

# DE CARDENAS



**TECHNOLOGIES INNOVATIONS  
AND SMART SOLUTIONS**

*A company of Boldrocchi Group*

## SYSTEM IMPROVEMENTS

De Cardenas has designed, builds and tested some technologies innovations to improve the efficiency, durability and maintenance of the industrial fans.

**DIPS 4.0:** is able to measure all the life parameters of the fans and it is able to anticipate the appropriate maintenance actions in order to prevent machine downtime and reduce intervention times.

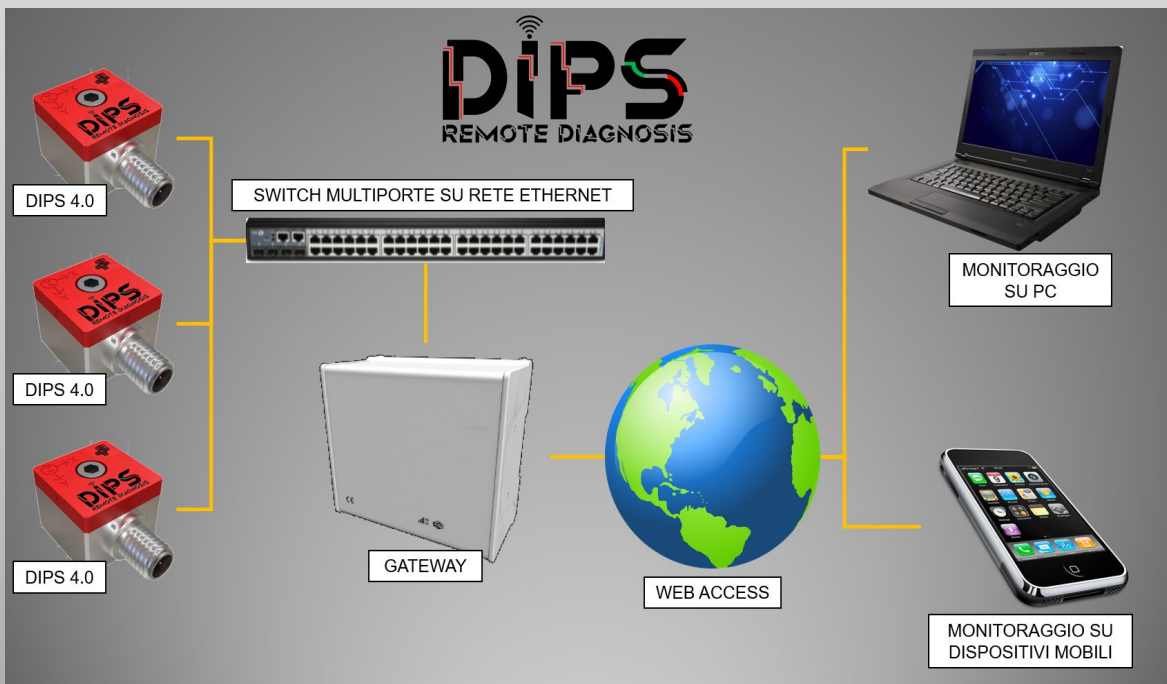
**DJ-COAT:** is a coating specially developed for the axial impellers in aluminum alloy produced by De Cardenas.

**T-BOX:** is a system that provides measurements in real time for the temperature and for the fan thrust in tunnel operating conditions.

# DIPS 4.0 Integrated Proactive System

## The main functions are:

- Data acquisition and storage.**
- Display and evaluation of parameters.**
- Alarm management.**
- Monitoring and display of operating trends (graphs).**
- Continuous monitoring of operating conditions.**
- Customizable dashboard on web browser.**
- Sending alarms by SMS and e-mails.**



## ELEMENTS OF THE SYSTEM

**D-IPS 4.0** is an innovative "all in one" processing tool specially designed to be installed on the fan.

**DIPS 4.0** contains the following functions in a single component:

- **3-AXIS vibration sensor;**
- **Measurement of the temperature of the fan;**
- **4-20 mA output to transmit the global vibration value in RMS to SCADA;**
- **ON / OFF digital output that can be set on a certain threshold as an additional alarm feed;**

**The industrial gateway** is a device equipped with Wi-Fi or LAN internet connectivity capable of connecting the elements in the field with a Cloud platform allowing the continuous exchange of data between the field and the Cloud.

It is equipped with mobile connectivity on 3G and 4G networks and allows the sending

of alarms and data recovery (up to 1 year) even in the event of a fault in the customer's internet network in order to ensure maximum system reliability. It is equipped with an access and password profiling system that guarantees data security and privacy.

**SMS service:** an alarm service via SMS and e-mail is pre-configured on the industrial gateway. When the alarm and stop thresholds for each sensor are exceeded, a message is sent to a predefined contact.

**A control panel** with Web interface allows you to view the live data provided by the various sensors, as well as the historical trend of the signals. Web access guarantees the ability to control the fans from any PC or Smartphone connected to an internet network. (PC and Smartphone not included in the supply)

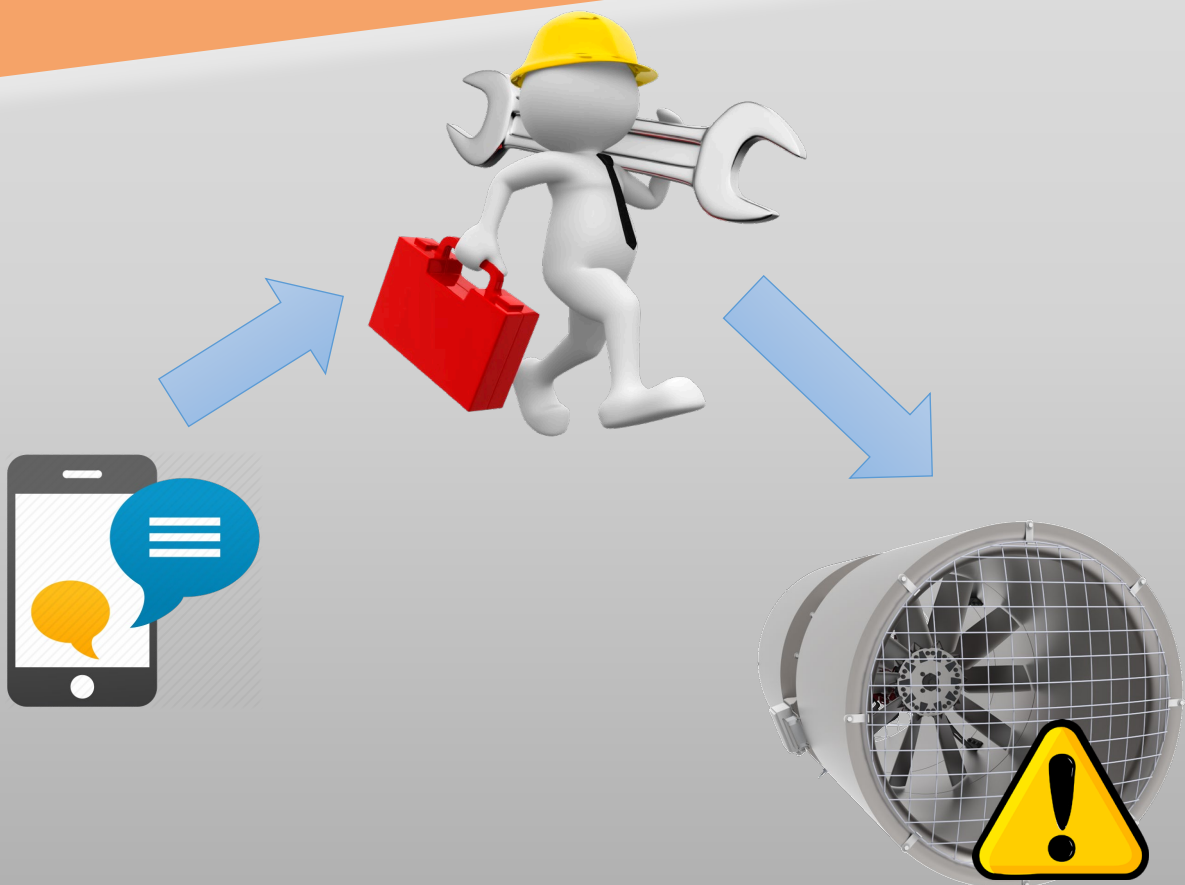


# SMART SERVICE

**De Cardenas is able to offer an assistance and maintenance service as an option.**

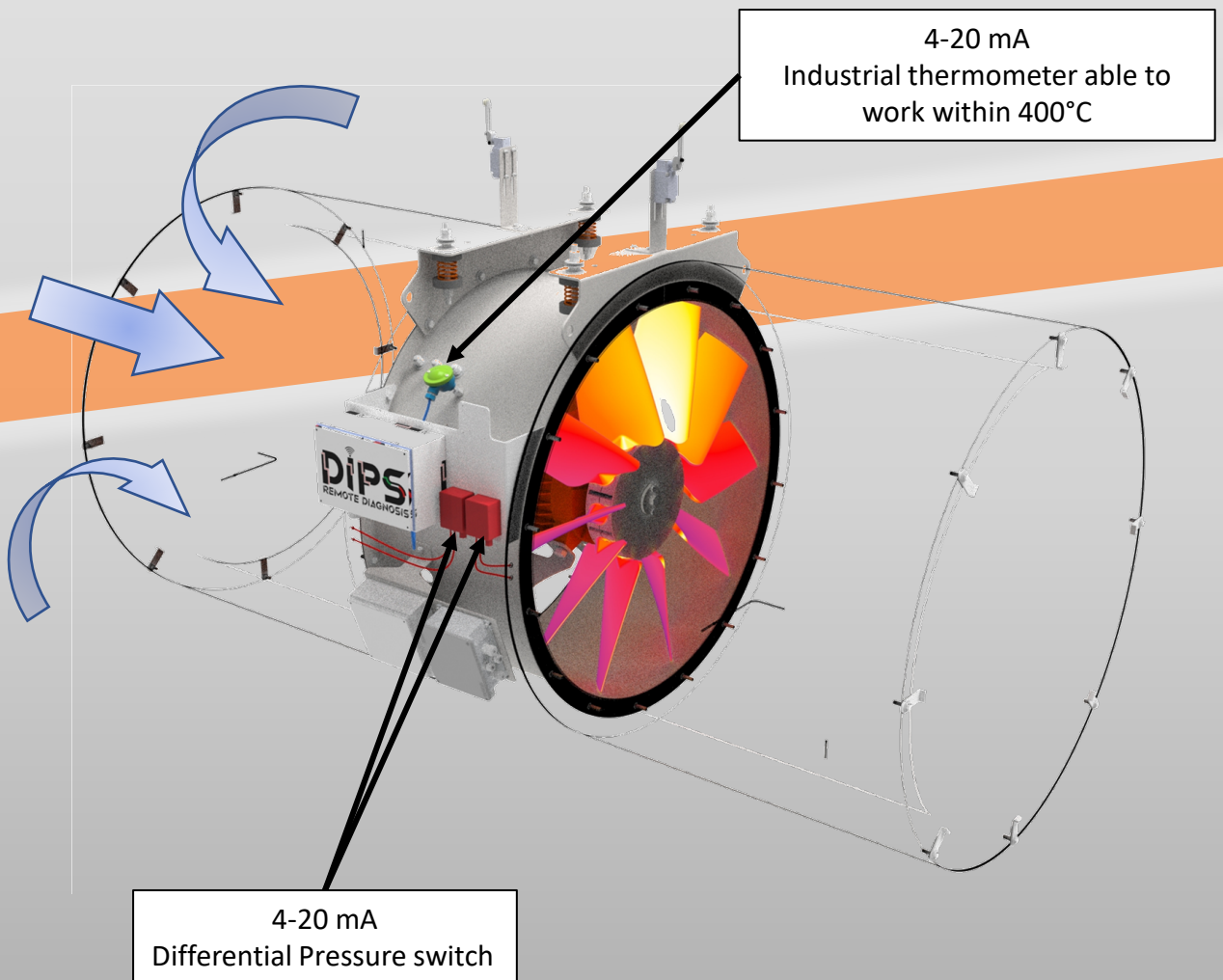
**In this case, the alarm message generated by the DIPS system will also be replicated to De Cardenas who will be able to intervene immediately for remote and on-site assistance, compatibly with the needs of the system.**

**The assistance will be carried out in the first phase remotely, by accessing the live and historical data of the control unit. If necessary, we will then proceed to send specialized technicians for on-site support.**



# T-BOX

**The T-BOX Thrust & Temperature** is a system that provides a high-performance technical solution able to measure in real time the temperature of the fluid passing through the fan and providing the performance data of "volumetric flow rate, air speed and therefore fan thrust» in tunnel operating conditions.



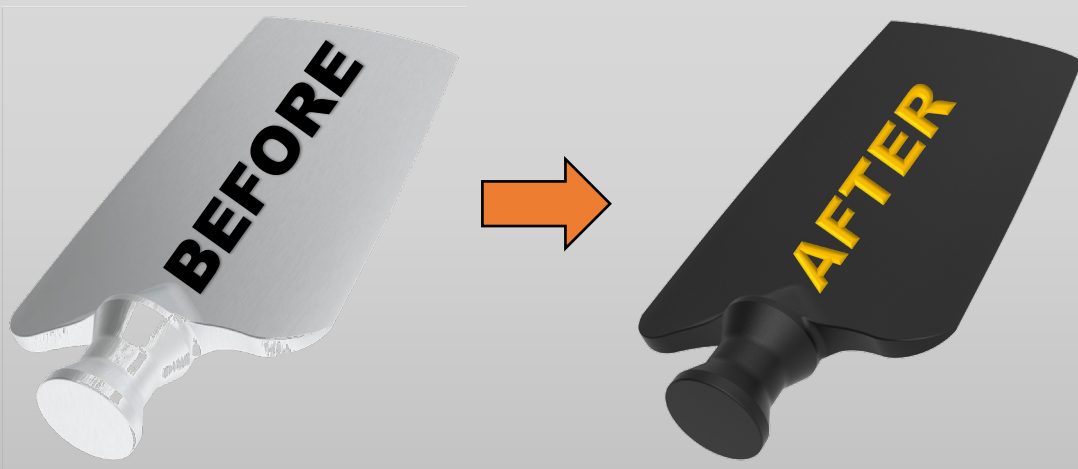
# DJ-COAT

**DJ-COAT TYPE 1** is a coating specially developed for the axial impellers in aluminum alloy produced by De Cardenas.

It is used to increase the resistance characteristics of the impellers over time, does not release toxic gases at high temperatures and reduces corrosion in saline environments.

It is applied on blades and blocks, modifying the surface of the treated piece in a material similar to ceramic. This layer takes the form of regular cells vertical to the surface of the piece, encloses the piece and protects it from wear and corrosion.

The hardness and compactness of the layer applied to the aluminum allows for a high resistance to abrasive and adhesive wear comparable to that of hard chrome equivalent to the stainless steel.



- High temperature resistance: up to 600°C continuously;
- Anti corrosion;
- Greater fluidity of fluids;
- Anti-adhesion to multiple substances
- Not combustible



# DE CARDENAS

**De Cardenas Fans & Service srl**  
**Via Lega Lombarda, 127 – Arcore (MB)**  
**Tel. +39 039 2282011**  
**[www.decardenas.it](http://www.decardenas.it)**