Upcoming Tenders at CERN

ILO Forum

Joshua Davison

IPT-PI

03-10-2023

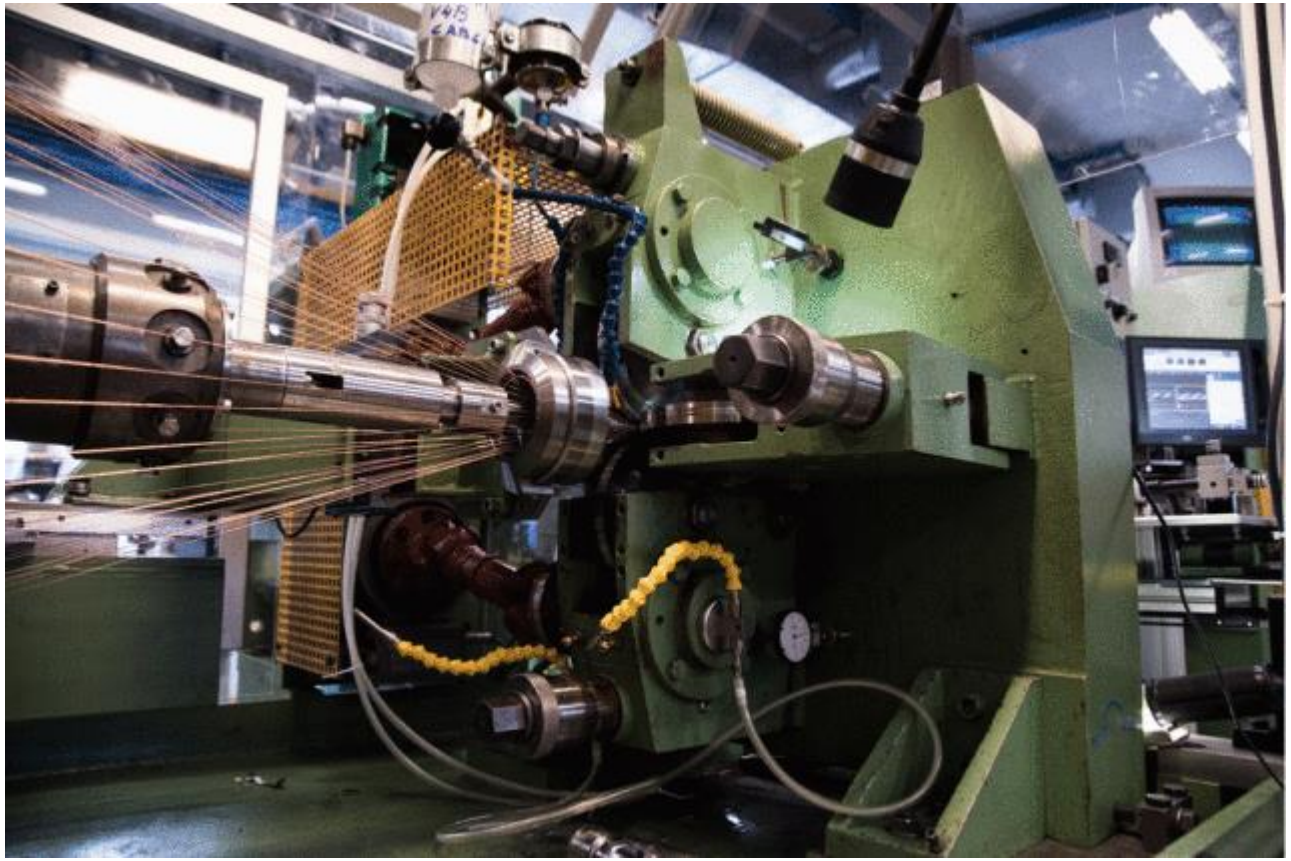
60-wire planetary cabling machine

Procurement Code: 02 25 05 03

Cost Range : 750 kCHF ⇔ 5 MCHF

Planning: MS: sent (MS-4905)

IT: Q4 2023



Description & Specific Condition :

Planetary cabling machine for manufacture of cables of up to 60 superconducting or copper wires and round cables

Contact: Thierry.Boutboul@cern.ch

Metal precision cleaning machine for Ultra-High Vacuum (UHV) and particle physics applications

Procurement Code: 09 02 02 00

Cost Range : ≤ 750 k CHF

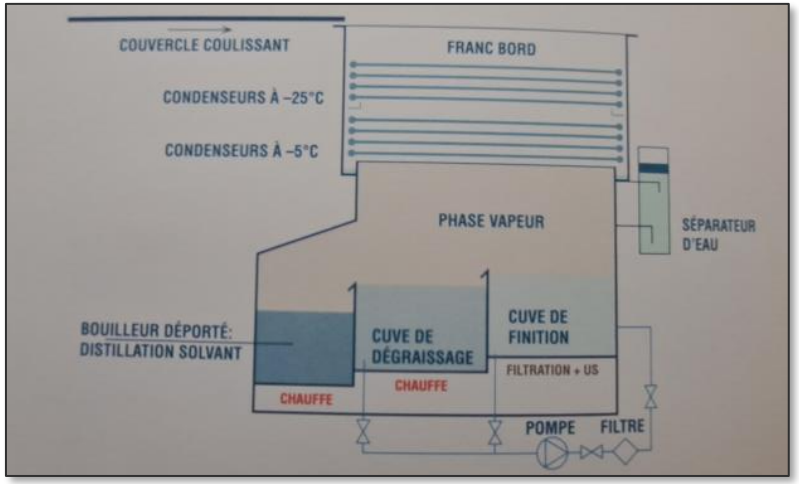
Planning: MS : Q4 2023

IT: Q1 2024

Description & Specific Condition :

Cleanliness level compatible with UHV both with hydrocarbon and silicon-based contaminants, useful cleaning capacity of 550 mm x 300 mm x 300 mm, used on a variety of metals.

Seeking firms with a similar machine pre-existing in its catalogue



Contact: Leonel.Ferreira@cern.ch

LHC Collimator Control System Upgrade

Description & Specific Condition :

Collimation control system allows for remote control and diagnostics of collimator parameters, for all specific sequences associated to LHC operational cycle.

Tenders will be subdivided into :

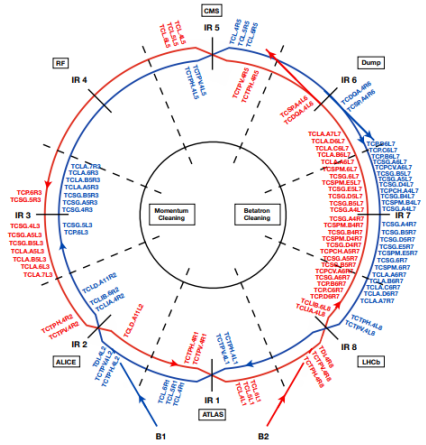
- Stepping Motors Drivers: MS Q1 2024, IT Q3 2024
- FMC Cards for Motion Control: DO Q1 2024
- PXI-e COMe Adapter: DO Q4 2024
- COMe CPU: DO Q1 2025
- PXIe Carrier: MS Q1 2024, IT Q1 2025

Procurement code: 03 00 00 00

Cost Range : 750 k CHF ⇔ 5 M CHF

Planning: see left

Contact: Mario.di.Castro@cern.ch



Assembly of DAQ (Data Acquisition System) Electronic Cards

Description & Specific Condition :

Assembly and testing of PCBs of three different types with a maximum size of 322.25 mm x 280 mm, double-sided with up to 22 layers.
The contractor shall assemble a wide mix of components onto the PCBs.

The quantity will be approximately 900 units and deliveries are expected over a duration of 12 months from the date of Contract notification.

Procurement code: 03 03 01 00

Cost Range : 750 k CHF ⇔ 5 M CHF

Planning: MS: Q4-2023 - IT: Q1-2024

Contact: **Christoph.Schwick@cern.ch**

Assembly of Hexaboards Electronic Cards

Description & Specific Condition :

Assembly and testing of around 22 000 rigid PCBs for the CMS High-Granularity Calorimeter.

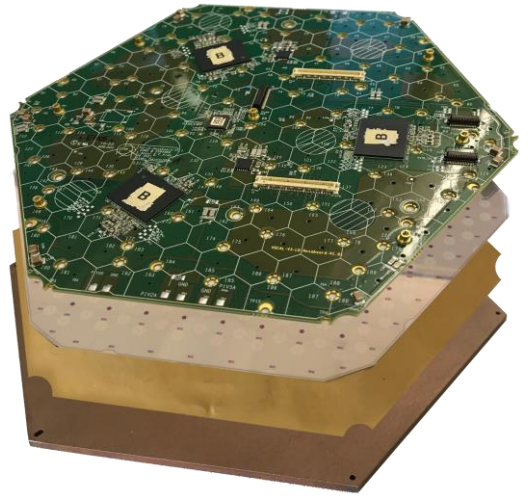
The PCBs have 8 layers, are mostly hexagonal with lateral dimensions of 20 cm × 20 cm and are approximately 1.3 mm thick.

Procurement code: 03 03 02 00

Cost Range : 750 k CHF ⇔ 5 M CHF

Planning: MS: Q4-2023 - IT: Q1-2024

Contact: David.Barney@cern.ch



Supply of PCB and PCB Assembly for the Serenity Project

Description & Specific Condition :

Supply of an approximate quantity of 550 PCB and PCB assembly, including testing.

The PCBs are of size 322.25 mm x 280 mm, thickness from 2.2 mm to 2.6 mm, with up to 20 layers.
The contractor shall assemble a wide mix of components onto the PCBs.

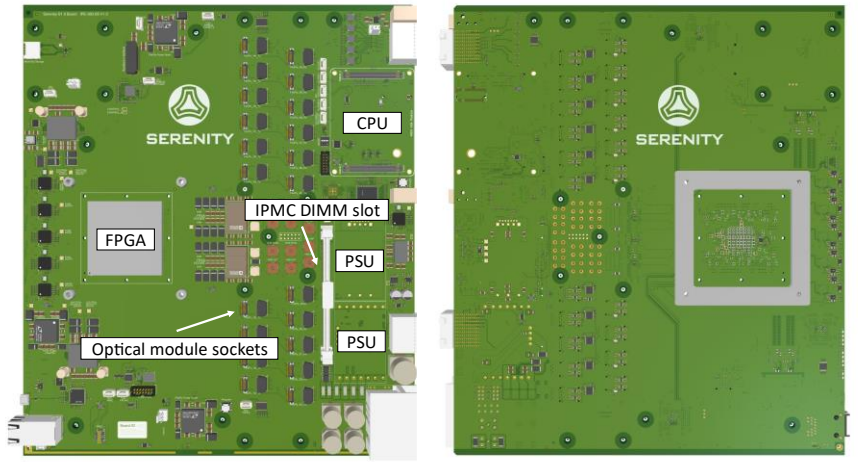
Considering the financing of this project, at least 50% of the Supply must originate in France, Germany, Italy or United Kingdom.

Procurement code: 03 02 10 00 – 03 03 02 00

Cost Range : 750 k CHF ⇔ 5 M CHF (Case B)

Planning: MS: Q4-2023 - IT: Q1-2024

Contact: **Gregory.Iles@cern.ch**

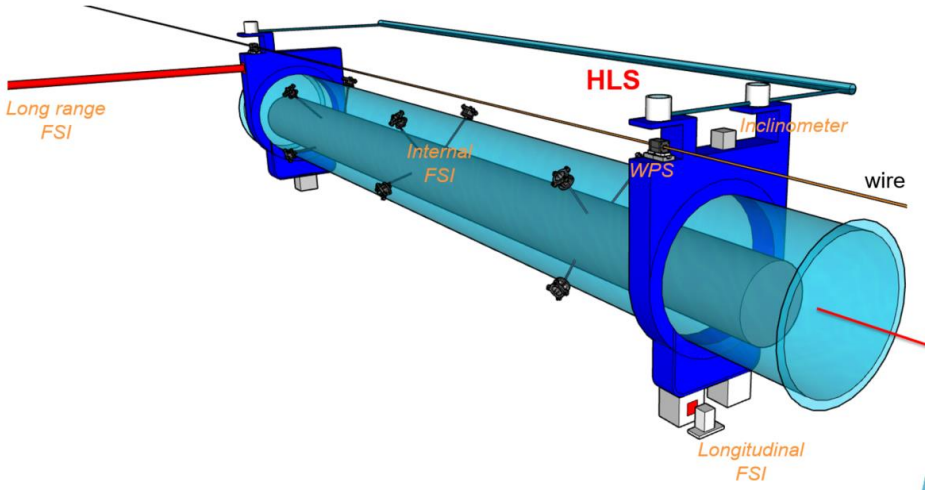


Sensors for alignment

Description & Specific Condition :

Alignment system includes the following sensors :

- Wire Positioning Sensors (WPS): MS Q1 2024, IT Q2 2024
- Hydrostatic Levelling Sensors (HLS): DO Q2 2024



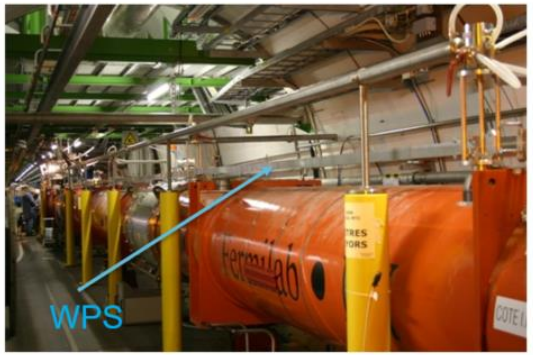
Cost Range : ≤ 750 k CHF

Planning: see left

Contact: **Helene.Mainaud.Durand@cern.ch**

Capacitive WPS sensor

- X-Y measurement w.r.t. stretched conductive wire
- Accuracy < 5µm, Resolution < 1µm
- Limited cable length (max. 30 .. 50 m)
- Conditioning electronics need to be RAD-TOL



Jacks for FRAS

Description & Specific Condition :

FRAS will allow for remote and simultaneous alignment of Magnets, cryostats, crab cavities, cryomodules, and TAXN

The jacks consist of two different types

- Longitudinal jacks (130)
- Central jacks (10)

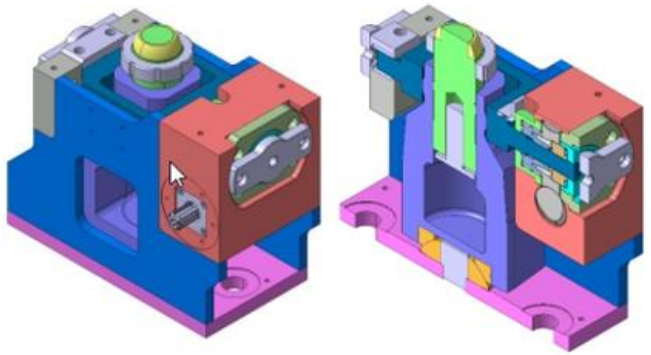
Build-to-print. High precision machining and assembly, welding and heat treatment are required for this production

Procurement code: 02 25 04 02

Cost Range : 750 k CHF ⇔ 5 M CHF

Planning: MS: Q4-2023 - IT: Q4-2024

Contact: Delio.Ramos@cern.ch



Longitudinal Jack

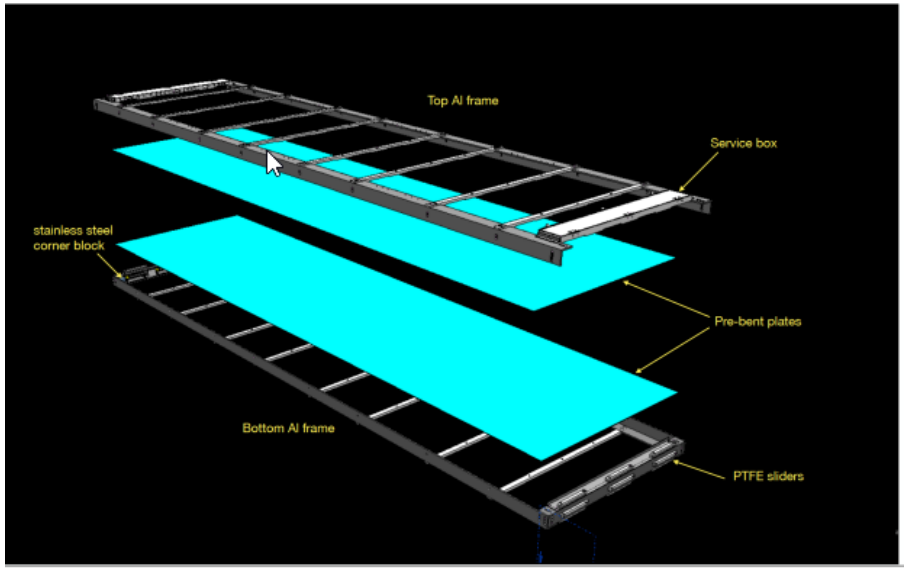
Central Jack

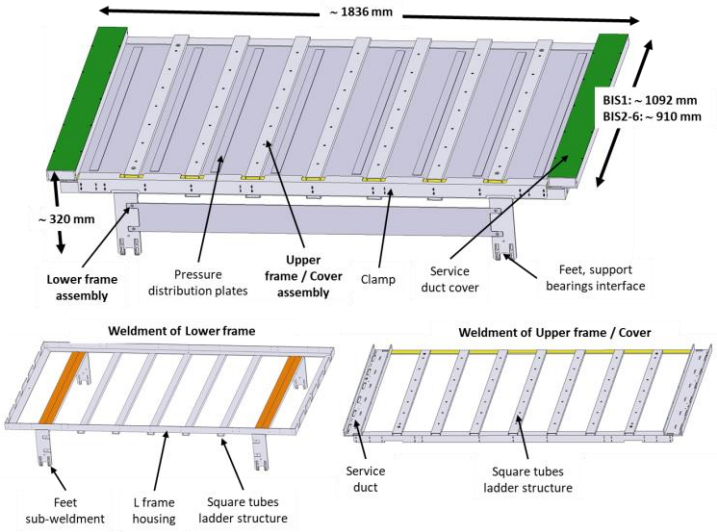
Screwed and welded aluminium support structures for ATLAS

Description & Specific Condition :

Supply of aluminium support structures to house different chambers.

- **Screwed structures** (210): made of aluminium frames, plates and covers. The general tolerances are 0,1 mm for parts and 1 mm for the assembly
- **Welded structures** (110): made of aluminium profiles, plates and covers. The general tolerances are 0,05 mm for parts and 0,5 mm for the assembly





Procurement code:

- 05010104: Aluminium, aluminium alloys
- 05040100: Machining of steels, stainless steels, aluminium alloys

Cost Range : 750 k CHF ⇔ 5 M CHF (case B)

Planning: MS-4900 (sent) - IT: Q1-2024

Contact: toni.baroncelli@cern.ch

TAXS Absorbers (Target Absorbers for Secondary)

Procurement code: 05 01 04 03

Cost Range : ≤ 750 k CHF

Planning: MS: Q3-2023 - IT: Q1-2024

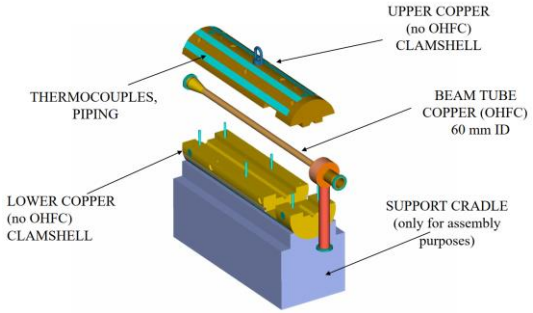
Contact: Francisco.Sanchez.Galan@cern.ch

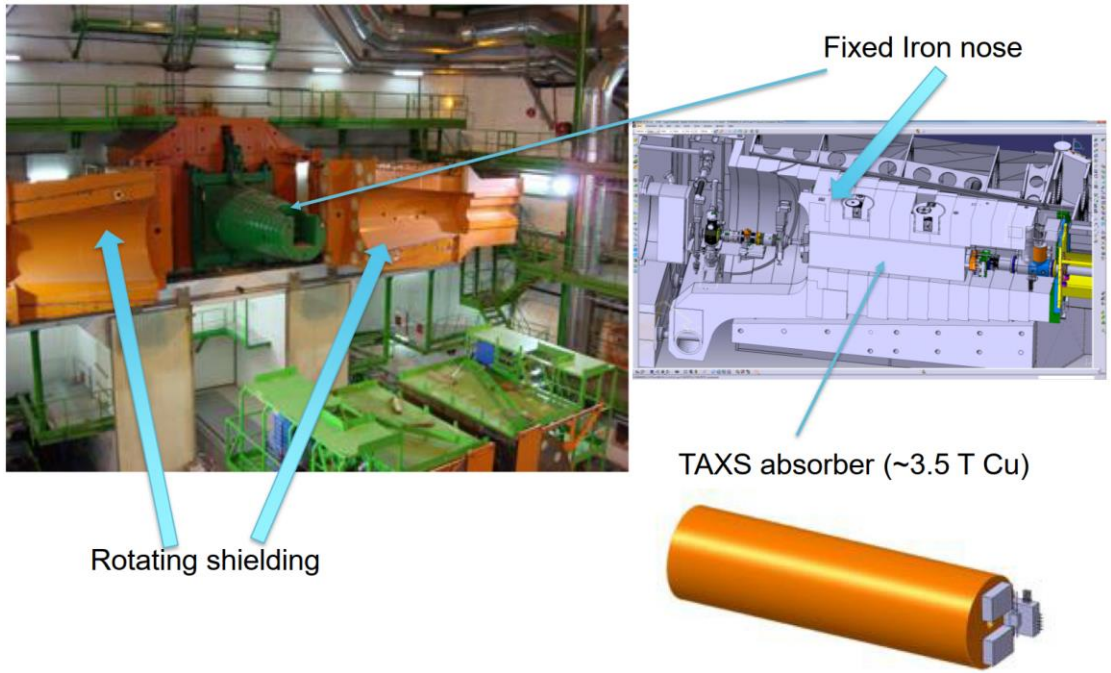
Description & Specific Condition :

TAXS absorbers are embedded in the forward shielding at the limit of the experimental cavern and the LHC tunnel, and are used to protect the inner triplets and dipoles from the collision debris generated at the interaction point

Built to print – 4 units

Absorber made of casted ETP Cu





TAXN Absorbers (Target Absorbers for Neutrals)

Procurement code: 05 01 04 03

Cost Range : ≤ 750 k CHF

Planning: MS: Q3-2023 - IT: Q1-2024

Contact: Francisco.Sanchez.Galan@cern.ch

Description & Specific Condition :

TAXN will be used to protect the dipoles from the collision debris generated at the interaction point

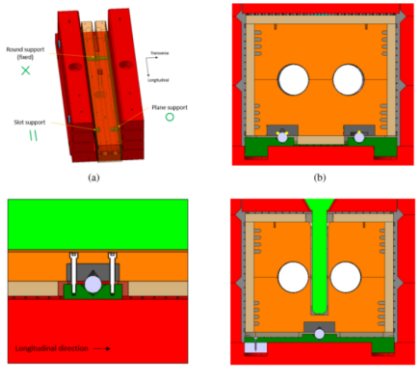
TAXN consists of 2 major assemblies :

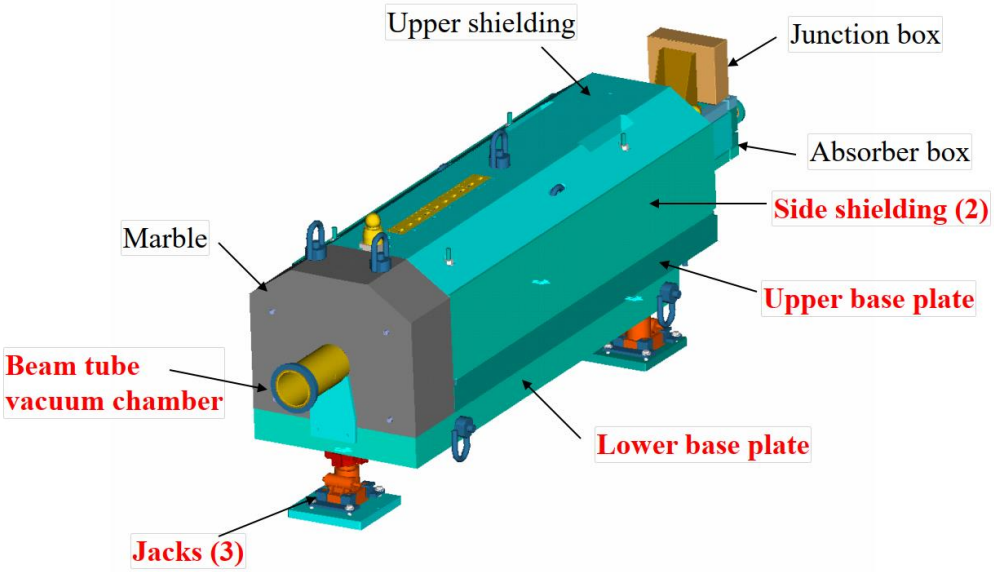
- Absorber box
- Steel shielding

Built to print

Absorber made of casted ETP Cu

Shielding of casted steel





Supports for Collimator Masks

Description & Specific Condition :

Procurement of raw material and components (aluminium, brass, stainless steel)

High precision machining of all components

Assembly, welding

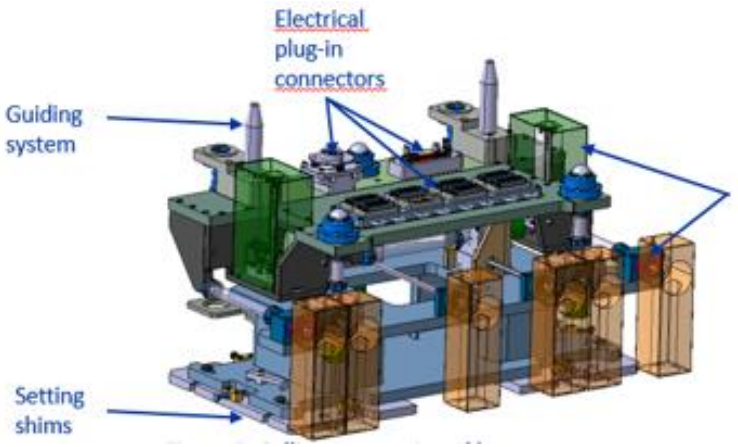
Quality controls and metrology for every unit produced

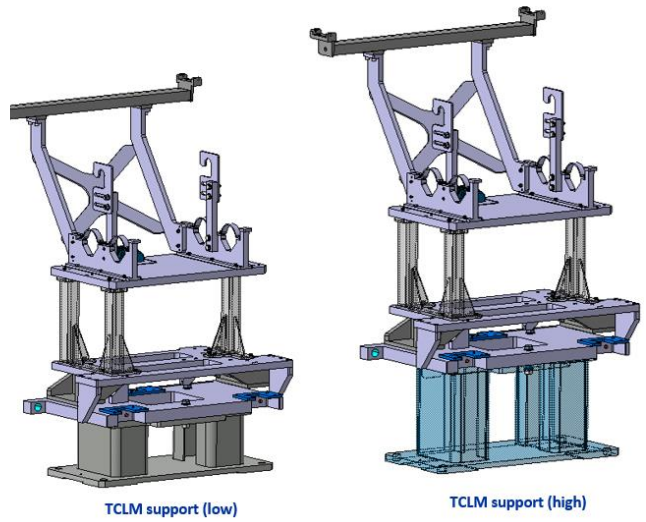
Procurement code: 05 04 01 00

Cost Range : 750 k CHF ⇔ 5 M CHF

Planning: MS: Q4-2023 - IT: Q4-2024

Contact: **Francois-Xavier.Nuiry@cern.ch**





Supply of masks

Procurement code: 05 04 00 00

Cost Range : ≤ 750 k CHF

Planning: MS: Q4-2023 - IT: Q1-2024

Contact: **Francois-Xavier.Nuiry@cern.ch**

Description & Specific Condition :

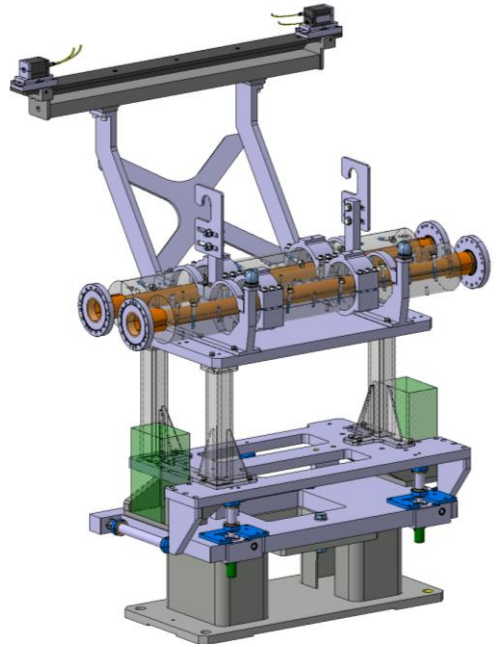
15 Masks for Vacuum chamber protection

Passive collimator – Protection for the magnets

Machined Tungsten blocs provided by CERN

Strict tolerances, brazing to join stainless steel flanges

Copper, Inconel or stainless steel (final design ongoing)



Twinax data bundles for ATLAS

Description & Specific Condition :

Design and supply of two different lots of custom-designed radiation-hard (250Mrad and 324Mrad) twinax cable bundle assemblies for the ATLAS ITk Outer Barrel data transmission system.

Approx 80 km of bare cable in total, assembled into bundles composed of 8-24 bare cables with bare cable dimensions below 1.12 mm x 0.71 mm.

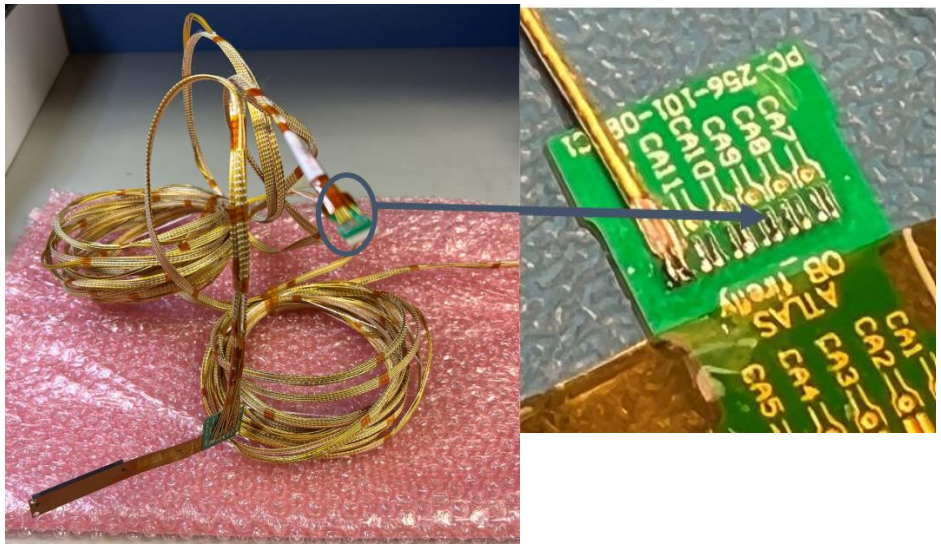
Radiation tests to be performed by CERN.

Procurement code: 02 05 05 00

Cost Range : 750 k CHF ⇔ 5 M CHF (Case D)

Planning: MS: Q4-2023 - IT: Q1-2024

Contact: **Susanne.kuehn@cern.ch**



UPS 20-200 kVA

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 : < 750 k CHF

Planning: MS: Q2 2024, IT: Q4 2024

Contact: **Joel.Lahaye@cern.ch**

Power converters of ±600 A and ±10 V

Description & Specific Condition :

Supply of power converters of ±600 A and ±10 V for HL-LHC project

Build-to-print

- 21 Units

Procurement Code: 02 10 05 00

Cost Range : <750 k CHF

Planning: MS: Q1 2024 - IT Q2 2024

Contact: Vicente.Herrero@cern.ch

Major overhauling helium compressors at manufacturer's premises

Procurement Code: 06 02 04 00

Cost Range : 750 kCHF ⇔ 5 MCHF

Planning: MS: 2025

IT: 2025

Description & Specific Condition :

Specific experience in the overhaul of He compressors

Contact: Steffen.juncker@cern.ch

Non-magnetic diffusion pumps for ATLAS

Description & Specific Condition :

Supply of 17 non-magnetic diffusion pumps.

Main characteristics:

- Operational in high-intensity magnetic fields
- Pumping speed of 1 500 l/s
- Pressure working range: 10^{-2} to 10^{-7} mbar
- Height: 950 mm (or less) x Width: 600 mm (or less) x Depth: 600 mm (or less)
- No soft-welding nor brazing is permitted

Procurement code: 06010804: Diffusion pumps

Cost Range : < 750 k CHF (case D)

Planning: MS: Q4-2023 - IT: Q1-2024

Contact: xavier.pons@cern.ch

Cold boxes for cooling plants

Description & Specific Condition :

MS-4798 published since some time, IT now pending

Passive cooling in aluminium alloys or stainless steel

Fairly standard material requirements but non-standard dimensions and drilling/feedthrough requirements

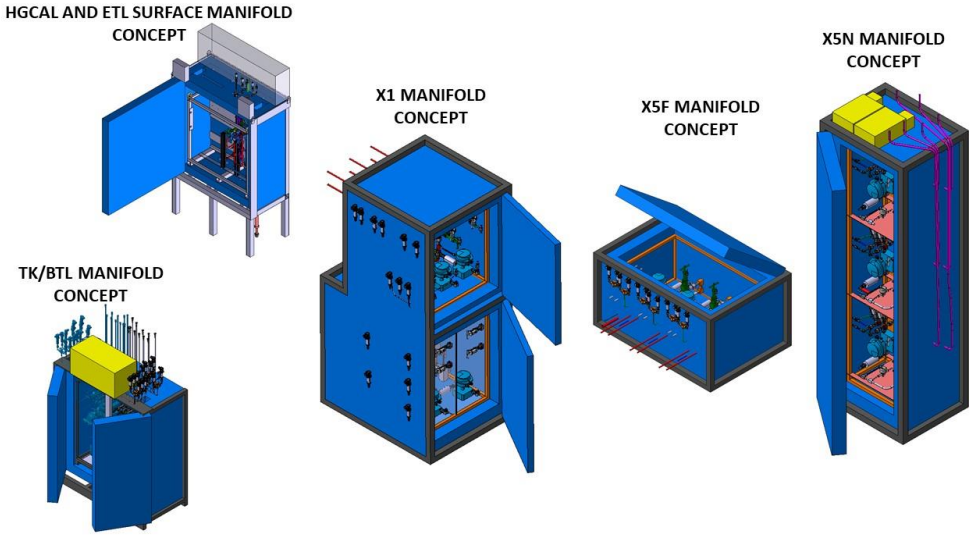
Circa 40 cold boxes

Procurement code: 01 03 03 02

Cost Range : 750 k CHF ⇔ 5 M CHF

Planning: IT Q4 2023

Contact: paolo.petagna@cern.ch



CO2 distribution manifolds for CMS

Description & Specific Condition :

20 distribution manifold boxes consisting of a metallic frame housing a hydraulic piping assembly

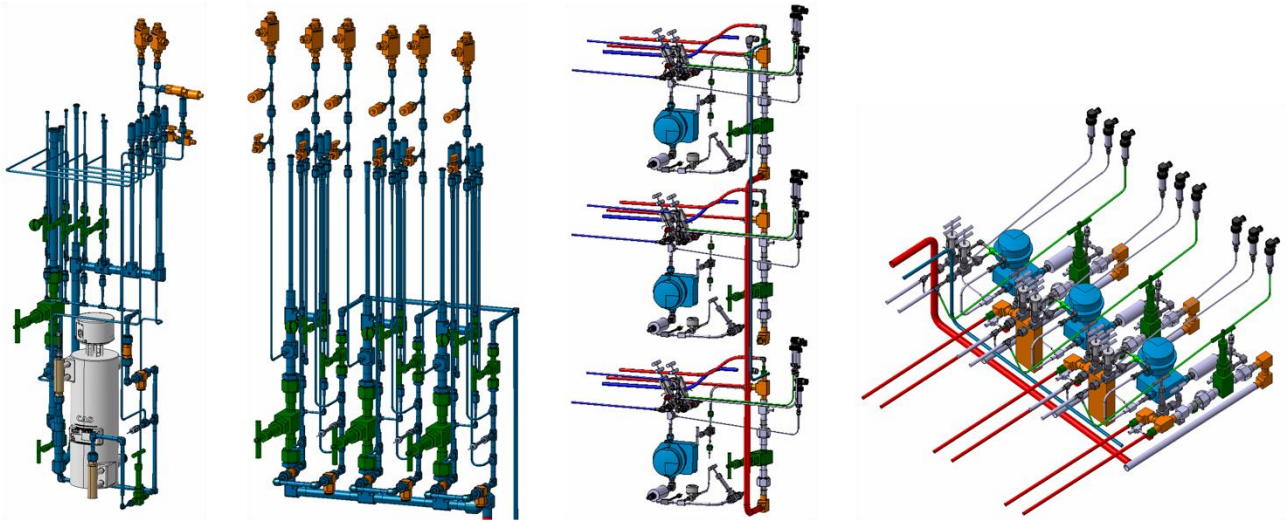
Structural verification and manufacturing drawings, plus construction (welding and forming of stainless steel piping and steel support structures) and assembly.

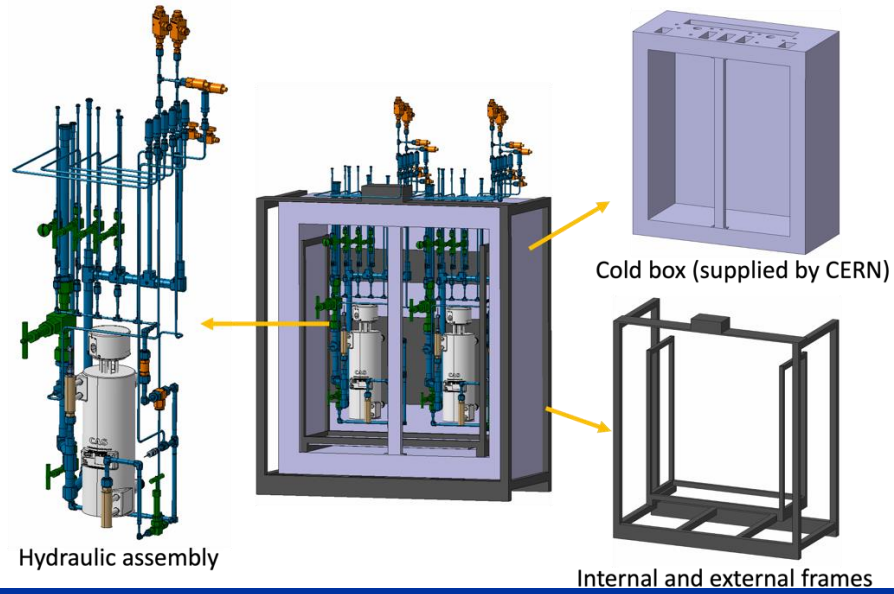
Procurement code: 01 03 03 01

Cost Range : 750 k CHF ⇔ 5 M CHF

Planning: MS Q4 2023, IT Q1 2024

Contact: **Jerome.daguin@cern.ch**





Heavy lifting of CMS calorimeters

Description & Specific Condition :

Removal of 2 existing calorimeters and installation of a new one on the CMS site in Cessy, including:

- Design and supply of tooling for heavy lifting
- Heavy lifting and transportation on site in two phases during 2026/7

The new calorimeter will weight 230+ tons, with a value ~150 MCHF

Contract adjudicated on a BVFM basis.

Procurement code: 13 11 03 00

Cost Range : 750 kCHF ⇔ 5 MCHF (case D)

Planning: MS: Q4 2023, IT: Q2 2024

Contact: **tristan.loiseau@cern.ch**

Construction of new Building 777

Description & Specific Condition:

General contractor to construct new Building 777 on CERN's Prévessin site in France. Key characteristics include:

- Mass timber structural system
- Highly performing MEP and façade system to achieve recognised sustainability accreditation.

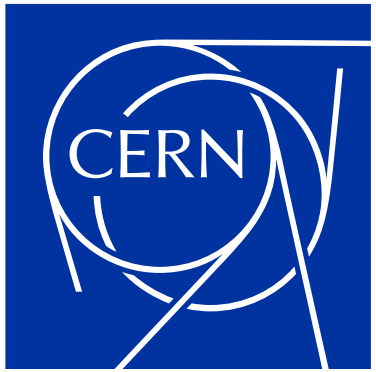
Procurement code: 01 02 01 00/ 01/ 02

Cost Range : > 10M CHF

Planning: MS Q1 2024 / IT Q3 2024

Contact: Pieter.mattelaer@cern.ch

Thank you



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