EMMEBI IMPIANTI
AEROTEXTILE TECHNOLOGY

SEMICENTRALIZED AIR CONDITIONING SYSTEM TYPE SM

The Semicentralized Air Conditioning Systems type SM are used in a functional and economic way in climatization plants for medium and small departments.
They are modular fitted for multiple installation solutions, ranging from the simplest up to the most complex situations.
Thanks to their pre-assembled structure they do not need civil works for their installation.
The SM Units blow saturated air in the room. Therefore they are suitable also for departments needing medium air humidity.

The complete SM Unit foresees :
- air filtering by means of static or automatic filters
- ambient air return by means of axial or centrifugal fans
- three dumpers for return, exhaust and external air intake or mix
- winter heat radiator
- humidification nozzles system
- air delivery axial fan with sealed motor
- drops separator at medium speed
- air delivery ducts with lamellar air diffusers at low induction

All the parts required maintenance and access to them is through doors or inspection windows.
The drop separator is of packed type removable from the outside.
The adjustment of the unit is done by means of a modern and functional strumentation which may be of electronic or pneumatic type.
To reduce the water consumption, there is a recycling tank entirely made in stainless steel with a stainless-steel circulation pump, static filter, floating switch, lower and overflow.

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TECHNICAL DATA
OF THE BASIC UNIT WITHOUT AIR RETURN

TYPE	*AIR CAPACITY*	*INSTALLED POWER*
SM15	*from 10.000 to 19.000 m3/h*	*4 kW*
SM25	*from 20.000 to 27.000 m3/h*	*5,5 kW*
SM35	*from 28.000 to 37.000 m3/h*	*7,5 kW*
SM45	*from 38.000 to 47.000 m3/h*	*11 kW*

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WATER TOLERANCES:

Ph		*7,5 -8,5*	
Durezza tot		*5-30*	*F°*
Ossido di calcio	*CaO*	*120*	*Mg/l*
Magnesio	*MgO*	*40*	*Mg/l*
Nitrato di Sodio	*Na*	*25*	*Mg/l*
Ferro	*Fe+++*	*0,05*	*Mg/l*
Cloriti	*Cl-*	*50*	*Mg/l*
Solfati	*SO4*	*50-100*	*Mg/l*
Silicati	*SI02*	*10*	*Mg/l*
Fosfati	*P04---*	*5*	*Mg/l*
Nitrati	*N03*	*30*	*Mg/l*
Ossigeno	*O*	*3*	*Mg/l*
Diossido di Carbonio		*0*	*Mg/l*

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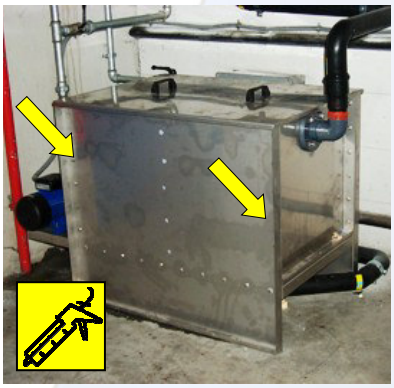
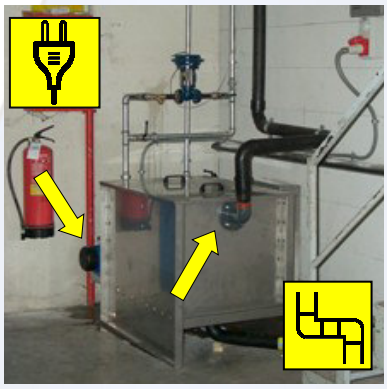
STARTING PROCEDURES

1 Place the water tank, clean it and seal every junction



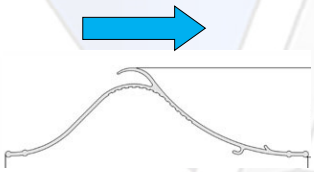
2 Connect the water pump to the electrical main and make the hydraulic connections

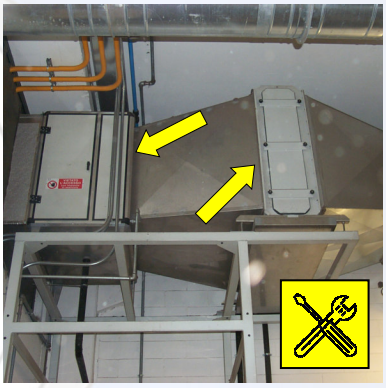


3 Place the SM Unit

4 Fix the SM Unit with the inox connectors and drop separator.

Be sure to install the drop separator in the right position.





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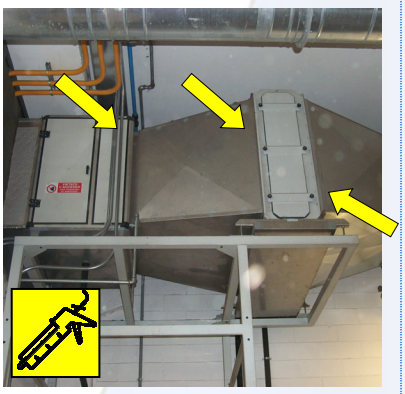
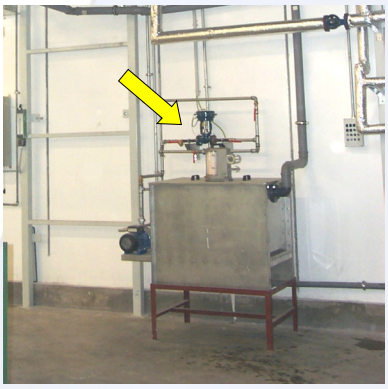
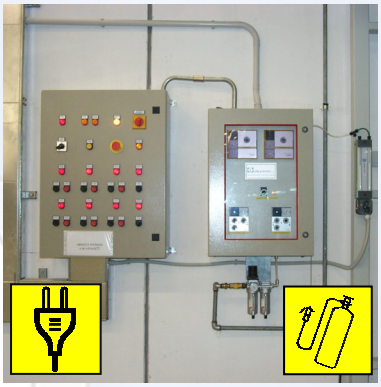
5	Clean and seal every junction, included the connection between the drop separator and the air distribution duct.	
6	Place the regulation and solenoid valves and make the hydraulic connections.	
7	Place the electrical panel and the regulation panel. Connect the switchgear to the electrical and pneumatic supply (in the case of electrical control, no pneumatic connection is required).	

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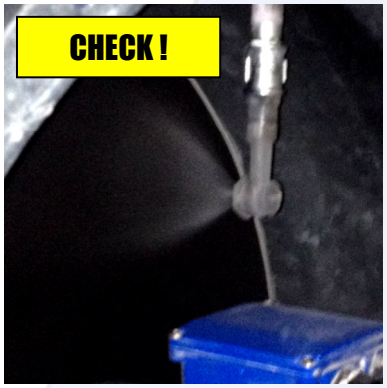
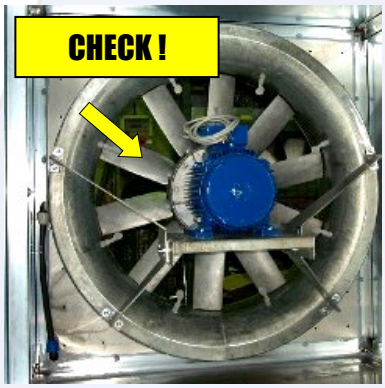
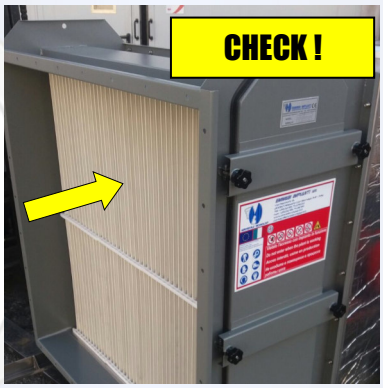
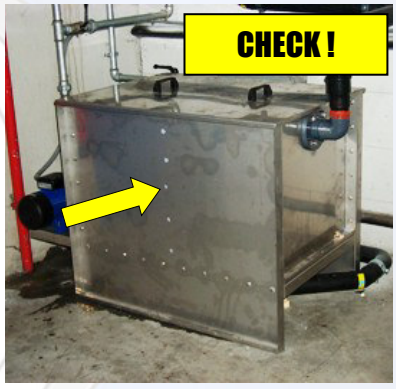
AEROTEXTILE TECHNOLOGY

MAINTENANCE PROCEDURES

1	Periodically check that the spraying nozzles are not blocked or scaled	
2	Periodically check that there are not scales on the wing of the fan	
3	Periodically check that there are not scales on the drop separator	
4	Periodically check that the filter of the water tank is not obstructed or scaled	

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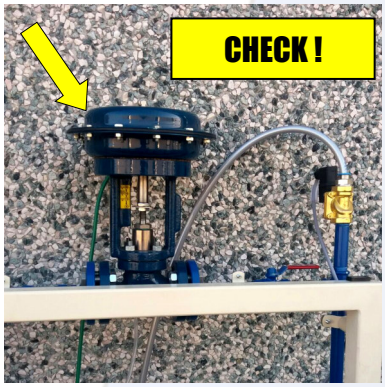
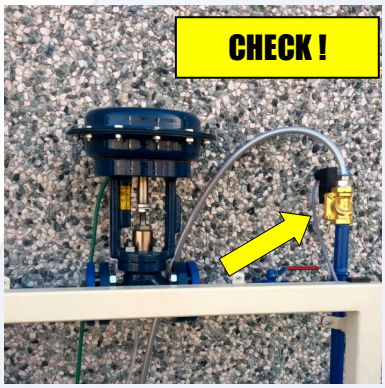
5	Periodically check the functioning of the water regulation valve (pneumatic / electric)	
6	Periodically check the functioning of the solenoid valve	

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MAINTENANCE LIST

For a proper maintenance of the system, all the components and the running mechanisms should be visually checked every day.

Spare part	Frequence of intervention					
	Weekly	*Monthly*	*Every 3 months*	*Every 6 months*	*Every Year*	*Every 2 years*
Nozzles						
PVC blades drop separator						
Static Filters						
Pump						
Water inside tank						

Check the status of the component

Change the component (adviced)

Change the component (max time)

Clean with water (stop the plant)

We advice to keep one piece or set in your storehouse

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MAINTENANCE OPERATIONS IN HAZARDOUS ALTITUDE AND SAFETY RECOMMENDATIONS

All the ordinary and extraordinary maintenance of the equipment at altitude, such as the replacement of impellers and / or fans, the replacement of ceiling-mounted air conditioning units, interventions on distribution channels etc. , must be carried out when the line is off and an electrical panel disconnected (button in off position and keypad lock) and with the help of mobile platforms and forklifts / cranes or other elevating systems capable of handling the equipment on floor or to ensure access to platform units according to safety rules.

In the case of a life line (optional), Only ordinary maintenance works that can be manually carried out by the operator on the cab roof (always under safety conditions and connected to the life line) are:

- Cleaning and replacing spray nozzles inside the air conditioning unit (SM or SMS group)
- Checking and, if necessary, replacing the servomotors on the dampers
- Dismantling of the air-conditioning unit at the cabin, with the aim of disconnecting the various components to allow displacement, carried out with cranes or lifters, of the unit for extraordinary maintenance

Emmebi always recommends the use of lifting equipment and / or crane for these operations as well.

Cab roof coverage capacity: 150 kg / m2
Air conditioning panel (SM or SMS) capacity: 90 kg / m2

IMPORTANT: All maintenance operations must be agreed upon and planned with the EMMEBI IMPIANTI SRL technical staff

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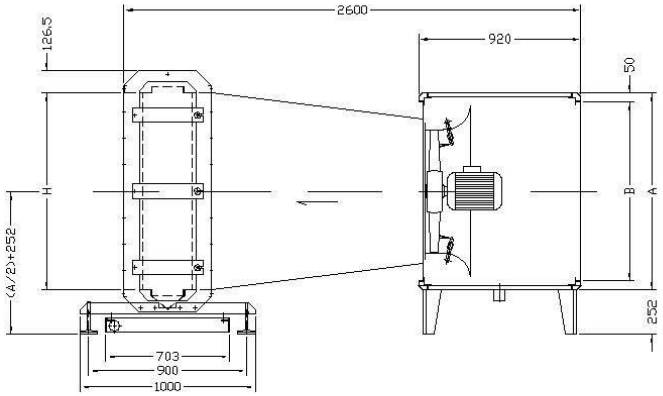
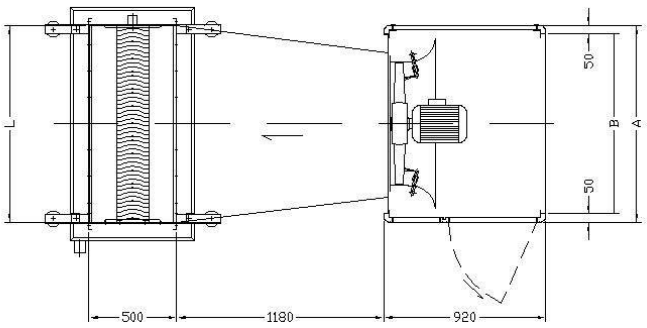
EMMEBI IMPIANTI
TECNOLOGIA - AEROTESSILE

N. DISEGNO	DATA O AGG.
NORM. 31	17-12-07

DENOMINAZIONE: GRUPPO SM
TIPO STANDARD

UNITA' DI TRATTAMENTO ARIA A SATURAZIONE





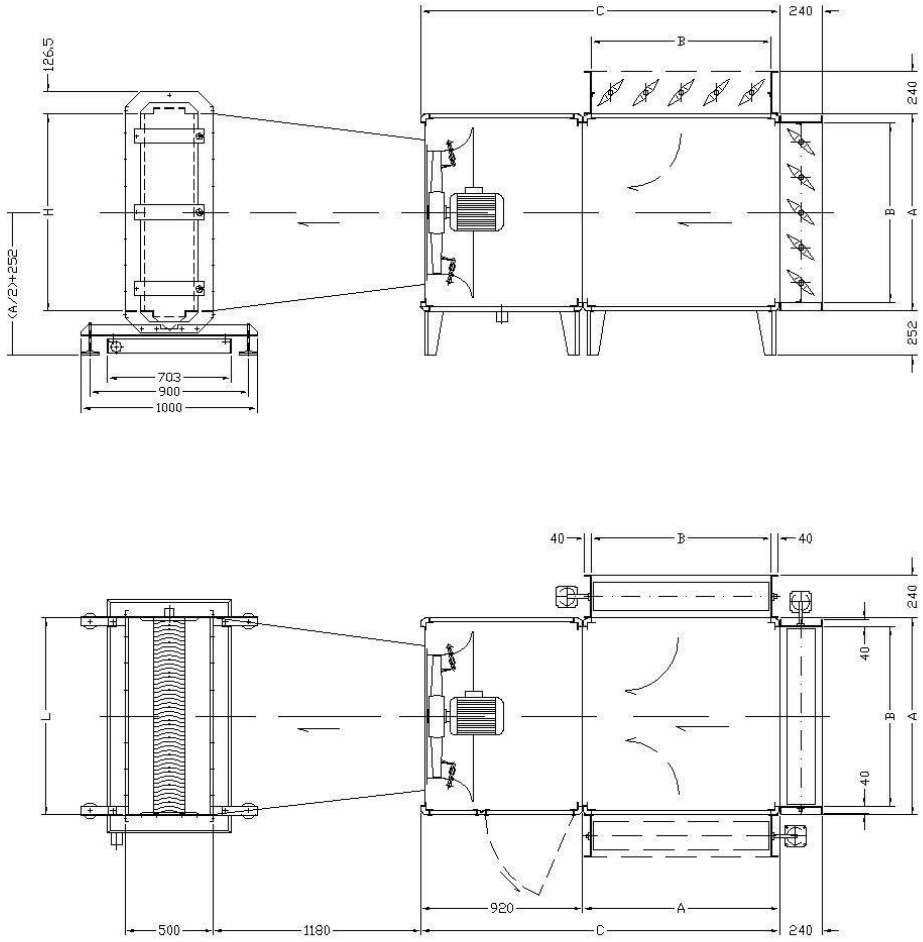
TIPO	A	B	C	L	H	SEZIONE SERRANDE	SEZIONE SEPARATORE
SM15	1120	1020	----	1120	1120	m^2 ----	m^2 1,25
SM25	1240	1140	----	1600	1220	m^2 ----	m^2 1,95
SM35	1320	1220	----	1880	1300	m^2 ----	m^2 2,44
SM45	1520	1420	----	2200	1500	m^2 ----	m^2 3,30

EMMEBI IMPIANTI
TECNOLOGIA - AEROTESSILE

N. DISEGNO	DATA O AGG.
NORM. 32	17-12-07

DENOMINAZIONE: GRUPPO SM
CON CASSONE MISCELA INTEGRATO

UNITA' DI TRATTAMENTO ARIA A SATURAZIONE



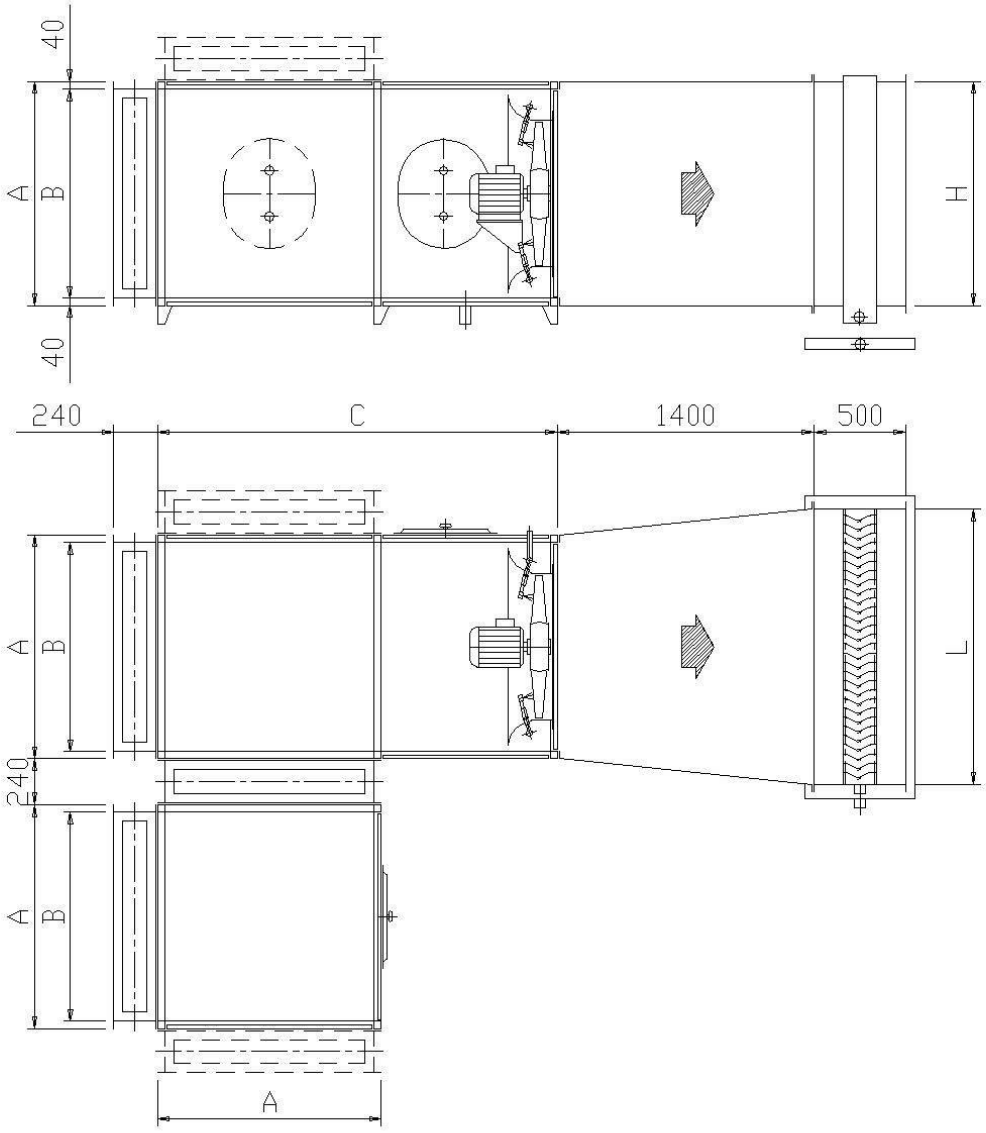
TIPO	A	B	C	L	H	SEZIONE SERRANDE	SEZIONE SEPARATORE
SM15	1120	1020	2040	1120	1120	m^2 1,00	m^2 1,25
SM25	1240	1140	2160	1600	1220	m^2 1,16	m^2 1,95
SM35	1320	1220	2240	1880	1300	m^2 1,48	m^2 2,44
SM45	1520	1420	2440	2200	1500	m^2 2,00	m^2 3,30

EMMEBI IMPIANTI
TECNOLOGIA - AEROTESSILE

N. DISEGNO	DATA O AGG.
NORM. 33	28-11-97

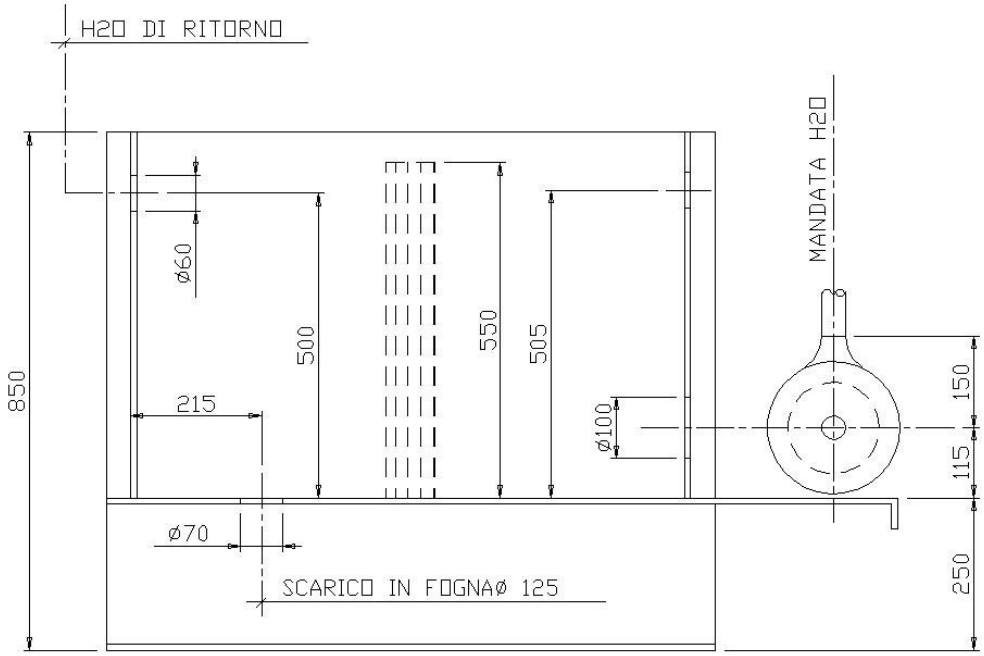
DENOMINAZIONE: GRUPPO SM
CON DOPPIO CASSONE DI MISCELA

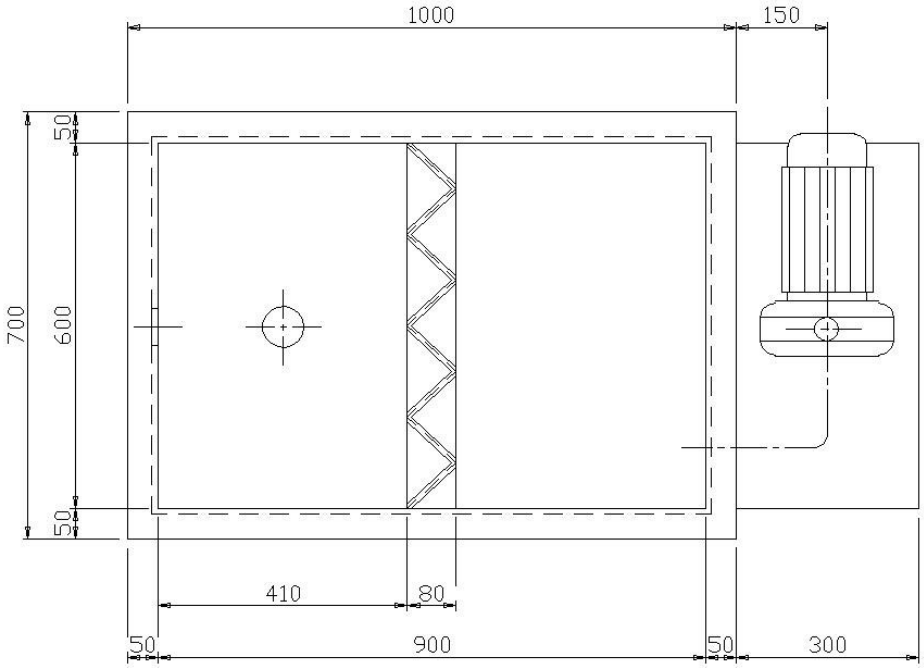
UNITA' DI TRATTAMENTO ARIA A SATURAZIONE



TIPO	A	B	C	L	H	SEZIONE SERRANDE	SEZIONE SEPARATORE
SM15	1120	1040	2080	1120	1120	m^2 1,00	m^2 1,25
SM25	1220	1140	2180	1600	1220	m^2 1,16	m^2 1,95
SM35	1300	1220	2260	1880	1300	m^2 1,48	m^2 2,44
SM45	1500	1420	2460	2200	1500	m^2 2,00	m^2 3,30

EMMEBI IMPIANTI TECNOLOGIA - AEROTESSILE	N. DISEGNO NORM. 13	DATA D AGG. 26-11-97
	DENOMINAZIONE VASCA RICIRCOLO H2O	





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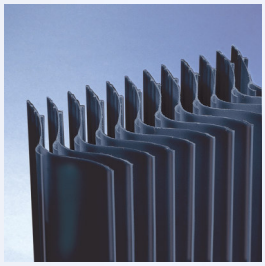
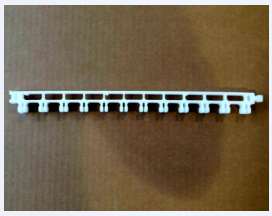
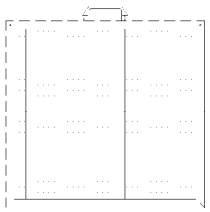
SPARE PARTS LIST

pos	ITEM	SM 15	SM 25	SM 35	SM 45
1	MB nozzle 	n. 4	n. 5	n. 5	n. 6
2	Blades for drop separator 	n. 45	n. 65	n. 76	n. 88
3	Spacing for drop separator 	n. 20	n. 40	n. 42	n. 52
4	Water pump 	n. 1 1,1kW	n. 1 1,1kW	n. 1 1,1kW	n. 1 1,1kW
5	Static filter 	n. 1	n. 1	n. 1	n. 1

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