EDMS # 383772

CERN — European Organization for Nuclear Research

I S I E C

INITIAL SAFETY INFORMATION ON EXPERIMENTS AT CERN

DATE: 16.12.05 **EXPERIMENT:** COMPASS / PT
INSTALLATION START: 24.11.05 **AREA/BEAM:** EHN2 / M2 (888)
SPOKESMAN: A. MAGNON, G. MALLOT
GLIMOS : G. MALLOT **TEL:** 76423
FILLED IN BY: G. MALLOT, J. KOIVUNIEMI **TEL:** 76423

(1) TEST BEAMS :
LABS AT CERN (BLDG/ROOM):

(2) GASES, LIQUIDS, CRYOLIQUIDS
(used in detectors or kept in nearby containers)

Device Type	Fluid 1 + % Fluid 2 etc.	Volume	Abs. Press.	Max Flow
Sup. magnet	Liq. helium	600 l	1,1 bar	20 l/h
Dil. refrig.	Liq. helium	12 l	0 bar	20 l/h

(3) OTHER CHEMICALS
Toxic/Corrosive/Flammable metals, solvents, additives etc:

(4) ELECTRICITY

MAGNETS:

Magnet type	Power	Field	Gap Vol.	Max.water press.
Sup. magnet	10 kW	2.5 T	0.33 m^3	12 bar

High Voltage (> 1 KV)

Detector Type	Voltage	Current	Stored Energy	No of HV Channels	Remote Shut-off?

SHORT-CIRCUIT current > 5 mA for >50 V possible anywhere?
POWER dissipated by all electronics a) on detectors:
b) off detectors:
SPECIAL GROUNDING REQUIREMENTS?

(5) LIFTING AND HANDLING

Weight of heaviest single piece to install ? 7.5 t
Specially designed handling equipment? /
For which max. weight? /

(6) VACUUM TANK, PRESSURE TANK, CRYO TANK

Tank	Abs. pressure	Volume	Weakest part(s) of wall
mag. cryost.	0 bar	1 m^3	3mm Al

(7) IONIZING RADIATION

Beam intensity, radioact. Sources, depleted uranium, etc.

(8) NON-IONIZING RADIATION

	DETAILS (e.g. class of laser, origin of UV light, average power of microwaves or RF, pulsed or CW, ...)
LASER	
UV LIGHT	
MICROWAVES (300 MHz-30 GHz)	70 GHz , 10 W
RADIOFREQUENCY (1-300 MHz)	

(9) OTHER HAZARDS (or remarks):

(10) RISK ANALYSIS

cryo, electr. and magnetic risks discussed with SC

PLEASE RETURN THIS FORM TO THE DSO OF THE PH DEPARTMENT

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Date: 13.7.2000
Installation start: May 2000
Spokesman: F. Bradamante, S. Paul
GLIMOS:
Filled in by: R. Joosten

Experiment NA58 (COMPASS)
Area/beam: M2 Bat. 888

Tel.:
Tel.: 76796

GASES used in various detectors:

ector	gas mixture	volume	abs. pressure	max flow	comment
MicroMegas	Ne(80%), **Ethane**(10%), CF_4(10%)	12 l	1 atm	12 l/h	
Driftchambers	Ar(45 %), **Ethane**(45%), CF_4(10%)	1000 l	1 atm	40 l/h	typ. flow !
MWPC-A	Ar(74%), CF_4(20%), CO_2(6%)	1050 l	1 atm	350 l/h	closed circuit
MWPC-A*	Ar(74%), CF_4 20%), CO_2(6%)	190 l	1 atm	50 l/h	closed circuit
MWPC-B	Ar(74%), CF_4(20%), CO_2(6%)	540 l	1 atm	300 l/h	closed circuit
GEMs	Ar(70%), CO_2(30%)	14 l	1 atm	100 l/h	
RICH CsI	**CH_4**	320 l		800 l/h	baseline closed circuit
	CH_4(>80%), **Isobutane**(<20%)	320 l		800 l/h	option closed circuit
RICH radiator	C_4F_{10}	100000 l		10000 l/h	closed circuit
MW 1	Ar(70%), CO_2(30%)	3000 l	1.01 atm	360 l/h	baseline
	CF_4(90%), **Methane**(10%)	3000 l	1.01 atm	360 l/h	option closed circuit
MW 2	Ar(75%),**CH_4**(25%)	1800 l	1 atm	1000 l/h	
Straws	Ar(74%), CF_4(20%), CO_2(6%)	3000 l	?	<1000 l/h	closed circuit

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INITIAL SAFETY INFORMATION on EXPERIMENTS at CERN

DATE: 25.5.2000 EXPERIMENT:
INSTALLATION START: AREA/BEAM:
SPOKESMAN:
GLIMOS: TEL.:
FILLED IN BY: R. Joosten TEL.: 76796

1 TEST BEAMS:

LABS AT CERN (Bldg/room):

2 GASES, LIQUIDS, CRYOLIQUIDS

used in detectors (or kept in nearby containers):

Device Type	Fluid 1 + % Fluid 2 etc.	Volume	Abs. press.	Max. flow
MWI	Ar (70%), CO_2 (30%) (baseline)	3000 l	1.01 atm	360 l/h
	Ar (70%), Ethane (30%) (option)	3000 l	1.01 atm	360 l/h

3 Other CHEMICALS

toxic / corrosive / flammable metals, solvents, additives etc.:

4 ELECTRICITY:

MAGNETS:

Magnet type	Power	Field	Gap vol.	Max. water press.

HIGH VOLTAGE (> 1 KV)

Detector Type	Voltage	Current	Stored energy	No of HV channels	Remote shut-off?

SHORT-CIRCUIT currents > 5 mA for >50 V possible anywhere? ----------

POWER dissipated by all electronics a) on detectors: ----------

b) off detectors: ----------

SPECIAL GROUNDING requirements? ----------

5 LIFTING AND HANDLING :

Weight of heaviest single piece to install? ----------

Specially designed handling equipment? ----------

For which max. weights? ----------

6 VACUUM AND PRESSURE tanks (≠ 1 atm.):

Tank	Abs. pressure	Volume	Weakest part(s) of wall

7 RADIATION

Beam intensity, radioact. sources, depleted uranium, lasers, microwaves etc.:

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8 OTHER HAZARDS (or remarks):

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INITIAL SAFETY INFORMATION on EXPERIMENTS at CERN

DATE: 25/5/2000 EXPERIMENT: NA58 (COMPASS)
INSTALLATION START: ..... AREA/BEAM: M2 (Bat 888)
SPOKESMAN: .....
GLIMOS: ..... TEL.: .....
FILLED IN BY: R Jaasten TEL.: 76796

1 TEST BEAMS:

LABS AT CERN (Bldg/room): .....

2 GASES, LIQUIDS, CRYOLIQUIDS

used in detectors (or kept in nearby containers):

Device Type	Fluid 1 + % Fluid 2 etc.	Volume	Abs. press.	Max. flow
RICH CsI	CH_4 (baseline)	8×40 ℓ		800 ℓ/hr
	78% CH_4 ; <20%			
	Isobutane (option)	8×40 ℓ		800 ℓ/hr
RICH radiator	C_4F_{10}	100000 ℓ		10000 ℓ/hr

3 Other CHEMICALS

toxic / corrosive / flammable metals, solvents, additives etc.:

.....

4 ELECTRICITY:

MAGNETS:

Magnet type	Power	Field	Gap vol.	Max. water press.

HIGH VOLTAGE (> 1 KV)

Detector Type	Voltage	Current	Stored energy	No of HV channels	Remote shut-off?

SHORT-CIRCUIT currents > 5 mA for >50 V possible anywhere? ----------

POWER dissipated by all electronics a) on detectors: ----------

b) off detectors: ----------

SPECIAL GROUNDING requirements? ----------

5 LIFTING AND HANDLING :

Weight of heaviest single piece to install? ----------

Specially designed handling equipment? ----------

For which max. weights? ----------

6 VACUUM AND PRESSURE tanks (≠ 1 atm.):

Tank	Abs. pressure	Volume	Weakest part(s) of wall

7 RADIATION

Beam intensity, radioact. sources, depleted uranium, lasers, microwaves etc.:

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8 OTHER HAZARDS (or remarks):

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INITIAL SAFETY INFORMATION on EXPERIMENTS at CERN

DATE: 16/05/2000 EXPERIMENT: NA58 (Compass)
INSTALLATION START: 30/07/2000 AREA/BEAM: M2 (Bat 888)
SPOKESMAN: F. Bradamante, S. Paul
GLIMOS: G. Mallot TEL.: 76423
FILLED IN BY: O. DENISOV TEL.: 75744

1 TEST BEAMS: M2
LABS AT CERN (Bldg/room): Bat 891, 888

2 GASES, LIQUIDS, CRYOLIQUIDS
used in detectors (or kept in nearby containers):

Device Type	Fluid 1 + % Fluid 2 etc.	Volume	Abs. press.	Max. flow
MWPC (typ A)	74%Ar + 20%CF4 + 6%CO2	7 x 150	atmosph	50 l/h
MWPC (typ B)	= " =	6 x 90	atmosph.	50 l/h
MWPC A*	= " =	190	atm.	50 l/h.

3 Other CHEMICALS
toxic / corrosive / flammable metals, solvents, additives etc.:

Isopropyl alcohol,
Ethyl alcohol

⇨

4 ELECTRICITY:

MAGNETS:

Magnet type	Power	Field	Gap vol.	Max. water press.
N/A				

HIGH VOLTAGE (> 1 KV)

Detector Type	Voltage	Current	Stored energy	No of HV channels	Remote shut-off?
MWPC	4.5 kV	10 mA	—	90	Yes

SHORT-CIRCUIT currents > 5 mA for >50 V possible anywhere? Yes

POWER dissipated by all electronics a) on detectors: ?

b) off detectors: ?

SPECIAL GROUNDING requirements? Yes

5 LIFTING AND HANDLING :

Weight of heaviest single piece to install? 500 kg

Specially designed handling equipment? Yes

For which max. weights? 500 kg

6 VACUUM AND PRESSURE tanks (≠ 1 atm.):

Tank	Abs. pressure	Volume	Weakest part(s) of wall
N/A			

7 RADIATION

Beam intensity, radioact. sources, depleted uranium, lasers, microwaves etc.:

Beam int upto 2×10^8, Sr 90 Rad source 2-3 GBq,

8 OTHER HAZARDS (or remarks):

N/A

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INITIAL SAFETY INFORMATION on EXPERIMENTS at CERN

DATE: 9/05/00 EXPERIMENT: NA58
INSTALLATION START: May 25 AREA/BEAM: M2
SPOKESMAN: E. Gadamoork, S. Paul
GLIMOS: TEL.:
FILLED IN BY: A. MAGNON TEL.:

1 TEST BEAMS:
LABS AT CERN (Bldg/room):

2 GASES, LIQUIDS, CRYOLIQUIDS
used in detectors (or kept in nearby containers):

Device Type	Fluid 1 + % Fluid 2 etc.	Volume	Abs. press.	Max. flow
DRIFTS	Ar/Ethane/CF4	45 l	1 b	5 l/h
	45/45/10			
MICROMEGAS	Ar/Isobutane			
	90/10			
	Neon/Ethane/CF4	6 l	1 b	6 l/h
	80/10/10			

3 Other CHEMICALS
toxic / corrosive / flammable metals, solvents, additives etc.:

4 ELECTRICITY:

MAGNETS:

Magnet type	Power	Field	Gap vol.	Max. water press.

HIGH VOLTAGE (> 1 KV)

Detector Type	Voltage	Current	Stored energy	No of HV channels	Remote shut-off?
DRIFTS	3kV	few mA		7	
Micromegas	2kV	1A		2	
RPCs	2kV	1A		2	

SHORT-CIRCUIT currents > 5 mA for >50 V possible anywhere?

POWER dissipated by all electronics a) on detectors:

b) off detectors:

SPECIAL GROUNDING requirements?

5 LIFTING AND HANDLING :

Weight of heaviest single piece to install?

Specially designed handling equipment?

For which max. weights?

6 VACUUM AND PRESSURE tanks (≠ 1 atm.):

Tank	Abs. pressure	Volume	Weakest part(s) of wall

7 RADIATION

Beam intensity, radioact. sources, depleted uranium, lasers, microwaves etc.:

8 OTHER HAZARDS (or remarks):

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INITIAL SAFETY INFORMATION on EXPERIMENTS at CERN

DATE: 5.5.2000
EXPERIMENT: COMPASS
INSTALLATION START: June
AREA/BEAM: 888 / M2
SPOKESMAN: F. Bradamante, S. Paul
GLIMOS: .....
TEL.: .....
FILLED IN BY: B. Ketzer
TEL.: 76002

1 TEST BEAMS:

LABS AT CERN (Bldg/room):

2 GASES, LIQUIDS, CRYOLIQUIDS used in detectors (or kept in nearby containers):

full COMPASS setup (20 detectors)

Device Type	Fluid 1 + % Fluid 2 etc.	Volume	Abs. press.	Max. flow
GEM detectors	Ar / CO_2 (70%/30%)	14 l	Atmosph. P.	100 l/h

3 Other CHEMICALS toxic / corrosive / flammable metals, solvents, additives etc.:

4 ELECTRICITY:

MAGNETS:

Magnet type	Power	Field	Gap vol.	Max. water press.

HIGH VOLTAGE (> 1 KV)

Detector Type	Voltage	Current	Stored energy	No of HV channels	Remote shut-off?
GEM detectors	4 kV	200 μA	240 mJ	40	yes

SHORT-CIRCUIT currents > 5 mA for >50 V possible anywhere? no

POWER dissipated by all electronics a) on detectors: 360 W (20 detectors)

b) off detectors: 120 W

SPECIAL GROUNDING requirements? no

5 LIFTING AND HANDLING :

Weight of heaviest single piece to install? /

Specially designed handling equipment? /

For which max. weights? /

6 VACUUM AND PRESSURE tanks (≠ 1 atm.):

Tank	Abs. pressure	Volume	Weakest part(s) of wall

7 RADIATION

Beam intensity, radioact. sources, depleted uranium, lasers, microwaves etc.:

8 OTHER HAZARDS (or remarks):

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INITIAL SAFETY INFORMATION on EXPERIMENTS at CERN

DATE: 3.05.2000 EXPERIMENT:
INSTALLATION START: End of 2000 AREA/BEAM:
SPOKESMAN:
GLIMOS: TEL.:
FILLED IN BY: I. Khokhlov TEL.:

1 TEST BEAMS:

LABS AT CERN (Bldg/room):

2 GASES, LIQUIDS, CRYOLIQUIDS

used in detectors (or kept in nearby containers):

Device Type	Fluid 1 + % Fluid 2 etc.	Volume	Abs. press.	Max. flow
MW2 - drift tubes	75% Ar + 25% CH_4	≈ 1800 l	1 b	1000 l

3 Other CHEMICALS

toxic / corrosive / flammable metals, solvents, additives etc.:

no

4 ELECTRICITY:

MAGNETS:

Magnet type	Power	Field	Gap vol.	Max. water press.

HIGH VOLTAGE (> 1 KV)

Detector Type	Voltage	Current	Stored energy	No of HV channels	Remote shut-off?
MW2 - Drift tubes	3kV	1mA	3J	1800	Yes

SHORT-CIRCUIT currents > 5 mA for >50 V possible anywhere?

POWER dissipated by all electronics a) on detectors: ~2 kW

b) off detectors:

SPECIAL GROUNDING requirements?

5 LIFTING AND HANDLING :

Weight of heaviest single piece to install?

Specially designed handling equipment?

For which max. weights?

6 VACUUM AND PRESSURE tanks (≠ 1 atm.):

Tank	Abs. pressure	Volume	Weakest part(s) of wall
~~Central gas supply~~			

7 RADIATION

Beam intensity, radioact. sources, depleted uranium, lasers, microwaves etc.:

8 OTHER HAZARDS (or remarks):

PLEASE RETURN THIS FORM TO THE DSO OF THE PPE DIVISION

Yu. Khokhlov Kad.