

EN-EA Magnets Supports Overview (for East Area Renovation)

Damien BRETHOUX EN-EA-DC



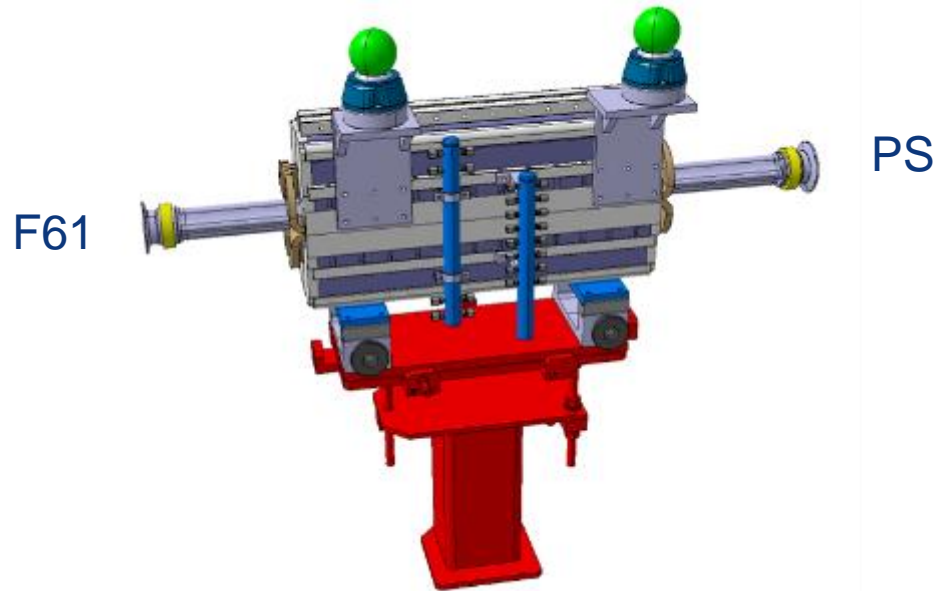
ENGINEERING
DEPARTMENT

Magnets supports

				3D design	2D drawings	Production
HMQAD	A01	Support for Quadrupoles Q74L, Adjusting table	1 on F61			
HMQAE.C01	C01	Support for Quadrupoles Q120, Adjusting concrete base, flat	2 on F62			
	C02	Support for Quadrupoles Q120, Adjusting concrete base, tilted 1,7 degree	1 on T09			
	C03	Support for Quadrupoles Q120, Adjusting concrete base, tilted 2 degree	1 on T10			
HMQAF.C01	C01	Support for Quadrupoles, Q100, Adjusting concrete base, flat	1 on T10			
	C02	Support for Quadrupoles, Q100, Adjusting concrete base, tilted 3,3 degree	2 on T11			
	C03	Support for Quadrupoles, Q100, Adjusting concrete base, tilted 2 degree	1 on T10			
	C04	Support for Quadrupoles, Q100, Adjusting concrete base, tilted 1,7 degree	1 on T09			
HMQAG	C01	Support for Quadrupoles, Q200L, Adjusting concrete base, flat	2 on T09 1 on T10			
	A01	Support for Quadrupoles, Q200L, Adjusting system	2 on T08			
HMQAH	M01	Support for Quadrupoles QDS or QFS, Adjusting metal base, tilted 2 degree	4 on T10			
	M02	Support for Quadrupoles QDS or QFS, Adjusting metal base, tilted 1,7 degree	4 on T09			
	M03	Support for Quadrupoles QFS, Adjusting metal base, flat	1 on F61			
	M04	Support for Quadrupoles QFS, Adjusting metal base, tilted 3,3 degree	2 on T11			
HMQAJ	P01	Support for Quadrupoles QFS, plug-in and Adjusting system, tilted 3,3 degree	1 on T11			
HMQAM	P01	Support for Quadrupoles QFL, plug-in and Adjusting system, flat	2 on T08			
HMQAN	M01	Support for Quadrupoles QFL, Adjusting metal base, flat	1 on F61			
HMBAC	P01	Support for Bending magnets MCB, plug-in and Adjusting system, flat	2 in F63			
HMBAD	A01	Support for Bending magnets MCB, Adjusting system, flat	2 in F61 3 in T08			
HMBAE	A01	Support for Bending magnets M100, Adjusting system, tilted 1,7 degree	1 in T09			
	A02	Support for Bending magnets M100, Adjusting system, tilted 2 degree	1 in T10			
HMBAF	C01	Support for Bending magnets M200L, Adjusting concrete base, tilted 1,7 degree	2 on T09			
	C02	Support for Bending magnets M200L, Adjusting concrete base, tilted 2 degree	2 on T10			
	C03	Support for Bending magnets M200L, Adjusting concrete base, tilted 3.3 degree	2 on T11			
UNI		Support for MDXL + CR200	2 on T08 (MDXL) 1 in T09 (MDXL) 1 on T10 (MDXL) 2 on F62 (CR200)			?
HMCAD	U01	Support for corrector magnets CR200, similar to universal support	1 on F61 (CR200)			
HLMAA	P01	Support for Multiple components, plug-in and adjusting system, flat	1 in T08 (for 2 magnets)			
HLMAB	P02	Support for Multiple components, plug-in and adjusting system, tilted 1,7 degree	1 in T09 (for 2 magnet + TCX)			
HLMAC	A01	Support for Multiple components, adjusting system, flat	1 in F61			

Support Q74L

Pending of good 3D model of the magnet (next week : S28)

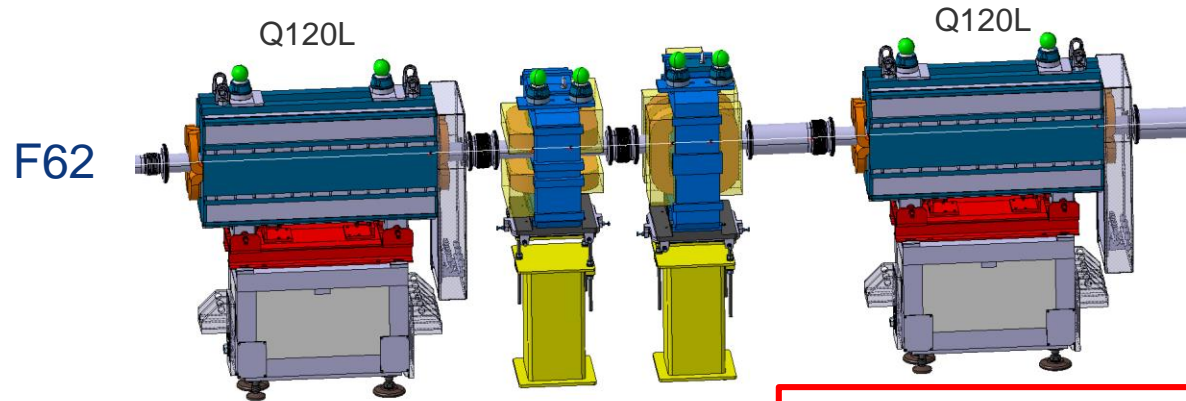


RESPONSIBLES :
Design: Damien
Production:
Assembly:

Support Q120L

HMQAE.C01	C01	Support for Quadrupoles Q120, Adjusting concrete base, flat	2 on F62			
	C02	Support for Quadrupoles Q120, Adjusting concrete base, tilted 1,7 degree	1 on T09			
	C03	Support for Quadrupoles Q120, Adjusting concrete base, tilted 2 degree	1 on T10			

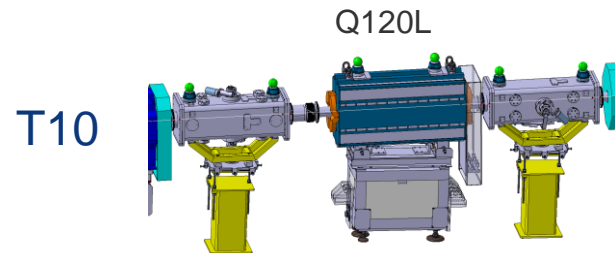
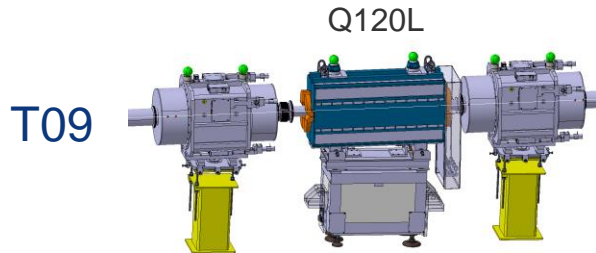
4 concrete bases recovered + production of interface to adjust the slope



Drawing : PSZHMQAE0001

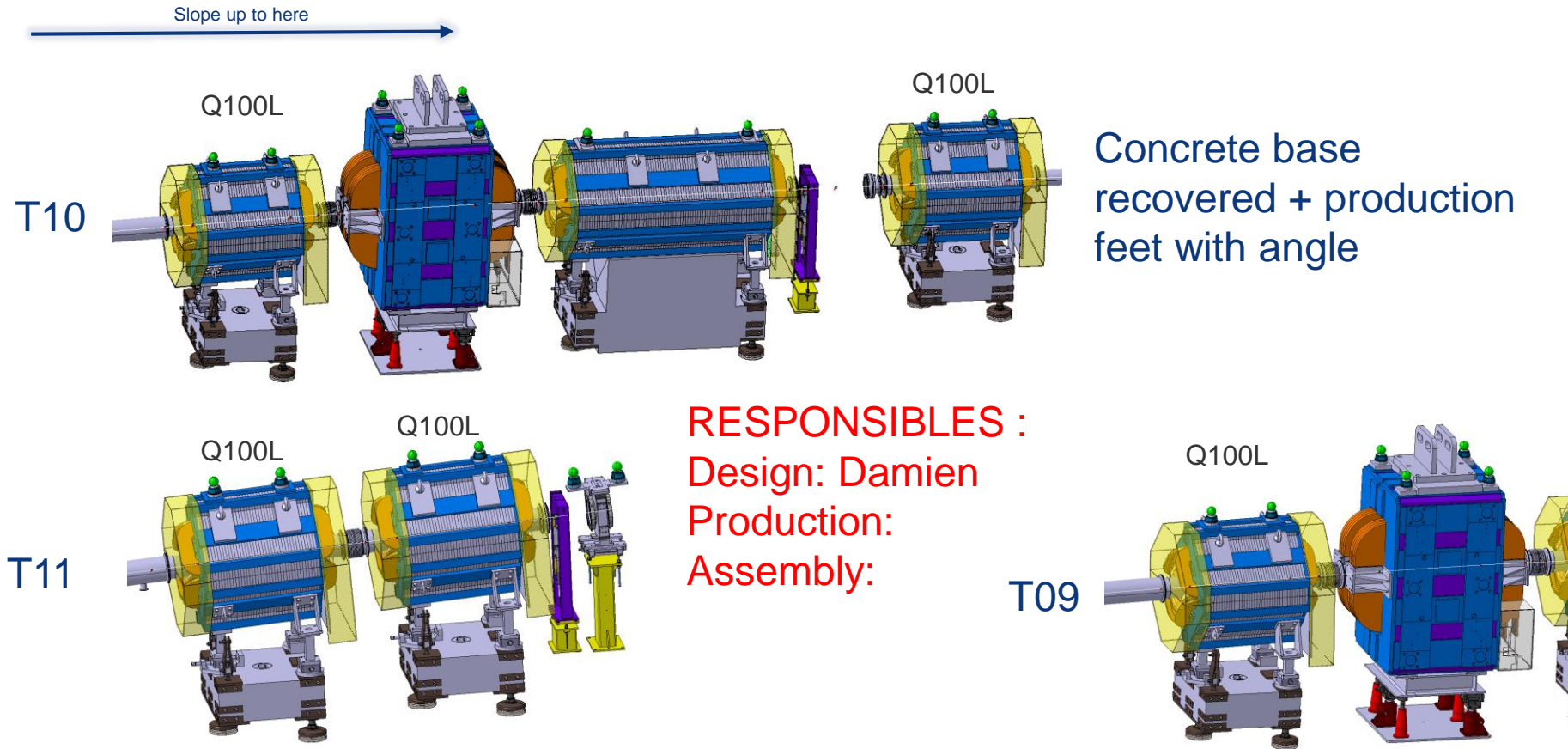
Drawing : PSZHMQAE0001

RESPONSIBLES :
Design: Damien
Production:
Assembly:



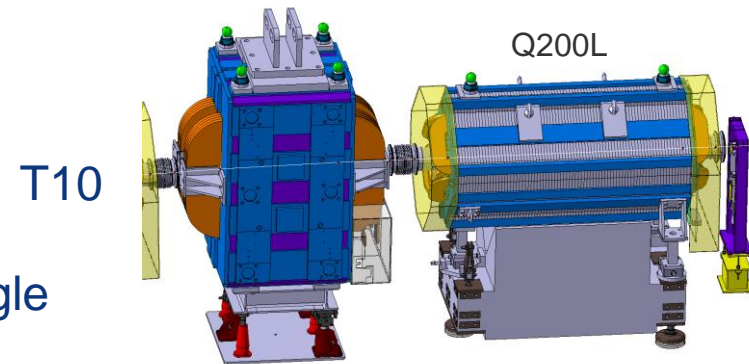
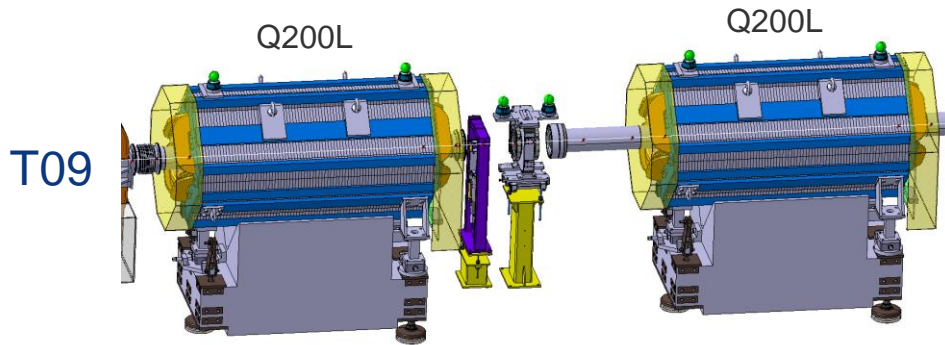
Support Q100L

HMQAF.C01	C01	Support for Quadrupoles, Q100, Adjusting concrete base, flat	1 on T10			
	C02	Support for Quadrupoles, Q100, Adjusting concrete base, tilted 3,3 degree	2 on T11			
	C03	Support for Quadrupoles, Q100, Adjusting concrete base, tilted 2 degree	1 on T10			
	C04	Support for Quadrupoles, Q100, Adjusting concrete base, tilted 1,7 degree	1 on T09			



Support Q200L

HMQAG	C01	Support for Quadrupoles, Q200L, Adjusting concrete base, flat	2 on T09 1 on T10			
	A01	Support for Quadrupoles, Q200L, Adjusting system	2 on T08			



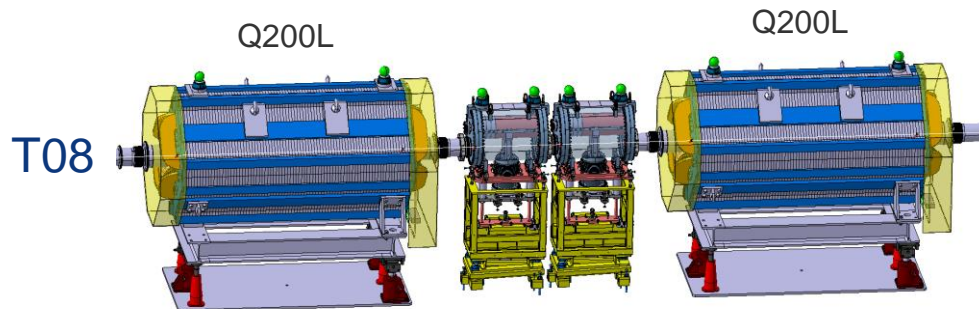
Concrete base recovered + production feet with angle

RESPONSIBLES :

Design: Damien

Production:

Assembly:

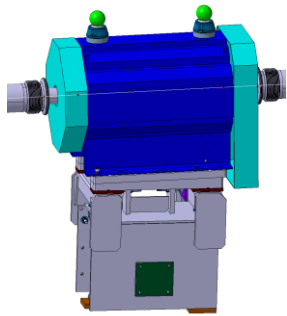


Jacks and adjusting tables recovered + frame to be produced

Support QDS + QFS

HMQAH	M01	Support for Quadrupoles QDS or QFS, Adjusting metal base, tilted 2 degree	4 on T10			
	M02	Support for Quadrupoles QDS or QFS, Adjusting metal base, tilted 1,7 degree	4 on T09			
	M03	Support for Quadrupoles QFS, Adjusting metal base, flat	1 on F61			
	M04	Support for Quadrupoles QFS, Adjusting metal base, tilted 3,3 degree	2 on T11			
HMQAJ	P01	Support for Quadrupoles QFS, plug-in and Adjusting system, tilted 3,3 degree	1 on T11			

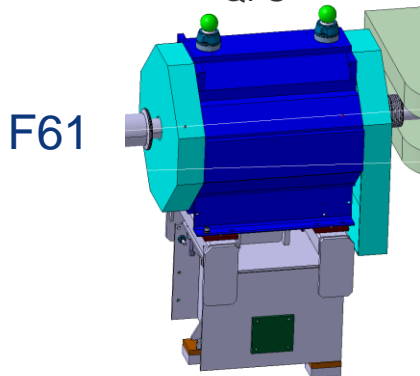
QDS



Metallic base already existing → recovered
On T10+T09 adjusting frame to be produced for the angle

RESPONSIBLES :
Design: Damien
Production:
Assembly:

QFS



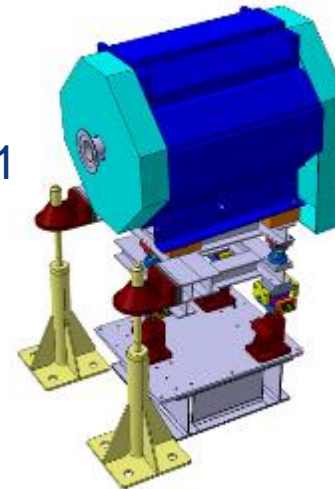
F61

RESPONSIBLES :
Design: Damien
Production:
Assembly:

Drawing :
PSZHMQAH0001

QFS

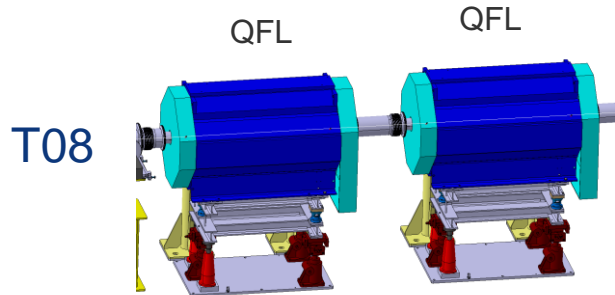
T11



RESPONSIBLES :
Design: Vincent
Production:
Assembly:

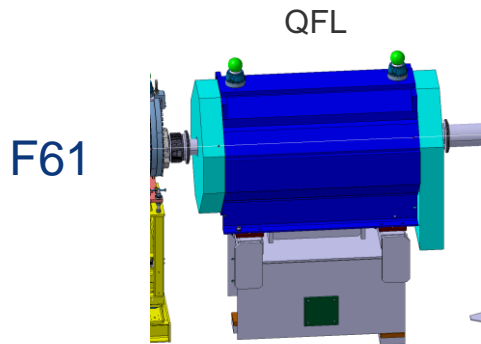
Support QFL

HMQAM	P01	Support for Quadrupoles QFL, plug-in and Adjusting system, flat	2 on T08			
HMQAN	M01	Support for Quadrupoles QFL, Adjusting metal base, flat	1 on F61			



Calculation for V-Ball : OK
Test by MME in progress

RESPONSIBLES :
Design: Vincent
Production:
Assembly:



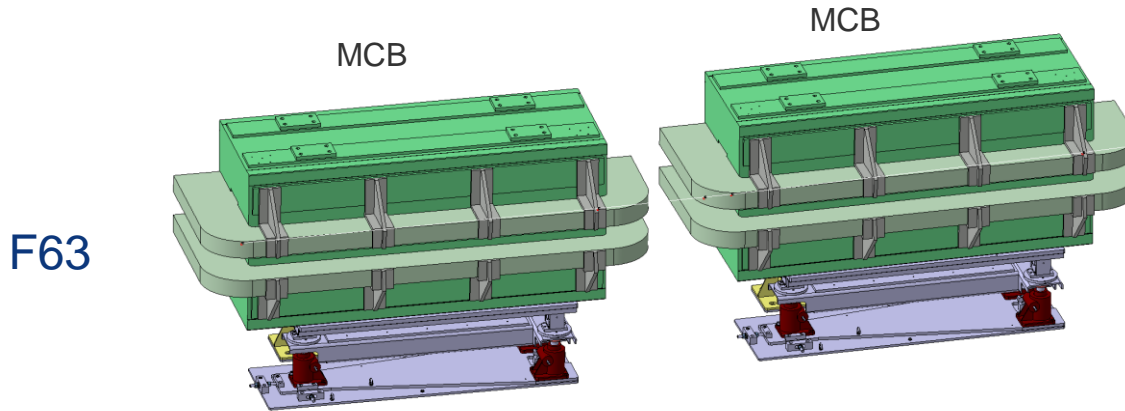
Metallic base already existing
→ recovered

Drawing : PSZHMQAN0001

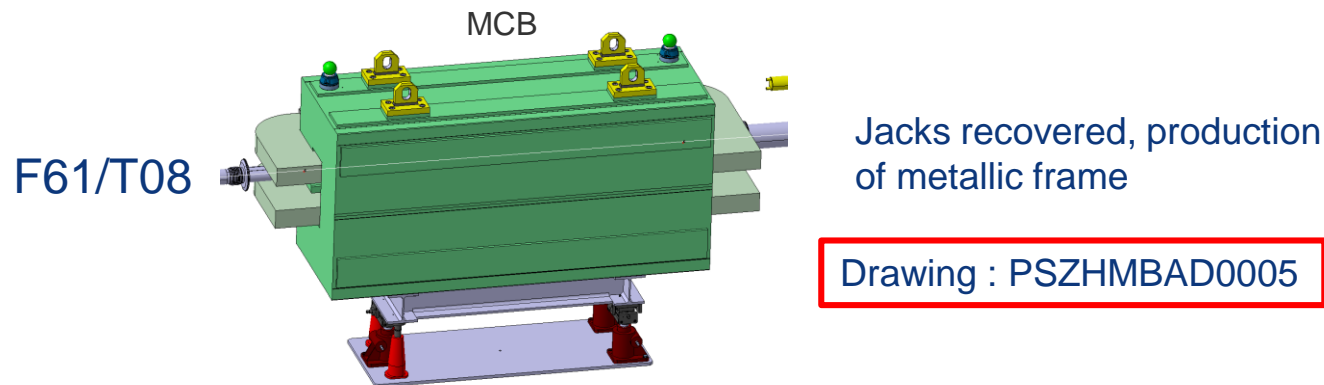
RESPONSIBLES :
Design: Damien
Production:
Assembly:

Support MCB

HMBAC	P01	Support for Bending magnets MCB, plug-in and Adjusting system, flat	2 in F63			
HMBAD	A01	Support for Bending magnets MCB, Adjusting system, flat	2 in F61 3 in T08			



RESPONSIBLES :
 Design: Vincent
 Production:
 Assembly:

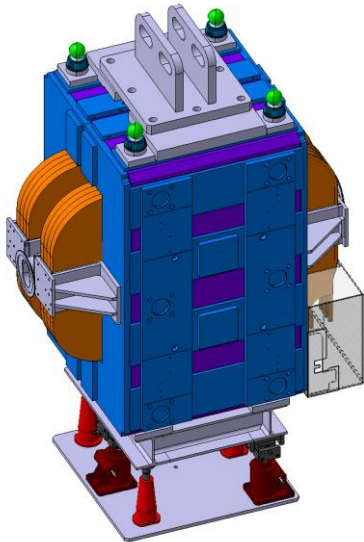


RESPONSIBLES :
 Design: Damien
 Production:
 Assembly:

Support M100L

HMBAE	A01	Support for Bending magnets M100, Adjusting system, tilted 1,7 degree	1 in T09			
	A02	Support for Bending magnets M100, Adjusting system, tilted 2 degree	1 in T10			

M100L



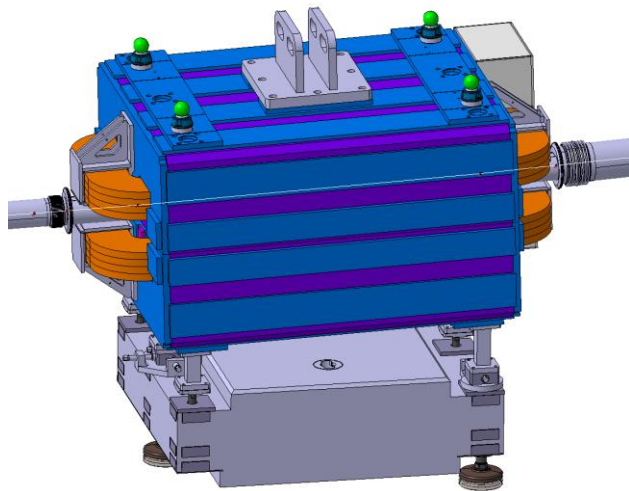
Jacks recovered, production of metallic frame

RESPONSIBLES :
Design: Damien
Production:
Assembly:

Support M200L

HMBAF	C01	Support for Bending magnets M200L, Adjusting concrete base, tilted 1,7 degree	2 on T09			
	C02	Support for Bending magnets M200L, Adjusting concrete base, tilted 2 degree	2 on T10			
	C03	Support for Bending magnets M200L, Adjusting concrete base, tilted 3.3 degree	2 on T11			

M200L



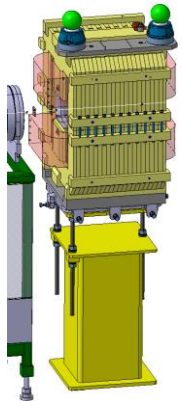
Concrete base
recovered +
production feet with
angle

RESPONSIBLES :
Design: Damien
Production:
Assembly:

Support MDXL + CR200

UNI		Support for MDXL + CR200	2 on T08 (MDXL) 1 in T09 (MDXL) 1 on T10 (MDXL) 2 on F62 (CR200)			?
HMCAD	U01	Support for Corrector magnets CR200, similar to universal support	1 on F61 (CR200)			

MDXL



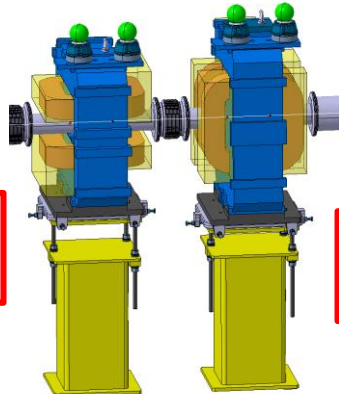
Adjusting table PSZBTVMC0001

RESPONSIBLES :
Design: Damien
Production:
Assembly:

CR200

CR200

F62

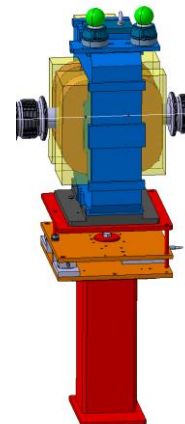


Drawing :
PSZHMCAF0001

Drawing :
PSZHMCAF0006

CR200

F61

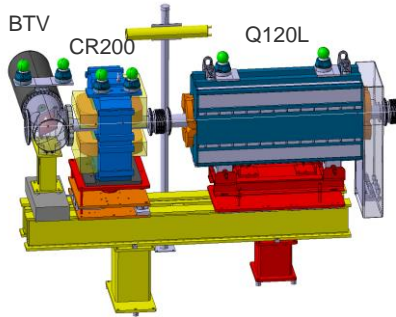


Different from standard support for bottom plate

Drawing : PSZHMCAD0002

Support Multiple Components

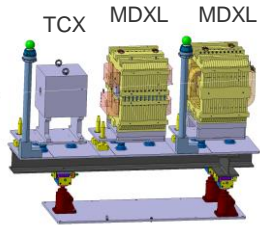
HLMAA	P01	Support for Multiple components, plug-in and adjusting system, flat	1 in T08 (for 2 magnets)			
HLMAB	P02	Support for Multiple components, plug-in and adjusting system, tilted 1,7 degree	1 in T09 (for 2 magnet + TCX)			
HLMAC	A01	Support for Multiple components, adjusting system, flat	1 in F61			



Beam recovered (to be cutted) and one foot to be added
 Beam to be taken from PS → **START PROCEDURE!**
 CR200 + Q120 interfaces to be produced

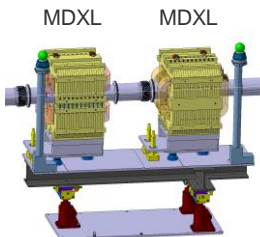
Drawings :
 Beam : PSZHLMAC0001
 CR200 : PSZHLMAC0004
 Q120L : PSZHLMAC0007

RESPONSIBLES :
 Design: Damien
 Production:
 Assembly:



T09

Calculation for V-Ball : OK
 Test by MME in progress



T08

RESPONSIBLES :
 Design: Vincent
 Production:
 Assembly:



ENGINEERING
DEPARTMENT

Thank you!