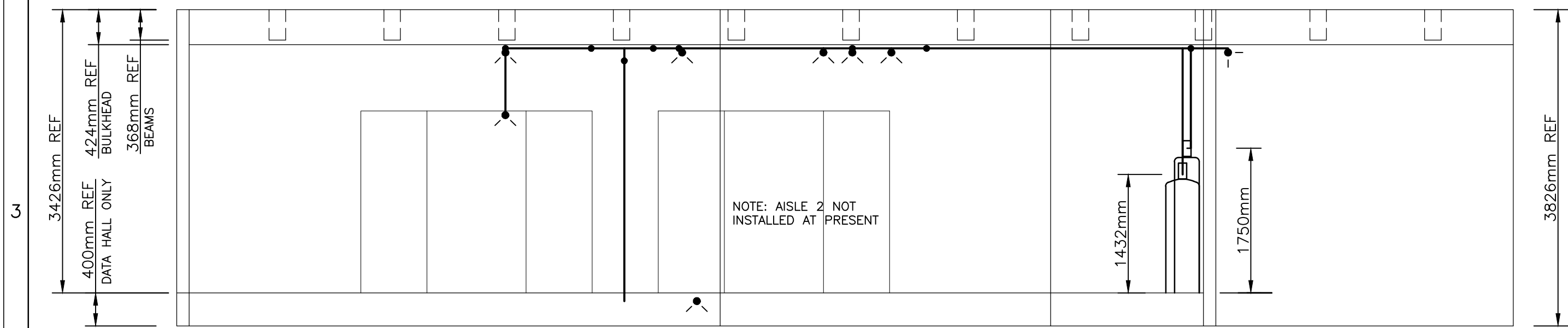


PLAN VIEW MECHANICAL LAYOUT SCALE 1:50



ELEVATION VIEW SCALE 1:50

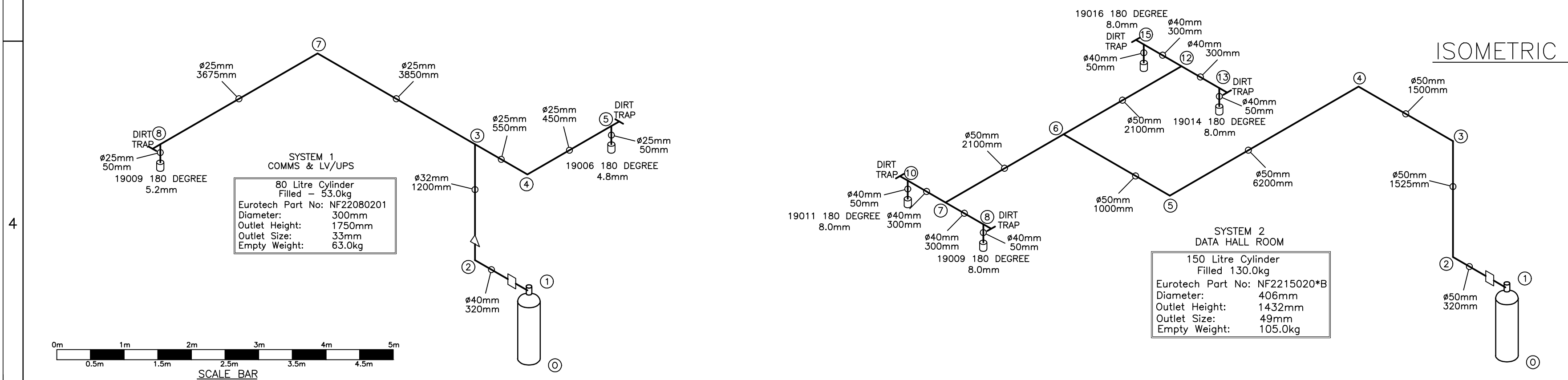


Table & Maximum Distance Between Pipework Supports

NOTE: All nozzles are to have a secure support within 100mm

Pipe Size (mm) Maximum Distance Between Supports (metres)

15	1.5
20	1.8
25	2.1
32	2.4
40	2.7
50	3.4
80	3.7
100	4.3
150	5.2
200	5.8

Minimum Pipework Distance Between Tee & Fitting

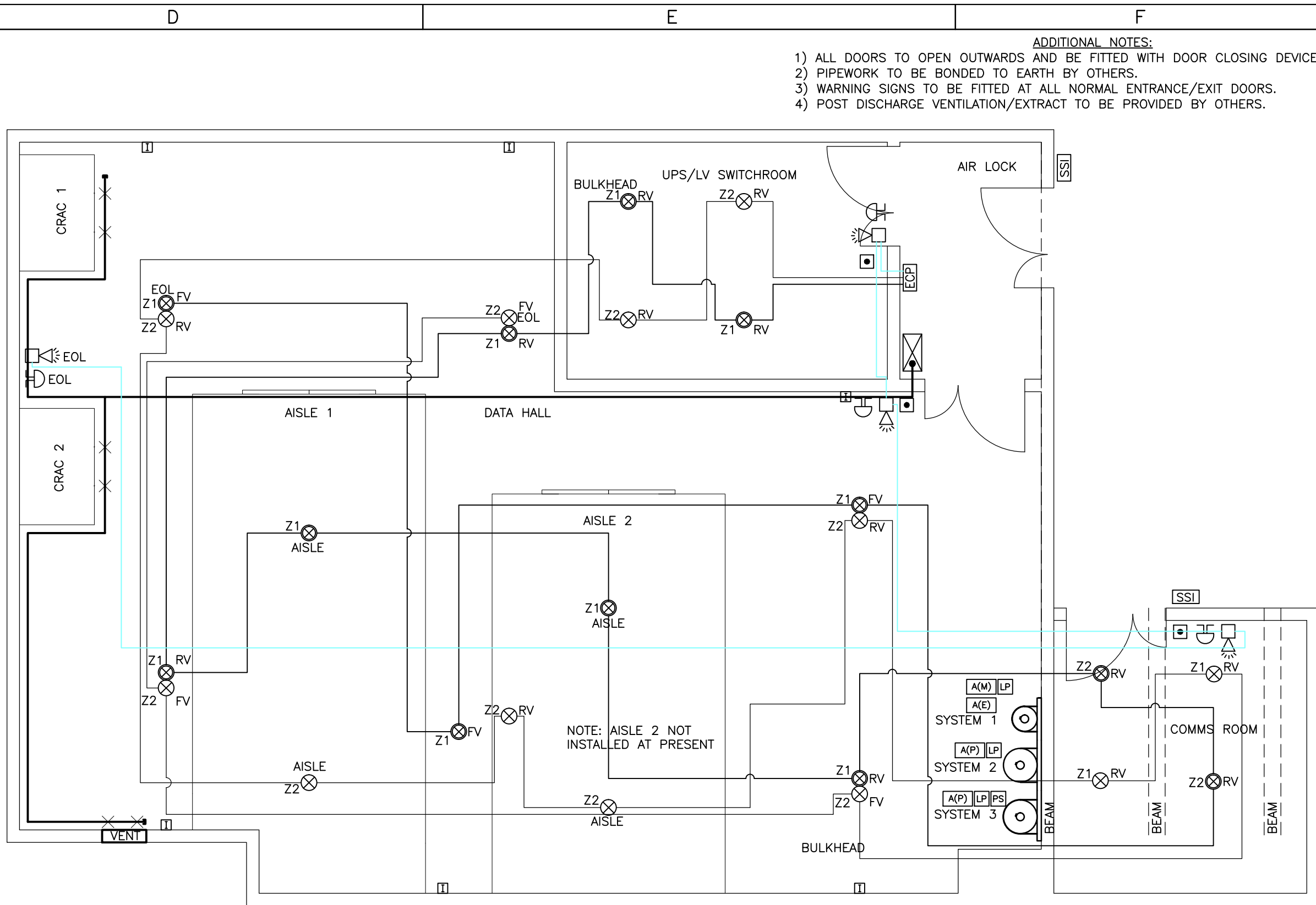
Tee Size (mm) Minimum Distance Between Fittings (mm)

15	150
20	200
25	250
32	320
40	400
50	500
80	800

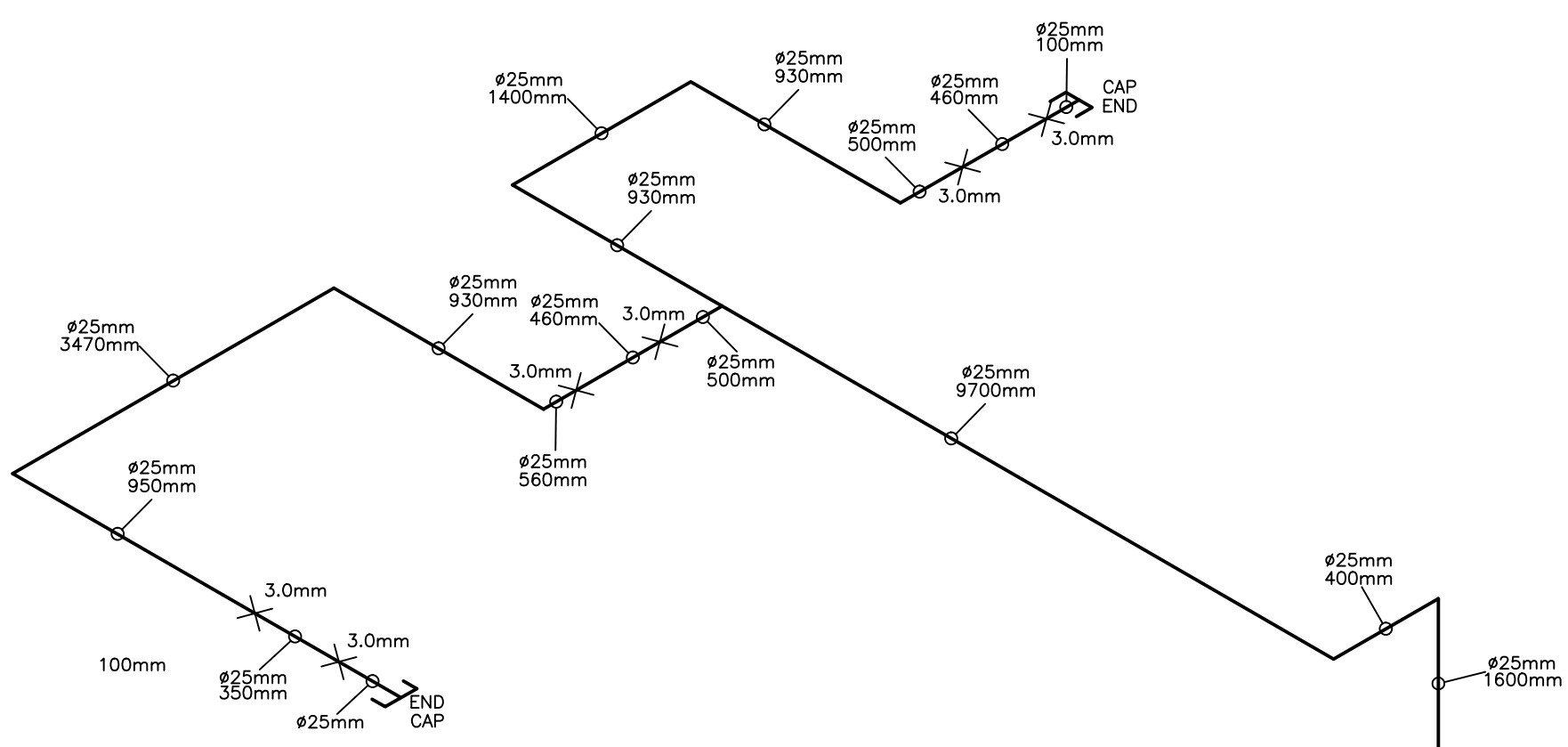
TABLE 7. STEEL PIPEWORK

NOMINAL PIPE SIZE	PUBLICATION	TYPE OF PIPE	MINIMUM WALL THICKNESS
25 BAR SYSTEMS			
UP TO AND INCLUDING 50mm	BS EN 10255:2004	BW	HEAVY
	BS EN 10217-1:2002	S	430
	BS EN 10217-1:2002	HFS or CFS	360 or 430
	ASTM A106-77	HF or CD	A or B
FITTINGS:			
a) UP TO AND INCLUDING 20mm IN DIAMETER			
1) SCREWED, COMPLYING WITH BS 1256, BS EN 10241:2000 OR CLASS 150 OF ANSI B16.3.			
b) ABOVE 20mm UP TO AND INCLUDING 80mm IN DIAMETER.			
1) SCREWED, COMPLYING WITH BS EN 10241:2000 OR CLASS 300 OF ANSI B16.3.			
NOTE: ALL PIPEWORK & FITTINGS TO BE GALVANISED.			
PIPEWORK TO BE Banded OR Painted RED FOR IDENTIFICATION			

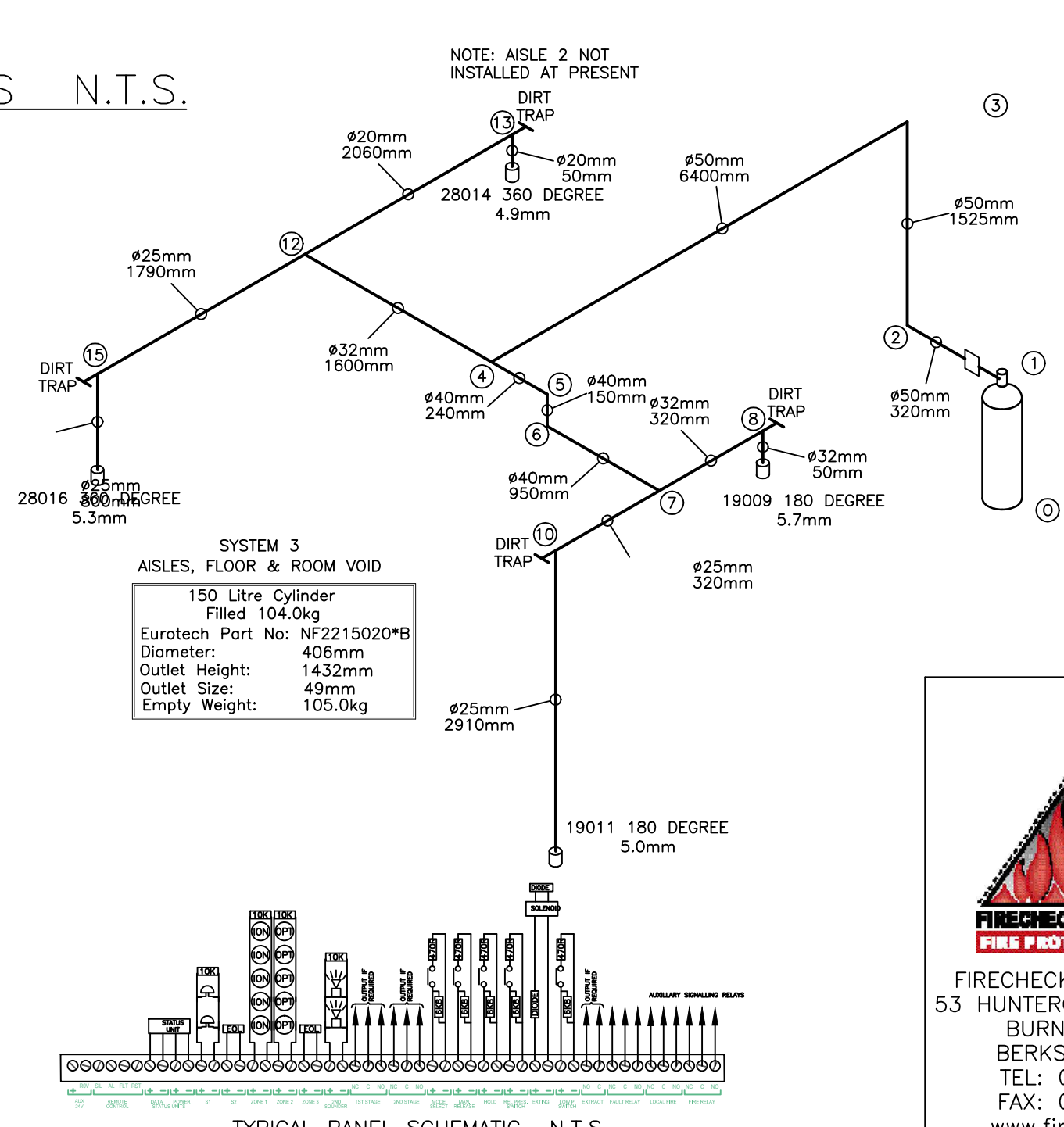
RECOMMENDED PRESSURE RELIEF OPENING (500 Pa) 100% FREE VENT AREA
DATA HALL ROOM VOID (INCLUDING AISLES) - PLASTERBOARD WALLS
NEGATIVE SURFACE AREA = 0.1223m ²
VENT SIZE = 350mm SQ
POSITIVE SURFACE AREA = 0.0315m ²
VENT SIZE = 178mm SQ
DATA HALL FLOOR VOID - 40mm THICK TILES
NEGATIVE SURFACE AREA = 0.0147m ²
VENT SIZE = 122mm SQ
POSITIVE SURFACE AREA = 0.0038m ²
VENT SIZE = 62mm SQ
1 off APS PVD500(FVA 0.225m ²) SUPPLIED, TO BE INSTALLED BY OTHERS
UPS/LV SWITCHROOM - PLASTERBOARD WALLS
NEGATIVE SURFACE AREA = 0.0160m ²
VENT SIZE = 127mm SQ
POSITIVE SURFACE AREA = 0.0041m ²
VENT SIZE = 65mm SQ
1 off APS PVD150 (FVA 0.04m ²) SUPPLIED, TO BE INSTALLED BY OTHERS
COMMS ROOM - PLASTERBOARD WALLS
NEGATIVE SURFACE AREA = 0.0145m ²
VENT SIZE = 121mm SQ
POSITIVE SURFACE AREA = 0.0037m ²
VENT SIZE = 61mm SQ
1 off APS PVD150 (FVA 0.04m ²) SUPPLIED, TO BE INSTALLED BY OTHERS



PLAN VIEW ELECTRICAL & VESDA LAYOUT SCALE 1:50



ISOMETRIC VIEWS N.T.S.



TYPICAL PANEL SCHEMATIC N.T.S.

- ADDITIONAL NOTES:
- 1) ALL DOORS TO OPEN OUTWARDS AND BE FITTED WITH DOOR CLOSING DEVICES.
 - 2) PIPEWORK TO BE BONDED TO EARTH BY OTHERS.
 - 3) WARNING SIGNS TO BE FITTED AT ALL NORMAL ENTRANCE/EXIT DOORS.
 - 4) POST DISCHARGE VENTILATION/EXTRACT TO BE PROVIDED BY OTHERS.

NOTE: ALL DIMENSIONS MUST BE CHECKED ON SITE AND NOT SCALED FROM THIS DRAWING.

DESIGN PARAMETERS:

INSTALLATION RULES:

BS EN 15004:2008
FOR GASEOUS FIRE FIGHTING SYSTEMS
PRESSURE EQUIPMENT REGULATIONS
(SI 1999/2001) PED CAT: 1
PRESSURE EQUIPMENT DIRECTIVE 27/23/EC

DATA HALL

ROOM VOLUME :- 237.12m³
QUANTITY OF FM-200 REQUIRED :- 163.2kg
AISLE 1 VOLUME :- 35.62m³
QUANTITY OF FM-200 REQUIRED :- 25.2kg
AISLE 2 VOLUME :- 29.48m³
QUANTITY OF FM-200 REQUIRED :- 25.1kg
FLOOR VOLUME :- 36.25m³
QUANTITY OF FM-200 REQUIRED :- 20.6kg

ROOM HEIGHT :- 3426mm

FLOOR HEIGHT :- 400mm

ACHIEVED CONCENTRATION - 9.38%

UPS/LV SWITCHROOM

ROOM VOLUME :- 40.54m³
QUANTITY OF FM-200 REQUIRED :- 27.7kg
ROOM HEIGHT :- 3826mm
ACHIEVED CONCENTRATION - 9.31%

COMMS ROOM

ROOM VOLUME :- 36.86m³
QUANTITY OF FM-200 REQUIRED :- 25.4kg
ROOM HEIGHT :- 3826mm
ACHIEVED CONCENTRATION - 9.32%

DESIGN CONCENTRATION BASED ON:

ROOM & CEILING = 8.5%@20°C

FLOOR = 8.5%@20°C

Note: Achieved concentration is based upon maximum room temperature (30°C) and net volume(5% occupancy).

FM200 HYDRAULIC INFORMATION	
AREA	CALC SHEET REFERENCE
SYSTEM 1 COMMS & LV/UPS	2859-01C.prj
SYSTEM 2 DATA HALL ROOM	2859-02C.PRJ
SYSTEM 3 AISLES, FLOOR & ROOM VOID	2859-03C.prj
FM-200 CYLINDER	OPTICAL SMOKE DETECTOR
NOZZLE (360°)	IONISATION SMOKE DETECTOR
NOZZLE (180°)	HEAT DETECTOR
ACTUATOR (MANUAL)	CEILING VOID REMOTE INDICATOR
ACTUATOR (PNEUMATIC)	FLOOR VOID REMOTE INDICATOR
ACTUATOR (ELECTRICAL)	SOUNDER WITH XENON BEACON
PRESSURE SWITCH	BELL
LOW PRESSURE SWITCH	EXTINGUISHANT CONTROL PANEL
DOOR NOTICE	EXTINGUISHANT HOLD OFF
VESDA DETECTION PANEL	SLAVE STATUS INDICATOR
PIPEWORK (HIGH LEVEL)	BREAK GLASS UNIT
PIPEWORK (LOW LEVEL)	MANUAL GAS RELEASE UNIT
KEY SWITCH	INTERCONNECTING BOX
FIRE ALARM PANEL	INTERFACE UNIT
FIRE ALARM REPEATER PANEL	
EXTINGUISHANT EXTRACT CONTROL SWITCH	

D	16/06/15	AS INSTALLED
C	06/05/15	CYLINDER DETAILS AMENDED AS ADVISED BY MANUFACTURER
B	29/04/15	AMENDMENTS MADE FOLLOWING SURVEY
A	21/04/15	FOR APPROVAL
REV	DATE	REVISION

SUDLOWS

BRIGHTON DIGITAL EXCHANGE
NEW ENGLAND HOUSE
NEW ENGLAND STREET
BRIGHTON & HOVE
EAST SUSSEX BN1 4GH

TITLE
DATA HALL, COMMS ROOM &
UPS/LV SWITCHROOM FM-200
FIRE PROTECTION SYSTEM

DRAWN SJH DATE 21/04/15

SCALE 1:50 @ A1

CHECKED DATE

DRAWING No. CC2859/01

REV D

