

DE ITECH



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DESCRIPTION OF THE UNIT

General: DE ITECH is a refrigeration dryer equipped with the innovative Impulse Technology system, that offers important advantages in terms of energy saving, reliability and low management costs. Thanks to this technology, DE ITECH units adapt their performances and their adsorbed power to the real requirements of the system, allowing at the same time high savings and excellent stability of the DEW point, also with variable compressed air flow rates.

Benefits:

- The innovative Impulse Technology system controls the drying capacity of the dryer via impulse adjustment of the refrigerant fluid flow or through the thermal mass effect;
- New compact 3-in-1 aluminium heat exchanger engineered specifically to maximize the heat transfer coefficient. It includes a stainless steel condensate separator;
- Minimal pressure drops (average 0.09 bar) thanks to the fluid dynamic optimization and the large transfer sections;
- Dew point under control also in case of sudden variation of the compressed air flow ;
- Low environmental impact and reduced carbon footprint thanks to the Impulse Technology energy saving system;
- Quick and easy installation;
- Simplified maintenance;
- Maximum reliability.

Structure and casing: Heavy duty structure with panels protected by an epoxy polyester powder coating. Easy and safe moving with forklift truck or transpallet (DEiT018 – 270).

Compressors: Hermetic piston compressors (DEiT 003– 140) ensure high reliability and long service life. Scroll compressors (DEiT 165 – 270) offer reduced energy consumptions, low vibrations, less moving parts and high reliability.

Refrigerant fluid:

R134a refrigerant: DEiT 003 – 080
 R404A refrigerant: DEiT 100 – 270

New advanced 3-in-1 heat exchanger: 3-in-1 compact aluminium heat exchanger including an Air-Air heat exchanger, the evaporator and a condensate separator combined in a single module (external condensate separator DEiT 140– 270). This advanced heat exchanger has been engineered specifically to maximize the heat transfer coefficient and to guarantee industry leading pressure drops.

Air-to-Air Heat Exchanger

Hot and moist air enters the Air-to-Air heat exchanger where it exchanges heat in total counter flow with the outgoing cold air. Precooling saves energy by reducing the heat load on the evaporator section reducing the size of the compressor as a consequence.

Evaporator

The pre-cooled air enters the evaporator where it is cooled to the required dew point by exchanging heat in counter flow with the evaporating refrigerant, allowing maximum thermal exchange. The dew point temperature is held within its optimum performance range by the microprocessor even under variable ambient conditions.

Demister Separator

After cooling the cold air enters the high efficiency stainless steel separator where the condensate is removed by a demister. The condensate then falls into a generously dimensioned drainage chamber or sump for disposal through the drain controlled by the microprocessor . The cold dry compressed air passes through the secondary side of the Air-to-Air heat exchanger where it is reheated by the hot inlet air it is precooling. Reheating phase prevents down-stream pipe sweating.



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 Company:
 Attention To:
 Address:

Ref.:
 Offer number:

Condenser: The air-cooled condenser is designed to ensure operation up to 50 °C external temperature and to achieve very high energy efficiency values. DEiT 003 – 032 are supplied with tubeless condenser with steel fins protected by a double layer dipping painting. DEiT 040 – 270 are equipped with a condenser coil with copper tubes and aluminium fins. Thanks to the ducted condenser coil, the maintenance activities are possible also with dryer ON. Condenser filters standard on DEiT 100 – 270.

Fans: DEiT 003 – 080 are equipped with axial suction fans equipped with safety grilles and aluminium blades directly connected to the electric motor that is provided with built-in thermal circuit breakers. DEiT 100 – 270 are equipped with axial suction fans with safety grilles, die-cast aluminium body and sickle-shaped polypropylene-coated aluminium blades

Refrigeration circuit:

1. Impulse technology components
2. Pressure switches: HP mod. DEiT032÷270, LP mod. DEiT100÷270
3. Fan pressure switch mod. DEiT060÷270;
4. Lamination device
5. Liquid separator: mod. DEiT100÷270;
6. Solenoid valve on liquid line : mod. DEiT165÷270;
7. Filter-dryer.

Electrical equipment: The electrical equipment of each model is compliant with EN 60204-1 and includes a transformer ,that assures the electrical insulation of the control section from the power section, and a potential free contact for a general alarm. The mod. DEiT 100-270 are equipped with an electrical panel IP54 EN 60529 compliant and fitted with an interlocked door main switch to prevent access while power supply is ON. The mod. DEiT 165-270 are supplied with a phase monitor providing protection against phase loss and phase reversal.

Microprocessor control: the management of the unit is provided by a microprocessor control with icon based display. The control monitors the main operating parameters of the system, optimizes its performance and it manages the following functions:

1. Compressor ON/OFF
2. Impulse Technology system management
3. Condensate drain control and programming
4. Compressor hour counter
5. Alarms and service warnings

The control is fitted with a serial interface connectable to ModBus networks by an RS485 kit.

Testing: Before shipment, all units are tested in MTA. In particular, the main checks performed are the following: correct installation of the components, absence of refrigerant leaks and electrical safety tests.

PERFORMANCES

Range	DE iTech
Model	DEiT 165
Refrigerant	R404A
Frequency	50 Hz
Compressors	Scroll
Compressed air flow rate	16,5 m ³ /min FAD 20°C
Working pressure	7 bar
Maximum allowable working pressure	16 bar
Maximum allowable pressure drop	0,35 bar
Dryer air inlet temperature	35 C
Dryer air outlet temperature	27,3 C
Ambient Temperature	25 C
Suction temperature	25 C
Ambient pressure	0 bar
Relative Humidity	60 %
Ambient water content	15,6 g/Nm ³
Water content inlet dryer	5,69 g/Nm ³
Water content outlet dryer	0,762 g/Nm ³
Moisture flow rate	0,001 kg/s
Pressure dew point	3 C
Atmospheric dew point	-20,78 C
Compressed air pressure drop	0,1 bar
Average absorbed power	1,53 kW
Condenser air flow Rate	6600 m ³ /h



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GENERAL DATA

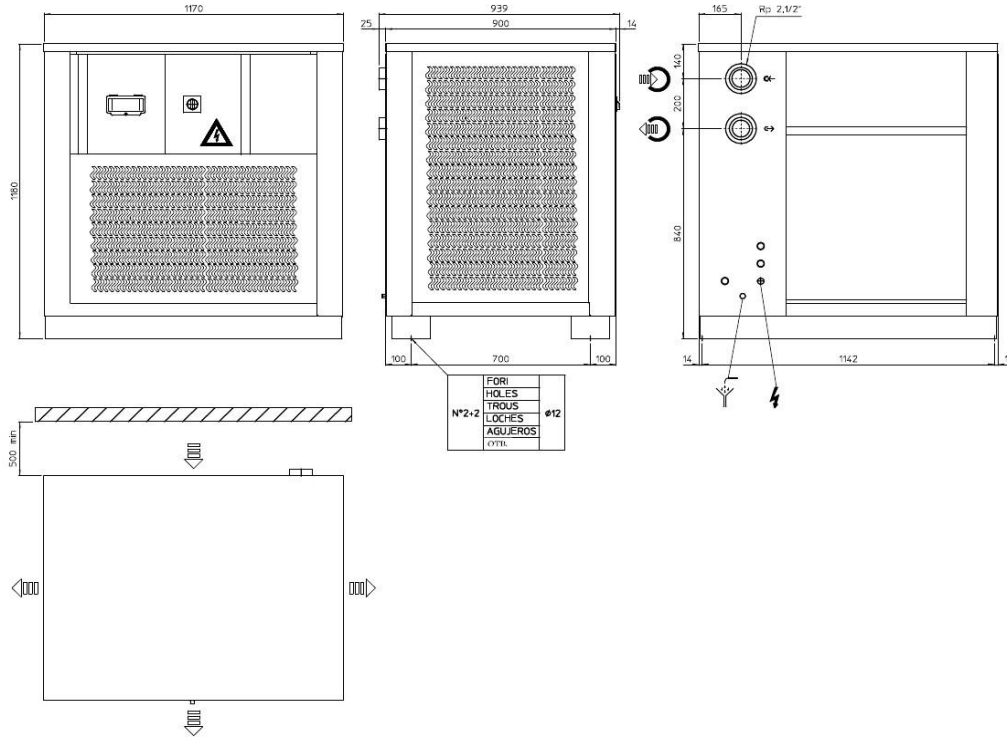
Power	400/3-PE/50 V/ph/Hz
Auxiliary	230/1/50 V/ph/Hz
Air connections	2 1/2" Rp
Sound Pressure Level	< 70 dB(A) 1 m
PED Category (2014/68/UE)	II
Lenght	939 mm
Width	1170 mm
Height	1180 mm
Weight	254 kg

ELECTRICAL DATA

Model	FLI	FLA	ICF
DEiT 165	3,17 kW	5,49 A	32 A

FLI = max power absorbed in the operating limit conditions
FLA = max current absorbed in the operating limit conditions
ICF = start-up current at the start of the last compressor in the operating limits condition

DE iTech 140 - 165 - 190 - 230 - 270



ALIMENTAZIONE ELETTRICA	⚡
POWER SUPPLY	
ALIMENTATION ELECTRIQUE	
ELEKTROANSCHLUB	
ALIMENTACION ELECTRICA	

INGRESSO ARIA	↻
AIR INLET	
ENTREE D'AIR	
LUFTENTRIIT	
ENTRADA DEL AIRE	

USCITA ARIA	↻
AIR OUTLET	
SORTIE D'AIR	
LUFTAUSTRIIT	
SALIDA DEL AIRE	

SCARICO CONDENSA	⤵
CONDENSATE DRAIN	
PURGE DES CONDENSATS	
KONDENSATABLASS	
DESCARGA DE LA CONDENSACION	

PICTURES





Cooling, conditioning, purifying.

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QUOTATION

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Product	Quantity	Unit net Price	Total net Price
DEiT 165	1	3.200 €	3.200 €

**USED DRYER IN GOOD CONDITION.
 CHECKED AND APPROVED BY OUR TECHNICAL DEPARTMENT.
 YEAR OF PRODUCTION: 2016**

TERMS AND CONDITIONS

Delivery & transport	ex works
Packing	Standard included *
Lead time	on stock
Payment	by agreement
Warranty	no warranty
Commissioning & start-up	Not included

QUALITY AND CERTIFICATION



MTA is ISO9001 certified, a sign of its commitment to complete customer satisfaction.

MTA products comply with European safety directives, as recognised by the CE symbol.