

H. Prin

With inputs from D. Ramos Duarte, M. Souchet, M. Bajko, H. Kos



The HiLumi LHC Design Study is included in the High Luminosity LHC project and is partly funded by the European Commission within the Framework Programme 7 Capacities Specific Programme, Grant Agreement 284404.

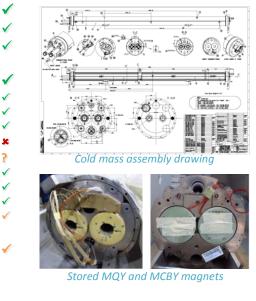


Q5 cryomagnets for point 6

- Feasibility study
 - Assembly procedures
 - Assembly drawings (LHCLMQ_A0022)
- Components availability
 - 4 MQY needed out of 7 existing spares (MQY20,21,27,28,29,30,31)
 - 1 MCBYA needed out of 3 existing spares (MCBYA39,40,41)
 - 1 MCBYB needed out of 3 existing spares (MCBYB42,43,44)
 - Solution To be chosen according to the performance

Solution of the second test before assembly

- Shells
- End covers
- Cold bore tubes
- Connection kits
- Tooling availability
 - Recovered from the insertion cold masses production
 - Qualified in bldg. 180 during the spared Q5L8 prod. For LS1
 - Welding press upgrade could be performed
- Feasibility study
 - Assembly procedures to be adapt from present Q5IR6 cryoassemblies
 - Assembly drawings
- Components availability
 - Vacuum vessel
 - Bottom tray
 - QQS service module
 - End covers
- Tooling availability
 - Secovered from the insertion cold masses production
 - Qualified in bldg. 180 during the spared Q5L8 prod. For LS1
 - ✤ Welding press upgrade to be performed



✓ ✓	On Going
×	
x	
×	
×	About one year for
×	procurement
×	hiarment
√	



Cryomagnet

Cold Masses

Production schedule



About 6 months to assemble the 2 cold masses.

The assembly can start once:

- The press is reconfigured
- Magnets are identified
- Magnets are cold tested if required

⇒Start during 2016?



2 months for the cryostating per cold mass

The assembly can start once:

• The components are delivered (including the cold mass)

⇒Start in the beginning of 2017?



About 5 weeks for each cryoassembly



Less than 1 month for each cryoassembly

 \Rightarrow Should be ready by the beginning of LS2

	Task	Task Name	Duration	Stat	Finish	1 40 731 A0 731
1	-	Magnets preparation (Inspection, alignment, electrical tests)	3 wits	Mar: 04/01/26	Fri 22/00/36	
2	-	Tooling preparation	1.5 more	Man 04/01/16	PH 12/02/36	
8	-	Int cold mass assembly	85 days	Mon 04/01/16	PH 25/04/35	
4	-	Shells preparation	2 days	Mar: 04/01/26	Mon 15/02/36	
5	-	magnets alignment	3 days	Tue 16/02/16	Thu 18/02/16	N
6	-	electrical connections and instrumentation	2 who	Pri 28/02/16	Thu 03/03/36	
7	-	Cold bore tube and upper shell installation	2 days	Fri 04/03/16	Mon 07/08/36	1
	-	Electrical tests	2 days	Tue 06/03/36	Wed 09/05/26	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
9	-	Longitudinal welding	1 wk	Thu 10/03/16	Wed 16/00/16	
28	-	Electrical tests	2 days	Thu 17/03/16	Hi 18/05/26	<u>s</u> .
11	-	Finishing	3 wks	Mae 21/03/26	Fri 08/04/25	
12	•	Preparation for cold texts	2 wks	Man 11/04/16	Rri 22/04/36	
25	-	Pressure/leak texts	1 wk	Man 25/04/16	RH 29/04/36	-
24	-	2nd cold mass assembly	56 days	Mon 21/03/26	Mon 06/06/26	
23	-	Shells preparation	2 days	Man 21/03/36	Tue 22/03/36	•
26	-	magnets alignment	3 days	Wed 23/03/16	Rri 25/09/36	N
ø	-	electrical connections and instrumentation	2 wks	Man 28/03/26	Pri 08/04/25	 _
28	-	Cold bore tube and upper shell installation	2 days	Mon 11/04/16	Tue 12/04/16	1 1
29	-	Electrical tests	2 days	Wed 13/04/26	Thu 14/04/16	A
20	-	Longitudinal welding	1 wk	Pri 25/04/16	Thu 21/04/16	L
23	-	Electrical tests	2 days	Pri 22/04/16	Mon 25/04/16	L
22	-	Finishing	3 whs	Tue 25/04/36	Mon 16/05/36	· · · · · · · · · · · · · · · · · · ·
23	-	Preparation for cold tests	2 wks	Tue 17/05/16	Man 30/05/36	t
24	-	Pressure/leak tests	1 wk	Tue 31/05/36	Mon 06/06/35	L

