

ANODE BARS CATHODE BARS ANODE YOKES

For the Primary Aluminium Smelters



Complete solutions for the industrial world

WHO WE ARE

HMR Group consists of nine companies, located strategically along the western coast of Norway, with its headquarters in Husnes, Hordaland.

HMR Group has been a partner and solution provider for the international aluminium industry since 1956. HMR specialises in supply of products, equipment and engineering advice to the primary smelters. Among the products are special potroom vehicles and auxiliary equipment, pot construction and start-up, including potshells, superstructures, bus bars, flexibles, anode stud bars, cathode collectors and anode yokes; automated stud repair lines, transport and handling systems, revision and service, electrical engineering and installation, etc.

The core business has been developed in Norway, but HMR is now an international holding with many referrals around the world.

All manufacturing companies in the HMR Group are certified according to ISO 9001:2008 and are qualified in the various supplier databases.



CATHODE COLLECTOR BARS

Square, rectangular or round hot rolled low carbon steel bars

HMR delivers a wide range of sizes and lengths of cathode collectors. We provide them also ready machined. We have been supplying these products to our international customers for more than 25 years.

Steel grades as requested, but for the purpose of cathode collector bars HMR recommends a low resistivity steel (LRS) which is the most suitable for electrolysis.

Cathode collectors are packed in bundles on wooden balks. Transport in containers. Technical requirements according to the customers' specification.

Chem. comp.	Steel grade LRS
C	Max. 0.06
Si	Max. 0.07
Mn	0.28-0.45
P	Max. 0.03
S	Max. 0.04
N	Max. 0.012

Dimensions

- Rectangular bars:
 - Width: min. 80, max. 280 mm
 - Thickness: min. 60, max. 150 mm
- Square bars: min. 50, max. 160 mm

Tolerances

- Width/Thickness: +/-2 mm
- Length: +10/-0 mm
- Straightness: 1 mm/1 m
- Radius of corners: 6-20 mm

Other dimensions and tolerances available – please inquire.



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Matrix

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ANODE STUD BARS

Round hot rolled carbon steel bars up to diameter 220 mm

Anode stud bars are custom-made in accordance with the customers' specification. Various steel grades as requested. HMR has been supplying these commodities to the aluminium smelters for over 25 years. Exclusive network of the international sub-suppliers assures very competitive prices.

Steel bars in long lengths are supplied in bundles, strapped with a strong wire. Transport: bulk or in the containers. We deliver pre-cut nipples, too. They can be supplied cut in different angles and with a welding groove according to the specification (see photo below).

Dimensions

- Diameter up to 220 mm
- Lengths: full bar lengths or pre-cut nipples

Tolerances

- Diameter: from +/-0.5 to +/-2.0 mm
- Length (long bar): +50/-0mm
- Straightness: 2.5mm/1m (DIN 1013)

Other dimensions and tolerances available – please inquire.



ANODE YOKES

Welded or cast units according to the customer's specification

HMR delivers anode yokes (otherwise known as anode hangers) and anode yoke and rod assemblies with a cast or welded yoke, with 2, 3, 4 or 6 studs depending on the customers' design. Bimetal or trimetal is used for the joint between the yoke and the rod. All these products are custom-made and adapted to the particular technology used in the smelter.

Used anode yokes can be repaired by means of HMR's Automated Stud Repair Line (ASRL). This line restores anode yokes by replacing worn-out studs with the new studs whilst anode yoke and rod is on the powered and free conveyor in the rodding shop. HMR's line is fully automatic and requires one operator only. HMR's ASRL brings the studs to the exactly same condition as on the new anode yoke.





HSE AND QA

Health and safety are core values at HMR, and we honour them.

We will not only strive to meet the intention of the law, but also have a proactive attitude to achieve continuous improvement of the results.

All accidents can be prevented.

We believe that high standards of health and safety will help to strengthen our results and that our health and safety policy is strictly linked with the quality of the services we provide.

Environmental protection and waste reduction are integral parts of the group's business strategy. By fulfilling our environmental responsibilities, we are increasing our ability to deliver competitive and profitable products and services.

We will continuously increase awareness and understanding of the company's HSE and QA policy, and its consequences for all those working for and on behalf of the company.

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