearance of electrolytic corrosion since it prevents the appearance of moisture at contact points.
The contacts are protected with electrical contact grease.
When tightening the shear-off nut of MAREL Insulated waterproof connector EBB AlCu 10-150/1,5-70mm² the "teeth" of contact plates fit well onto non-insulated overhead ACSR or copper conductor of the main line and penetrate through the insulation of the tap-off conductor, thus making a perfect contact, thanks to deep penetration into the conductor and large contact surface with it.
The contact plates are made of electrolytic sheet of excellent conductivity and very high mechanical strength.
Therefore, the penetration through insulation is possible even on very low temperatures.
Tightening of MAREL Insulated connector for bare main line EBB N AlCu 10-150/1,5-70mm² is done until mechanical damage of shear-off nut occurs.
Additional tightening is allowed up to maximum mechanical load, maximum 1.5 circle from the moment of damage of shear-off nut.
Installation under voltage is possible but it is necessary to use adequate protective equipment.

MAREL Insulated connector for bare main line is designed in such a way that it enables fast, easy and reliable installation regardless of outdoor temperature.
The housing of the connector is made of Polyamide PA 6.6 (30-50% glass fiber reinforced), resistant to UV rays, weather conditions, temperature changes and aging.

MAREL Insulated connector for bare main line :
- does not contain parts which could fall off during installation;
- can be used / installed only once;
has an anti-rotation device (ARD), which enables easy and proper installation because it doesn't allow rotation of upper and lower part of the connector around its axis, which results in easy and deep penetration of contact plates through insulation of branch conductor

Installation wrench: 13
Dismantling wrench: 17
Wrench to hold the lower part during installation: 22





SRB.

IZOLOVANA STEZALJKA ZA NEIZOLOVANI GLAVNI VOD RBB N AlCu 10-150mm²

Marel izolovana stezaljka za neizolovani glavni vod RBB N AlCu 10-150mm² se koristi za direktno postavljenje odvodnika prenapona na neizolovane nadzemne AlČe ili Cu električne vodove.

Upotreba stezaljke je dozvoljena samo uz odvodnik prenapona.

Nije dozvoljeno stezaljku koristiti bez odvodnika prenapona. Kontakti su zaštićeni elektrkontakt-nom mašću.

Prilikom stezanja moment navrtke MAREL izolovane stezaljke za neizolovani glavni vod RBB N AlCu 10-150mm² kontaktne pločice naležu na neizolovani nadzemni AlČe ili Cu vod i ostavaru-ju odličan kontakt,
zahvaljujući velikoj dodirnoj površini .
Kontaktne pločice su izrađene i od elektrolitičkog materijala odlične provodljivosti i veoma velike mehaničke čvrstoće tako da je kontakt veoma pouzdan i na veoma niskim temperaturama.
Pritezanje MAREL izolovane stezaljke za neizolovani glavni vod RBB N AlCu 10-150mm² vrši dok ne dođe do mehaničkog oštećenja moment navrtke.
Dotezanje stezaljke je dozvoljeno do maximalnog mehaničkog opterećenja, maximalno 1,5 krug od momenta kidanja moment navrtke.
Moguća je montaža pod naponom ali uz obaveznu upotrebu propisane zaštitne opreme.

MAREL Izolovana stezaljka za neizolovani glavni vod je tako konstruisana da omogućava brzu , laku i pouzdanu montažu nezavisno od spoljne temperature.
Kućište je izrađeno od Poliamida PA 6.6 (armiran staklenim vlaknima od 30-50%) otpornog na UV zračenja, vremenske prilike, promene temperature, starenje.



MAREL izolovana stezaljka za neizolovani glavni vod :
- ne sadrži delove koji mogu da otpadnu pri radu na visini;
- namenjena samo za jednu upotrebu - montažu;
poseduje anti rotacioni element (anti rotation device ARD) što omogućava laku i pravilnu montažu jer ne dozvoljava rotaciju gornjeg i donjeg dela stezaljke oko svoje ose što za rezultat ima lak i dubok prodor kontaktnih pločica kroz izolaciju otcepnog provodnika pri montaži

Ključ za montažu OK 13
Ključ za demontažu OK 17
Ključ za prihvat donjeg dela pri montaži OK 24

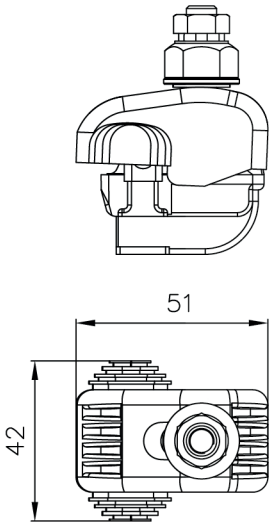
ENG.

INSULATION PIERCING CONNECTOR FOR BARE MAIN LINE RBB N AlCu 10-150mm²

MAREL Insulated connector for bare main line RBB N AlCu 10-150mm² is designed to install a surge arrester directly onto non-insulated overhead ACSR or copper power distribution lines.
It is allowed to use the connector only with a surge arrester.
It is not allowed to use the connector without a surge arrester.

The contacts are protected with electrical contact grease. When tightening the shear-off nut of MAREL Insulated connector for bare main line RBB N AlCu 10-150mm2 the contact pads fit well onto non-insulated overhead ACSR or copper conductor and make a perfect contact, thanks to the large contact surface.
The contact plates are made of electrolytic sheet of excellent conductivity and very high mechanical strength.
Therefore, the electrical contact is very reliable even on extremely low temperatures.
Tightening of MAREL Insulated connector for bare main line RBB N AlCu 10-150mm² is done until mechanical damage of shear-off nut occurs.
Additional tightening is allowed up to maximum mechanical load, maximum 1.5 circle from the moment of damage of shear-off nut.
Installation under voltage is possible but it is necessary to use adequate protective equipment.

MAREL Insulated connector for bare main line RBB N is designed in such a way that it enables fast, easy and reliable installation regardless of outdoor temperature.
The housing of the connector is made of Polyamide PA 6.6 (30-50% glass fiber reinforced), resistant to UV rays, weather conditions, temperature changes and aging.





MAREL Insulated Connector for bare main line :
- does not contain parts which could fall off during installation;
- can be used / installed only once;
has an anti-rotation device (ARD), which enables easy and proper installation because it doesn't allow rotation of upper and lower part of the connector around its axis, which results in easy and deep penetration of contact plates through insulation of branch conductor

Installation wrench: 13
Dismantling wrench: 17
Wrench to hold the lower part during installation: 24

SRB.

KABL ZA UZEMLJENJE I KRATKO SPAJANJE



Kabl za uzemljenje ESQ
Earthing cable ESQ

Kabl za kratko spajanje SCD
Short-circuit SCD

Kabl za uzemljenje (ESQ) ima svrhu da se preko njega privremeno ili po potrebi stalno uzemlji samonoseći kablovski snop SKS bez prethodnog uklanjanja izolacije. Jedna strana kabla za uzemljenje uvek mora biti pravilno postavljena na uzemljivač stuba električne mreže.
Kabl za kratko spajanje (SCD) ima svrhu da napravi pouzdanu privremenu ili stalnu izolovanu vezu između samonosećeg kablovskog snopa i kabla za uzemljenje (ESQ). Kabl za kratko spajanje ima mogućnost da se postavi na 6 Marel CBS (CDR) + PMCC stezaljki i na jedan uzemljivač (ESQ).
Povezivanje se vrši na sledeći način : Na samonoseći kablovski snop SKS se ugrađuje Marel izolovana vodonepropusna strezaljaka tip CBS ili CDR sa ugrađenim Marel PMCC priključkom, na PMCC priključak se postavlja jedna strana kabla za kratko spajanje (SCD) a sa druge strane se tog istog kabla se postavlja kabl za uzemljenje (ESQ).
Jedan Marel komplet ESQ + SCD može da uzemlji do 6 električnih vodova samonosećeg kablovkog snopa. Ugradnjom ovog tipa uzemljivača povećava se bezbednost na radu i bezbednost od strujnog udara. Marel CBS (CDR) + PMCC inastalacija na samonosećem kablovskom snopu SKS je trajna i može da se koristi neograničeno puta za ostvarivanje veze sa kablom za uzemljene (ESQ) preko kabla za kratko spajanje (SCD). Korišćenjem ove aplikacije ne dolazi do oštećenja samonosećeg kablovskog snopa (SKS) u smislu uklanjanja izolacije, to samo po sebi povećava bezbednost pri radu.

ENG.

EARTHING CABLE ESQ AND SHORT-CIRCUIT CABLE SCD

The purpose of Earthing Cable (ESQ) is to temporarily or permanently ground an aerial bundled cable (ABC) without removing the insulation. One side of the Earthing Cable must always be properly connected to the grounding system of a power pole.
The purpose of Short-circuit Cable (SCD) is to make a reliable temporary or permanent insulated connection between aerial bundled cable (ABC) and Earthing Cable (ESQ). Short-circuit cable can be installed on 6 Marel CBS (CDR) connectors + PMCC adapter and on one Earthing Cable (ESQ).
The connection is made in the following way: Marel insulated piercing connector type CBS or CDR connected to Marel PMCC adapter is installed on aerial bundled cable (ABC), one side of Short-circuit Cable (SCD) is connected to PMCC adapter and Earthing Cable (ESQ) is connected to the other side of the same Short-circuit Cable. One Marel ESQ + SCD kit can ground up to 6 ABC power lines. The installation of this type of earthing kit increases safety at work and safety against electric shock. Marel CBS (CDR) + PMCC installation on aerial bundled cable (ABC) is permanent and can be used unlimited number of times to make connection to the Earthing Cable (ESQ) via a Short-circuit Cable (SCD). In this way the aerial bundled cable is not damaged by removing the insulation, which increases safety at work.

SRB.

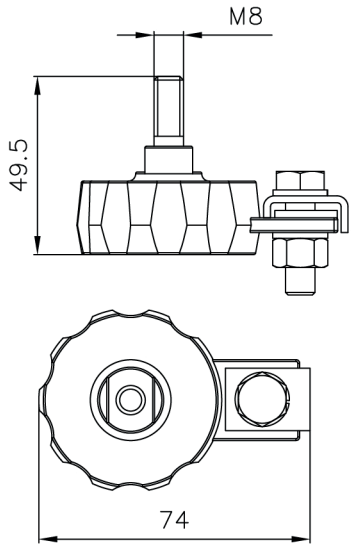
ODVODNIK PRENAPONA

Odvodnik prednapona za NN elektroenrgetske mreže ima namenu da štiti uređaje. Odvodnik prenapona može biti sa ili bez indikacije.

ENG.

LOW-VOLTAGE SURGE ARRESTER

Low-voltage Surge arrester is used to protect installations from overvoltage. Surge arrester can be with or without disconnector.





Kat.broj Catalog No.	Kod Code	Nominalna udarna struja Uc (Vac) Nominal surge current Uc (Vac)	Maksimalna udarna struja (In) Maximum surge current (In)	Radni napon (Imax) Operating voltage (Imax)	Zaštitni napon Up (V) Protection voltage Up (V)	Pakovanje (kom) Packaging (pcs)
bez signalizacije/without disconnector						
375060	MOP 280/5-0	5	35	280	1050	30
375061	MOP 440/5-0	5	35	440	1650	30
375062	MOP 500/5-0	5	35	500	2050	30
375063	MOP 660/5-0	5	35	660	2350	30
375064	MOP 280/10-0	10	40	280	1100	30
375065	MOP 440/10-0	10	40	440	1850	30
375066	MOP 500/10-0	10	40	500	2300	30
375067	MOP 660/10-0	10	40	660	2750	30
sa signalizacijom /with disconnector						
375068	MOP 280/5	5	35	280	1050	30
375069	MOP 440/5	5	35	440	1650	30
375070	MOP 500/5	5	35	500	2050	30
375071	MOP 660/5	5	35	660	2350	30
375072	MOP 280/10	10	40	280	1100	30
375073	MOP 440/10	10	40	440	1850	30
375074	MOP 500/10	10	40	500	2300	30
375075	MOP 660/10	10	40	660	2750	30

KAT. BR. / CAT.NO. 375085 | KOD / CODE : NNZ

SRB.

KONTAKTNI PROVODNIK KA ZEMLJI

Kontaktni provodnik ka zemji ima ulogu da poveže odvodnik prenapona i tačku za uzemljenje.

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ENG..

CONTACT WIRE TO THE GROUND

Contact wire to the ground is used to connect a surge arrester and grounding point.



KAT. BR. / CAT.NO. 375084 | KOD / CODE : NNM

SRB.

Kontaktni provodnik ka NN mreži ima ulogu da ostvari pouzadnu vezu izmedju odvodnika prenapona sa jedne strane i izolovane vodonepropusne stezaljke Marel tipa CBS ili CDR i glavnog NN voda sa druge strane.
Spoj dobijen na ovaj način je vodonepropustan i pouzdan. Pouzdan pri svim vremenskim uslovima i UV zračenju.

ENG..

Contact wire to LV network is used to establish a reliable connection between a surge arrester on one side and Marel Insulated piercing connector type CBS or CDR and LV main line on the other side.
The connection established in this way is waterproof, reliable in all weather conditions and resistant to UV radiation.

KONTAKTNI PROVODNIK KA NN MREŽI
CONTACT WIRE TO LV NETWORK



SRB.

IZOLOVANI ADAPTER ZA KRATKO SPAJANJE I UZEMLJENJE PMCC

Izolovani adapter za kratko spajanje i uzemljenje na mrežu se ugrađuje preko Izolovane vodonepropusne stezaljke sa probijanjem izolacije tipa CBS ili CDRS.
Adapter se ugrađuje na otcepnoj strani Izolovane vodonepropusne stezaljke sa probijanjem izolocije tipa CBS ili CDRS.
Izolovani adapter PMCC na svojoj spoljnoj strani ima oznake čijim se selektivnim uklanjanjem označava na kom faznom odnosno nultom provodniku je stezaljka ugrađena.
Pre postavljanja opreme za kratko spajanje i uzemljenje obavezno poroveriti da li kablovski nadzemni elektrodistributivni vod nije pod naponom.
Po zahtevu kupca adapter može biti isporučen sa 35mm² Cu kablom.

Pakovanje 50 kom
Težina 8,4 kg / 100 kom

NAPOMENA: Adapter se koristi sa Marel izolovanom vodonepropusnom stezaljkom

25mm² =



Adapter je dostupan u sledecim bojama:

CRNA BLACK	PLAVA BLUE	ZELENA GREEN	ŽUTA YELLOW	CRVENA RED

Standardna boja
Standard color

Adapter is available in the following colors:

Na zahtev Kupca
At Customer request

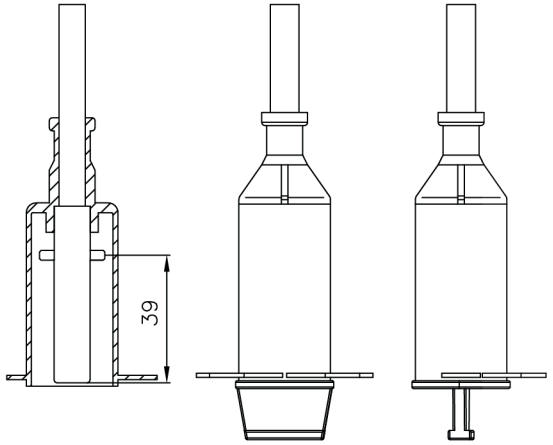
ENG..

INSULATED ADAPTER FOR SHORT CIRCUIT AND GROUNDING PMCC

Insulated adapter for short circuit and grounding is installed on Insulated piercing connector Type CBS or CDRS.
The Adapter is installed on the tap-off side of the Insulated piercing connector type CBS or CDRS.
Insulated adapter PMCC has removable markings to allow visual identification of phase and neutral conductors.
Before installing equipment for short circuit and grounding it must be checked whether overhead power distribution line is not under voltage.
At Custumer request the adapter can be delivered with 35mm² Cu cable.

Packaging 50 pcs
Weight 8,4 kg / 100 kom

NOTE: Adapter is used with MAREL Insulated piercing connector





SRB.

ŠIPKASTI UZEMLJIVAČ MUZ

Šipkasti uzemljivač ima mogućnost za ostvarivanje povremenog i trajnog uzemljenja svake faze pojedinačno pri radu na izolovanim NN mrežama .
Koristi se uz sve Izolovane vodonepropusne stezaljke tipa CBS i CDRS , sem modela CES. Ima mogućnost neograničene upotebe.
Ne sadrži delove koji mogu da otpadnu pri radu na visini. Može da se isporučuje sa Izolovanom vodonepropusnom stezaljkom u kompletu ili pojedniačno.

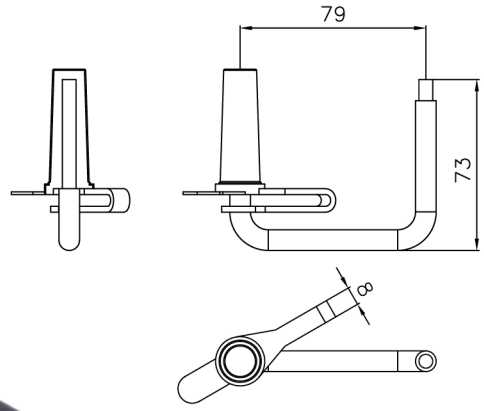
Pakovanje 100 kom
Težina 6,40 kg / 100 kom

ENG..

EARTHING BAIL MUZ

Earthing bail enables temporary and permanent earthing of each phase conductor individually when working on insulated LV networks.
It is used with all Insulated Piercing Connectors of CBS and CDRS type, except CES type.
It can be used unlimited number of times. It does not contain parts which can fall off during installation.
It can be delivered in a set with an Insulated piercing connector or separately.

Packaging 100 pcs
Weight 6,40 kg / 100 pcs







Proizvođač MAREL d.o.o. za sve svoje proizvode, a na zahtev Kupca dostavlja pismenu garanciju od minimum 3 godine na kvalitet, funkcionalnost i pouzdanost.

Štampom ovog kataloga, tehničkog priručnika svi ranije objavljeni podaci o našim proizvodima, kataloškim brojevima, tehničkim karakteristikama, prestaju da važe. Proizvođač zadržava pravo da bez prethodne najave izvrši izmene i dopune podataka u katalogu.

Svi podaci u ovom tehničkom priručniku, katalogu naših proizvoda, odgovaraju našim tehničkim saznanjima i merenjima. Ovaj tehnički priručnik se ne može upotrebiti kao garancija posebnih kvaliteta i zahteva proizvoda u čiji smo kvalitet, trajnost, funkcionalnost i pouzdanost mi kao proizvođači uvereni.

Na zahtev Kupaca dostavljamo :

- protokole i uverenja o tehničkim ispitivanjima izdatim od strane akreditovane laboratorije;
- pojedinačnu tehničku dokumentaciju za svaki proizvod;
- uputstva za upotrebu.

NAPOMENA:

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All the data in this technical manual, catalog of our products comply with our technical knowledge and measurements. This technical manual cannot be used as a guarantee of specific qualities and requirements of the products, but we as manufacturers are certain of their goodquality, durability, functionality and reliability.

At Customer request we submit:

- protocols and certificates of technical testings issued by accredited laboratories;
- technical documentation for each single product;
- Instructions manuals.

NOTE:

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Design: Aleksandra Nasković NASKA



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