



# Upcoming Tenders at CERN

ILO Forum

Joshua Davison

*IPT-PI*

24-09-2024

# NA-CONS: BA80 cooling station consolidation and upgrade

## Description & Specific Condition :

Design, supply, installation, testing and commissioning of the demineralised water cooling station and water distribution network in BA80.

In order to improve the operability, reliability, availability, maintainability and safety, the demineralised water cooling plant in North Area building BA80 will be subject to consolidation by replacing the aging mechanical equipment. At the same time, the cooling plant capacity will be increased to cope with the additional load required by the new water-cooled Power Converters that will be installed as part of NA-CONS Phase 1 project.

Start of the Contract: Q4 2025

Procurement Code: 01 03 03 00

Cost Range : 1.5MCHF ⇔ 5 MCHF

Planning: MS: Q4 2024

IT: Q4 2024

**Contact:** [laurentiu.vlasceanu@cern.ch](mailto:laurentiu.vlasceanu@cern.ch)



# NA-CONS: CT2 cooling upgrade and consolidation

## Description & Specific Condition :

Design, supply, installation, testing and commissioning of the 5<sup>th</sup> cooling tower cell in CT2.

To meet the requirements of the additional load required by the new users that will be installed as part of the NA-CONS project, a 5<sup>th</sup> cooling tower cell will be added to CT2. This Invitation to Tender will cover the equipment to be installed in the cell, as well as consolidation works to the pumping station.

Start of the Contract: Q1 2026

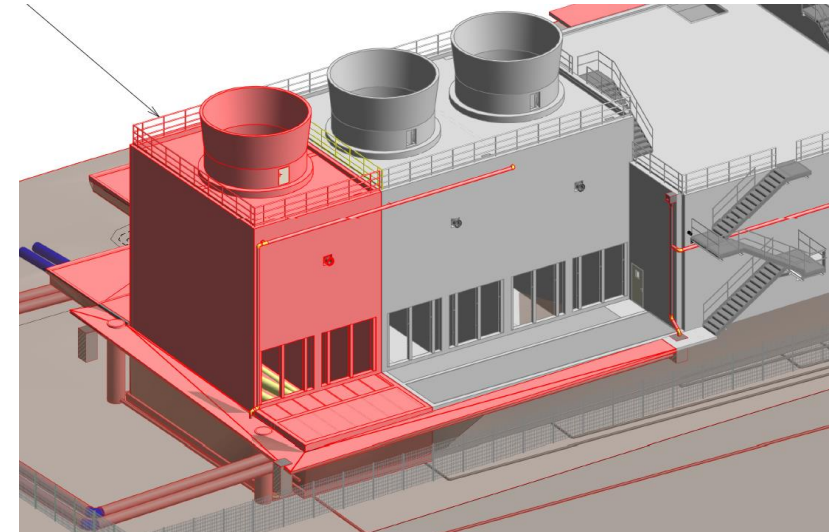
Procurement Code: 01 03 03 00

Cost Range : 400k - 1.5M CHF

Planning: MS: Q4 2025

IT: Q1 2026

**Contact:** [laurentiu.vlasceanu@cern.ch](mailto:laurentiu.vlasceanu@cern.ch)



# Cooling system Blanket Purchase Contract

## Description & Specific Condition :

5+1+1 years blanket purchase contract.

Design, supply and installation, test and commissioning of cooling systems on the CERN Site.

Several cooling plants will be consolidated or newly installed during and after Long Shutdown 3 both at the level of LHC, HL-LHC and Experiments.

Projects will range from small to medium and large sizes (<40 kCHF, 40-200 kCHF, 200+ kCHF).

All components shall comply with the technical prescriptions.

Procurement Code: 01 03 03 00

Cost Range : >10MCHF

Planning: MS: Q4 2024 IT: Q1 2025

**Contact: [francesco.dragoni@cern.ch](mailto:francesco.dragoni@cern.ch)**



# SRF/SA18 Cooling and ventilation systems

## Description & Specific Condition :

Design, supply, installation, test and commissioning of all the HVAC systems and the air treatment system in the new building SA18 at Point 1.8 of the LHC.

Key conditions:

- Experience in the installation of HVAC systems of similar size and complexity.
- Experience in the installation of air treatment systems with wet scrubbers.
- Experience in the execution of similar projects in accordance with the European and French regulations.

Start of the Contract: Q3 2026

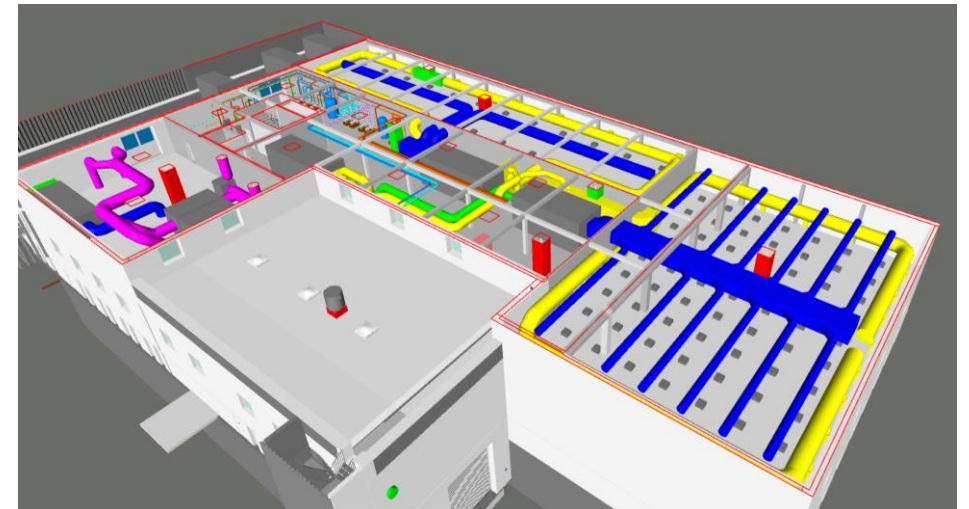
Procurement Code: 01 03 00 00

Cost Range : 5 MCHF ↔ 10 MCHF

Planning: MS: Q4 2024

IT: Q3 2025

**Contact:** [theodoros.aivaliotis@cern.ch](mailto:theodoros.aivaliotis@cern.ch)



# SRF/SA18 Cleanrooms construction

## Description & Specific Condition :

Design, supply, construction, test and commissioning of all the cleanrooms and their associated HVAC systems in the new building SA18 at Point 1.8 of the LHC.

Key conditions:

- Experience in the construction of laminar flow ISO Class 4 cleanrooms and mixed flow ISO 8 cleanrooms of similar size and complexity.
- Experience in the execution of similar projects in accordance with the European and French regulations.

Start of the Contract: Q3 2026

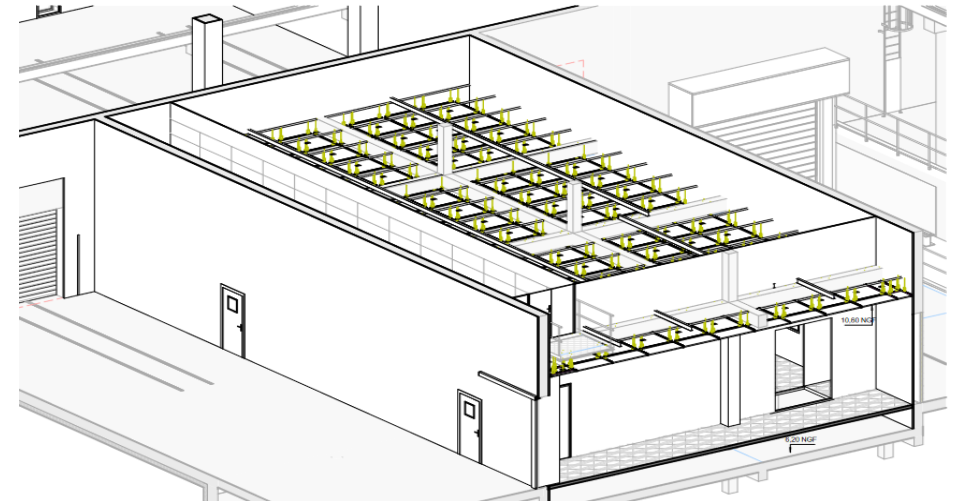
Procurement Code: 01 03 00 00

Cost Range : 5 MCHF ↔ 10 MCHF

Planning: MS: Q4 2024

IT: Q3 2025

**Contact:** [theodoros.aivaliotis@cern.ch](mailto:theodoros.aivaliotis@cern.ch)



# SRF/SA18 Natural refrigerant heat pumps/chillers

## Description & Specific Condition :

Supply of the Air Source Heat Pumps (ASHPs), which will generate heating and cooling water for the new building SA18 at Point 1.8 of the LHC.

Key conditions:

- Experience in the supply of units of similar cooling and heating capacities.
- Utilisation of a natural refrigerant with very low GWP.
- Energy performance validated in accordance to EN14511.

Start of the Contract: Q4 2026

Procurement Code: 01 03 01 03

Cost Range : 400k - 1.5M CHF

Planning: MS: Q3 2025

IT: Q1 2026

**Contact:** [theodoros.aivaliotis@cern.ch](mailto:theodoros.aivaliotis@cern.ch)



# UPS 20-200 kVA (MS-4959)

## Description & Specific Condition :

Supply of modular UPS in the range of 20 - 200 kVA, incl. design and supply

5 years Blanket contract

- 25 Units in 2025
- 15 additional Units in the next years of the Contract

Procurement Code: 02 30 40 00

Cost Range : 400k – 1.5MCHF

Planning: MS: Q2 2024, IT: Q4 2024

**Contact:** [Joel.Lahaye@cern.ch](mailto:Joel.Lahaye@cern.ch)





# 400 kV circuit breakers and 66 kV disconnecter switches (MS-5038/EN)

## Description & Specific Condition :

Supply of 5 Circuit Breakers 400 kV and 18 disconnecter switches 66 kV.

One or two Supply Contracts.

Firms must have a proven experience and competence in the design and manufacturing of high voltage equipment for at least 10 years.

Procurement Code: 02 02 01 00

Cost Range : 400k - 1.5M CHF

Planning: MS: Q4 2024 IT: Q1 2025

**Contact: [George.Podoleanu@cern.ch](mailto:George.Podoleanu@cern.ch)**



# Crates for Relays (MS-5034/EN)

## Description & Specific Condition :

Supply of numerical protection relay crates for housing protection of 275 relays in 19" racks.

Supply Contract.

Firms must have in-house facilities for the production and assembly of the specified protection relay crates and hold ISO9001-2000 quality certification or equivalent.

Procurement Code:

02 70 01 00

Cost Range :

400k - 1.5M CHF

Planning:

MS: Q4 2024 IT: Q1 2025

**Contact:**

**[Joni.Leppilhati@cern.ch](mailto:Joni.Leppilhati@cern.ch)**



# Three Diesel Generators (MS-4974/EN)

**Procurement Code:** 02 70 01 00

**Cost Range :** 1.5 MCHF ↔ 5 MCHF

**Planning:** MS: Published / IT: Q4 2024

Pre-engineering (done by CERN) during 2024

Design + engineering during Q1 and Q2 2025

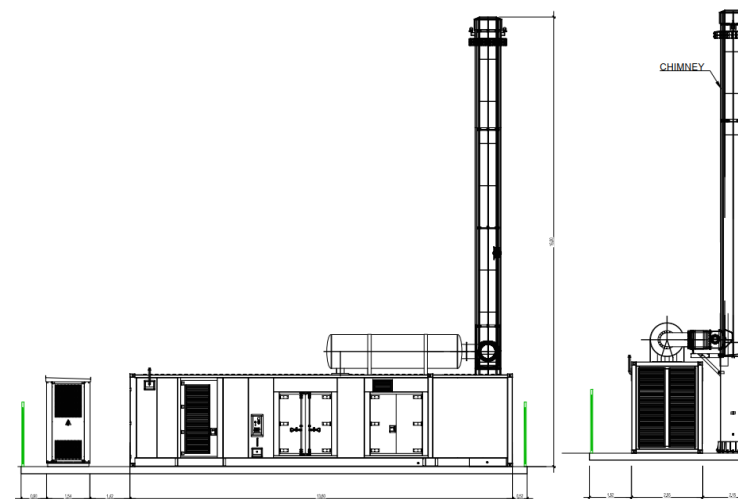
Start of commissioning Q4 2025

**Location on the CERN site:** France

## **Description & Specific Condition :**

Supply, installation and maintenance of three diesel generators (including all civil engineering work):

- One unit 400 V 800 kVA ESP (replacement of an existing generator);
- Two units of 400 V 2MVA ESP (including chimney and diesel buried tank).



**Contact:** Pablo.Valdes@cern.ch

# Fibre glass cable insulation (MS-4968/TE)

## Description & Specific Condition :

3-year blanket purchase contract, estimated 57 km of cables to be insulated

Tailor-made insulation in fibre glass for magnet cables, for HFM programme

Production line must be in a separate, dedicated space to avoid contamination

Key conditions:

- Clean room (grey, ISO8)
- Proven experience with fibre (glass) braiding
- Proven experience with braiding around large rectangular cable
- Proven experience with horizontal braiding systems

Procurement code: 02 25 04 03

Cost Range : 400 k CHF ⇔ 1.5 M CHF

Planning: MS: published

IT: Q4-2024

**Contact:** [Francois-Olivier.Pincot@cern.ch](mailto:Francois-Olivier.Pincot@cern.ch)



# Step-up transformers for RF LHC (MS-4979/SY)

## Description & Specific Condition :

Supply of five Oil tanks units containing two identical transformers rated 2MVA, 28kV/1kV each, insulated to ground at 60kV.

Each unit of this supply consist of two immersed oil transformers in one tank for outdoor use.

Procurement Code: 02 01 05 00

Cost Range : 400 kCHF ↔ 1.5 MCHF

Planning: MS: published IT: Q4 2024

**Contact:** [davide.aguglia@cern.ch](mailto:davide.aguglia@cern.ch)



# Custom designed PCIe based fibre optics I/O cards

**Procurement Code:** 03 04 09 00 (PCI, PCIe modular electronic boards )

**Cost Range :** 400 K – 1.5 M CHF

**Planning:** MS : Q4 2024  
IT: Q1 2025

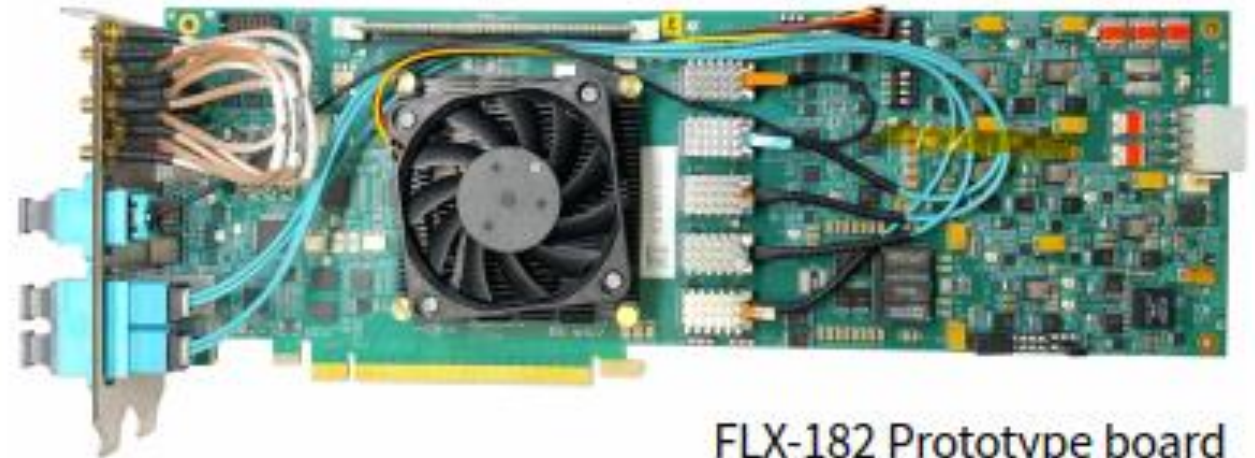
**Scope:**

Assembly and testing of approx. 800 PCBs

- Versal Prime VP1552 FPGA
- PCIe Gen5 x16
- Up to 52 optical links, link speed up to 25 Gb/s
- Overall PCB dimensions: 311.99 x 106.65 mm
- 24 layers and a thickness of  $(3.00 \pm 0.28)$  mm
- PCB material is EM980K

**Duration:** Production over 12 months

**Eligible Firm Profile:** Interested firms shall have proven experience and competence in assembly and test of PCBs of the complexity required.



FLX-182 Prototype board

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**Contact: [Carlo.Alberto.Gottardo@cern.ch](mailto:Carlo.Alberto.Gottardo@cern.ch)**

# Supply of Micro-D Connectors and Cables

**Procurement Code:** 02 05 03 00 (Multiconductor cables)  
03 02 04 03 (Rectangular connectors)

**Cost Range :** 400 K – 1.5 M CHF

**Planning:** MS : Q4 2024  
IT: Q1 2025

**Scope:**

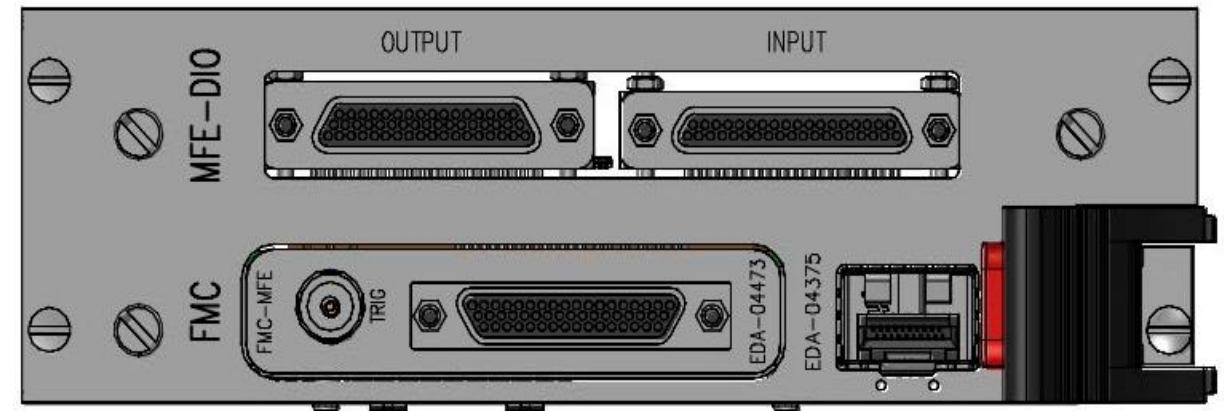
Procurement of high-reliability, MIL-DTL-83513 standard Micro-D connectors and cables.

400 sets of three types (51-way plug, 51-way socket, 37-way plug) PCB connectors and

400 sets of three types of corresponding cables.

**Duration:** Production over 12 months

**Eligible Firm Profile:** Interested firms shall have experience in manufacturing Micro-D connectors and low-smoke zero halogen cables.



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**Contact: Erik.van.der.Bij@cern.ch**

# HL-LHC Crab cavities RF Circulators & Loads (MS-5030/SY/HL/LHC)

- **Description & Specific Condition :**

Supply of 18 x circulators for the HL-LHC Crab cavities.

Key conditions:

- Design & manufacturing expertise : CERN will provide a functional specification and the Contractor shall design and manufacture accordingly (Detailed Design File to be approved by CERN)
- Capacity to manufacture 18 units in approximately in less than 3 years
- Proven experience with circulators and loads for High Power RF Systems

Start of the Contract: Q2 2025

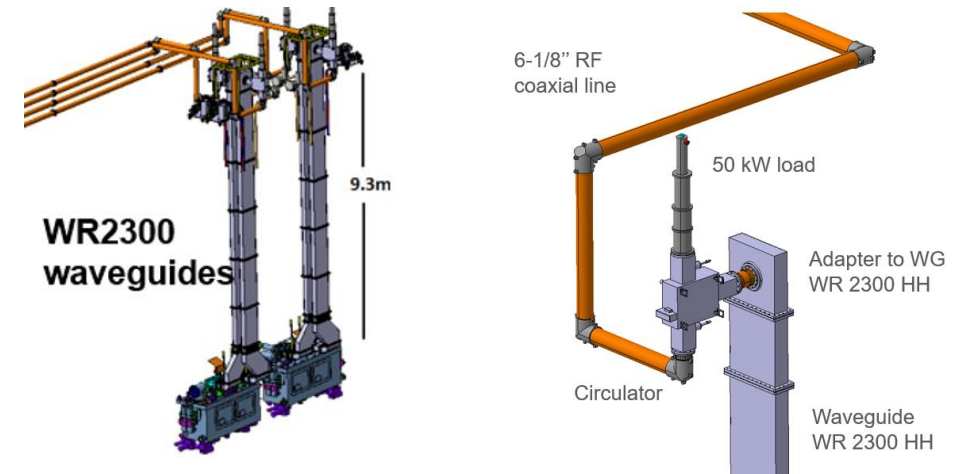
**Procurement Code:** 03 06 01 00

**Cost Range :** 1.5 MCHF ⇔ 5 MCHF

**Planning:** MS: Q4 2024

IT: Q4 2024

**Contact:** [eric.montesinos@cern.ch](mailto:eric.montesinos@cern.ch)





# HL-LHC Crab cavities HPRF stations (MS-5024/SY/HL/LHC)

## Description & Specific Condition :

Supply of 18 HPRF stations (High Power Radio Frequency station) powering IOTs for the HL-LHC Crab cavities.

Key conditions:

- Design and Manufacturing expertise in HPRF equipment
- Capacity to produce in the systems in the required timeframe.

Start of the Contract: Q2 2025

Procurement Code: 03 06 01 00

Cost Range : 5 MCHF ↔ 10 MCHF

Planning: MS: Q4 2024

IT: Q4 2024

**Contact:** [eric.montesinos@cern.ch](mailto:eric.montesinos@cern.ch)



# HL-LHC HPRF Waveguides (MS-5031/SY/HL/LHC)

## Description & Specific Condition :

Supply of 18 Waveguides + spares for the HL-LHC Crab cavities

Key conditions:

- Design and Manufacturing expertise in HPRF equipment
- Capacity to produce in the systems in the required timeframe.

Start of the Contract: Q2 2025

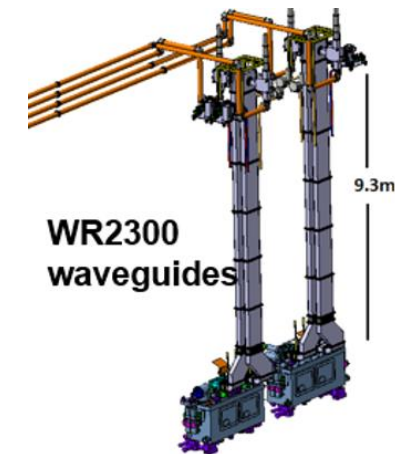
Procurement Code: 03 02 12 00

Cost Range : 1.5 MCHF ⇔ 5 MCHF

Planning: MS: Q4 2024

IT: Q4 2024

**Contact:** [eric.montesinos@cern.ch](mailto:eric.montesinos@cern.ch)



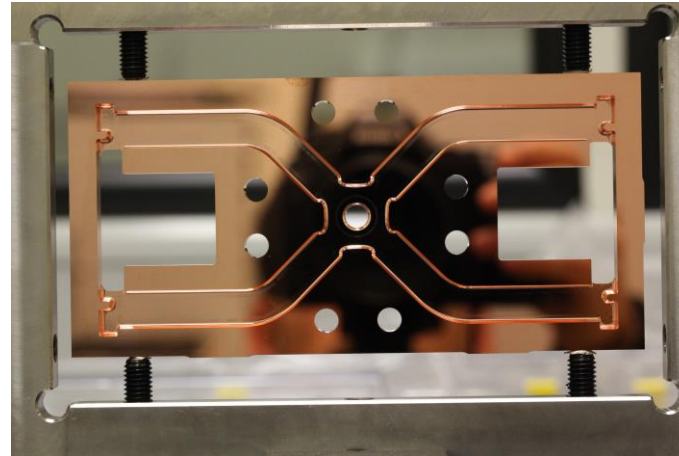
# Ultra precision machining of copper disks (DO-34382/SY/CLIC)

## Procurement Code:

05 04 02 00

Cost Range : 200-400 k CHF

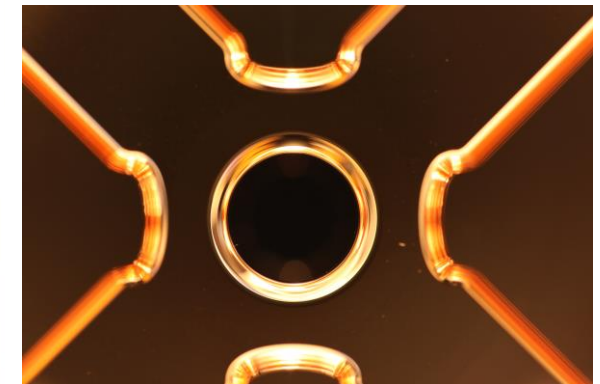
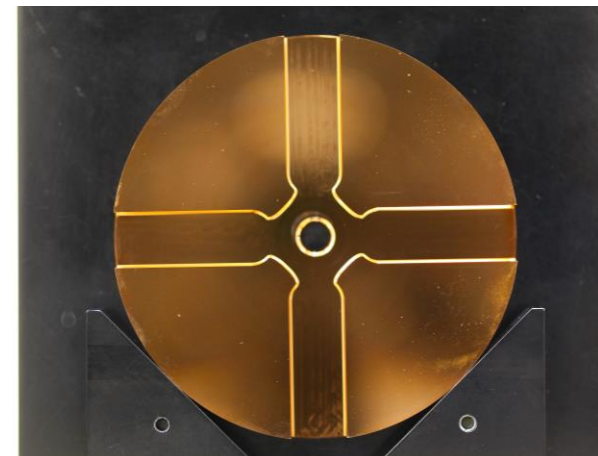
Planning: DO: Q4 2024



## Description & Specific Condition :

Build-to-print specification: ultra precision machining of 58 copper disks

Firms shall have **CNC** and **CMM**, **experience** in machining similar tolerances and shall succeed in providing a prototype of the disc.



**Contact:** [pedro.morales.sanchez@cern.ch](mailto:pedro.morales.sanchez@cern.ch)

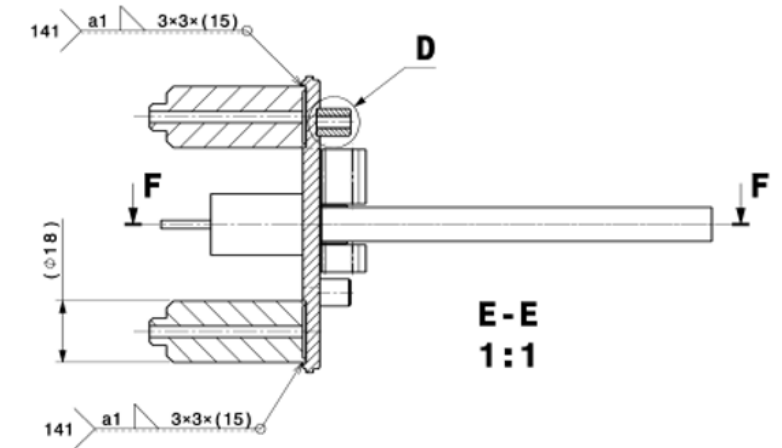
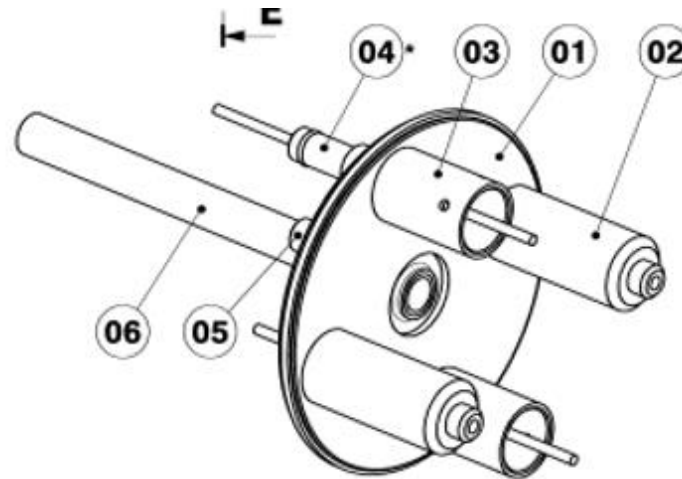
# Precision end plates for UHV application (DO-34448/SY/HL-LHC)

## Procurement Code:

06 01 06 06

Cost Range : 200-400 k CHF

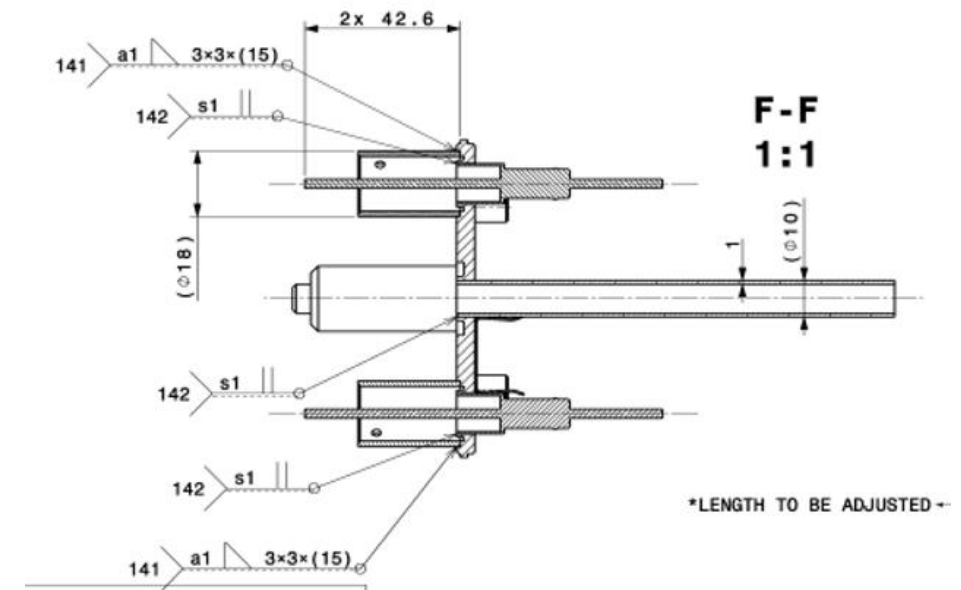
Planning: DO: Q4 2024



## Description & Specific Condition :

Build-to-print specification: 1000 precision end plates for UHV application. Materials: stainless-steel, copper and ceramics. Activities involved: machining, cleaning, welding, metrology and leak testing.

Firms shall have **experience** in the activities mentioned above for UHV applications. Firms must provide references.



**Contact:** Gerhard.Schneider@cern.ch

# Tungsten Half Shells of Tungsten alloy (DO-34467/SY/HL-LHC)

## Procurement Code:

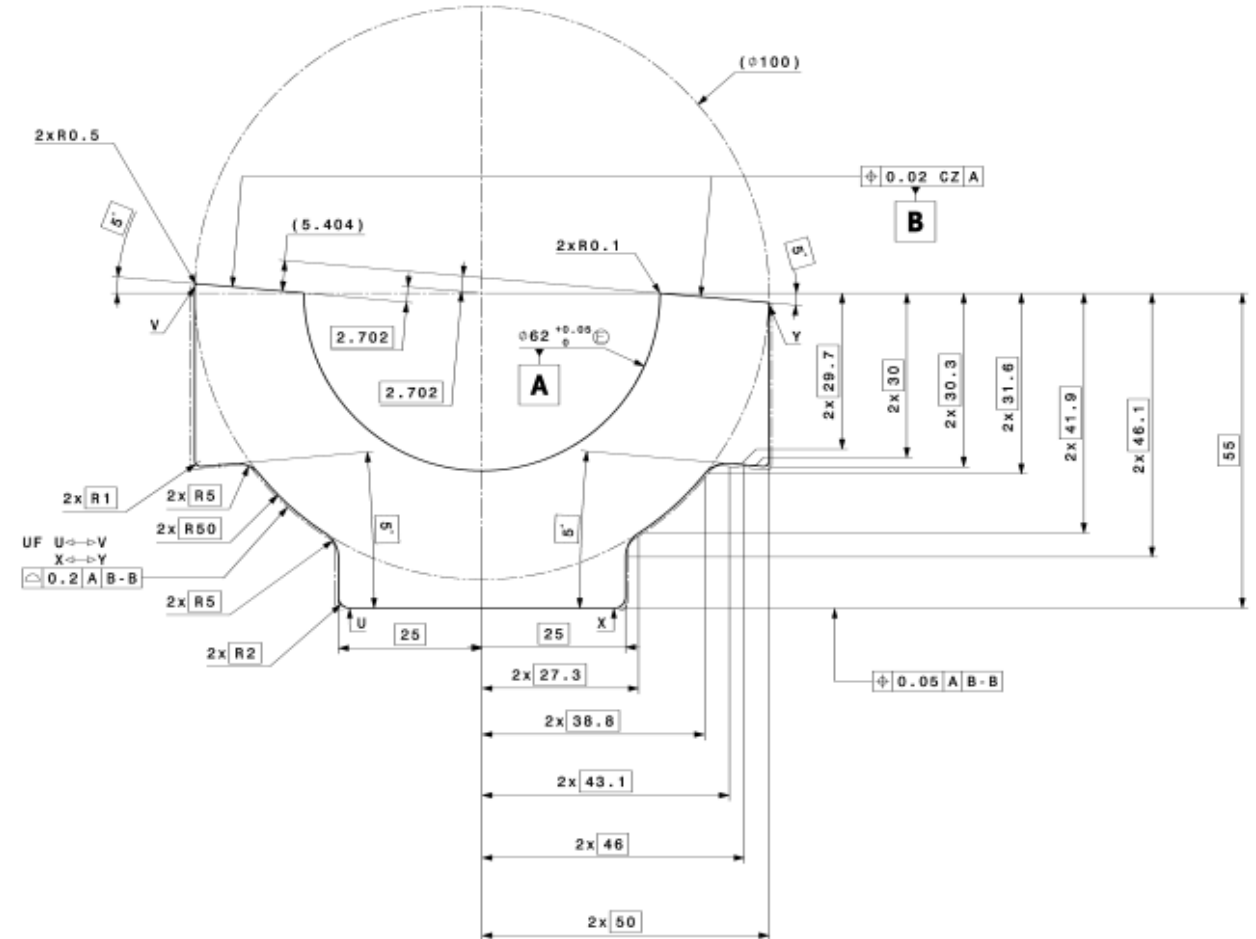
05 01 03 07 - Refractory metals (Nb, Mo, W, Ta...) and alloys

Cost Range : 200-400 k CHF

Planning: DO: Q4 2024

## Description & Specific Condition :

250 Tungsten alloy (W95NiCu) Half Shells, according to the material, dimensions, tolerances, surface treatments and norms and standards defined in the Technical Specification.



**Contact:** edouard.grenier-boley@cern.ch

# Ti6Al4V forged blanks (MS-5036/SY/HL-LHC)

## Procurement Code:

05 01 02 06 - Titanium, titanium alloys

Cost Range : 400k-1.5M CHF

Planning: MS: Q4 2024  
IT: Q1 2025

## Description & Specific Condition :

44 seamless **Ti Gr 5 forged hollow blanks** for the vessels of the HL-LHC dumps.

Main requirements:

- Inner diameter 698.5 mm (cylindricity - tolerance of 0.1 mm).
- Wall thickness 12 mm.
- Length 750 mm

**Contact:** [nicola.solieri@cern.ch](mailto:nicola.solieri@cern.ch)



# Stainless-steel forged blanks and rings EN 1.4429 AISI 316LN for Ultra-High Vacuum applications (MS-5016/SCE)

**Procurement Code:** 05 01 03 02 (Stainless Steel)

**Cost Range :** 5M – 10M CHF

**Planning:** MS : Q4 2024

IT: Q1 2025

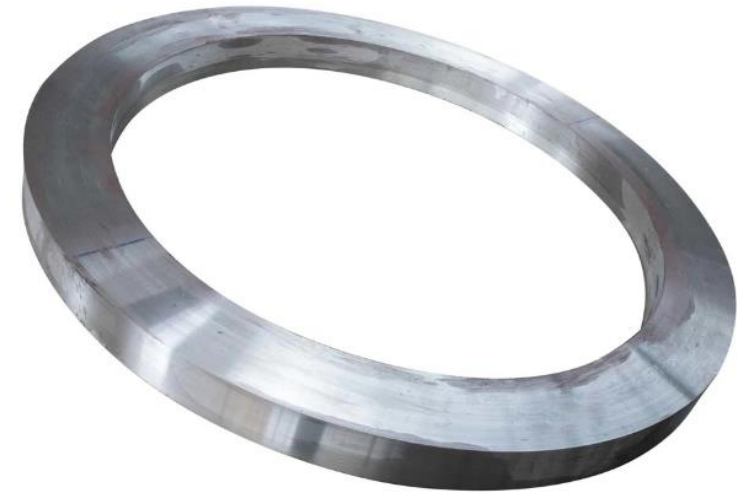
Contract start: 1 July 2025

**Scope:**

- Supply of 80T stainless steel forged blanks;
- EN 1.4429 AISI 316LN (Electroslag Remelting ESR)

**Duration:** 5 years

**Eligible Firm Profile:** Interested firms shall have proven experience and competence in metallurgy, manufacturing, forging and testing of the above-mentioned material.



**Contact:** [Leila.akhouay@cern.ch](mailto:Leila.akhouay@cern.ch)

# Supply of Corrugated Welded Stainless-Steel Pipes for the Einstein Telescope Pilot Sector

## Description & Specific Condition :

Two prototypes with an inner diameter of 1000 mm and a length of at least two metres, featuring corrugation as per the approved final design and fully representative of the foreseen manufacturing process for the series pipes, are to be delivered to CERN prior to the final approval for the manufacturing of seven pipes. The contractor shall select the most suitable techniques to perform welding, forming and corrugation of the strip to achieve the final design.

## Composition (wt. %) of the stainless steel according to EN 10028-7:

	C	Mn	Si	P	S	Cr	Ni	Nb	Ti
AISI 441	≤ 0.03	≤ 1.00	≤ 1.00	≤ 0.04	≤ 0.015	17.5-18.5	-	≤ 1.00	0.10-0.60
AISI 304L	≤ 0.03	≤ 2.0	≤ 1.0	≤ 0.03	≤ 0.015	17.0-20.0	10-12.5	-	-

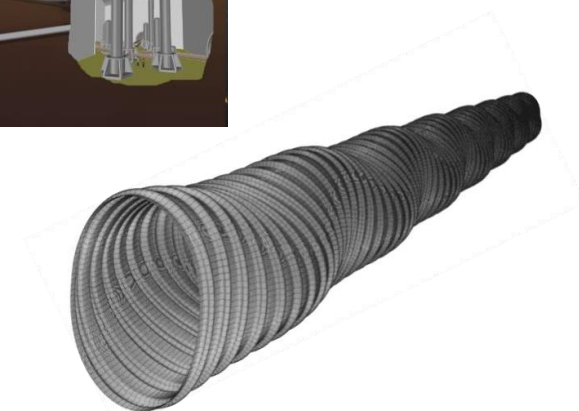
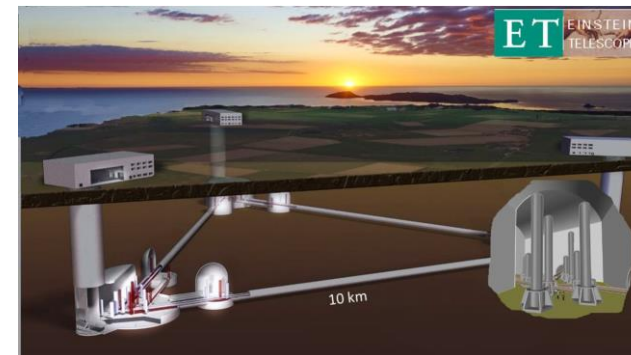
## Mechanical properties of the stainless steel:

	Yield Strength Rp0.2 (MPa)	Tensile strength Rm (MPa)	Elongation at break A5 (%)
AISI 441	~ 320	~ 480	~ 30
AISI 304L	~220	~520	~45

Cost Range : 400 kCHF – 1.5 MCHF

Planning: MS: Q4 2024 IT: Q4 2024

**Contact: [cedric.garion@cern.ch](mailto:cedric.garion@cern.ch)**





# Voice Alarm and Evacuation System

## Description & Specific Condition :

8 years blanket purchase contract

Design, supply and installation, test and commissioning of the Voice Alarm & Evacuation systems

New LHC voice systems to be installed and commissioned during LS3, and existing acoustic alarms systems to be renovated

Smaller projects (non-LHC) of the same nature will be included in the contract at an estimated rate of 3 per year

Any component to be installed in the LHC shall satisfy the constraints of radiation and helium presence.

Procurement Code: 10 07 01 03

Cost Range : 1.5 MCHF ↔ 5 MCHF

Planning: MS: published IT: Q4 2024

**Contact: [eva.sanchez-corral.mena@cern.ch](mailto:eva.sanchez-corral.mena@cern.ch)**



# Elaboration of Technical Specs For Human Capital Management (HCM) Suite Tendering

**Procurement Code:** 04900200 (Software Development Consultants)

**Cost Range :** 100k - 400K CHF

**Planning:** DO: Q4 2024

Contract start: 1 January 2025

**Scope:**

- In collaboration with business and computing stakeholders, elaboration of technical specifications and qualification criteria for the tendering procedures related to a new HCM Suite solution, its implementation and the implementation QA services

**Duration:** 6 months

**Eligible Firm Profile:**

- Interested firms shall have proven competence and experience in accompanying international governmental organisations (similar to CERN) during the selection and implementation of HCM/ERP solutions.



**Contact:** [Oana.Liteanu@cern.ch](mailto:Oana.Liteanu@cern.ch), [Jan.Janke@cern.ch](mailto:Jan.Janke@cern.ch)

# Human Capital Management (HCM) Suite

**Procurement Code:** 04050700 (Application Packages)

**Cost Range :** 400 kCHF – 1.5M CHF

**Planning:** MS : Q4 2024

IT: Q3 2025

Contract start: 1 January 2026

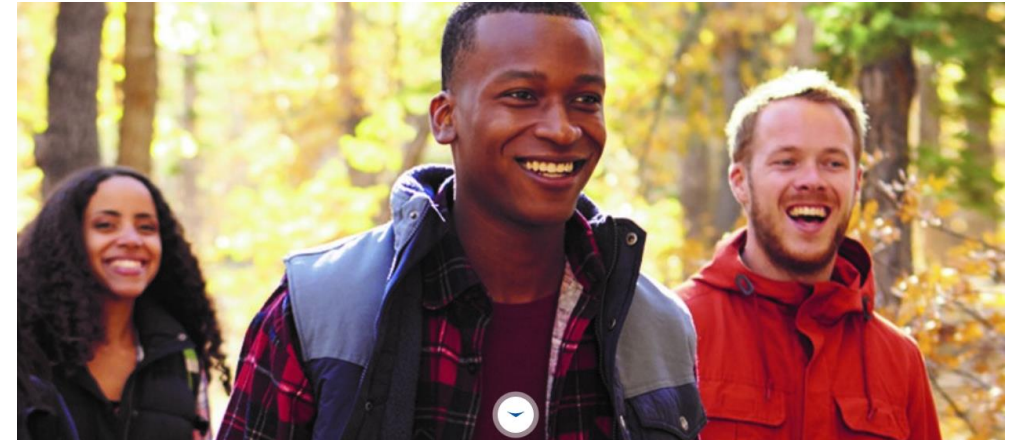
**Scope:**

- Provision of a HCM Suite (HR Information System) incl. at least the domains Core HR, Recruitment, Learning Management, Payroll and optionally Enterprise Performance Management.
- Future extensibility to cover domains such as Finance, Procurement and Supply Chain Management is desired.

**Duration:** min. 5 years

**Eligible Firm Profile:**

- Interested firms shall be recognised for their expertise in providing full-scale HCM solutions. They shall have experience in providing to and supporting such solutions for international governmental organisations.



**Contact:** [Oana.Liteanu@cern.ch](mailto:Oana.Liteanu@cern.ch), [Jan.Janke@cern.ch](mailto:Jan.Janke@cern.ch)

# Human Capital Management (HCM) Implementation Services

**Procurement Code:** 04900200 (Software Development Consultants)

**Cost Range :** 400k – 1.5M CHF

**Planning:** MS : Q4 2024

IT: Q4 2025

Contract start: 1 May 2026

**Scope:**

- Provision of agile HCM Suite implementation services (tool vendor to be determined in preceding tendering procedure).

**Duration:** 3 years

**Eligible Firm Profile:**

- Interested firms shall have proven competence and experience in implementing HCM/ERP solutions in replacement of an existing system.
- They shall be certified implementation partners for the HCM solutions they wish to be considered for.



**Contact:** [Oana.Liteanu@cern.ch](mailto:Oana.Liteanu@cern.ch), [Jan.Janke@cern.ch](mailto:Jan.Janke@cern.ch)

# Human Capital Management (HCM) Implementation Quality Assurance Services

**Procurement Code:** 04900200 (Software Development Consultants)

**Cost Range :** 100k – 400K CHF

**Planning:** MS : Q4 2024

IT: Q4 2025

Contract start: 1 May 2026

**Scope:**

- Provision of Quality Assurance services during the HCM Suite implementation period. As part of the HCM implementation Steering Committee act as intermediate between CERN's implementation partner and CERN.

**Duration:** 3 years

**Eligible Firm Profile:**

- Interested firms shall have proven competence and experience in providing quality assurance for HCM/ERP implementation projects.
- Firm has to be fully independent from the chosen HCM implementation provider.



**Contact:** [Oana.Liteanu@cern.ch](mailto:Oana.Liteanu@cern.ch), [Jan.Janke@cern.ch](mailto:Jan.Janke@cern.ch)

# Insurance brokerage services (MS-4864/FAP)

**Procurement Code:** 14 01 02 00 (Transport and Property Insurance)

**Cost Range :** 400k - 1.5M CHF

**Planning:** MS : Q1 2025

IT: Q2 2025

Contract start: 1 January 2026

**Scope:**

- Provision of insurance broking services;
- Support, advice and monitoring of CERNs insurance contract portfolio (around twenty contracts).

**Duration:** 5 years (+ optional 2-y extension)

**Eligible Firm Profile:** Interested firms shall have proven competence and experience in providing insurance broking services for large science infrastructures and international organizations



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**Contact:** Carmelo.Saitta@cern.ch

# Socio-economic impact assessment of CERN activities

**Procurement Code:** 12 90 00 00 (Management and communication consultants)

**Cost Range :** 400 K – 1.5 M CHF

**Planning:** MS : Q4 2024  
IT: Q4 2024

Contract start: 1 January 2025

**Scope:**

- Literature review, methodology and content proposal
- Socio-economic impact assessments
- Case studies
- Production of a CERN Impact Study Report

**Duration:** 1 year (+ optional to renew)

**Eligible Firm Profile:** Interested firms shall have proven experience and competence in complex multi-dimensional studies on the socio-economic impact of big science and/or fundamental research.



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**Contact:** [Manuela.Cirilli@cern.ch](mailto:Manuela.Cirilli@cern.ch)

Thank you



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