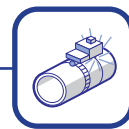


# HOT-FORMED STRUCTURAL HOLLOW SECTIONS



**COST  
EFFICIENT**



**EASY  
PROCESSING**



**FULL SIZE  
RANGE**

INDUSTRY



FOR BEST-IN-CLASS  
CONSTRUCTION

— RELIABLE PARTNER,  
FIELD-PROVEN EXPERTISE

— A WIDE RANGE OF SEAMLESS  
AND HOT-FORMED WELDABLE  
STEELS WITH SUPERIOR  
DUCTILITY

— FLEXIBILITY AND FIT-FOR-PURPOSE:  
LOW MINIMUM QUANTITIES  
REQUIREMENTS AND ALL WALL  
THICKNESSES

## QUALITY PRODUCTS, DEDICATED STEELS AND RELIABLE DELIVERY AT ANYTIME

With a proven track record in the field, we partner closely with you to select the best solution for your specific project.

### GLOBAL STANDARDS FOR QUALITY PRODUCTS

Our hot-formed seamless structural hollow section products carry approvals from national and international acceptance bodies and classification societies. All our plants are certified to ISO 9001.

- EN 10210 Hot finished structural hollow sections  
Part 1: Technical delivery requirements for **non-alloy and fine-grain** steels  
Part 2: Tolerances, dimensions and sectional properties  
Part 3: Technical delivery requirements for **high strength** and **weather resistant steels**
- ASTM A501-21 Hot-Formed Carbon Steel Structural Tubing
- ASTM A618-21 Hot-Formed High-Strength Low-Alloy Structural Tubing
- ISO 12633
- EN 10225-3 for offshore applications
- Det Norske Veritas (DNV) and the American Bureau of Shipping (ABS) certification for Oceanfit® production sites



## TESTED AND TRUSTED BY CUSTOMERS

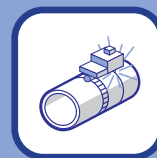
Vallourec's structural hollow sections provided a sturdy and visually pleasing structure while also significantly lightening the weight of the design.

In addition, the overall combination of on-time deliveries, logistical organization and precise weld operations allowed for a very efficient production.



### COST EFFICIENT

— Reliable & proven steels made for fit-for-purpose designs. Ideal for standardized assemblies.



### EASY PROCESSING

— Hot-formed seamless quality without distortion. Reduced weld processing time.



### FULL SIZE RANGE

— Full range of outside dimensions and wall thicknesses.



# STRUCTURAL HOLLOW SECTIONS FOR RELIABLE STRENGTH, COST-EFFICIENCY AND AESTHETIC APPEAL

Our seamless structural hollow sections (SHS) are a universal construction element, ideal for all types of steel structures in various fields of engineering. They offer excellent strength and ductility properties and are available in a broad range of grades and sizes including circular, square, rectangular or special shapes. All are delivered according to international standards.

## Benefits of hot-rolled seamless SHS:

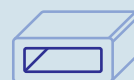
- High-static load bearing capacity
- Proven higher buckling load capacity
- High-notch toughness for different service temperatures
- Unrestricted weldability even in corner zones
- None or low distortion for reliable processing based on low residual stresses
- Small corner radii
- High visual appeal

## SHAPES & SIZES:

### Hot-rolled seamless



Round  
OD: 31.8 – 711mm  
WT: 2.9 – 100mm



Rectangular  
OD: 50x30mm – 400x200mm  
WT: 2.9 mm – 25 mm



Square  
OD: 40x40mm – 304.8x304.8mm  
WT: 2.9 mm – 25 mm



Special geometry /  
shaped components





## WIDE PORTFOLIO OF SIZES AND GRADES

We manufacture a broad range of steel grades, including standard and innovative proprietary grade families including Forterrior®, Oceanfit® and FineXcell® to meet any challenge.

OUR QUALIFIED METALLURGISTS AND TECHNICAL TEAMS SUPPORT YOU IN SELECTING THE OPTIMUM STEEL GRADE FOR YOUR APPLICATION.

### STANDARD STEELS S355J2H AND S460NH

These steels provided the following properties:

- Reasonable yield and tensile strength
- Low carbon equivalent
- Guaranteed impact toughness at -20 °C or -50°C
- Extraordinary elongation properties
- 3.1 certificate and CE Marking for unlimited use in construction



Vallourec is a member of the CIDECT international association, that contributes to research projects and develops design guides on structural hollow sections to promote their use in steel construction and engineering around the world.

### FORTERRIOR®

#### Chemical composition

Increased tensile strength compared to standard grades and, in some steel variants, enhanced impact toughness due to additional heat treatment methods.

#### Mechanical properties

Excellent load capacity and good weldability.

#### Impact properties

In hot-formed variants, impact properties are provided at -20°C or -40°C.

#### Defining characteristics

Superior to standard grades, with increased mechanical properties and good weldability.

Forterrior 450

Forterrior 500

Forterrior 550

Forterrior 620

### FINEXCELL®

#### Chemical composition

Meticulously controlled composition produced by advanced heat treatment methods.

#### Mechanical properties

Outstanding mechanical properties, yield strength up to 960 MPa. Excellent weldability.

#### Impact properties

Impact properties provided at -40°C or -50°C.

#### Defining characteristics

Most advanced series of high strength, extremely ductile and homogeneous fine-grained steels with excellent weldability.

FineXcell 690

FineXcell 770

FineXcell 890

FineXcell 960

### OCEANFIT®

#### Chemical composition

Chemical composition designed for the most extreme conditions and permitting good weldability.

#### Mechanical properties

Outstanding mechanical properties, reliable throughout the section, ensuring weldability in harsh conditions.

#### Impact properties

Excellent impact toughness at extreme low temperatures, up to -40°C.

#### Defining characteristics

Standard to high-strength homogeneous steels providing excellent weldability in the harshest environments for safe, durable and ductile structures.

Oceanfit 355

Oceanfit 460

Oceanfit 550

Oceanfit 690

Oceanfit 770

Oceanfit 890

### HOT FORMED SEAMLESS HOLLOW STRUCTURAL SECTIONS

covering steel grades per EN 10210-1 & EN 10210-3 and ASTM A501 & A618



Find the full structural hollow section product catalog on Vallourec's Expertise Center.



# YOUR INDUSTRIAL PARTNER, SETTING THE PACE FOR INNOVATION AND PERFORMANCE EVOLUTION

5 INTERNATIONAL  
R&D CENTERS

13 HOT-FORMING  
PRODUCTION  
SITES

WORLDWIDE  
SALES AND  
SERVICES



Agricultural  
Machinery



Civil Construction



Automotive



Cranes/ Lifting  
Equipment



Offshore  
Construction

## NEED MORE INFORMATION?

Information is available online on  
[solutions.vallourec.com](https://solutions.vallourec.com) or by  
scanning the following QR code.



[solutions.vallourec.com](https://solutions.vallourec.com)



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