

Ozone Systems MCP-XTL Range



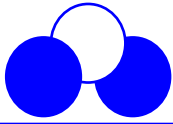
Ozone Production from Air, PSA, LOX

Ozone Output of 40 g/h and 1,400 g/h

Low Power Consumption

Compact and Completely Housed

Complete Process Instrumentation



Series MCP-XTL

The MCP-XTL range is the OZONO ELETTRONICA INTERNAZIONALE S.R.L. midsize range of ozone generators. Five different types of systems are able to produce between 52 g/h and 1,400 g/h of ozone with very low power consumption and with ozone concentrations between 2 weight % and 15 weight %.

The power consumption for ozone production from PSA and LOX is very competitive. Regarding ozone production from air OZONO ELETTRONICA INTERNAZIONALE S.R.L. is the leading manufacturer of ozone systems with respect to power consumption.

All systems have a compact design and are integrated into a painted stainless steel cabinet – even including the air feed gas drying system for ozone production from air. The complete system complies with IP54 requirements. To ensure a safe and reliable ozone production all systems are equipped with complete process instrumentation.

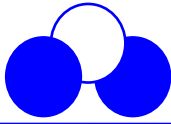
The systems are delivered with a text display as human-machine-interface. A Profibus-Modbus-Ethernet DP extension is available as an option.

The ozone generators are available stand-alone or as complete systems including ozone introduction system, ozone monitors and ozone destruction systems etc.

Since four decades the ozone systems successfully and reliably operate in different applications like:

- Drinking water disinfection
- Removal of iron or manganese
- Process water conditioning
- Cooling water treatment
- Odour control
- Swimming pools and spas
- Aquaculture like fish farming and zoos
- Removal of colours and surfactants from textile industry
- Removal of pollutants from petrochemical industry

State-of-the-art technology combined with high quality materials and components form reliable ozone systems that operate even under different environmental conditions. The MCP-XTL ozone systems meet high demands and are a future-proof investment for their owners and operators.



Technical Data Sheet

MCP-XT	MCP-XT	1	2	4	7	14
Produzione Ozono [g/h]¹ Aria: 2% wt (26g/Nm ³) Aria: 3% wt (40g/Nm ³) PSA/LOX: 6% wt (87 g/Nm ³) PSA/LOX: 10% wt (148 g/Nm ³)	Ozone Performance [g/h]¹ Air: 2% wt (26 g/Nm ³) Air: 3% wt (40 g/Nm ³) PSA/LOX: 6% wt (87 g/Nm ³) PSA/LOX: 10% wt (148 g/Nm ³)	52,5 42 100 70,3	105 84 200 140,6	210 168 400 281,2	367,5 294 700 492,1	735 588 1,400 984,2
Alimentazione Gas [Nm³/h] Aria con 2% wt ² Aria con 3% wt ² LOX con 6% wt LOX con 10% wt	Feed Gas Supply [Nm³/h] Air with 2% wt ² Air with 3% wt ² LOX with 6% wt LOX with 10% wt	2.4 1.3 1.15 0.67	4.8 2.6 2.30 1.34	9.6 5.2 4.60 1.90	16.7 8.9 8.04 3.32	33.4 17.8 16.16 6.64
Domanda acqua di raffreddamento[m³/h]	Cooling Water Demand m³/h]	0,140	0,280	0,600	0,980	1,96
Cons. Ener. @ PCC [kW] Aria 2% Aria3%-O ₂ 10%	Power Cons. @ PCC³ [kW] Air 2% Air%-O ₂ 10%	0,73 0.64	1.46 1.31	2.92 2.62	5,12 4.58	10,23 9.15
Dimensioni [mm] LaxLuxH	Dimensions [mm] Depth x Width x Height	600 x 800 1,960	600 x 800 1,960	800 x 800 1,960	800 x 800 1,960	800 x 1,800 1,960
Peso [kg]	Weight [kg]	150	160	350	470	600

1. Data based on cooling water temperature of 15° C,
2. Lower ozone concentration generate higher ozone output;
3. Including 18% for dryer operation;
4. Point of common connection

Features

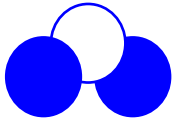
Water Cooled Plasma Cells
Enclosed Cabinet Complying with IP54
Automatic Isolation Valves
Air Feed Gas Drying Incorporated (as needed)
Air Ventilation for Electrical Equipment
PLC for Operation
Touch Panel HMI

Monitoring

Inlet Gas Pressure
Cooling Water Flow
Ozone Temperature
Ozone Flow
Air Dryer Pressure
Dried Air Pressure

Options

Air Conditioning System
Ozone & Dissolved Ozone Monitor
PSA System & Compressor
Air Ventilation for Electrical Equipment
Diffusers / Pump Injector System
Ozone Destruction System
Cooling Water System



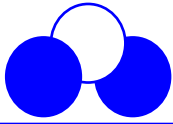
SITE CONDITIONS	
Design altitude	< 1000 m
Ambient temperature	5 – 35 °C
Humidity	< 80 %
Particles	< 5 mg/Nm ³
Pressure	1 bar
Gas and Noxious Vapors	NO

ELECTRICAL DATA	
Mains voltage	400 Vac ± 10 %
Frequency	50 – 60 Hz
Power Factor	0.86 – 0.98 (cos φ)
Regulation Range	10 – 100 %
Protection Class	IP 54
Standards	EN / IEC / ISO
Compliance	CE

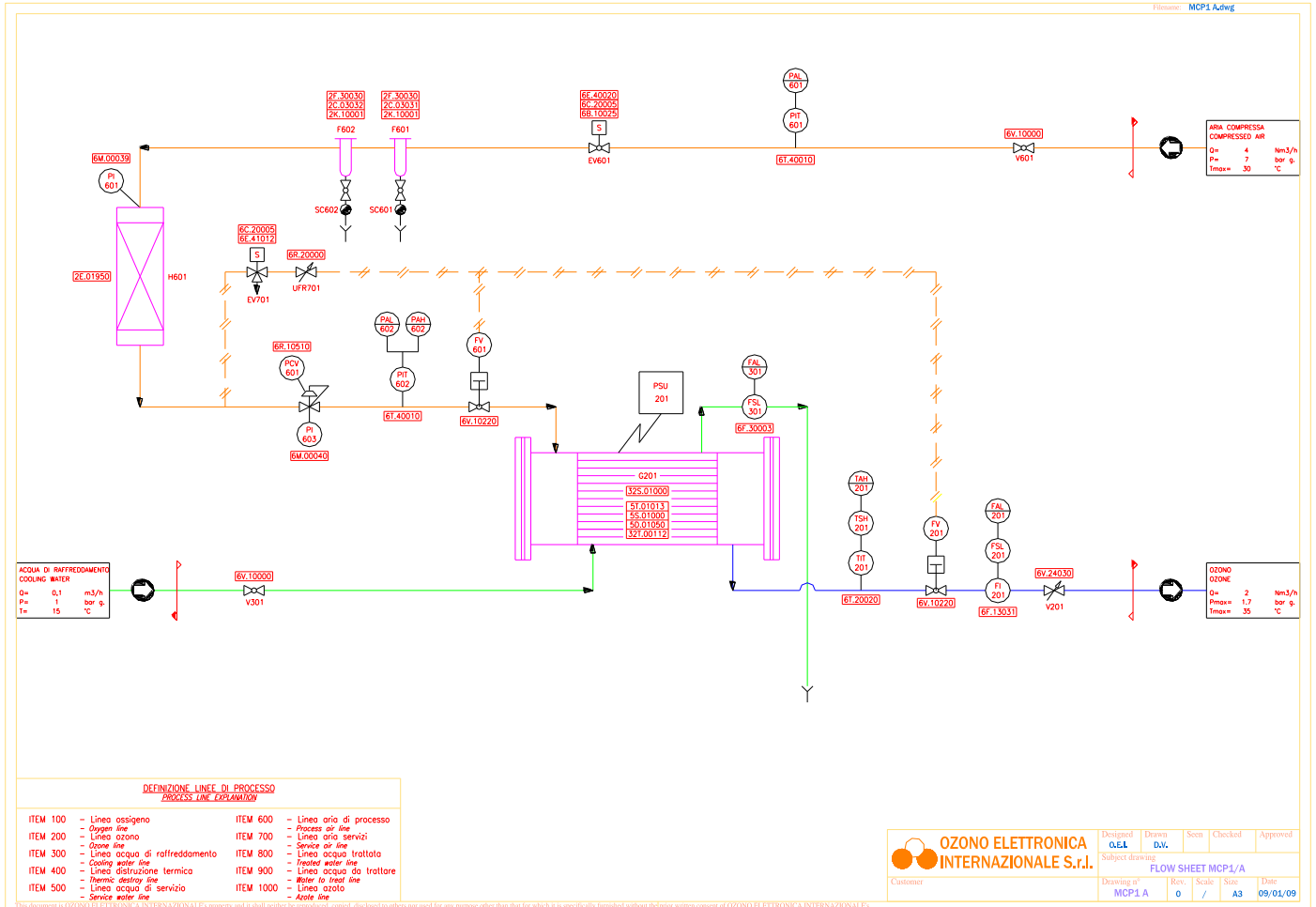
CONTROL & SIGNAL	
Ozone generator Start / Stop	Local / remote
Ozone production regulation	Local / remote (4-20 mA)

MATERIALS	
In contact with ozone	AISI 316 L, Viton, PTFE
In contact with water	304 L, 316 L
Enclosure	Mild Steel

SIGNAL TO MASTER CONTROLLER	
Inverter modulation	Potential free contacts
Alarms	Potential free contacts



**MCP 1/A
Flow sheet**

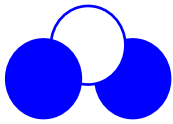


OZONO ELETTRONICA INTERNAZIONALE S.r.l.

Designed	Drawn	Seen	Checked	Approved
O.E.L.	D.V.			

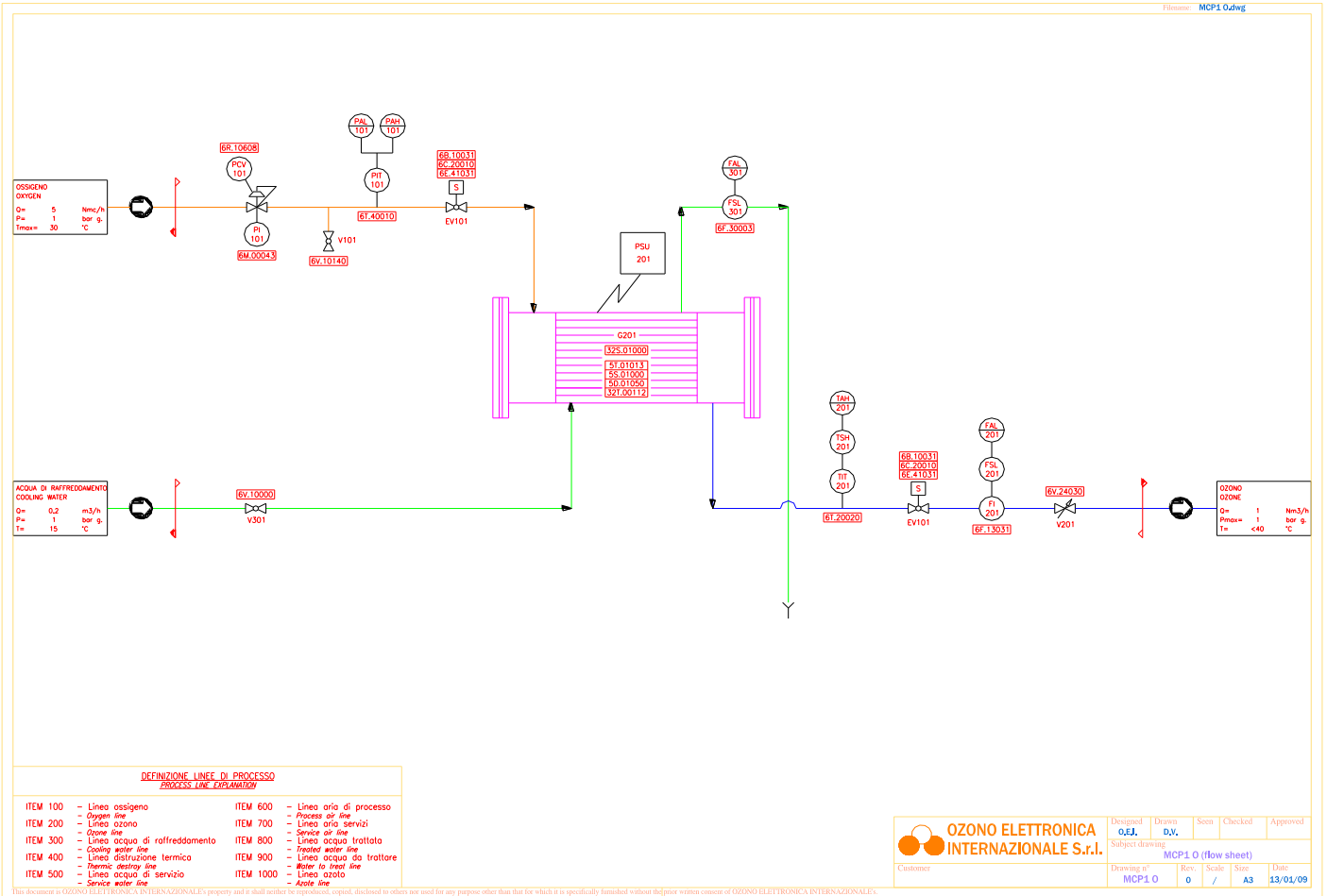
Subject drawing: **FLOW SHEET MCP1/A**

Drawing n°	Rev.	Scale	Size	Date
MCP1/A	0	/	A3	09/01/09



MCP 1/O Flow sheet

Filename: MCP1.0.dwg



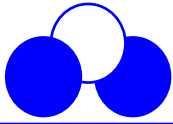
OZONO ELETTRONICA INTERNAZIONALE S.r.l.

Designed	Drawn	Seen	Checked	Approved
O.E.J.	D.V.			

Subject drawing: MCP1 O (flow sheet)

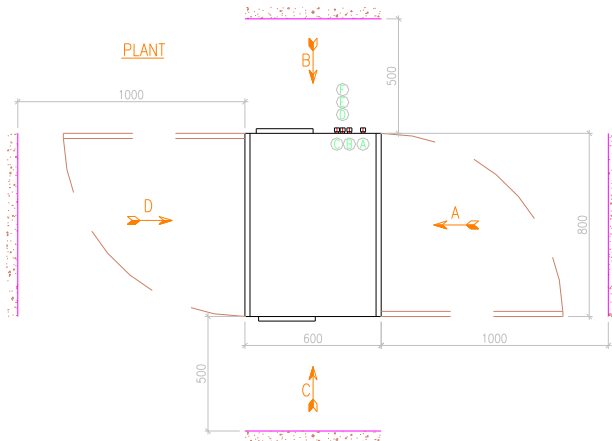
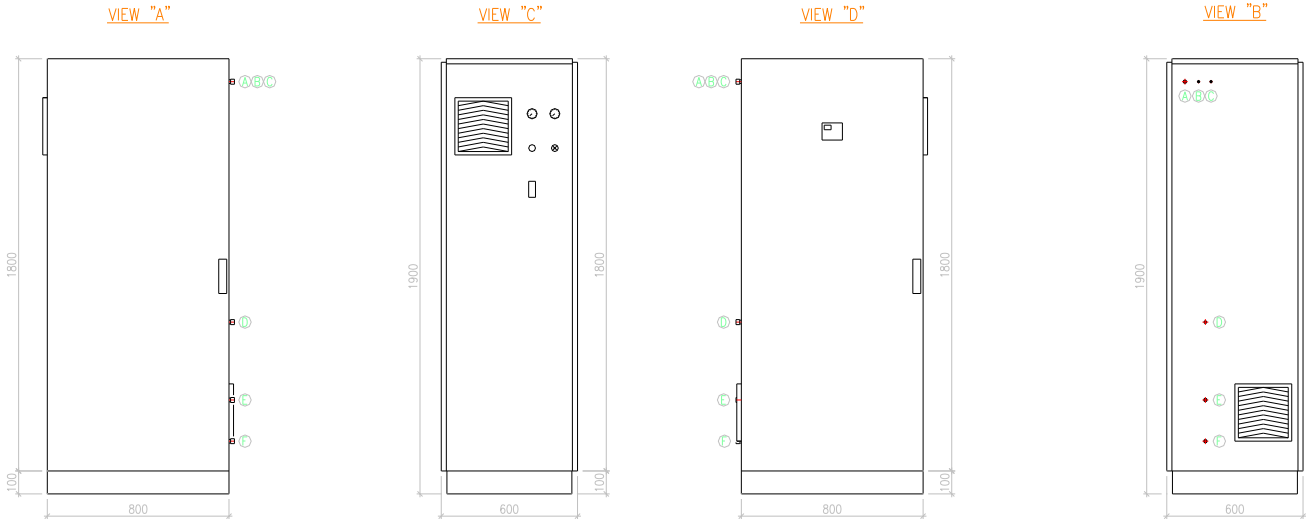
Drawing n°	Rev.	Scale	Size	Date
MCP1 O	0	/	A3	13/01/09

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**MCP 1/A
Layout**

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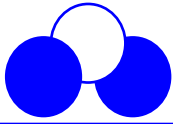


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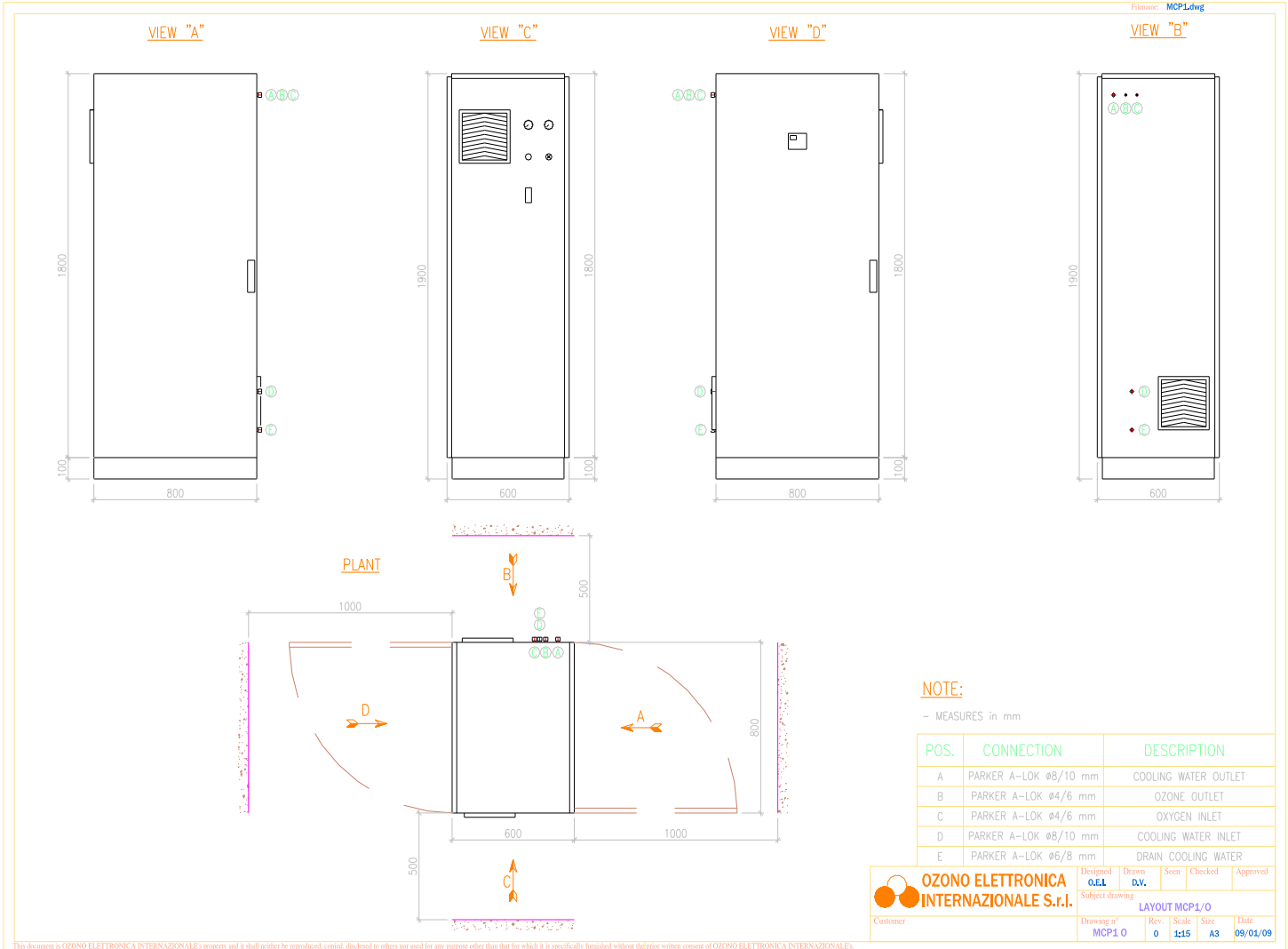
- MEASURES in mm

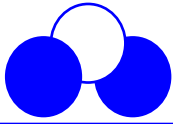
POS.	CONNECTION	DESCRIPTION
A	PARKER A-LOK Ø8/10 mm	COOLING WATER OUTLET
B	PARKER A-LOK Ø4/6 mm	OZONE OUTLET
C	PARKER A-LOK Ø4/6 mm	AIR INLET
D	PARKER A-LOK Ø8/10 mm	CONDENSE DRAIN
E	PARKER A-LOK Ø8/10 mm	COOLING WATER INLET
F	PARKER A-LOK Ø6/8 mm	DRAIN COOLING WATER

	Designed O.E.I.	Drawn D.V.	Seen	Checked	Approved
	Subject drawing				
Customer	LAYOUT MCP1-2/A				
	Drawing n° MCP1-2 A	Rev. 0	Scale 1:15	Size A3	Date 09/01/09

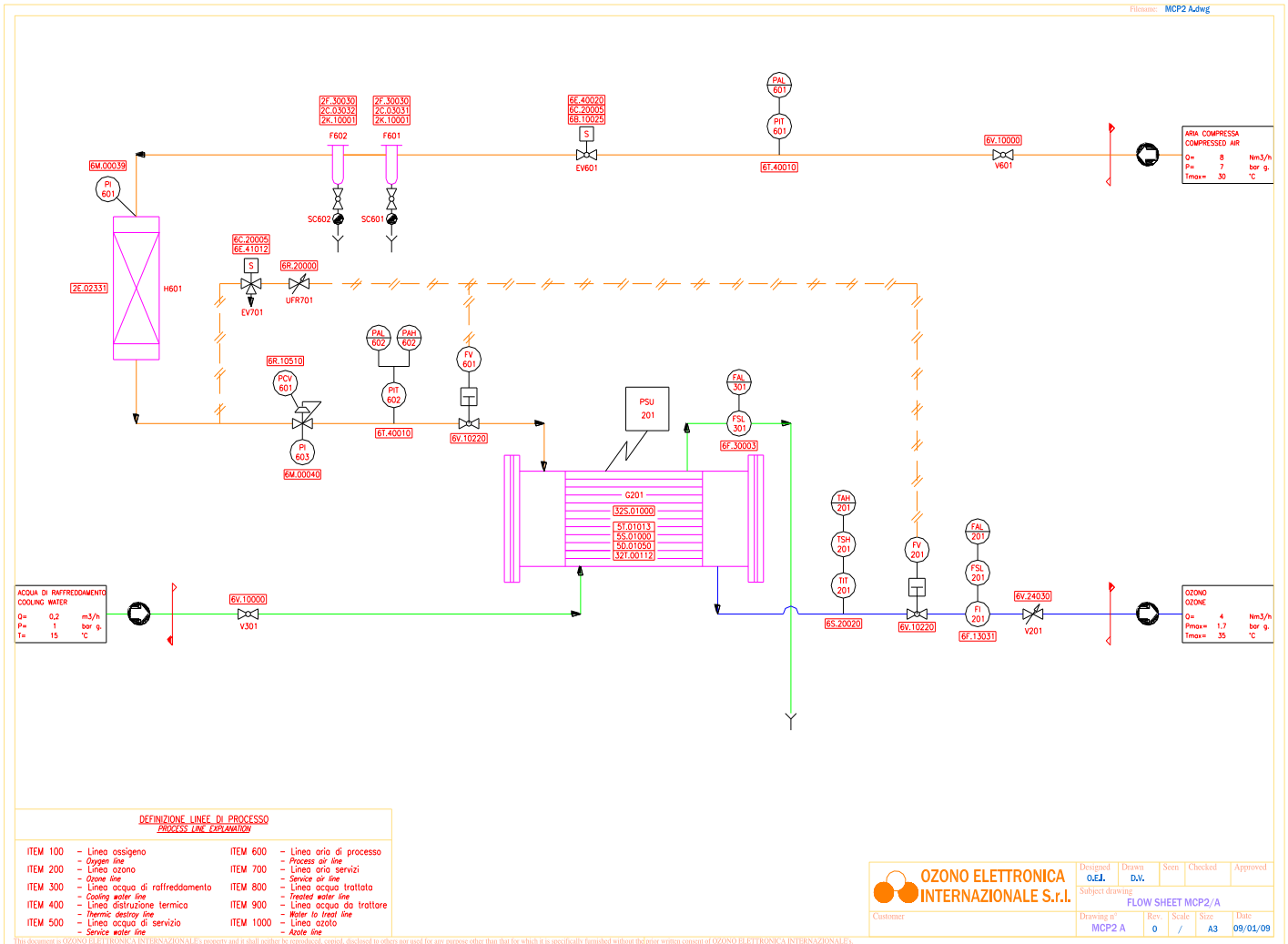


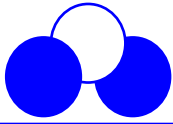
**MCP 1/O
Layout**





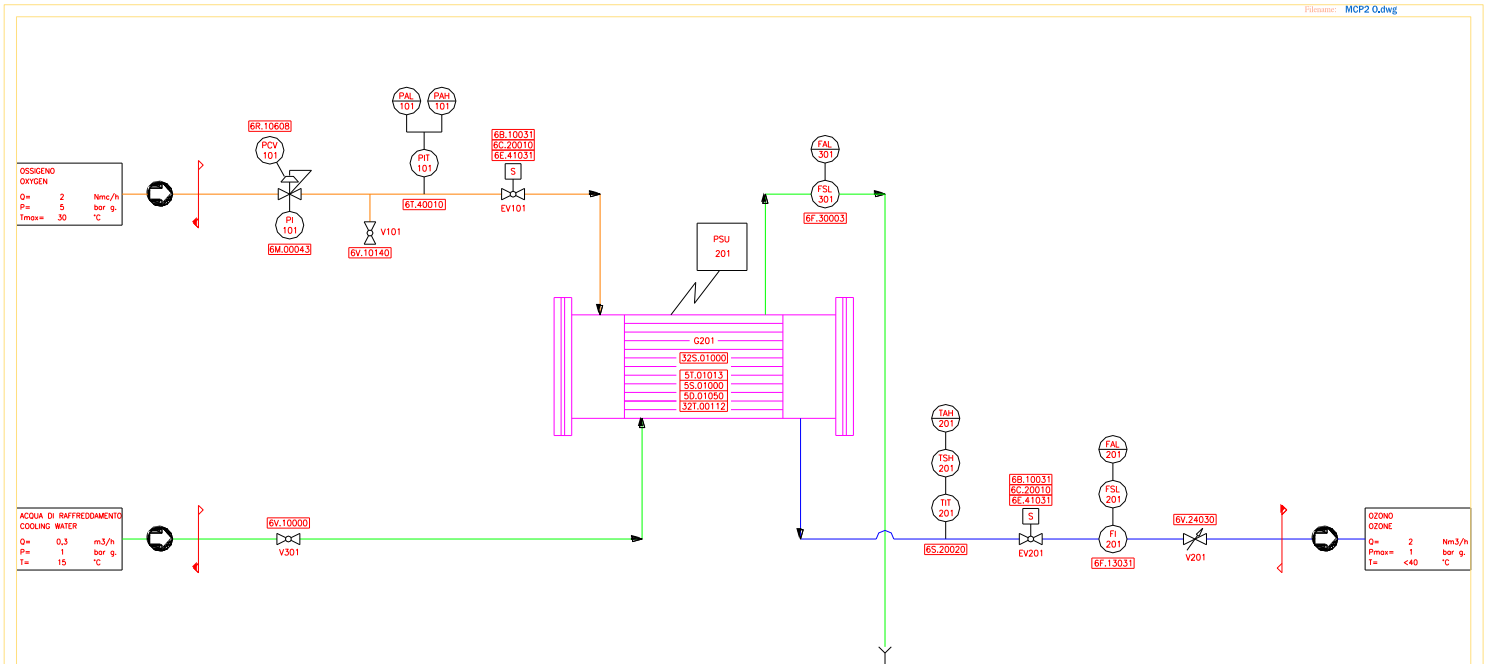
MCP 2/A Flow sheet





**MCP 2/O
Flow sheet**

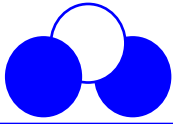
Filename: MCP2 Odwg



**DEFINIZIONE LINEE DI PROCESSO
PROCESS LINE EXPLANATION**

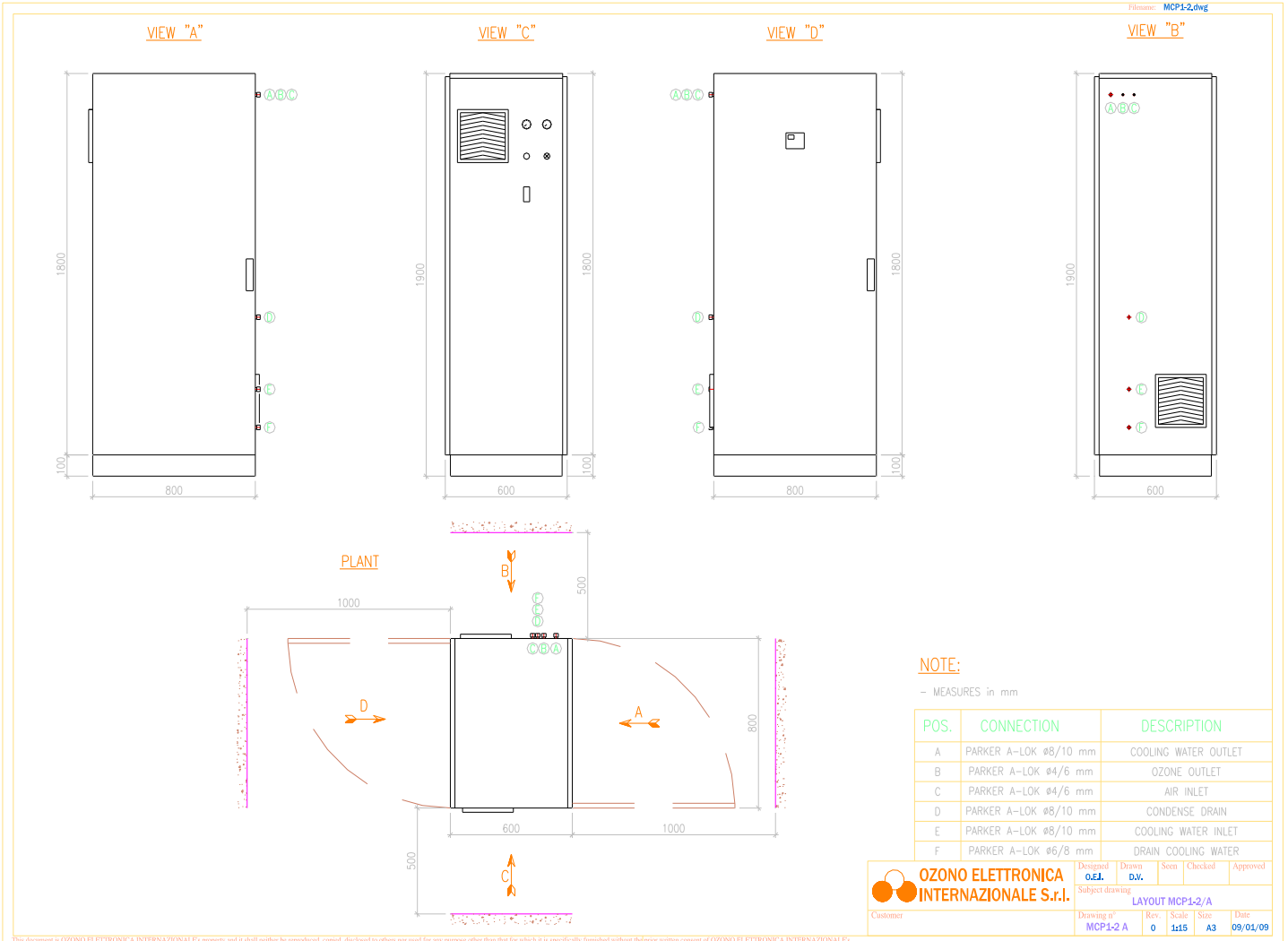
ITEM 100	- Linea ossigeno - Oxygen line	ITEM 600	- Linea aria di processo - Process air line
ITEM 200	- Linea ozono - Ozone line	ITEM 700	- Linea aria servizi - Service air line
ITEM 300	- Linea acqua di raffreddamento - Cooling water line	ITEM 800	- Linea acqua trattata - Treated water line
ITEM 400	- Linea distruzione termica - Thermic destroy line	ITEM 900	- Linea acqua da trattare - Water to treat line
ITEM 500	- Linea acqua di servizio - Service water line	ITEM 1000	- Linea azoto - Azote line

OZONO ELETTRONICA INTERNAZIONALE S.r.l.		Disegnato O.E.I.	Disegni D.V.	Seen	Checked	Approved
Customer		Subject drawing MCP2 O (flow sheet)				
Drawing of MCP2 O	Rev. 0	Scale /	Size A3	Date 13/01/09		



**MCP 2/A
Layout**

File name: MCP1-2.dwg

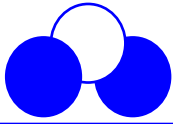


NOTE:

- MEASURES in mm

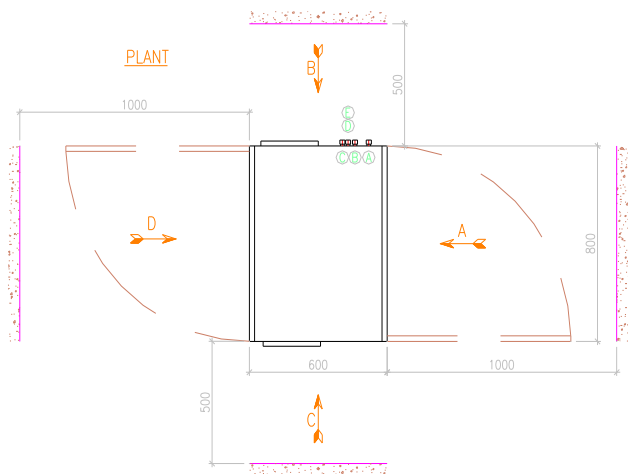
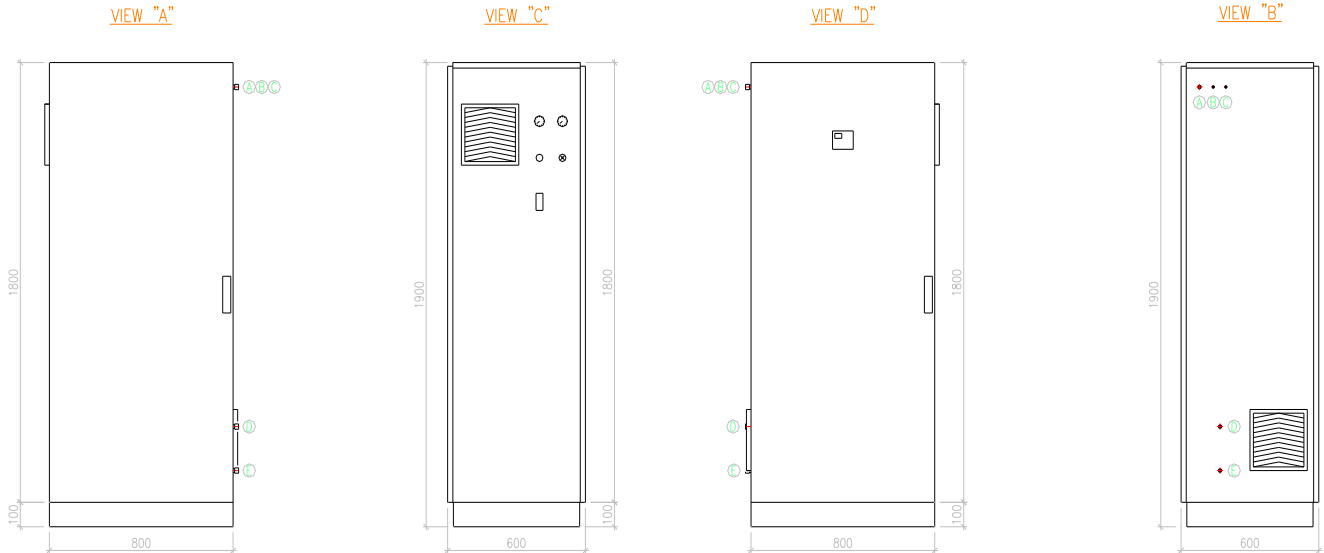
POS.	CONNECTION	DESCRIPTION
A	PARKER A-LOK \varnothing 8/10 mm	COOLING WATER OUTLET
B	PARKER A-LOK \varnothing 4/6 mm	OZONE OUTLET
C	PARKER A-LOK \varnothing 4/6 mm	AIR INLET
D	PARKER A-LOK \varnothing 8/10 mm	CONDENSE DRAIN
E	PARKER A-LOK \varnothing 8/10 mm	COOLING WATER INLET
F	PARKER A-LOK \varnothing 6/8 mm	DRAIN COOLING WATER

<p>OZONO ELETTRONICA INTERNAZIONALE S.r.l.</p>	Disegnato O.E.I.	Disegnato D.V.	Scen	Checked	Approved
	Subject drawing: LAYOUT MCP1-2/A				
Customer	Drawing n° MCP1-2 A	Rev. 0	Scale 1:15	Stato A3	Date 09/01/09



**MCP 2/O
Layout**

Filename: MCP2.dwg



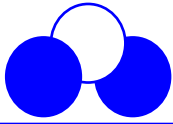
NOTE:

- MEASURES in mm

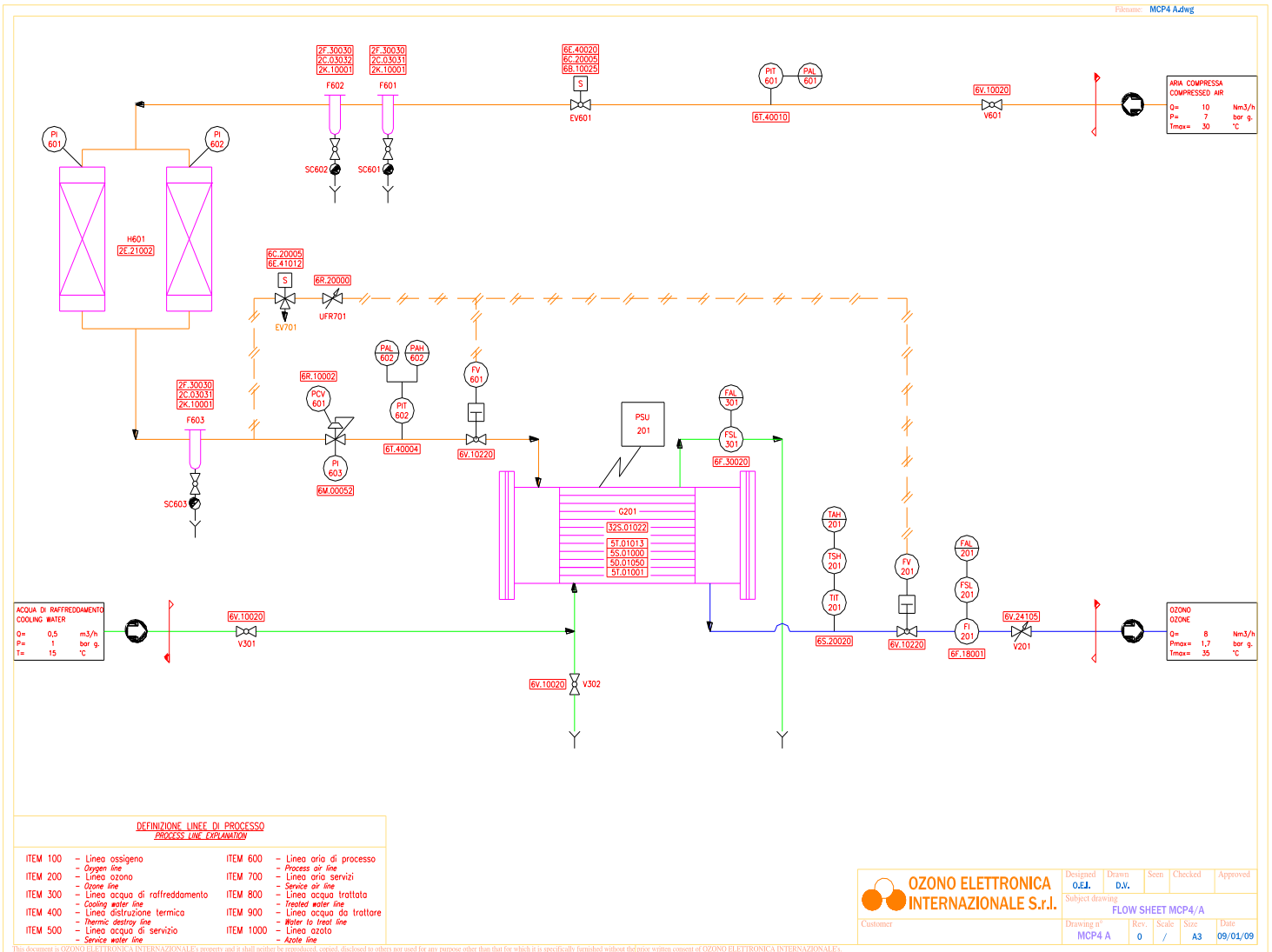
POS.	CONNECTION	DESCRIPTION
A	PARKER A-LOK Ø8/10 mm	COOLING WATER OUTLET
B	PARKER A-LOK Ø4/6 mm	OZONE OUTLET
C	PARKER A-LOK Ø4/6 mm	OXYGEN INLET
D	PARKER A-LOK Ø8/10 mm	COOLING WATER INLET
E	PARKER A-LOK Ø6/8 mm	DRAIN COOLING WATER

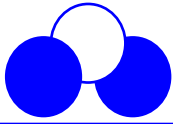
OZONO ELETTRONICA INTERNAZIONALE S.r.l.

Designed O.E.L.	Drawn D.V.	Seen	Checked	Approved
Subject drawing				
LAYOUT MCP2/O				
Customer	Drawing n° MCP2 O	Rev: 0	Scale: 1:15	Size: A3
				Date: 09/01/09

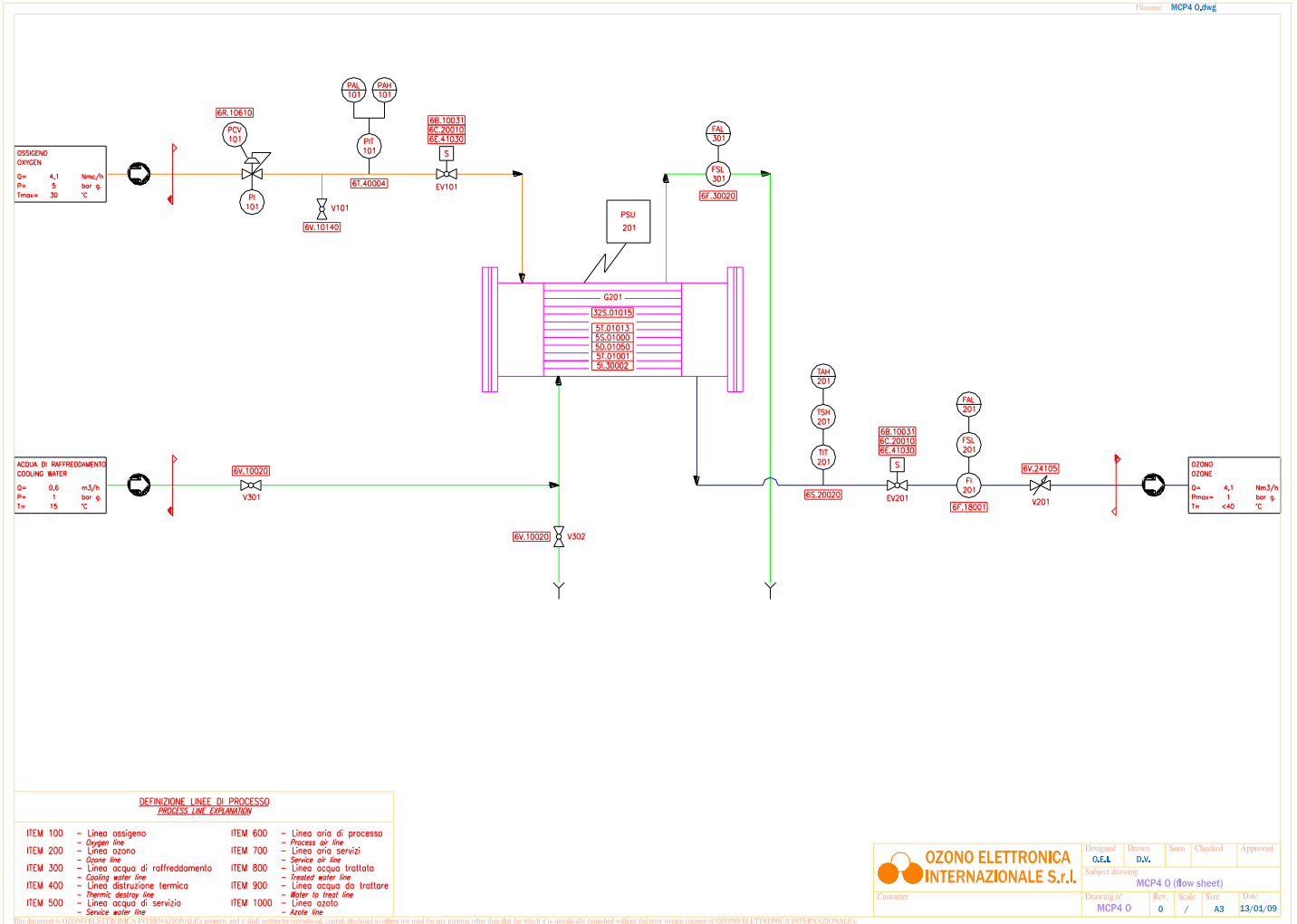


MCP 4/A Flow sheet



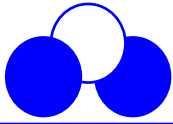


MCP 4/O Flow sheet



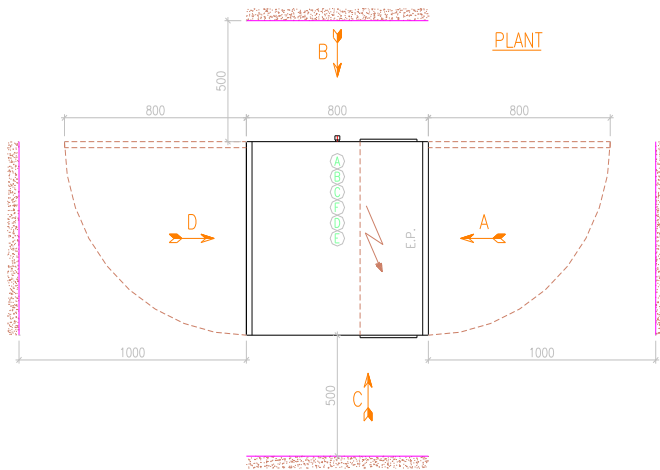
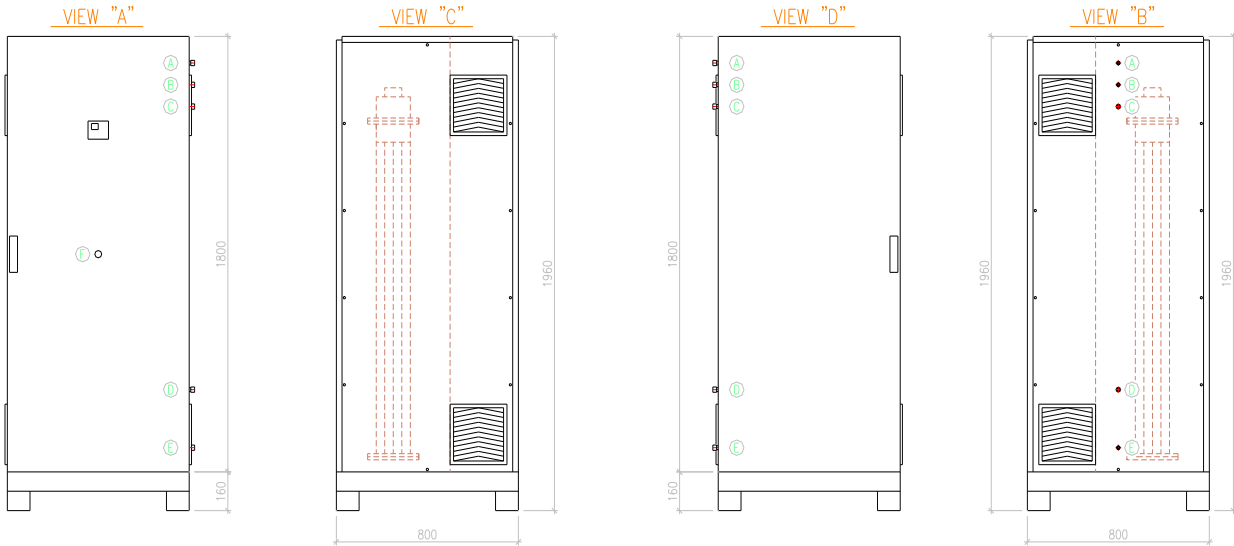
OZONO ELETTRONICA INTERNAZIONALE S.r.l.

Disegnato O.E.L.	Disegnato D.V.	Seen	Checked	Approved
Subject drawing: MCP4 O (flow sheet)				
Customer	Drawing n° MCP4 O	Rev. 0	Scale /	Date 13/01/09



**MCP 4/A
Layout**

Filename: MCP4-7 A.dwg

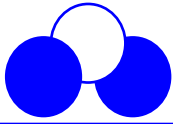


NOTE:

- MEASURES in mm

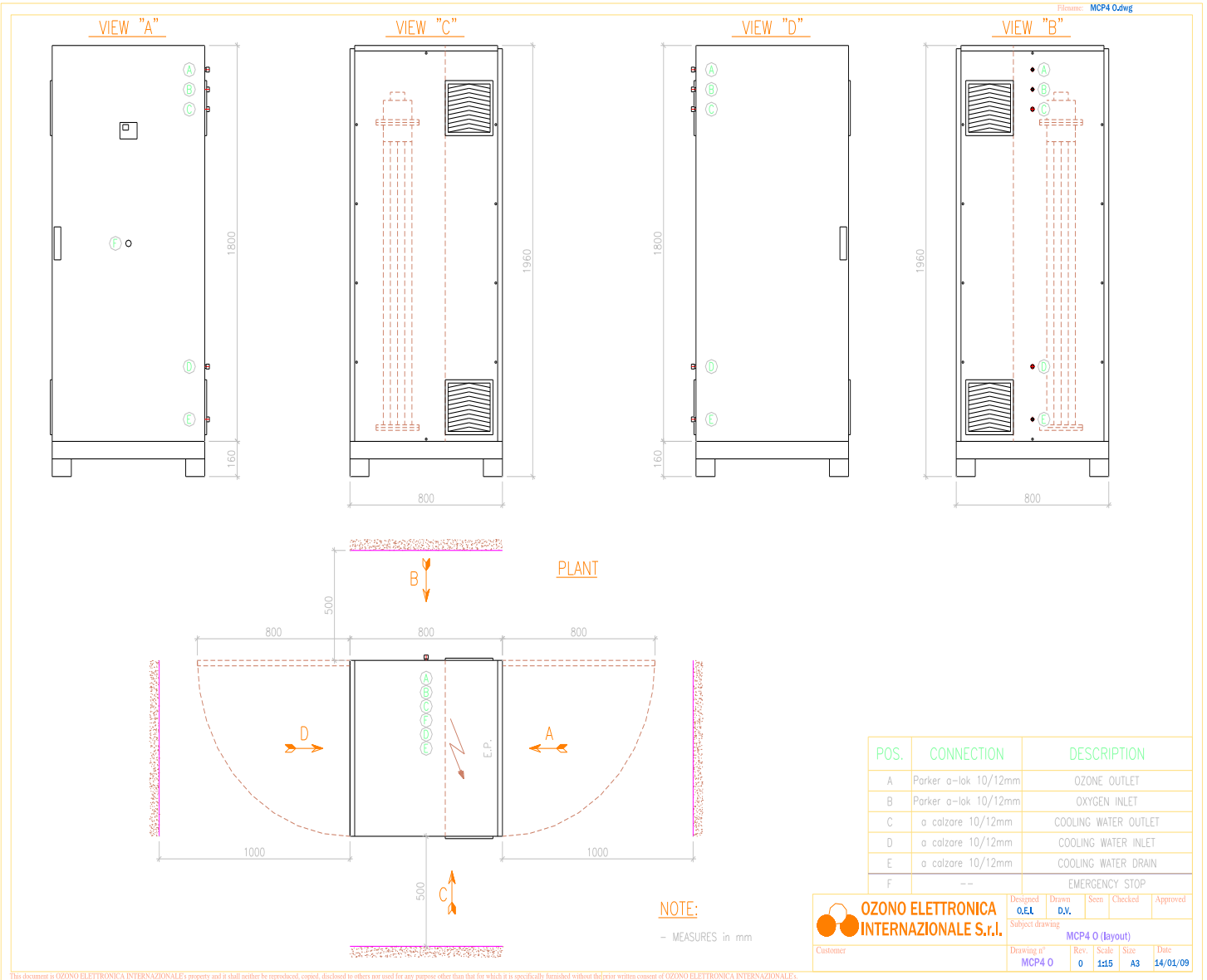
POS.	CONNECTION	DESCRIPTION
A	Parker a-lak 10/12mm	OZONE OUTLET
B	Parker a-lak 10/12mm	INLET AIR
C	o calzare 12/15mm	COOLING WATER OUTLET
D	o calzare 12/15mm	COOLING WATER INLET
E	o calzare 10/12mm	COOLING WATER DRAIN
F	--	EMERGENCY STOP

	Designed O.E.I.	Drawn D.V.	Seen	Checked	Approved
	Subject drawing: MCP4-7 A (layout)				
Customer	Drawing of MCP4-7 A	Rev. 0	Scale 1:15	Size A3	Date 09/01/09



**MCP 4/O
Layout**

File name: MCP4 0.dwg

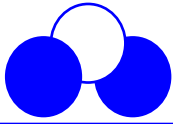


POS.	CONNECTION	DESCRIPTION
A	Parker a-lak 10/12mm	OZONE OUTLET
B	Parker a-lak 10/12mm	OXYGEN INLET
C	a calzare 10/12mm	COOLING WATER OUTLET
D	a calzare 10/12mm	COOLING WATER INLET
E	a calzare 10/12mm	COOLING WATER DRAIN
F	--	EMERGENCY STOP

OZONO ELETTRONICA INTERNAZIONALE S.r.l.	Designed O.E.I.	Drawn D.V.	Seen	Checked	Approved
	Subject drawing MCP4 O (layout)				
Customer	Drawing n° MCP4 O	Rev. 0	Scale 1:15	Size A3	Date 14/01/09

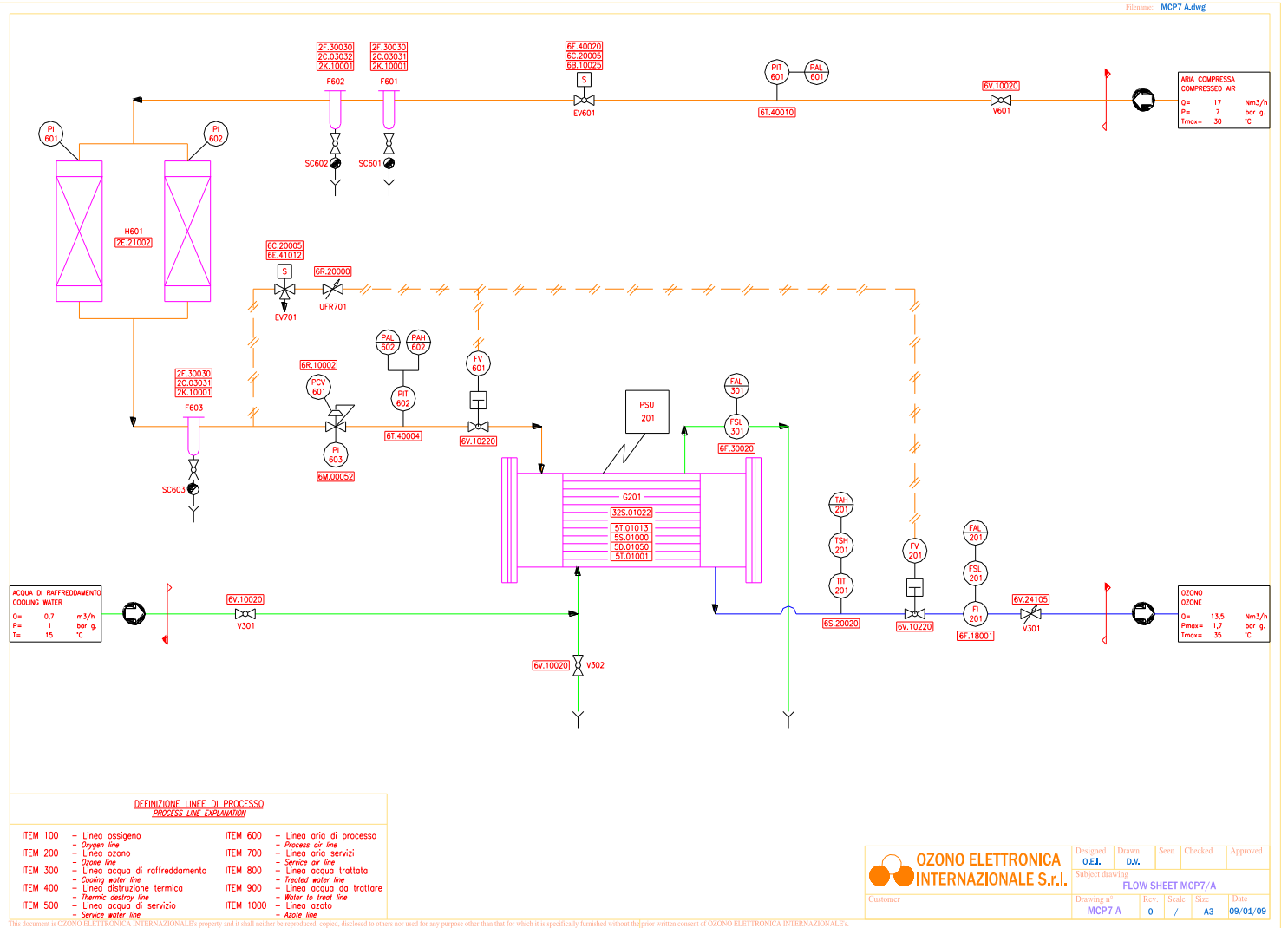
NOTE:
- MEASURES in mm.

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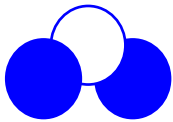


MCP 7/A Flow sheet

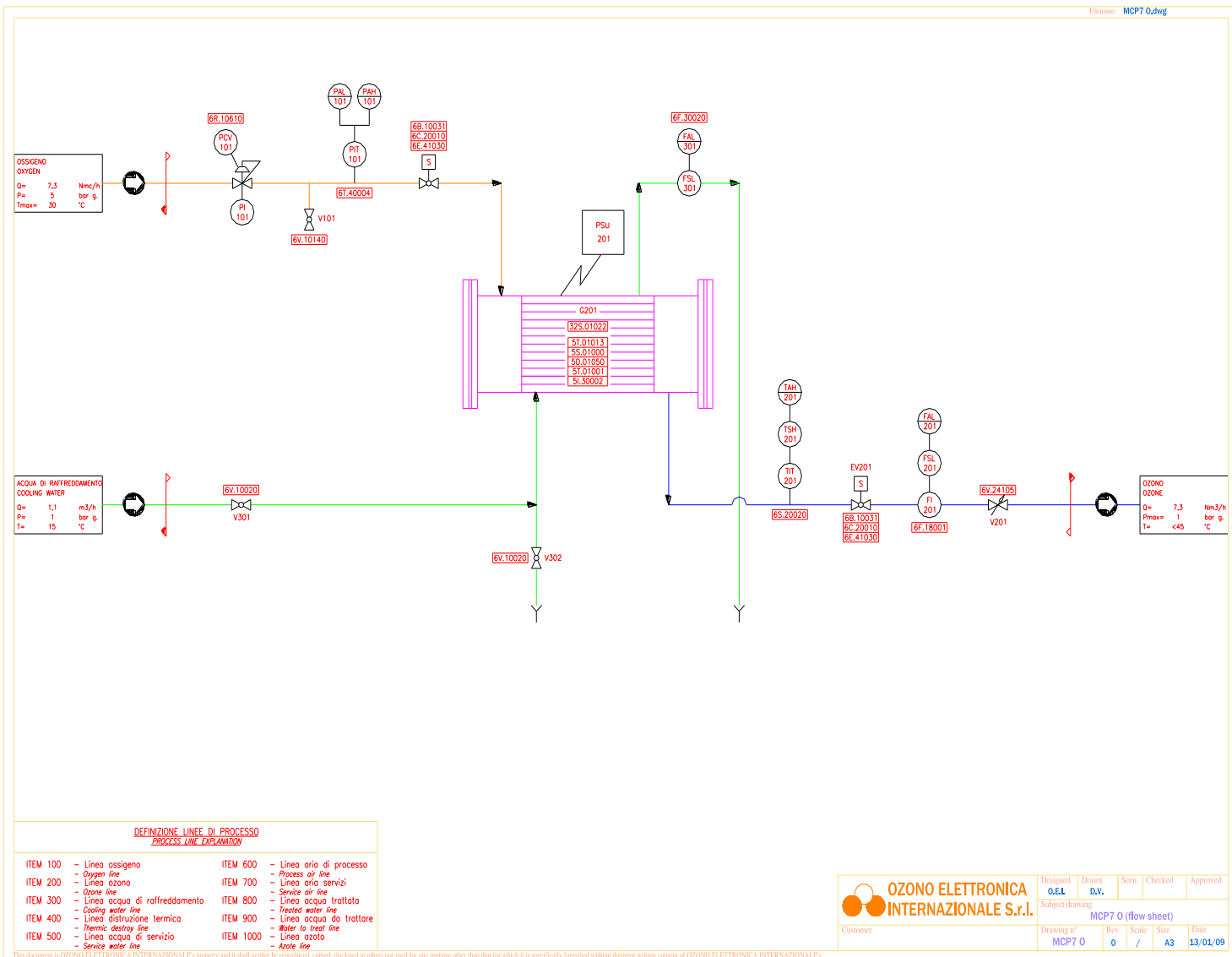
Filename: MCP7 A.dwg

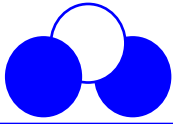


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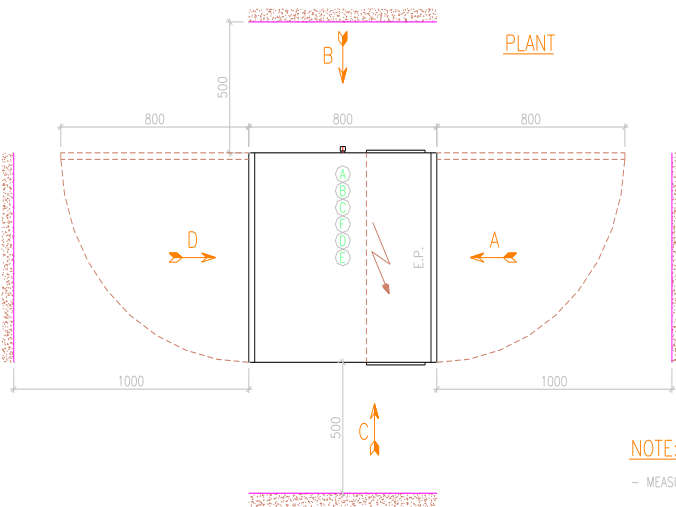
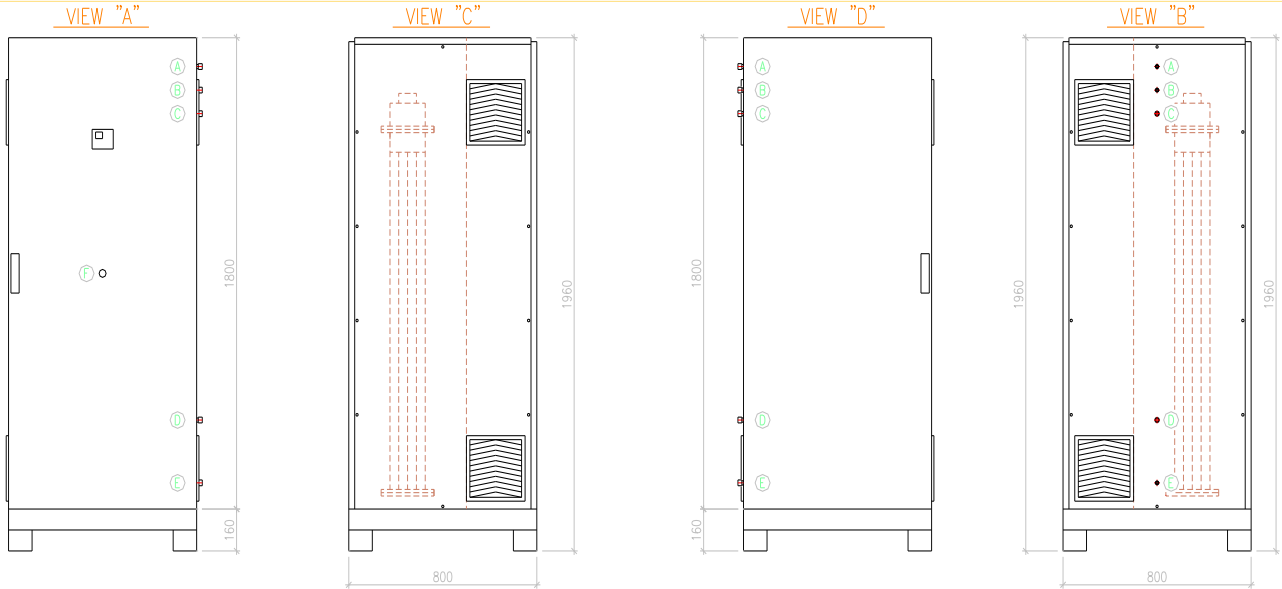
MCP 7/O Flow sheet





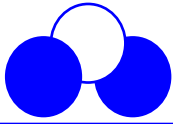
**MCP 7/A
Layout**

File name: MCP4-7 A.dwg



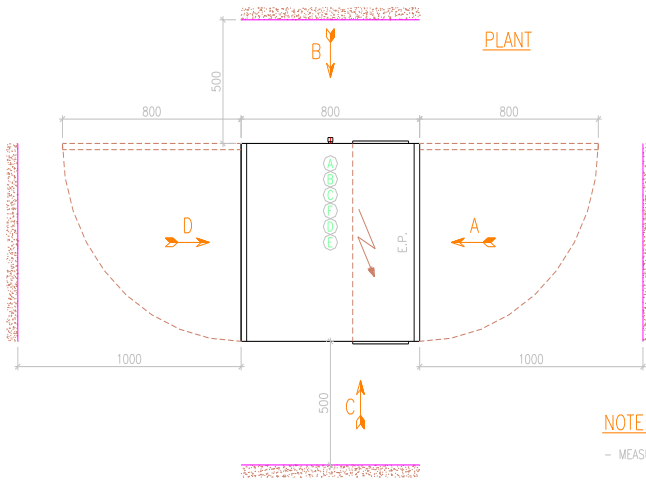
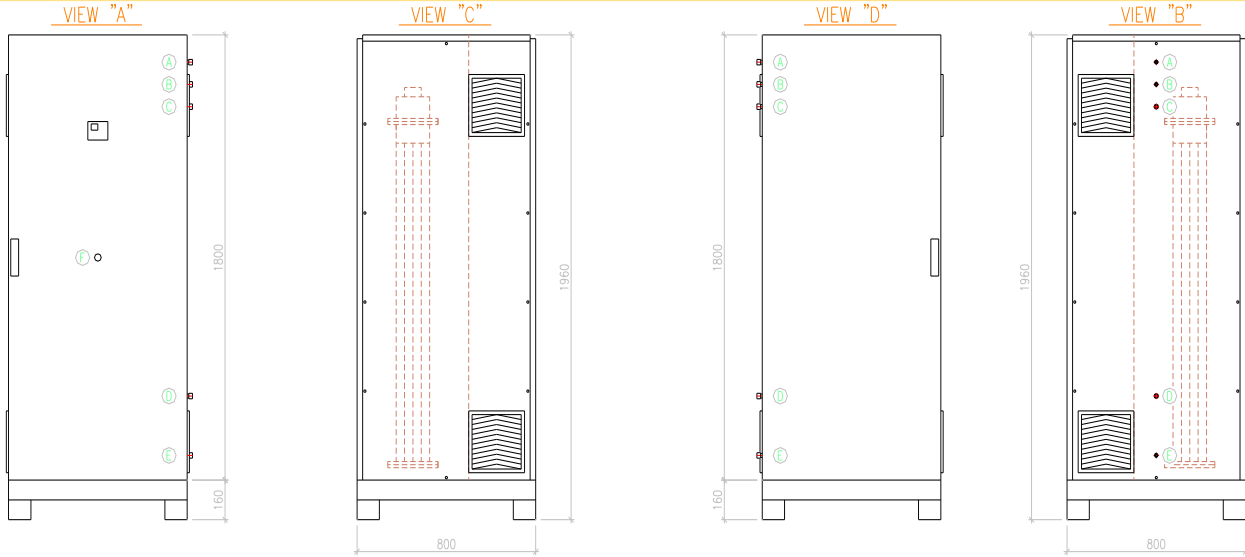
POS.	CONNECTION	DESCRIPTION
A	Parker a-lok 10/12mm	OZONE OUTLET
B	Parker a-lok 10/12mm	INLET AIR
C	a calzare 12/15mm	COOLING WATER OUTLET
D	a calzare 12/15mm	COOLING WATER INLET
E	a calzare 10/12mm	COOLING WATER DRAIN
F	--	EMERGENCY STOP

Customer	OZONO ELETTRONICA INTERNAZIONALE S.r.l.		Designed O.E.I.	Drawn D.V.	Seen	Checked	Approved
	Subject drawing MCP4-7 A (layout)		Drawing n° MCP4-7 A	Rev. 0	Scale 1:15	Size A3	Date 09/01/09



**MCP 7/O
Layout**

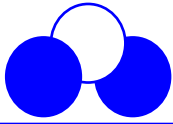
File name: MCP7 0.dwg



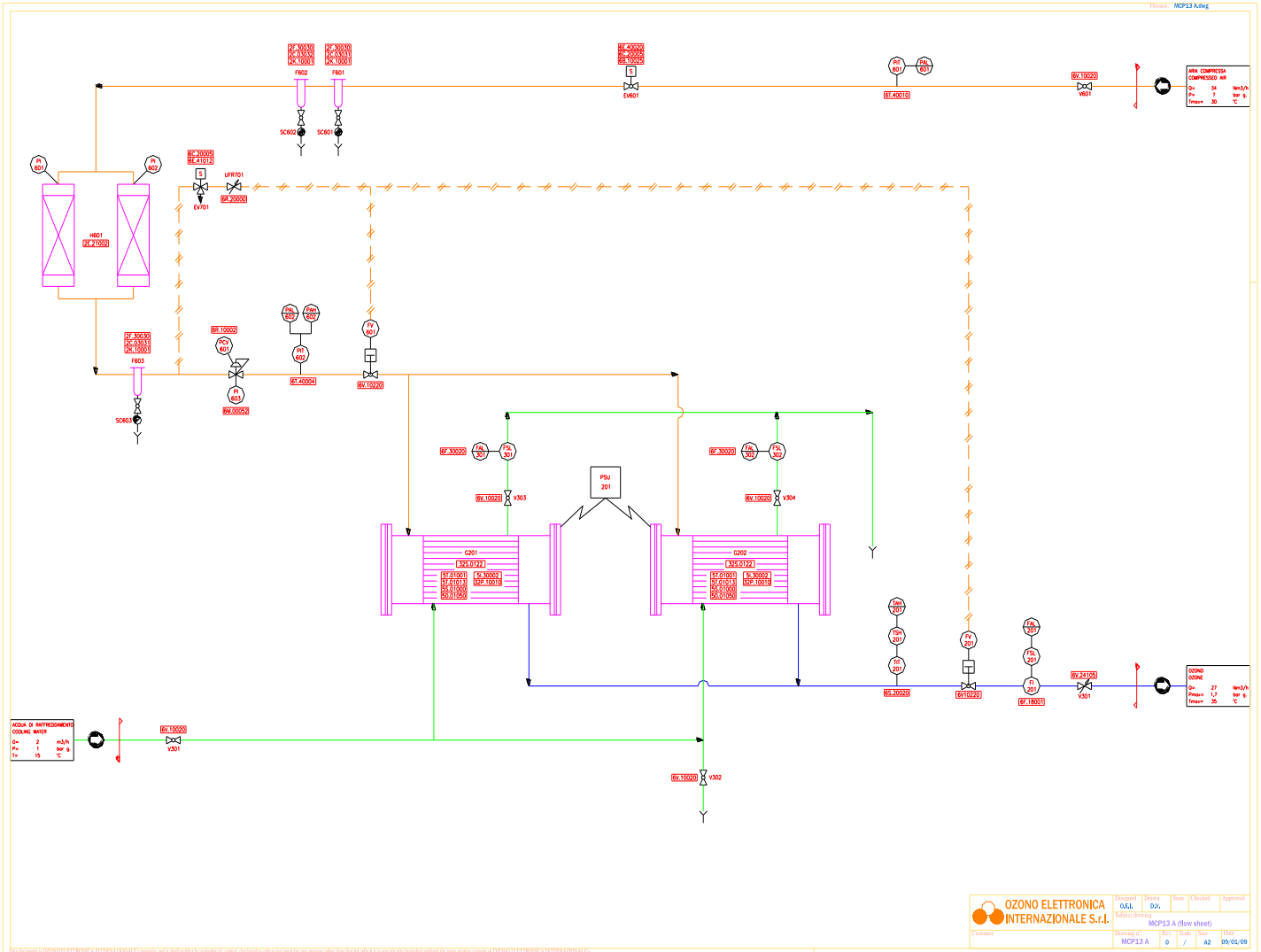
NOTE:
- MEASURES in mm

POS.	CONNECTION	DESCRIPTION
A	Parker a-lok 10/12mm	OZONE OUTLET
B	Parker a-lok 10/12mm	OXYGEN INLET
C	a calzare 10/12mm	COOLING WATER OUTLET
D	a calzare 10/12mm	COOLING WATER INLET
E	a calzare 10/12mm	COOLING WATER DRAIN
F	--	EMERGENCY STOP

	Designed 0.EI.	Drawn D.V.	Seen	Checked	Approved
	Subject drawing				
Customer	Drawing n° MCP7 0	Rev. 0	Scale 1:15	Size A3	Date 14/01/09

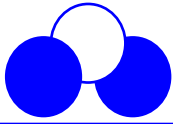


MCP 14/A Flow sheet

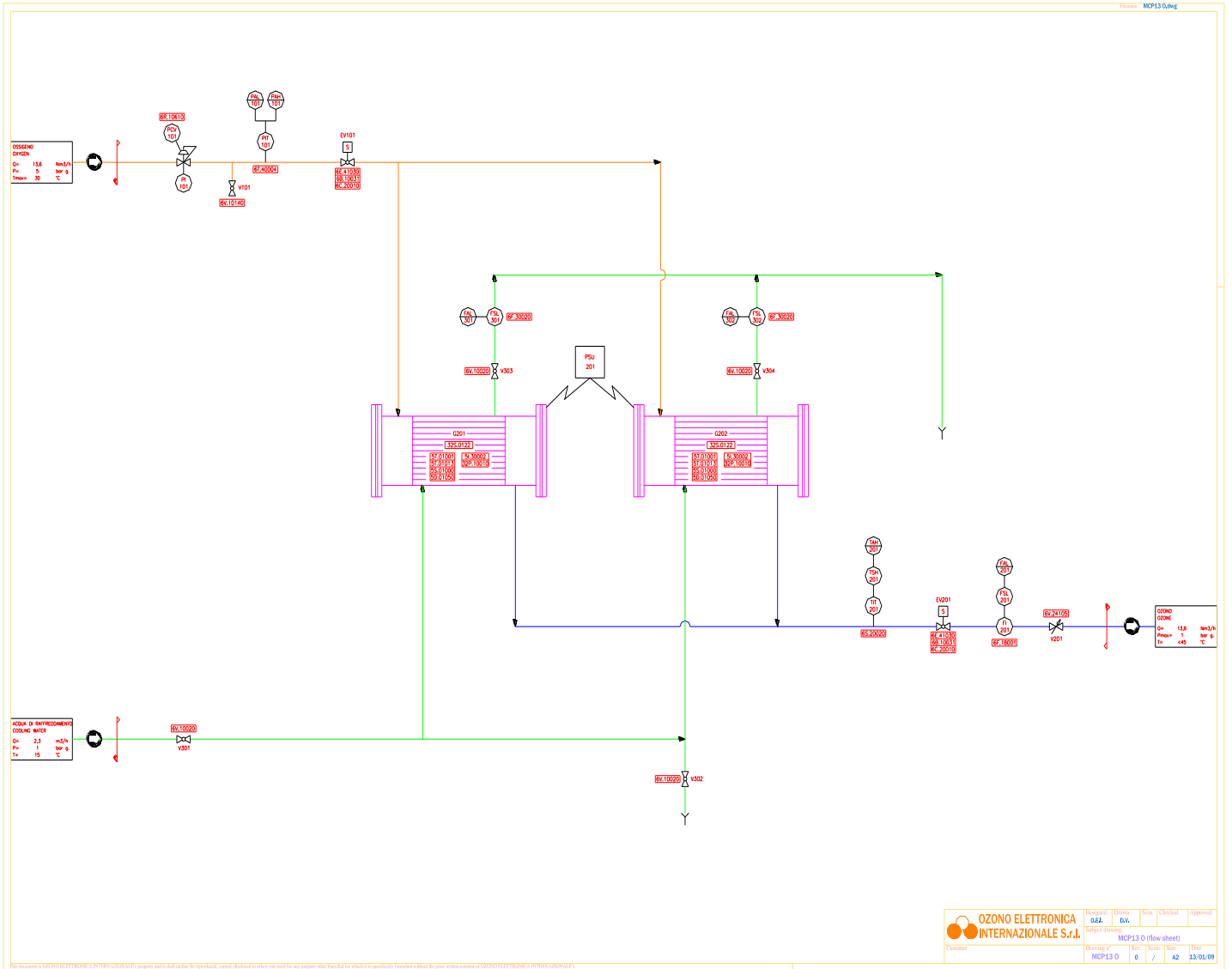


	Developed	D.E.L.	Drawn	D.G.	Seen	Checked	Approved
	Target version:	MCP13 A (flow sheet)					
Revision	MCP13 A	Rev:	0	Scale:	1:1	Date:	13/01/09

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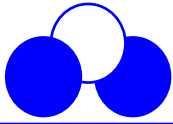


**MCP 14/O
Flow sheet**



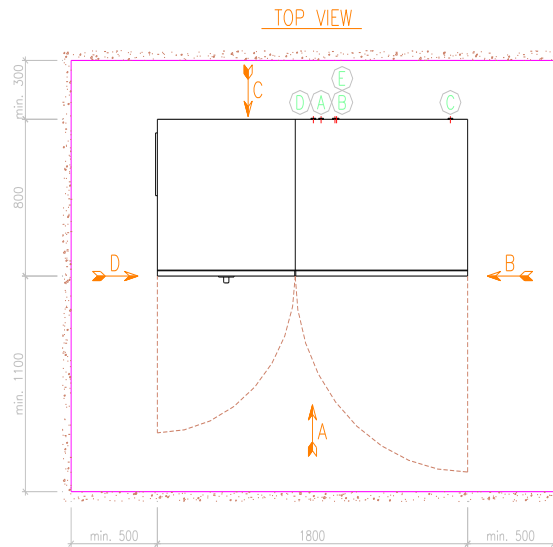
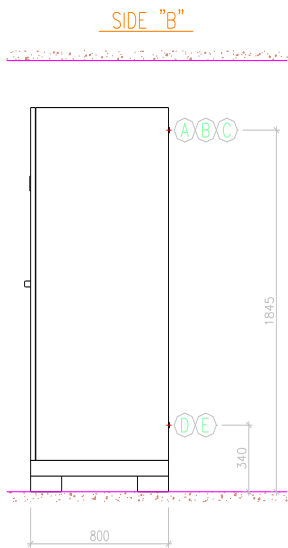
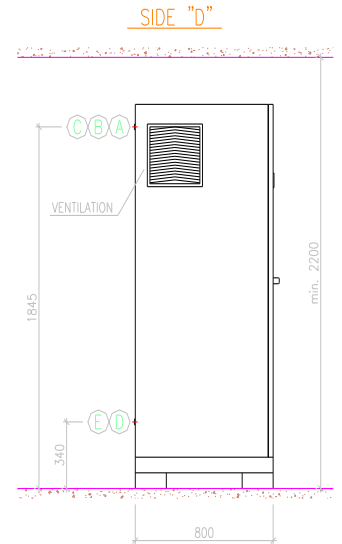
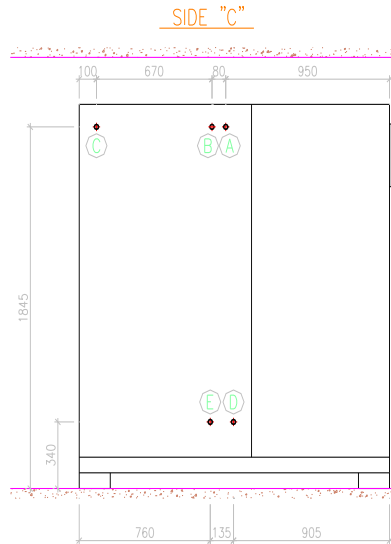
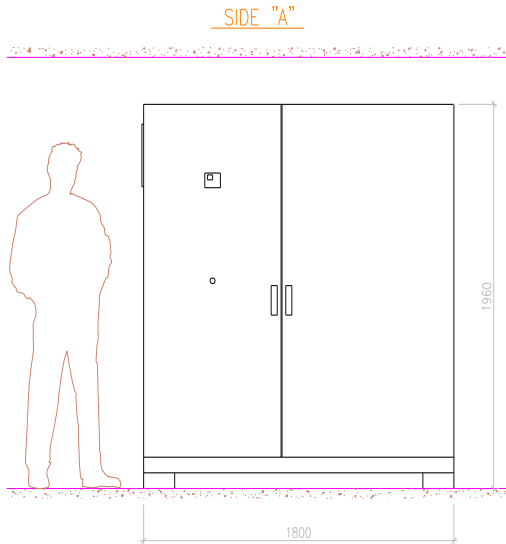
	Original	Drawn	Size	Checked	Approved
	o.e.i.	D.V.			
Customer	MCP13 O (flow sheet)				
MCP13 O	0	/	A2	23/09/09	

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**MCP 14/A
Layout**

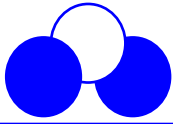
File name: MCP13 A.dwg



LEGEND		
POSITION	DESCRIPTION	CONNECTION
A	COOLING WATER OUTLET	ø 1/2" F
B	COMPRESSED AIR INLET	ø 1/2" F
C	OZONE OUTLET	ø 1/2" F
D	COOLING WATER INLET	ø 1/2" F
E	DRAIN	ø 1/2" F

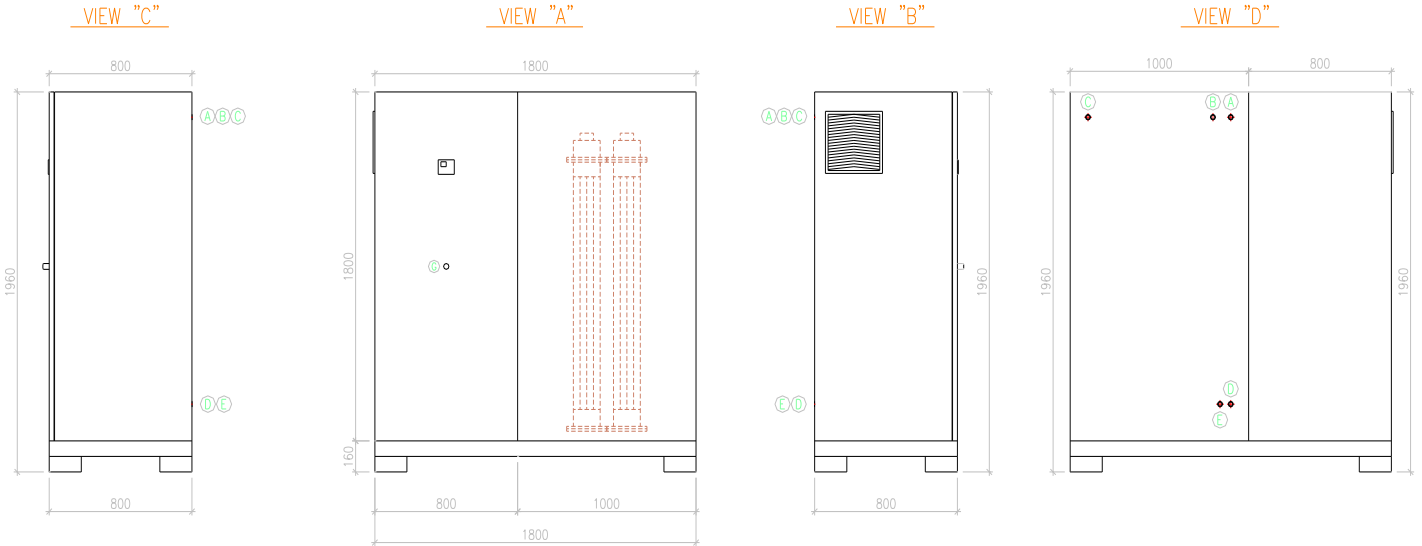
NOTE:
- MEASURES IN mm

Customer	OZONO ELETTRONICA INTERNAZIONALE S.r.l.		Designed O.E.I.	Drawn D.B.	Seen A.L.	Checked A.L.	Approved O.E.I.
	Subject drawing: MCP13/ A (layout)						
	Drawing n° MCP13 A		Rev. 0	Scale 1:20	Size A3	Date 15/07/09	

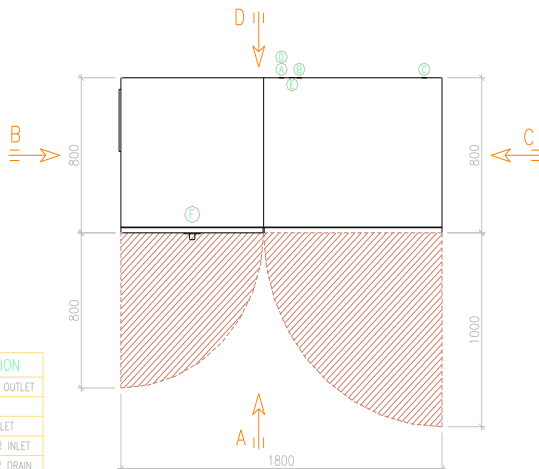


**MCP 14/O
Layout**

Filename: MCP13 O.dwg



PLANT



POS.	CONNECTION	DESCRIPTION
A	ø 1/2"	COOLING WATER OUTLET
B	ø 1/2"	OXYGEN
C	ø 1/2"	OZONE OUTLET
D	ø 1/2"	COOLING WATER INLET
E	ø 1/2"	COOLING WATER DRAIN
F	--	EMERGENCY STOP

NOTE:

- MEASURES IN mm

	Designed O.E.I.	Drawn D.V.	Seen	Checked	Approved
	Subject drawing				
Customer	MCP13 O (layout)				Date
	Drawing n° MCP13 O	Rev. 0	Scale 120	Size A3	Date 14/01/09