



High Performance Metal Solutions

High Performance Solutions for Large Extrusion Applications

H.C. Starck 
High Performance Metal Solutions

Maximize Material Yields through Extrusion Technology

H.C. Starck Solutions is one of the largest producers of refractory materials with world class extrusion capabilities and services. We help customers solve material processing and fabrication challenges with extrusion technology and an extensive knowledge in the processing and metallurgy of a wide spectrum of metals and alloys.

Our extrusion services offer the ability to convert material to meet the size and shape requirements of customers. With a highly qualified staff of Engineers and Production Developers, we can assist with specifications for your material process and design needs. H.C. Starck Solutions focuses on extrusion process development to optimize extrusion quality and material yields. By producing near-net-shapes and pipes, extrusion reduces machining costs and improves material yields.

H.C. Starck Solutions can also provide extruded products, such as pipe and shapes, in many ferrous and nonferrous metals. We have one of the only extrusion operations in the world that can produce extruded pipe with a flange. As a fully-integrated supplier, we can manage the entire process from material procurement, extraction billet preparation to a wide range of finishing processes, including heat treatment, cleaning, straightening, and cutting.

Our extrusion expertise comprises specialty metals and alloy based systems including titanium, molybdenum, tantalum, niobium and other metals for large extrusion applications.

Extrusion Services and Product Offerings for a Wide Variety of Markets



Aerospace & Defense



Chemical Processing



Electronics



Medical



Automotive



Energy

H.C. Starck Solutions is a World Class Leader in Extrusion Technology

Technology & Capabilities

Premiere High Temperature Extrusion Source

Forward extruded shapes and pipe
Back extruded heavy wall pipe

Force

5,000 metric tons (5,500 tons)

Extrusion Ram Speed

1.27 – 203 mm/sec (0.05 – 8.0 inch/sec)

Billet Temperature

260 – 1315 °C (500 – 2400 °F) *gas fired controlled atmosphere*
815 – 1925 °C (1500 – 3500 °F) *induction inert atmosphere*

Input Billet Diameter

152 – 432 mm (6 inch – 17 inch) diameters

H.C. Starck Solutions is unique in its ability to extrude almost any metal in any size range. From concept to production, from small 6 inch diameter to large scale 17 inch diameter billet, we provide extrusion services to deliver specified material, size and shape to your specific needs. H.C. Starck Solutions' extensive extrusion capabilities allow us to provide extrusion services with as little as two weeks lead-time.

At H.C. Starck Solutions we utilize our 5,000 metric ton (5,500 ton) extrusion press to extrude rods, tubes and shapes from difficult to extrude materials, including:

Copper and Copper Alloys

C10100 | C15000 | C16200 | C17200 | C17500 | C18200
C63000 | C70600 | C71500 | Copper and Niobium

Stainless Steels

300 series | 400 series | 15-5 PH | 17-4 PH | Duplex

Nickel Base Alloys

C276 | 400 | 625 | 718 | 800H | 925

Titanium and Titanium Alloys

CP2 | 6Al | 4V

Refractory Metals

Molybdenum and Molybdenum Alloys
Tantalum and Tantalum Alloys
Niobium | Chrome

Aluminum Metal Matrix Composites

Composite Billets

Superconductor Materials
Clad Materials

PIPE MATRIX

OD	WALL THICKNESS											OD		
	inches	0.375	0.500	0.625	0.750	0.875	1.000	1.125	1.250	1.375	1.500		1.625	
3.0														76.2
3.5														88.9
4.0														101.6
4.5														114.3
5.0														127.0
5.5														139.7
6.0														152.4
6.5														165.1
7.0														177.8
7.5														190.5
8.0														203.2
8.5														215.9
9.0														228.6
9.5														241.3
10.0														254.0
10.5														266.7
11.0														279.4
		9.5	12.7	15.9	19.1	22.2	25.4	28.6	31.8	34.9	38.1	41.3	mm	

Copper & Copper Alloys
 Stainless Steels
 Nickel Base Alloys

Pipe capability at 20 feet (6 m) minimum extruded lengths.
Please inquire for other sizes and metals.

USA

H.C. Starck Solutions
21801 Tungsten Road
Euclid, OH 44117-1117 USA
T +1 216 692 3990
F +1 216 692 0029

H.C. Starck Solutions
199 Wells Ave, Ste 107
Newton, MA 02459 USA
T +1 480 977 6108
F +1 617 630 5879

H.C. Starck Solutions
460 Jay Street
Coldwater, MI 49036 USA
T +1 517 279 9511
F +1 517 269 9512

Japan

H.C. Starck Fabricated Products GK 3F Shiodome Building,
1-2-20 Kaigan,
Minato-ku, Tokyo
105-0022 JAPAN
T +81-3-6721-8177
F +81-3-6733-8896

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info@hcstarcksolutions.com
www.hcstarcksolutions.com

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