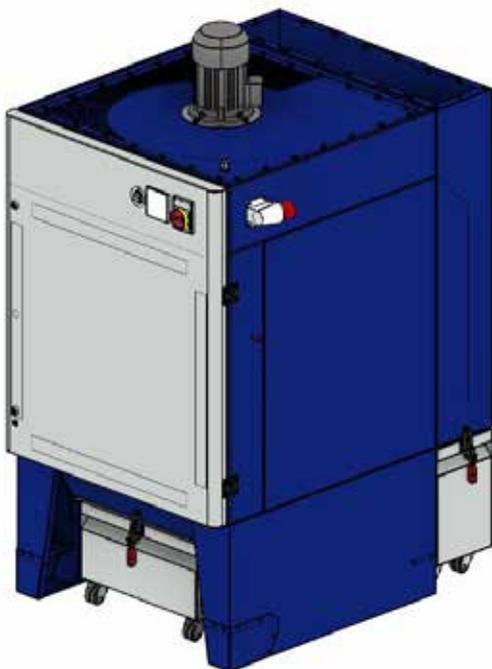


For service and sales in the USA
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IPERJET DF



ANTIPOLLUTION SYSTEMS

www.coral.eu



IT18120000011031

MANUALE D'USO E MANUTENZIONE	2
MANUEL D'UTILISATION ET D'ENTRETIEN	39
USER AND MAINTENANCE MANUAL	74
GEBRAUCHS-UND INSTANDHALTUNGSGANLEITUNG	110
MANUAL DE USO Y MANTENIMIENTO	146

I
F
GB
D
E

1.	DESCRIPTION OF USER INSTRUCTION MANUAL	73
1.1.	INTRODUCTION	73
1.2.	INFORMATION ABOUT THE USOF THE MANUAL	73
2.	MACHINE IDENTIFICATION	74
2.1.	MODEL IDENTIFICATION DATA	74
2.2.	EC IDENTIFICATION PLATES	74
2.3.	EC DECLARATION OF CONFORMITY	75
3.	GENERAL PRELIMINARY INFORMATION	76
3.1.	DIRECTIVES	76
3.2.	GENERAL SAFETY INSTRUCTIONS	76
3.3.	RESIDUAL RISKS	76
3.4.	PERSONAL PROTECTIVE DEVICES	76
3.5.	NOISE LEVELS	77
3.6.	VIBRATION LEVELS	77
3.7.	OBLIGATIONS	77
3.8.	PROHIBITIONS	77
3.9.	INTENDED USE/ UNINTENDED USE	78
3.10.	SAFETY SIGNS USED ON THE MACHINE	78
3.11.	WARRANTY	79
4.	MACHINE DESCRIPTION	80
4.1.	OPERATIONAL DESCRIPTION	80
4.2.	MAIN COMPONENTS	81
4.3.	OPTIONAL DEVICES	82
4.4.	TECHNICAL SPECIFICATIONS	84
4.5.	OVERALL DIMENSIONS	85
4.6.	SAFETY DEVICES	86
5.	TRANSPORTATION AND INSTALLATION	87
5.1.	TRANSPORTATION	87
5.2.	INSTALLATION	88
5.3.	CONNECTIONS	89
5.4.	ADJUSTMENTS	89
6.	MACHINE CONTROLS AND USE	91
6.1.	CONTROL DEVICES	91
6.2.	ELECTRIC CONTROL BOARD CONTROL DEVICES	91
7.	MAINTENANCE	93
7.1.	ROUTINE MAINTENANCE	93
7.2.	EXTRAORDINARY MAINTENANCE	93
7.3.	TIGHTENING MOMENTS FOR METRIC THREADED SCREWS	94
8.	TROUBLESHOOTING	95
9.	SCRAPPING AND DECOMMISSIONING	96
10.	ELECTRICAL PANEL	98
10.1.	MAGNETOTHERMAL SWITCHES	98
11.	SPARE PARTS	99
11.1.	HOW TO REQUEST SPARE PARTS	99
11.2.	SPARE PARTS LIST	100

1. DESCRIPTION OF USER INSTRUCTION MANUAL

1.1. INTRODUCTION

The machine in question has been made in compliance with EU directives on the free movement of industrial products in EEC countries, it is then supplied with all documentation required by these directives.

1.2. INFORMATION ABOUT THE USOF THE MANUAL

The maintenance and user manual contains all information for installation, operation, maintenance and cleaning of the machine. It is to be used by operators in charge of managing the machine during all stages of its service life.



WARNING!

It is important to keep it in a readily accessible location, close to the machine and known to all users, so it can be found quickly in any situation.

The manual forms an integral part of the machine for safety purposes.

Therefore,

- It must be kept complete (in all its parts) if it gets lost or damaged, it is necessary to order a replacement.
- the machine must be tracked up to its destruction (even in the event of moving, sale, hiring, etc.);
- It must be kept updated and include any changes made to the machine.



WARNING!

Carefully read all documentation before performing any operation.

OPERATOR	MANUAL CHAPTERS THAT MUST BE STUDIED
INSTALLER	<ul style="list-style-type: none"> • Description of User Instruction Manual • Machine identification • General preliminary information • Description of the machine • Transportation and installation • Scrapping and decommissioning
OPERATOR	<ul style="list-style-type: none"> • Description of user Instruction Manual • Machine identification • General preliminary information • Machine controls and use
MAINTENANCE ENGINEER	<ul style="list-style-type: none"> • Description of user Instruction Manual • Machine identification • General preliminary information • Maintenance • Spare parts

2. MACHINE IDENTIFICATION

2.1. MODEL IDENTIFICATION DATA

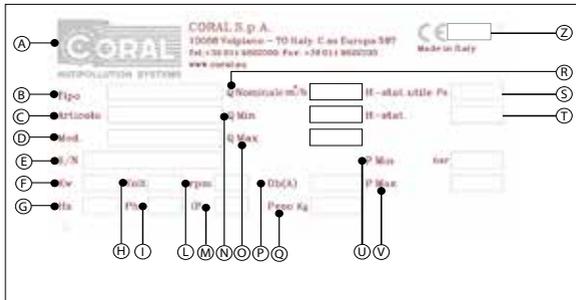
MACHINE	<i>FILTER</i>
MODEL	<i>IPERJET DF</i>
EDITION	<i>1.4 / 05.19</i>

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IPERJET DF						
	DF4	DF4/R	DF4 TRU	DF4 TC		
MACHINE NUMBER	2020000122 2020000123 2020000170	2020000124 2020000125	2020000171	2020000137		
	DF6	DF6 TRU	DF6 TC	DF9	DF9 TRU	DF9 TC
MACHINE NUMBER	2020000126 2020000167 2020000188	2020000171	2020000128 2020000138 2020000142	2020000127 2020000189	2020000173	2020000139 2020000143

2.2. EC IDENTIFICATION PLATES

The machine is equipped with an EC identification plate, containing specific data. Transmitting to the Manufacturer the data engraved which has the exact identification of the machine in question.



FIELD	DESCRIPTION
A	Manufacturer
B	Machine function
C	Machine identification number
D	Machine number
E	Machine serial number
F	Motor Power
G	Frequency
H	Volt
I	Electric Phase
L	Max rpm of fan
M	Electrical protection rating

N	Minimum rated capacity
O	Maximum rated capacity
P	Equivalent sound level decibel
Q	Machine weight
R	Nominal rated capacity
S	Static pressure drop with reference to the min nominal flow rate
T	Fan Static pressure
U	Compressed air Minimum value
V	Compressed air Maximum value
Z	Production order date

2.3. EC DECLARATION OF CONFORMITY



DATE

Macchina / Matériel / Machine / Maschine / Maquina / Machines / Maskinen

Funzione / Function / Fonction / Betriebszweck / Função :
 Modello / Model / Modèle / Modell / Modelo :
 Tipo / Type / Type / Typ / Tipo / Tipo : Kw V Hz
 Matricola / Serial No./ Numéro de série / Serien-Nr./ Matricula :
 Codice (Denominazione commerciale) Code / Code / Kode / Código / Código :

Dichiarazione di conformità CE

La CORAL S.p.a. C.so Europa, 597 Volpiano - Torino (Italia) dichiara con la presente che la macchina è conforme alla normativa contenuta nella direttiva del consiglio 2006/42/CE; 2014/35/CE; 2011/65/EU RoHS; 2014/30/UE integrate dalle inerenti successive direttive del consiglio CEE. Alcune disposizioni e normative di riferimento, laddove pertinenti, UNI EN ISO 12100:2010; EN 60204-1; EN 50581. Il fascicolo tecnico è custodito dall' Ing. Tagliavini Roberto presso l'ufficio tecnico del costruttore in C.so Europa, 597 Volpiano - Torino (Italia).

Déclaration de conformité CE

CORAL s.p.a. C.so Europa, 597 Volpiano - Turin (Italie) déclare par la présente que la machine est conforme à la norme contenue dans la directive du conseil 2006/42/CE; 2014/35/CE; 2011/65/EU RoHS; 2014/30/UE complétée par les directives inhérentes successives du conseil CEE. Quelques dispositions et normes de référence, là où cela est nécessaire; UNI EN ISO 12100:2010; EN 60204-1; EN 50581. Le dossier technique est conservé par M. Tagliavini Roberto - Ingénieur - au bureau technique du constructeur sis C.so Europa, 597 Volpiano - Turin (Italie).

CE declaration of conformity

CORAL S.p.a., with head offices at no. 597 C.so Europa, Volpiano - Turin (Italy), hereby declares that this machine complies with the regulations contained in Council Directive 2006/42/CE, 2014/35/CE, 2011/65/EU RoHS, 2014/30/UE, as amended by the subsequent directives issued by the EEC Council. Some reference standards and provisions include, where relevant, UNI EN ISO 12100:2010, EN 60204-1, EN 50581. The technical file is held by Eng. Roberto Tagliavini at the manufacturer's technical office, at no. 597 C.so Europa, Volpiano - Turin (Italy).

EG-Übereinstimmungserklärung

Hiermit erklärt die Firma CORAL S.p.a. C.so Europa, 597 Volpiano - Turin (Italien), dass die Maschine mit den Vorgaben der Richtlinie 2006/42/EG; 2014/35/EG; 2011/65/UE RoHS; 2014/30/UE des Europarates und mit den einschlägigen, folgenden EWG-Richtlinien übereinstimmt. Verordnungen und Bezugsnormen, sofern relevant, UNI EN ISO 12100:2010; EN 60204-1; EN 50581. Die technische Dokumentation wird von Herrn Ing. Tagliavini Roberto in der technischen Abteilung des Herstellers, C.so Europa, 597 Volpiano - Turin (Italien) verwahrt.

Declaración de conformidad CE

CORAL S.p.A. C.so Europa, 597 Volpiano - Torino (Italia) declara con la presente que la máquina es conforme con la normativa de la directiva del consejo 2006/42/CE; 2014/35/CE; 2011/65/EU RoHS; 2014/30/UE ampliada por las correspondientes directivas del consejo CEE. Algunas disposiciones y normativas de referencia, donde necesarias: UNI EN ISO 12100:2010; EN 60204-1; EN 50581. El dossier técnico es conservado por el Ing. Tagliavini Roberto en el departamento técnico del fabricante, C.so Europa, 597 Volpiano - Torino (Italia).

Claudio CORAL - President



Ing. Roberto TAGLIAVINI - Technical Director



3. GENERAL PRELIMINARY INFORMATION

3.1. DIRECTIVES

In the design and construction of the machine the following directives were held as reference:

DIRECTIVES	
2006/42/CE	Machinery Directive
2014/30/UE	Electromagnetic Compatibility Directive
2006/95/CE	Low Voltage Directive (LVD)

3.2. GENERAL SAFETY INSTRUCTIONS

The instructions and safety instructions referred to in this manual take into account that, in the workplace, the requirements of the document “**Consolidated Act Legislative Decree 81/08**” (regarding workplace safety) must be known and applied. These contain important information relating to:

- safety of persons engaged in operation and maintenance;
- safety and efficiency of the machine.

3.3. RESIDUAL RISKS

The machine is delivered with all safety systems needed for the operator to work in conditions of maximum safety, but risks remain from which the operators must be protected, especially during the maintenance, installation and cleaning stages.

Operators, for their part, must use personal protective equipment suited to the risk to be addressed. The most used are: gloves and masks, goggles, safety footwear etc. ...

		GENERAL RESIDUAL RISKS
	Residual risk	Description
1	VOLTAGE PRESENCE DANGER	There would be a risk of electric shock in the event in which the operator performs maintenance or replacement operations of the switch and leaves the under voltage plug inserted.
2	POWDER INHALATION DANGER	In the event the operator removes the powder-holder containers while performing maintenance without disconnecting the mains socket, he/she risks of inhaling potentially dangerous powders due to the automatic post-cleaning effects of the end of cycle.
3	EXPLOSION RISK	In the event in which, despite the prohibition clearly set out in paragraph “ 3.9. INTENDED USE/ UNINTENDED USE ”, the machine is used to extract elements that by nature or by reaction are flammable, or pose an explosion risk.

3.4. PERSONAL PROTECTIVE DEVICES

The workers must wear work clothes and if necessary personal protective equipment (gloves, goggles, masks, etc..) according to the laws and safety regulations applicable in your country.

The signs indicated below refer to the personal protective equipment to be used.

SYMBOL	OBLIGATION
	Use protective gloves.



Use safety footwear.



Protective mask.

3.5. NOISE LEVELS

The machine has been designed so as to reduce the A-weighted sound power level expressed in dB(A). The user can detect values different from those indicated according to the environment location (it is necessary to assess the reverberation time and the proximity of walls or other reflecting surfaces).

IPERJET DF			
	DF4 - DF4/R	DF6	DF9
SOUND LEVEL	78 dB(A)	81 dB(A)	87 dB(A)
SOUND LEVEL WITH PLENUM	71 dB(A)	75 dB(A)	79 dB(A)



WARNING!

To reduce sound levels due to reverberation, we recommend placing the filter in correspondence to the corners, near walls or on enclosed metal structures.



WARNING!

The machine is designed to reduce the level of sound power to the source. Check the requirements of the legislation in force in the country of installation and, if required, use:

- Personal protective equipment,
- any soundproofing screens.

3.6. VIBRATION LEVELS

The machine does not send vibrations to the ground that may compromise the stability or accuracy of any devices located near the system.

3.7. OBLIGATIONS

- Do not use the machine improperly, that is, do not use the machine in any manner other than that indicated in the paragraph entitled “**3.9. INTENDED USE/ UNINTENDED USE**”.
- Perform maintenance operations with the machine turned off and disconnected plug.
- Only qualified personnel can operate the machine.

In particular operators must:

- observe the rules and instructions provided by the employer, the manager and the person in charge of collective or individual protection.
- use the machinery, equipment, tools etc. correctly;
- use the protective devices provided correctly;
- promptly inform the employer, or person in charge of any deficiency in the safety devices;
- long hair must be tied back, do not wear scarves or any other piece of clothing that might get caught or dragged into the moving parts of the machine.

3.8. PROHIBITIONS

In particular, operators must not:

- remove or modify the safety, signalling or control devices without authorisation;

- carry out operations or actions which are outside their field of expertise and which might compromise their own safety or that of other operators;
- process with products different to those listed;
- change the electrical connections to exclude the safety devices;
- smoke while the filter is in operation.

3.9. INTENDED USE/ UNINTENDED USE

The IPERJET DF filter is designed for:

OPERATION	TREATED AIR TYPE		WORK ENVIRONMENT
	PERMITTED	NOT PERMITTED	
FILTRATION of:	<ul style="list-style-type: none"> • welding fumes • dry powders • metallic powders 	<ul style="list-style-type: none"> • flammable or explosive vapours • potentially explosive metallic powders • powders which are by nature or by reaction can be explosive 	Products during processing in the mechanical industry

The machine has been designed to:

- satisfy the requirements mentioned in the sales contract;
- be used according to the directions and limits of use specified in this manual.

The machine has been designed and built to work safely if:

- it is used within these limits;
- the procedures in the user manual are performed;
- routine maintenance is performed on time and as indicated in the manual;
- extraordinary maintenance is performed promptly when needed;
- the safety devices are not removed or bypassed.



WARNING!

It is considered “MISUSE” if the machine is used to obtain production values different from those described herein.

Any other use of the machine must be previously authorized by **CORAL S.p.A**

In the absence of such written permission the manufacturer disclaims any liability with regard to possible damage to property or persons and deems any kind of warranty regarding the line and the equipment supplied as void.



WARNING!

During welding operations the use of flammable spray, abrasive wheels or other tools that cause sparks or naked flames, can cause ignition of the filter fabric.

3.10. SAFETY SIGNS USED ON THE MACHINE

Safety stickers and labels are affixed to the machine, as shown in the table below and illustrated in the following image:

POS.	SIGN	DESCRIPTION
A		Installation warning

B	 <p>Spegnere il ventilatore e togliere tensione prima di aprire il filtro. Vor dem Öffnen des Filtergerätes Ventilator abschalten und Netzspannung ziehen. Pls. switch off the fan and tension before opening the filter. Arrêter le ventilateur et la tension avant d'ouvrir le filtre. Apagar el ventilador y la tensión antes de abrir el filtro.</p>	Obligation warning
C		Voltage presence danger
D		Obligation warning (in the version with electric control board)
E		Motor rotation direction

3.11. WARRANTY

The warranty **is subject** to the following general conditions

- the packaging must be opened and installation must be performed by authorized and/or approved technicians by the Manufacturer;
- **The commissioning of the installed machine** must be performed according to the instructions listed in this manual. (For technical assistance contact Coral S.p.A.).
- **the machine must be used within the limits stated** in the contract and reported in the technical and/or commercial documentation.
- maintenance must be performed in the time and manner provided by the manual, using **CORAL S.p.A.** original spare parts and entrusting the work to qualified personnel.

The warranty becomes **void** in the event of:

- the safety standards not being respected;
- **removal of or tampering with** the control and safety devices (guards, photocells, sensors, switches, etc.);
- **changes to safety conditions** established by the Manufacturer;
- misuse of the machine:
- use of the machine by **untrained and/or unauthorized personnel** or failure of the various operators to comply with responsibilities indicated in the manual;
- **changes or repairs** made by the user without the written authorisation of the Manufacturer;
- partial or total failure to comply with instructions;
- defective energy supply (electricity, compressed air, etc.);
- lack of maintenance;
- use of non-original spare parts.
- exceptional events such as floods, fires (if not caused by the machines).

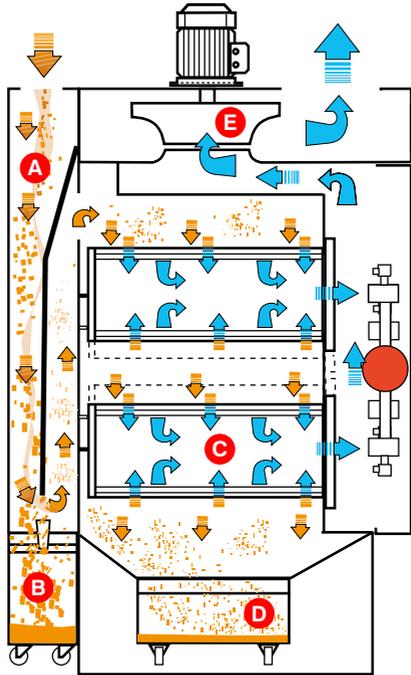
The warranty **does not include**:

- Consumable material such as: oil, filter cartridges, lubricating grease.
- parts damaged by misuse or improper use, wrong operator intervention, unauthorized repair or tampering by the customer or by third parties, or use of parts not supplied by **CORAL S.p.A.**

4. MACHINE DESCRIPTION

4.1. OPERATIONAL DESCRIPTION

The IPERJET DF filter is made with a panelled structure made of varnished metal sheet equipped with an intake connection.



The polluted air is sucked through the air intake by the vacuum created inside the casing by the centrifugal fan.

STEP	ACTION
A	The air passes through the vertical pre-chamber in which the first mechanical separation of the particles takes place by decantation.
B	The heavy particles sink to the bottom of the wheeled container.
C	The remaining particles are filtered by the cartridge filter.
D	The finer filter dust settles in the second container.
E	The air filtered in this way passes through the fan and is expelled through a grid located on the upper wall of the plenum.

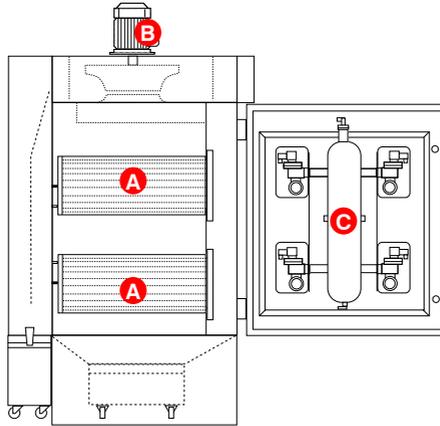


WARNING!
The unit is designed for use in vacuum.

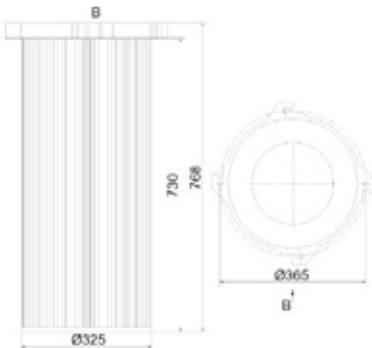
4.2. MAIN COMPONENTS

The machine is made up of the following components:

POS.	ELEMENT
A	CARTRIDGE FILTER
B	FAN
C	PNEUMATIC PLANT CLEANING



4.2.1. CARTRIDGE FILTER



The cartridge is made with polyester non-woven filtering fibres obtained with the spunbonded process. This manufacturing method allows no variations on air permeability, filtering efficiency is, therefore, increased and higher stability is obtained.

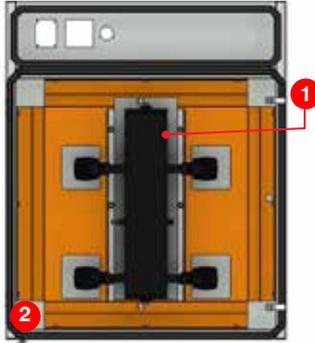
The fibre IFA-BGIA certification complies with directives DIN EN 60335-2-69:2008, which require a release lower than 0.1% for granulometry powder within 0.2 and 2 micron and a passage speed of 0.056 m/s, which corresponds to the M classification category. The maximum use temperature in continuous operation is 130°C.

The smooth surface allows obtaining an optimal powder detachment.

For assembly and disassembly see section “7.2.1 REPLACING THE CARTRIDGE”.

DESCRIPTION	
SIZES	Ø325 L=700 mm
NO. OF FOLDS/ SURFACE	175/ 12 m ²
WEIGHT	270 g/m ²
MAX OPERATING TEMPERATURE	90°C
BIA CLASSIFICATION	M (USGC)

4.2.2. DESCRIPTION OF THE PNEUMATIC CLEANING SYSTEM



The washing takes place via a highly effective direct system, consisting of a circular section tank (1), with incorporated solenoid valves and condensation discharge (2).

The high efficiency is determined by the fact that the solenoid valves obtain the air directly from the tank, which injects it directly into the cartridge. The high shock wave, as a consequence, separates the powder, by discarding it to the container.



WARNING!

The system uses and filtered compressed but not lubricated air, in the pressure field of 6-8 bar.

4.3. OPTIONAL DEVICES

4.3.1. SOUNDPROOF PLENUM

The ejected soundproof plenum (1) can be supplied optionally with the IPERJET DF machine.

It is installed to muffle the noise tested from the engine and from the by the turbulent air movement.



WARNING!

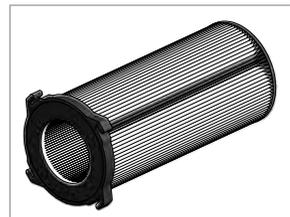
The plenum is designed to insert any hepa filter or activated carbon in it.



4.3.2. ELECTROSTATIC FILTERING CARTRIDGES

The M/Aluminium cartridge is treated with aluminium powders, which is the solution for all the applications that require removing electric charge on the powders to be filtered and, therefore, on filtering media.

The type of fibre has a particularly smooth surface, which allows an optimal powder detachment.



4.3.3. ACTIVATED CARBON

Activated carbon filter section intended to absorb the gassy phase of the emissions, i.e. the organic solvents contained in paint.

DESCRIPTION	
Type of activated carbon:	Extruded cylinders obtained by physical activation of selected raw material with heat and steam.
Diameter of pellets::	3 mm / 4mm
Apparent density (ASTM D2854-89)	520 g/l
Ashes (ASTM D2866-94)	10%
Mechanical resistance (ASTM D3802-79)	> 97 %
Humidity at packaging (Oven Drying ASTM D2867-91)	8 %
Specific surface (B.E.T. method)	1050 m ² /g
Iodine number (JIS K1470-67)	1000 mg / g
CCI4 absorption(ASTM D3467-94)	45%

4.3.4. ELECTRIC CONTROL BOARD

The electric control board is optional in models DF4(*), DF6 (*) whereas in DF9 (*) is standard.

The functions of the electric control board are:

- Start and stop the machine automatically from the work station.
- Alarm lights.
- Cycle economiser to manage the cartridge cleaning.

The electric diagrams are attached to the electric control board.

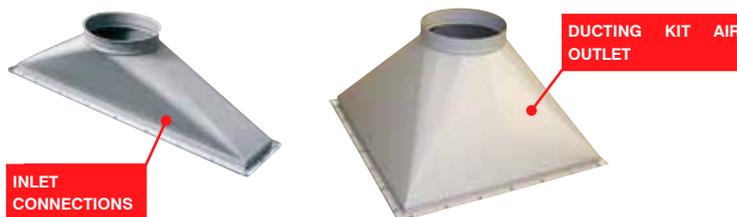
(*) The electric control board can be replaced by the digital control system AHEAD (Optional) integrated in the door panel.



4.3.5. CONNECTIONS AND COUPLINGS

- Suction inlet connections to connect a pipe line.
- Connection kit to duct the ejection.

Only in the DF4 version, the fixing plate is available for using 2 suction arms of d. 150.



4.3.6. HEPA FILTER

The hepa filter (optional) is certified according to standard CEN EN 1822 dated 1995, which requires a release lower than 0.05% for granulometry powders within 0.1 and 0.2 micron, corresponding to the H13 category. For dimensions see “4.4 TECHNICAL DATA”.

4.4. TECHNICAL SPECIFICATIONS

IPERJET DF								
	DF4 DF4/R DF 4TRU	DF4 DF4/R DF 4TRU	DF4 TC	DF6 DF6 TRU	DF6 TC	DF9 DF9 TRU	DF9 TC	
POWER	3Hp 2,2 kW	4Hp 3 kW	3Hp 2,2 kW	5,5Hp 4 kW	4Hp 3 kW	10Hp 7,5 kW	5,5Hp 4 kW	
SUPPLY VOLTAGE [V]	230/400			400/690	230/400	400/690	400/690	
FREQUENZA [Hz]	50			50	50	50	50	
ABSORBTION [A]	4,5	5,9	4,5	7,6	5,9	14,5	7,6	
N° OF REVOLUTIONS [rpm]	2920	2920	2920	2920	2920	2915	2920	
FAN TYPE	PRA250			PRA280	PRA250	PRA320	PRA280	
MAX CAPACITY	[m³/h]	2200	3000	2000	4000	2500	6500	3500
	[cfm]	1294	1764	1180	2352	1475	3835	2065
AVAILABLE STATIC PRESSURE [mmH ₂ O]	150	130	180	100	150	130	150	
CARTRIDGE FILTER DIMENSIONS	D.325 L=750	D.325 L=750	D.325 L=750	D.325 L=750	D.325 L=750	D.325 L=750	D.325 L=660	
N° OF FILTERS	4 MPES	4 MPES	4 MPES	6 MPES	4 MPES	9 MPES	9 MPES	
FILTER TYPE	CARTRIDGE			CARTRIDGE		CARTRIDGE		
FILTER FABRIC TYPE	100% POLYESTERE			100% POLYESTERE		100% POLYESTERE		
BIA CLASSIFICATION	M	M	M	M	M	M	M	
FILTERING SURFACE	37 m²	48 m²	48 m²	72 m²	72 m²	108 m²	72 m²	
FILTRATION EFFICIENCY	99,9%	99,9%	99,9%	99,9%	99,9%	99,9%	99,9%	
HEPA FILTER DIMENSION	610x610x78			762x915x78		610x610x292 305x610x292		
ACTIVATED CARBONS NUMBER [Kg]	14	14	14	27	27	Max 80	Max 80	
STORAGE CAPACITY FRONT DRUM [l]	86 (65 TRU)	86 (65 TRU)	123	115	146	137 (65TRU)	137 (65TRU)	
STORAGE CAPACITY BACK DRUM [l]	80	80	80	90	90	102	102	
WEIGHT [Kg]	380 415(TRU)	385 415(TRU)	460	490	550	620	752	

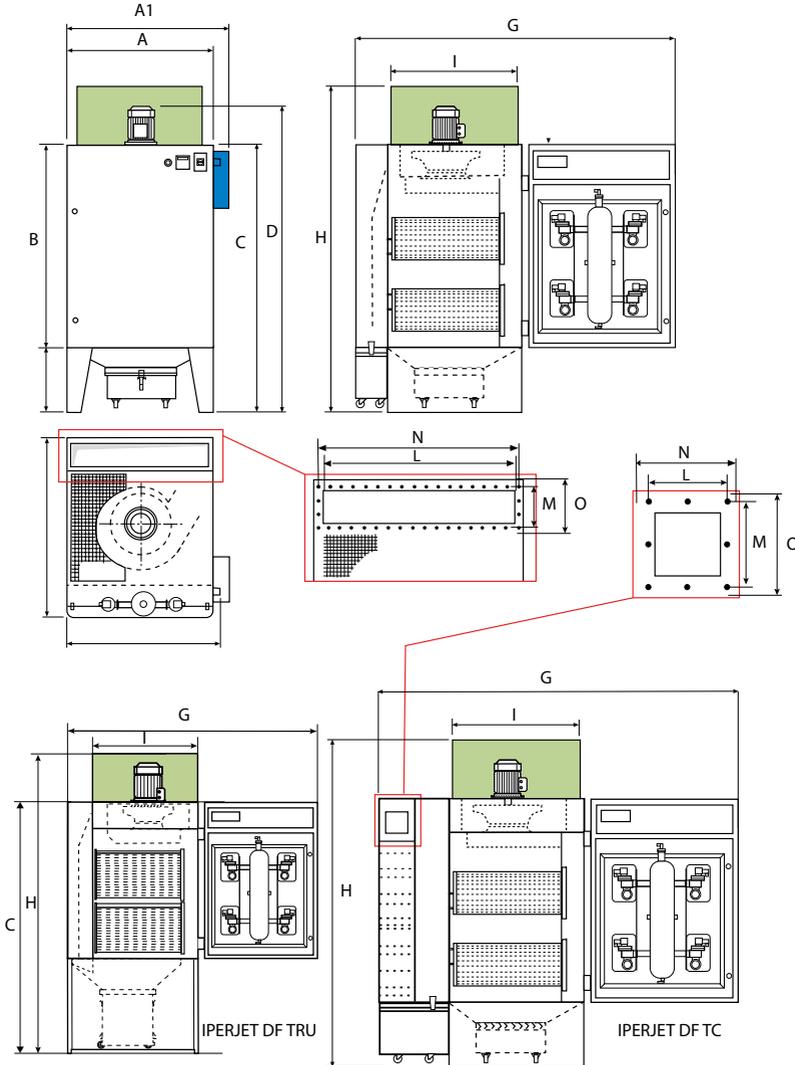


WARNING!

A high filter detachment and a release lower than 0.1% for glanulometry powders within 0.2 and 2 micron with a passage speed of 0.056 m/s are ensured.

		IPERJET DF4	IPERJET DF6	IPERJET DF9
TANK		Ø 5" 4 outputs	Ø 5" 6 outputs	Ø 5" 9 outputs
SOLENOID VALVE	MODEL	VEP (3/4")	VEP (3/4")	VEP (3/4")
	ELECTRICITY SUPPLY	24V AC 50 Hz	24V AC 50 Hz	24V AC 50 Hz
	No.	4	6	9

4.5. OVERALL DIMENSIONS



	OVERALL DIMENSIONS									INLETS			
	A	B	C	D	E	F	G	H	I	L	M	N	O
DF DF4	930	1120	1610	1951	1015	1210	2085	2043	838	864	181	894	211
DF DF6	1100	1315	1805	2130	1190	1210	2260	2358	840	1036	181	1066	211
DF DF9	1300	1490	1979	2340	-	1300	2550	2510	840	1235	181	1266	211
DF DF4 TC	930	1120	1610	1900	1015	1400	2280	2043	838	240	210	240	210
DF DF6 TC	1100	1315	1805	2100	1190	1420	2470	2358	840	240	210	240	210
DF DF9 TC	1300	1495	1979	2320	-	1540	2725	2800	980	240	210	240	210
DF DF4 TRU	930	1120	1920	2225	1015	1400	2085	2353	838	864	181	894	211
DF DF4 TRU	1100	1315	2130	2450	1190	1420	2260	2683	940	1036	181	1066	211
DF DF4 TRU	1300	1490	2300	2300	-	1540	2250	3211	980	1235	181	1266	211

4.6. SAFETY DEVICES

The machine is equipped at origin with all the protective systems needed to work safely.
Listed below are the systems adopted by **CORAL S.p.A.**:

POS.	ELEMENT	DESCRIPTION
A	CRANKCASE	The crankcase covers all the moving parts of the machine, in order to prevent dangerous situations for the operator.
B	MAIN "ON-OFF" SWITCH	If set to "ON" the current goes to the machine, if set to "OFF" the current is stopped. The switch is set to be locked during maintenance.
C	SAFETY GRID	It is placed inside the filter close to the fan, in order to prevent dangerous situations for the operator.



WARNING!

The removal of the crankcase or safety systems typically causes the warranty to become void the full assumption of responsibility by the user.

5. TRANSPORTATION AND INSTALLATION

5.1. TRANSPORTATION

The **IPERJET DF** filter is transported to the customer:

- assembled,
- packaged,
- palletized

Upon delivery of the machine:

STEP	ACTION
1	Remove material from packaging.
2	Visually check that there was no damage during transportation and check the completeness of the delivery. Otherwise tell your dealer as soon as possible and no later than 10 days after delivery.



WARNING!

Prior to any handling, disconnect the machine from the mains supply and from the connections with utilities.



WARNING!

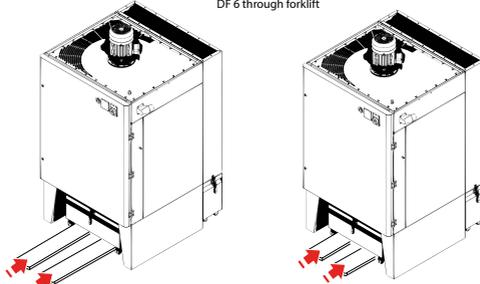
To handle the material, use the wheels or suitable lifting devices and take all the safety measures required for the worksite activities.



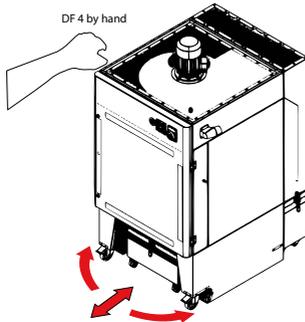
WARNING!

It is mandatory to electrically ground the filter by connecting the points of contact with an adequately sized copper wire (a section of 2.5 mm² is recommended), secured to the manufactured product, taking care to maintain continuity.

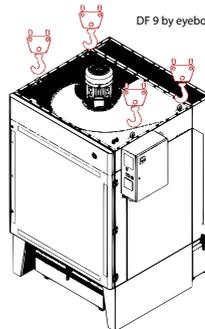
DF 6 through forklift



DF 4 by hand



DF 9 by eyebolts



5.2. INSTALLATION

The **IPERJET DF** filter for the design characteristics:

- is designed onboard the machine installed in the immediate vicinity of the utilities;
- It is connected by a rigid or flexible channelling to the connection system, which is equipped with the machine tools.

For **installation**, follow the procedure below:

STEP	ACTION
1	Connect the machine to the mains only after verifying the correct voltage and frequency indicated on the engine nameplate.
2	Check the correct fan rotation indicated by the arrow on the engine crankcase.
3	Connect the pneumatic cleaning system to the compressed air system.



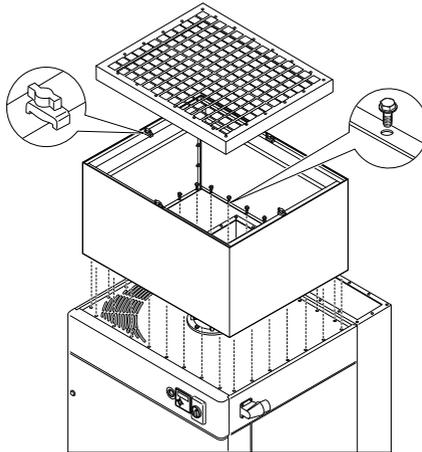
WARNING!

The filter is equipped with a filtered air expulsion handle placed on the upper side of the unit/ motor roof; therefore, in outdoor installations, we recommend protecting the filter under a shed, so to protect the manufacture from inevitable rainfall infiltrations.

5.2.1. ASSEMBLING THE SOUNDPROOF PLENUM (OPTIONAL)

To **assemble the plenum**, refer to the following image:

STEP	ACTION
1	Loosen the M8 screws on the ejection plate and motor connection.
2	Place the plenum without the ejection grid on the filter top.
3	Tighten the M8 screws inside the plenum again.
4	Place the ejection grid back (H) on the plenum (A) and fasten using the bridge clamp closure.



5.2.2. SOUND-PROOFING PLENUM ASSEMBLY WITH ACTIVE CHARCOAL (OPTIONAL)

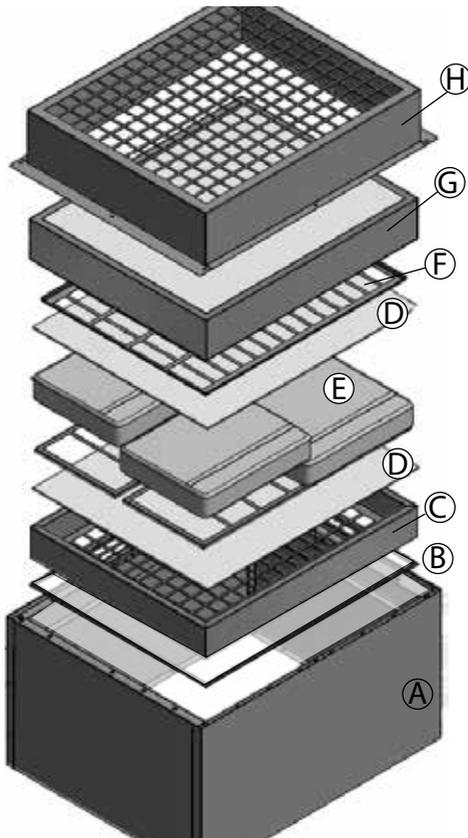
For assembly of the plenum with active charcoal, refer to the following image

STEP	ACTION
1	Follow the instructions for assembly of the sound-proofing plenum.
2	Insert that stated below in the following order:
3	<ul style="list-style-type: none">• gasket (B)• bottom grid for activated carbon (C)• polyester layer (D)• activated carbon and protective net (E)• polyester layer (D)• bottom grid for activated carbon (F)• Absolute filter(G)
4	Place the ejection grid back (H) on the plenum (A) and fasten using the bridge clamp closure.



WARNING!

Avoid release of activated carbon. Avoid prolonged contact with eyes and skin. Avoid inhalation. Wear protective gloves and glasses. Avoid contact with strong oxidants (H₂O₂, KMnO₄, chlorates, hypochlorides, nitrates), sources of ignition, combustible materials.

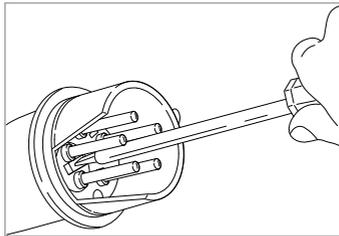


5.3. CONNECTIONS

5.3.1. ELECTRIC CONNECTIONS

For the **electrical connection**, follow this procedure:

STEP	ACTION
1	<p>Check:</p> <ul style="list-style-type: none"> • the voltage and • frequency of the mains. <p>The correct data for use of the machine are shown on the nameplate on the electrical engine or in the technical data table in the manual.</p>
2	<p>The IPERJET DF machine is equipped with a five-pole plug, to power the 220 volt pneumatic cleaning system. Make sure that the electricity power supply system is equipped with a neutral and a with an earth connection.</p>
3	<p>Insert the five-pole plug.</p>
4	<p>For a short time, start and stop the machine to check the correct rotation direction, indicated by the arrow on the engine.</p>
5	<p>In the versions with electric control board (optional on DF4 and DF6), the machine is equipped with a 5 m extension cable with five-pole plug having phase inversion; for the procedure see the figure. The electric control board is also provided with transformer that powers the 24Vac low voltage cycle programmer.</p>



5.3.2. PNEUMATIC CONNECTIONS

For the **pneumatic connection** of the filter proceed as follows:

STEP	ACTION
1	<p>Connect the compressed air cylinder to the line, ensuring that the mains section is suitable for the flow rate required (Ø 1/4" tank connection to the power supply line).</p>
2	<p>Power the solenoid valves with a max. pressure of 6 bar.</p>
3	<p>Ensure that the compressed air of the pneumatic system is purified and free from lubrication; otherwise, mount a skillair with 3/8" coupling.</p>

5.4. ADJUSTMENTS

5.4.1. FLOW ADJUSTMENT

To **adjust the flow of the unit**, follow this procedure:

STEP	ACTION
1	<p>Acting on the butterfly gate (optional) mounted on the ducting using the appropriate the knob.</p>

5.4.2. ADJUSTING THE ECONOMISER

For operation and adjustments refer to the manual attached to the economiser.

5.4.3. FACTORY-SET PARAMETERS

POS.	PARAMETER	DESCRIPTION
1	Language	ENGLISH
2	Analog display	
3	Mode	Full-Auto
4	Δp measuring unit	kPa
5	Number of outlets equal to the number of valves	
6	Power supply voltage	230VAC
7	Solenoid valve voltage	24VAC
8	Type of wash	Pulse-jet
9	Δp wash start	0.8 Kpa – 8 mbar – 80 mmH ₂ O
10	Pause time	1 min 20 sec
11	Work time	0,500 sec
12	Final wash	ON
13	Δp Final wash start	0,2 Kpa – 2 mbar – 20 mmH ₂ O
14	Final wash cycles	5
15	Final wash pause time	30 sec
16	Final cycle work time	0,50 sec
17	Precoting	OFF
18	Δp Precoting	1,2 Kpa – 12 mbar – 120 mmH ₂ O
19	Relay 1 alarm	1,2 Kpa – 12 mbar – 120 mmH ₂ O
20	Relay 2 alarm	1,8 Kpa – 18 mbar – 180 mmH ₂ O

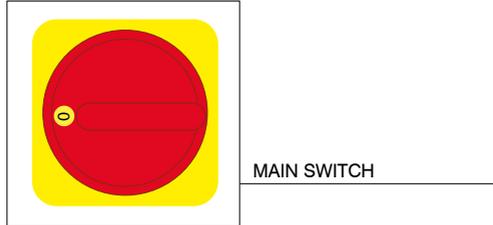
**WARNING!**

Parameters must vary depending on the type and amount of polluting agent sucked. This operation must be previously agreed with the CORAL S.P.A. Technical Department during installation; in any case, it will depend on the experience of the user.

6. MACHINE CONTROLS AND USE

6.1. CONTROL DEVICES

The machine has an “ON - OFF” main switch, which can be locked for maintenance operations. By setting the switch on “ON” , the filter will start.



In the versions with electric control board, the main switch provides power, but does not start the machine, which occurs when the green drive button is pressed and it is stopped when the black button is pressed.

6.2. ELECTRIC CONTROL BOARD CONTROL DEVICES

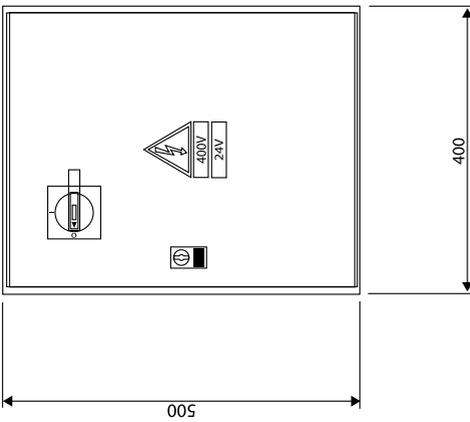
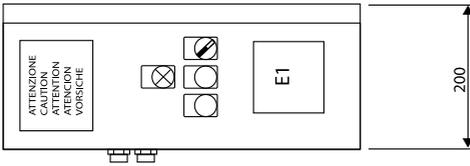
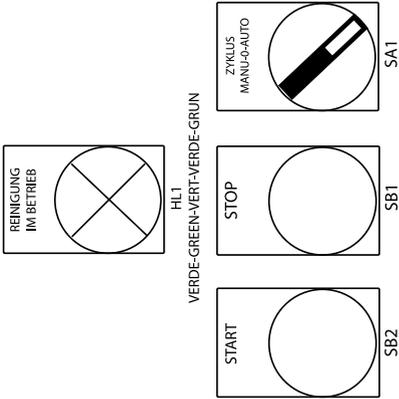
The **IPERJET DF9(*)** filter (optional DF4(*) and DF6(*)) is equipped with electric control board in compliance with EC regulations having the following functions basic:

- Main switch that can be locked placed on the access door for maintenance operations
- Green light indicating cleaning in progress **HL1**
- Drive button **START SB2**
- Stop button **STOP SB1**
- Selector switch to start the fan in **AUTOMATIC** or **MANUAL** mode
- Cycle programmer **E1**

In **MANUAL** position, it is started when the drive/stop buttons are pressed.

In **AUTOMATIC** position, it is started by remote from the work station.

(*) If the machine is equipped with control panel AHEAD refer to he attached manual for commands description.



7. MAINTENANCE



WARNING!

Do not perform any maintenance operations when the machine is in operation or connected to an electricity source. We therefore recommended during these phases to:

- disconnect the plug,
- lock the controls to avoid accidental start-ups.



WARNING!

We recommended not using flammable liquids when cleaning the filters.



WARNING!

Maintenance operations must be carried out by qualified personnel, who must be equipped with Personal protective equipment.

7.1. ROUTINE MAINTENANCE

To ensure correct machine operation, it is necessary to carry out periodical and preventive control and maintenance operations according to the table and to adhere to the indicated maintenance schedule. Failure to observe this warning shall exempt the Manufacturer from all liability to the effects of the warranty.

7.1.1. ROUTINE MAINTENANCE OPERATION TABLE

Ordinary maintenance operations must be carried out at the due time indicated in the table.

OPERATION	24 hours	250 hours	500 hours	1000 hours	1500 hours
Check the state of the electrical and pneumatic supply cables.				♦	
Check the state of the cartridges through the appropriate inspection door.		♦			♦
Unload the contents of the wheeled collection container.	♦				
Verify the pressure level of the pneumatic line (6-8 bar) and discharge condensation from the tank.		♦			
Check the pneumatic fittings and airtight clamping of the solenoid valve connector.				♦	
Verify that no anomalous vibrations are detected on the fan.					♦
Verify the performance of the backwashing cleaning system.		♦			
Check the status of cleanliness and, if necessary, clean the filter inlet piping, including caps, pipes and any flexible hoses.		♦			

7.1.2. CLEANING

WARNING!

The incorrect cleaning or replacement of filtering media carries the risk of leakage to the outside environment and of pollutant work.

As per standard, the filter is equipped with:

- cycle programmer for cleaning in automatic and manual mode
- differential pressure switch to monitor the progressive clogging of the filters.



7.2. EXTRAORDINARY MAINTENANCE

Operations not included among those listed as "routine maintenance" are considered extraordinary maintenance.



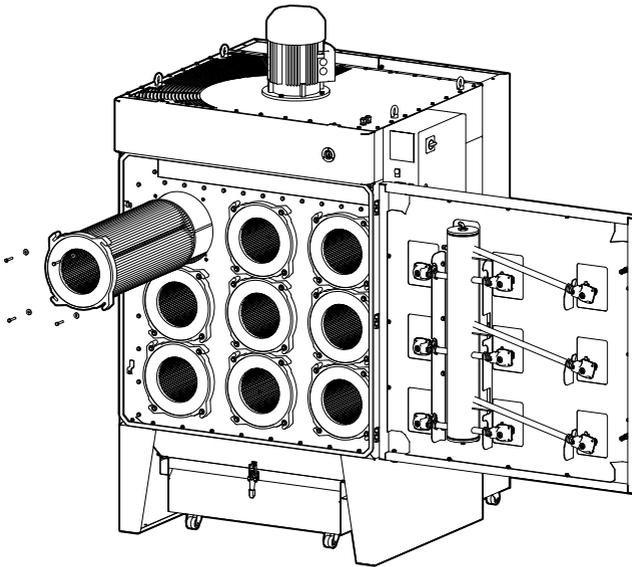
WARNING!

The extraordinary maintenance operations and repair of the machine are reserved for qualified, trained and authorized personnel of the Manufacturer or Authorized Service Centre.

7.2.1. CARTRIDGE REPLACEMENT

To replace the cartridge, follow this procedure:

STEP	ACTION
1	Undo the M8 fixing screws.
2	Remove the cartridge by turning it anticlockwise and proceed with the replacement.
3	Tighten the M8 fixing screws of the cartridge using a torque wrench. Tightening torque 5 Nm



7.3. TIGHTENING MOMENTS FOR METRIC THREADED SCREWS

Tightening moments must be applied slowly and constantly and a torque wrench must be used; these values must be decreased of 10% if an impulse screwdriver is used.

DIAMETER PER STEPS	SCREW SECTION mm ²	SCREW TIGHTENING MOMENTS Nm
6x1	20	10,4
8x1.25	36	25
10x1.5	58	50
12x1.75	84	86

8. TROUBLESHOOTING

DEFECT	CAUSE	POSSIBLE SOLUTIONS
The air emitted is not sufficiently purified	Inefficient action of the filters.	Check the state of cleanliness and replace if necessary.
Decrease the intake air flow	Filters not cleaned.	<ul style="list-style-type: none"> • Check the operation of the timer, electric and pneumatic systems. • Intervene at the pause times of the solenoid valves. • Replace the filtering parts if necessary.
The fan vibrates	The rotor is not balanced.	Remove and clean the rotor.
The fan turns but suction is insufficient	the rotation direction is incorrect	Invert the two phases connected to the engine.
Start failure	Incorrect connection.	Check the electrical connections.
The valve does not open	The reel or connection cables are interrupted	<ul style="list-style-type: none"> • Verify and restore the connections • Verify the programmer outlet: the control voltage must be free from disturbances within a tolerance of 10%
The valve discharges or remains open	<ul style="list-style-type: none"> • Insufficient circuit pressure • Insufficient air flow rate. Take pressure to 5 and 7 bar. 	Verify that the pneumatic circuit pressure is suitable (see paragraph "5.3.2 PNEUMATIC CONNECTION").
The fan turns but suction is insufficient	<ul style="list-style-type: none"> • Verify the correct rotation direction • Verify that air ducts are free 	<ul style="list-style-type: none"> • Invert two phases between them • Remove the obstacles and act on the calibration shutter

9. SCRAPPING AND DECOMMISSIONING

The machine has no particular decommissioning problems. Appropriate precautions should be taken to prevent it from being restarted by an unauthorized person.

For legal and tax issues (if any reports, complaints, etc ...), follow the current laws of the country where it is used.

Component	Material	Weight [kg]	Treatment	Note
Structure	Steel	350...580		  
Motor	Steel/Copper/ Plastics	10 ... 15	  	Requires disassembling. See supplier's manual.
Cartridges filters	Polyestere	1,5 cad.	 	    Replace it in the bags. Please consult the current regulations in force for information on how to properly dispose of these items.



SPECIAL WASTE. Wear suitable protection to avoid contact with any particles which may have been released. Please consult the current regulations in force for information on how to properly dispose of these items.



STEEL. Fully recyclable.



NON-RECYCLABLE MATERIAL. Hand over to a landfill.



WEEE. Please consult the current regulations in force for information on how to properly dispose of these items. (WEEE n° IT18120000011031)

9.1. TABLE OF SCHEDULED MAINTENANCE



It is recommended to use a register to track the maintenance actions performed.

It is suggested to photocopy this page and keep the register updated.

24 HOURS

Action	Date	Δp prev.	Δp after	Operator's signature
--------	------	---------------------	---------------------	----------------------

Unload the contents of the wheeled collection container.

250 HOURS

Action	Date	Δp prev.	Δp after	Operator's signature
--------	------	---------------------	---------------------	----------------------

Check the state of the cartridges through the appropriate inspection door.

Verify the pressure level of the pneumatic line and discharge condensation from the tank.

Verify the performance of the backwashing cleaning system.

Check the status of cleanliness and, if necessary, clean the filter inlet piping, including caps, pipes and any flexible hoses.

1000 HOURS

Action	Date	Δp prev.	Δp after	Operator's signature
--------	------	---------------------	---------------------	----------------------

Check and possibly replace torn or scratched filters.



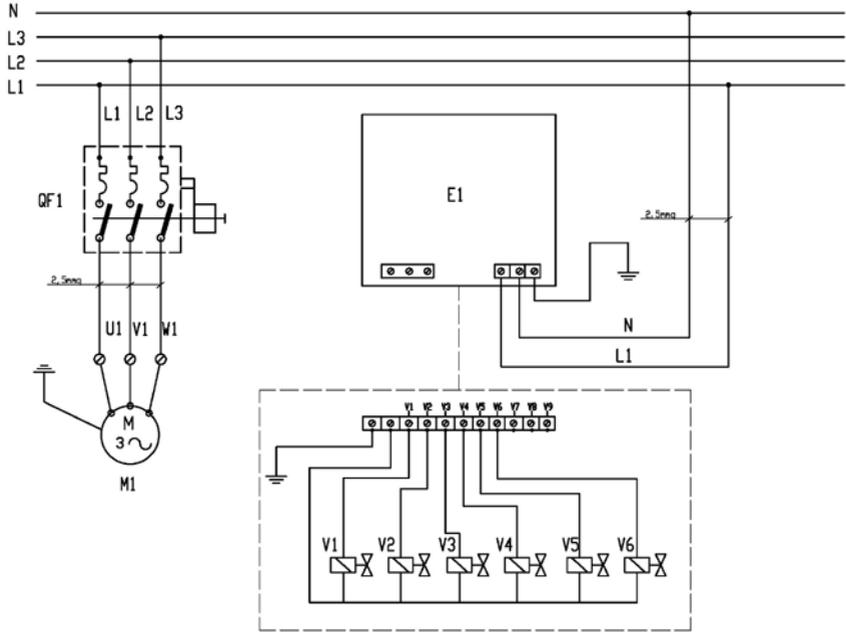
WARNING!

Do not dump used filters, send them to specialist disposal companies in accordance with local regulations.

10. ELECTRICAL PANEL

Comply with the voltage values, correct polarity and rotation direction during electric connection.

LINEA-FEEDING-LINE-LIGNE-LINEA-LEITUNG
 400Vac 3PH 50Hz/60Hz



E1=Generatore ciclico; Cyclical sequencer; Sequenceur cyclique; Programador ciclico; Steur



WARNING!

In the version with electric control board, the electric diagrams are attached to it.

10.1. MAGNETOTHERMAL SWITCHES

Iperjet DF4 2,2Kw	SWITCH 4,5/6,3 A
Iperjet DF4 3Kw	SWITCH 5,5/8 A
Iperjet DF6	SWITCH 7/10 A
Iperjet DF9	(see the electric diagrams attached to the electric control board)

11. SPARE PARTS

11.1. HOW TO REQUEST SPARE PARTS

If you need to order spare parts, proceed as follows:

1. Photocopy the form on the below page;
2. Fill in the suggested spaces.
3. Contact your local distributor or service office and **CORAL S.p.A.** spare parts sending a copy of the completed form in its entirety, to the e-mail address or the fax number indicated.

In response, you will be sent as soon as possible, a complete offer of price, delivery and sales conditions.



TECHNICAL AND SPARE PARTS OFFICE
CORAL S.p.A. Corso Europa, 597
10088 Volpiano (TORINO) - ITALY
Ph. +39 011 9822000 r.a. Fax +39 011 9822033-044
e-mail: coral@coral.eu http://www.coral.eu
P.I.02695840013

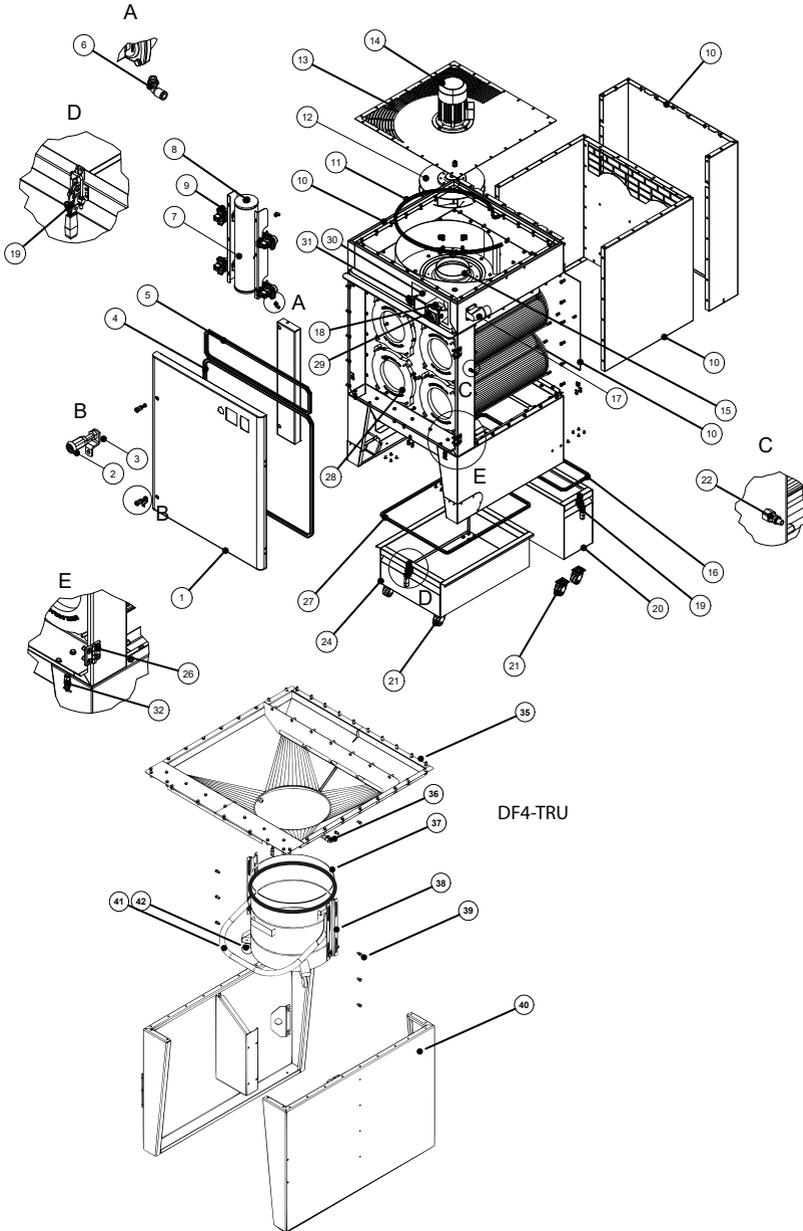
Spare parts request form

Goods delivery address		Invoice delivery address	
Applicant name	Telephone number	Shipment by:	
	Fax number	Date	

MACHINE SERIAL NUMBER	YEAR OF MANUFACTURE	POS. NO.	DESCRIPTION	QUANTITY

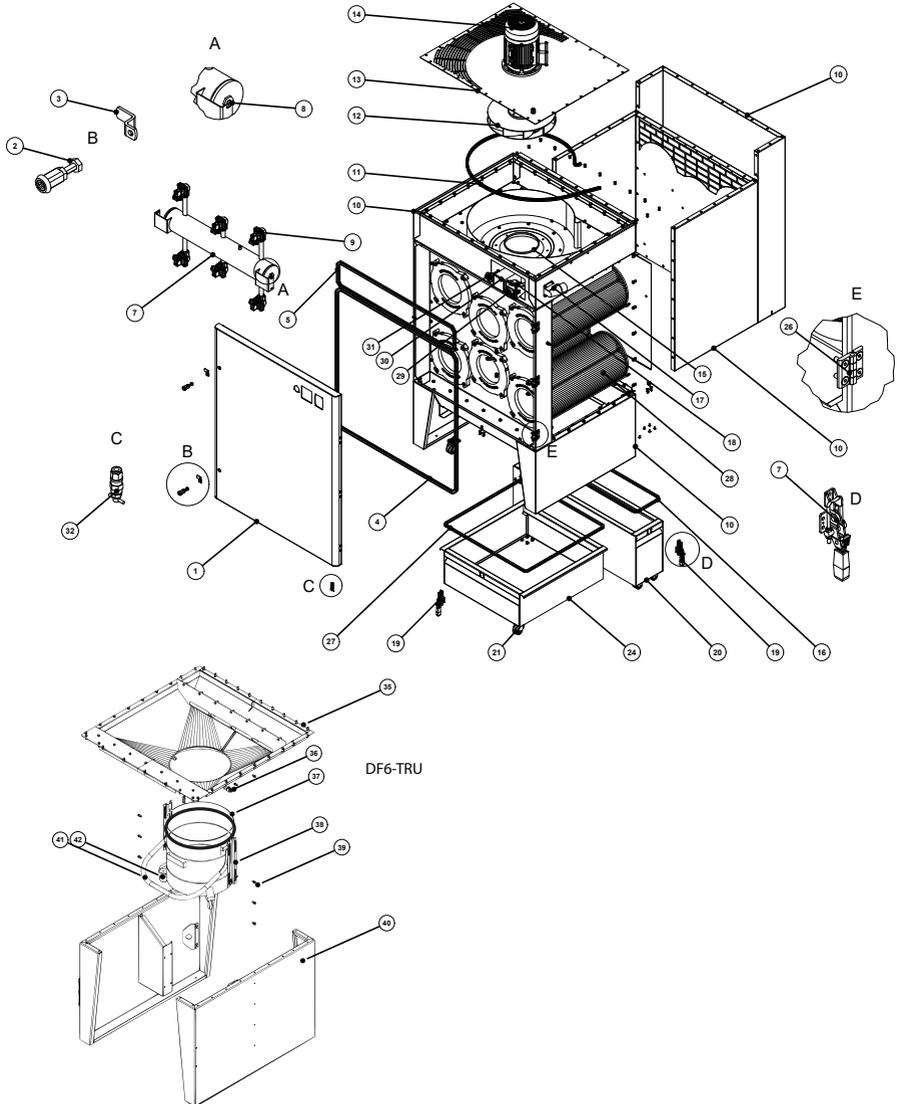
11.2. SPARE PARTS LIST

IPERJET DF4



POS.	DESCRIPTION	QTY	U. MEASUREMENT
1	FRONT DOOR	1	Nr.
2	CHROMED-P5MM-COMPRESSION CLOSURE	2	Nr.
3	33MM-COMPRESSION-CLOSURE LEVEL	2	Nr.
4	GASKET	3,5	Mt.
5	GASKET	2	Nr.
6	RUB. EXT. CONNECTION-1/4" COUPLING DT8	4	Nr.
7	5" TANK WITH 4 3/4" OUTLETS	1	Nr.
8	RUB. EXT. CONNECTION-1/4" COUPLING DT8	4	Nr.
9	SOLENOID VALVE	1	Nr.
10	BODY UNIT/HOPPER DF4	1	Nr.
11	GASKET	1,8	Mt.
12	PRA250-FAN-KW3-D400-F28-LG-50	1	Nr.
13	MOTOR UNIT PLATE PRA250/3KW	1	Nr.
14	MOT.HP4-P2-B5-V230/400-HZ50-IE2	1	Nr.
15	PRA250-IRON NOZZLE (KW 3)	1	Nr.
16	GASKET REAR DRAWER	2,2	Mt.
17	PLUG-TRI+N+TV380-16A-IP44	1	Nr.
18	SWITCH	1	Nr.
19	TIE-ROD CLOSURE-320/T2	3	Nr.
20	REAR DRAWER	1	Nr.
21	WHEEL-D50-TWEEN-ROT. SUPP.	8	Nr.
22	1/4" PIN COUPLING FOR COMPRESSED AIR	1	Nr.
23	FIXED WHEEL D100	2	Nr.
24	FRONT DRAWER	1	Nr.
25	ROTATING WHEEL D100	2	Nr.
26	SCREW HINGE.-ZAMA-BLACK-60X60	2	Nr.
27	GASKET FRONT DRAWER	2,5	Mt.
28	CART.D325/4PS1-H750-USGC-GR270	4	Nr.
29	SWITCH BOX	1	Nr.
30	CYCLE PROGRAMMER	1	Nr.
31	GAUGE-0/12BAR	1	Nr.
32	CONDENSATION DISCHARGE	1	Nr.
35	HOPPER	1	Nr.
36	PIN BIN	2	Nr.
37	BIN GASKET	1,5	Mt.
38	BIN SLIDEWAY	2	Nr.
39	SLIDEWAY SCREW	6	Nr.
40	HOPPER GROUP	2	Nr.
41	BIN HANDLE	1	Nr.
42	BIN WHEEL	4	Nr.

IPERJET DF6



POS.	DESCRIPTION	QTY	U MEASUREMENT
1	FRONT DOOR	1	Nr.
2	CHROMED-P5MM-COMPRESSION CLOSURE	2	Nr.
3	33MM-COMPRESSION-CLOSURE LEVEL	2	Nr.
4	GASKET	4,2	Mt.
5	FRONT DRAWER	1	Nr.
6	RUB. EXT. CONNECTION-1/4" COUPLING DT8	4	Nr.
7	5" TANK WITH 4 3/4" OUTLETS	1	Nr.
8	SOLENOID VALVE	4	Nr.
9	TOOL-HOLDER FRONT PANEL	1	Nr.
10	BODY UNIT/HOPPER DF4	1	Nr.
11	GASKET	2,3	Mt.
12	PRA280-FAN-KW4-D430	1	Nr.
13	MOTOR UNIT PLATE PRA280/4KW	1	Nr.
14	MOT.HP5,5-V230/400	1	Nr.
15	PRA280-IRON NOZZLE (KW 4)	1	Nr.
16	GASKET	2,5	Mt.
17	PLUG-TRI+N+T-V380-16A-IP44	1	Nr.
18	SWITCH	1	Nr.
19	TIE-ROD CLOSURE-320/T2	3	Nr.
20	REAR DRAWER	1	Nr.
21	WHEEL-D50-TWEEN-ROT. SUPP.	8	Nr.
22	1/4" PIN COUPLING FOR COMPRESSED AIR	1	Nr.
23	FIXED WHEEL D100	2	Nr.
24	FRONT DRAWER	1	Nr.
25	ROTATING WHEEL D100	2	Nr.
26	SCREW HINGE.-ZAMA-BLACK-60X60	2	Nr.
27	GASKET	2,8	Mt.
28	CART.D325/4PS1-H750-USGC-GR270	4	Nr.
29	SWITCH BOX	1	Nr.
30	CYCLE PROGRAMMER	1	Nr.
31	GAUGE-0/12BAR	1	Nr.
32	CONDENSATION DISCHARGE	1	Nr.
35	HOPPER	1	Nr.
36	PIN BIN	2	Nr.
37	BIN GASKET	1,5	Mt.
38	BIN SLIDEWAY	2	Nr.
39	SLIDEWAY SCREW	6	Nr.
40	HOPPER GROUP	2	Nr.
41	BIN HANDLE	1	Nr.
42	BIN WHEEL	4	Nr.

POS.	DESCRIPTION	QTY	UNIT OF MEASUREMENT
1	FRONT DOOR	1	Nr.
2	CHROMED-P5MM-COMPRESSION CLOSURE	2	Nr.
3	33MM-COMPRESSION-CLOSURE LEVEL	2	Nr.
4	GASKET	4,9	Mt.
5	STRAIGHT-COUP. CONNECTION-1/4" -DT8	6	Nr.
6	5" TANK WITH 9 3/4" OUTLETS	1	Nr.
7	SOLENOID VALVE	3	Nr.
11	PRA320-FAN-KW7.5-D480-F38-LG	1	Nr.
12	MOTOR UNIT PLATE PRA320/7.5KW	1	Nr.
13	EYEBOLTS	4	Nr.
14	MOT.HP10-P2-B5-V400/690-HZ50-IE2	1	Nr.
15	BODY UNIT/HOPPER DF9	1	Nr.
16	GASKET	2,5	Mt.
17	ELECTRIC CONTROL BOARD	1	Nr.
18	TIE-ROD CLOSURE-320/T2	3	Nr.
19	REAR DRAWER	1	Nr.
20	PRA350-IRON NOZZLE (KW 7.5)	1	Nr.
21	FRONT DRAWER	1	Nr.
22	FRONT DRAWER GASKET	3,4	Nr.
23	SCREW HINGE.-ZAMA-NERA-60X60	2	Nr.
24	WHEEL-D50-TWEEN-ROT. SUPP.	8	Nr.
25	1/4" PIN COUPLING FOR COMPRESSED AIR	1	Nr.
26	GAUGE-0/12BAR	1	Nr.
27	CART.D325/4PS1-H750-USGC-GR270	9	Nr.
28	CONDENSATION DISCHARGE	1	Nr.
29	REAR DRAWER GASKET	2,9	Mt.
35	HOPPER	1	Nr.
36	PIN BIN	2	Nr.
37	BIN GASKET	1,5	Mt.
38	BIN SLIDEWAY	2	Nr.
39	SLIDEWAY SCREW	6	Nr.
40	HOPPER GROUP	2	Nr.
41	BIN HANDLE	1	Nr.
42	BIN WHEEL	4	Nr.



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ANTIPOLLUTION SYSTEMS