



Extrusion Ingots

Combining high-quality products, smart solutions
and great service for your long term success





Building progressive Partnerships

For more than a century, Hydro's history has been rooted in innovation and sustainable technological development. As a global player with local expertise we combine high-quality products, smart solutions and great service. Our goal is to enable our customers to reach their goals, and we collaborate to tailor advanced products and solutions to meet their specific needs, always aiming to exceed expectations. We help to satisfy our customers' needs by supplying the resources, services and high-quality input materials they require to deliver on their promises and meet challenging market developments. Progressive partnerships create optimum products, which help to improve performance and ultimately the bottom line.

Our standard alloys

Alloy	(DIN)	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others	
										Each	Total
107070	-	0.05-0.08	0.17-0.23	0.01	0.01	0.01		0.02	0.02	0.02	0.10
137070	-	0.05-0.08	0.17-0.23	0.01	0.005	0.01		0.02	0.003	0.02	0.10
300370	-	0.17-0.22	0.53-0.63	0.06-0.10	1.10-1.25	0.02		0.03	0.02	0.02	0.10
606015	F19	0.36-0.41	0.17-0.23	0.03	0.03	0.40-0.45	0.02	0.03	0.02	0.02	0.10
606020	F20	0.36-0.41	0.17-0.23	0.03	0.03	0.45-0.50	0.02	0.03	0.02	0.02	0.10
606035	F22	0.40-0.45	0.18-0.23	0.03	0.03	0.45-0.50	0.02	0.03	0.02	0.02	0.10
606090	F25	0.50-0.55	0.18-0.23	0.03	0.03	0.50-0.55	0.02	0.03	0.02	0.02	0.10
610640	F26	0.45-0.50	0.18-0.23	0.10-0.15	0.08-0.14	0.50-0.53	0.02	0.05	0.02	0.03	0.10
600540	F27	0.58-0.63	0.18-0.23	0.10-0.20	0.12-0.20	0.53-0.58	0.08	0.03	0.02	0.02	0.10
608250	F31	0.95-1.05	0.15-0.25	0.03	0.50-0.57	0.63-0.70		0.03	0.02	0.02	0.10

Hydro has developed a range of standard alloys with outstanding strength properties. Other alloys and alloys for special purpose are also available. Contact your local sales office for further details.



Closer to the customer

We continuously increase the efficiency of our production systems and improve our range of services to meet our customers' individual requirements. Our regional market teams are close at hand to provide fast and professional customer service. Each team can provide the following services:

- Technical support and access to R&D resources
- Commercial services and market information
- Scrap conversion

These dynamic services are reflected in our European Hydro Billet Plus™ bonus program. Hydro Billet Plus™ offers customers Hydro's know-how to support and enhance their value creation. The greater the business activity between Hydro and the customer, the more comprehensive the level of technical and commercial services becomes. Many of our services are accessible 24/7 via our on-line customer portal. This easy-to use facility gives customers added flexibility and helps to simplify their daily working routines. Customers can get an overview of their contract details, material certificates and up-to-date transport information, place new orders, carry out pricing and take advantage of our broad range of customised services. These optimized solutions add further value and help build and reinforce customer relationships.

Diameters and dimensions

Diameter (mm)	Tolerances ¹ (mm)
152 ²	+0/-2 and +1/-0
178	+0/-2
192	+0/-2
203	+0/-2
215	+0/-2
228	+0/-2, +/-1 and +2/-1
247	+0/-2 and +/-1
254	+0/-2
272	+0/-2
279	+0/-2
305	+0/-2
317	+0/-3
348 ²	+0/-3
382 ²	+0/-3
405 ²	+0/-3

Available lengths³

Short lengths: 400-1499 mm
Long lengths: 2000 – 7000 mm

Length tolerances

Short lengths: 400 - 1499 mm: tolerance ± 3 mm
Long lengths: 2000 – 7000 mm: tolerance ± 6 mm.

Short lengths, US: 18 – 55 in.: tolerance ± 0.12 in.
Long lengths, US: 100 – 300 in.: tolerance ± 0.24 in.

Straightness

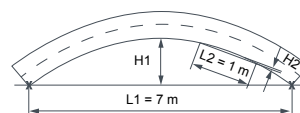
Max. curvature: 2.5 mm / m
Max. curvature: 15 mm / total length (6 or 7 m)

Max. curvature, US: 0.1 in. / 39 in.
Max. curvature, US: 0.6 in. / Total length (300 in.)

Squareness

Sawn ends squared to 900 ± 0.50

Measurement of curvature



H1 max = 15 mm
H2 max = 2,5 mm

¹ The tolerances given are valid for 6xxx alloys.

² Availability is subject to mutual agreements.

³ Certain lengths are not available in all diameters. Contact your local sales office for details.

Quality and environmental awareness

Our advanced technological expertise in extrusion ingot casting ensures an exceptionally high standard of sustainable quality in all our products. Consistent high metal quality is secured by using top-grade input materials and by the efficient cleaning of the melt during production. All alloys in our product range have been developed to combine high extrudability with excellent performance in the finished products.

Over the years, Hydro has become one of the largest suppliers of extrusion ingots in the world. Converting our

customers' process scrap into new top quality extrusion ingots is economically and environmentally beneficial for all parties, helping to optimise customer scrap flows. Our unique network of local production facilities allows us to remelt a wide range of scrap grades to Hydro's stringent quality and environmental standards. This enables us not only to be closer to our customers but also helps to increase flexibility, reduce lead times and achieve on time delivery.

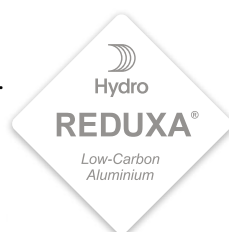
ASI

Hydro is an active member of the Aluminium Stewardship Initiative (ASI). ASI's mission is to recognize and collaboratively foster the responsible production, sourcing and stewardship of aluminium. We have been involved at all stages in the multi-stakeholder development of ASI standards to date. We have participated in developing ASI's certification program. The third party certification platform was launched in December 2017. Hydro will initiate the process of certifying the first site according to ASI in 2018, and aims to have certified a number of plants throughout the aluminium value chain by second quarter of 2019.

Hydro REDUXA

Hydro REDUXA is our series of low-carbon aluminium. Using renewable energy sources like hydro power, we reduce the carbon footprint per kg aluminium to less than a fourth of the global average. The result is aluminium with one of the world's lowest carbon footprint to date. Minimizing the carbon footprint of our products and maximizing opportunities for our customers.

- Hydro REDUXA 4.0 has a maximum carbon footprint of 4.0 kg CO₂ equivalent per kg aluminium produced.
- Hydro REDUXA 4.0 is available in all grades and forms from our Norwegian aluminium plants and can be shipped worldwide.
- Hydro REDUXA 4.0 is verified according to ISO 14064 by DNV GL, covering all carbon emissions from bauxite mining and alumina refining to the production of aluminium in electrolysis and casting.



Hydro's low carbon products

Hydro has an industry-leading climate strategy that has resulted in producing some of the aluminium with the lowest energy consumption and the lowest emissions in the world. Through the use of renewable power and modern technology we are able to produce cleaner aluminium than ever before. Hydro is pushing the boundaries for low carbon aluminium and the use of consumer scrap to create products helping our customers on the path to zero emissions.

Hydro CIRCAL

Hydro CIRCAL is a range of products made with recycled, post-consumer scrap. Through the use of recycled content, we reduce energy use drastically while still being able to offer high-quality products.

Operating the most advanced sorting technology in the industry allows us to provide one of the highest recycled content in the market.

- Hydro CIRCAL 75R contains a minimum of 75% post-consumer scrap.
- With post-consumer scrap, we exclusively refer to aluminium that has reached its end of life as a product in use and is brought back into the loop.
- Hydro CIRCAL 75R is verified by DNV GL based on traceability and quality principles developed by Hydro.



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We are aluminium

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Hydro is a fully integrated aluminium company with 35,000 employees in 40 countries on all continents, combining local expertise, worldwide reach and unmatched capabilities in R&D. In addition to production of primary aluminium, rolled and extruded products and recycling, Hydro also extracts bauxite, refines alumina and generates energy to be the only 360° company of the global aluminium industry. Hydro is present within all market segments for aluminium, with sales and trading activities throughout the value chain serving more than 30,000 customers. Based in Norway and rooted in more than a century of experience in renewable energy, technology and innovation, Hydro is committed to strengthening the viability of its customers and communities, shaping a sustainable future through innovative aluminium solutions.