

HVB production (starting scenario)

Today			Expected
200 ordered by Padova	200 ordered by Aachen	4 weeks	(End of May)
waiting for OK from tests		3 weeks	(Middle/End of June)
order of 1800		4 weeks	(Middle/End of July)
shipments (3-4 weeks) and assembly (5-6 weeks) in Beijing (I'm discussing with Chunhua and Niu for a 64 boards/day test jig)			(End of September)
Padova has to wait for authorization before to place the order			(Early of July)
order of 1800		4 weeks	(Middle/End of August)
shipments (3-4 weeks) and assembly (5-6 weeks) in Beijing			(End of October)

In middle of November about 3900 boards are assembled and their installation is going on.

Assembly in Beijing (assuming about 1500 boards/month)

	Time requested	Total assembled
1 batch from Aachen	from End of July to End of September	1800
1 batch from Padova	from End of September to Early of November	3600
2 batch from Aachen	from Middle of November to End of December	5600
2 batch from Padova	from Early of January '05 to Middle of February '05	7600
3 batch from Aachen	from Middle of February '05 to Middle of March '05	9100
3 batch from Padova	from Middle of March '05 to End of May '05	10600

Delivery and shipping to Beijing

		Boards ordered
1 batch from Aachen	End of July	1800
1 batch from Padova	Early of September	1800
2 batch from Aachen	End of September (middle of October)	2000
2 batch from Padova	Middle/End of November	2000 + 350 (HVB-8)
3 batch from Aachen	End of November (end of December)	1500
3 batch from Padova	End of January '05	1500

HVB Tests

Quick validation tests:

1. Ramp up the high voltage applied to the boards until discharge on dielectric will appear;
Thermal cycling between - 50° to + 40°;
Ramp up the high voltage applied to the boards until discharge on dielectric will appear;

The behaviour has to be the same before and after the thermal cycle for to consider them OK.

2. Thermal cycling;
Ageing in Climatic cell (Temp.=80°, RH=80%, Volt.=200V);
Test of the insulating resistance every day;

If, after 15 days, everything is OK the quick test is considered passed but the ageing will continue for other 30 days (at least).

3. Assembly and mounting them into an SL;
Test of efficiency, cross-talk and all that using standard chambers validation set up ;

The behaviour has to be the same (at least) as the previous version.

4. Section of some PCB to inspect the quality of materials and the production cycle;

These tests have to be performed onto each batch of the production.

Long time tests:

- **Test in climatic cell**
- **High pressure vessel at 2 bars with Ar-CO₂ atmosphere for 3 weeks at least**
 - High voltage test until discharge**
 - High voltage test with ON-OFF cycles for 15 days**
- **Micro discharges detection using radio frequencies method**
- **Gas chromatography on PCB**

Material procurement

Board to be installed on DT chambers:

9960 HVB-16ch

588 HVB-20ch

320 HVB-8ch

There are materials to assembly about 2000 PCBs (disregarding pins and gnd contacts).

To be ordered (with few spare):

53000	pcs	Murata 470 pF capacitors
150000	pcs	AMP sockets
1100	pcs	DP 190 glue cartridges (assuming 10 PCB/cartr.)
2000	pcs	nozzles
8000	m	Draka-Fileca Hv wire
2400	m	shrink tube
35100	pcs	Hybrid resistive networks
200000	pcs	HV pins
33000	pcs	GND contacts
65	Kg	welding wire