DAT
INSTRUMENTS

… your eyes in the ground

DATA LOGGER CATALOGUE 2019

Jet grouting - Grouting - TAM grouting - GIN
Compensation grouting - Drilling - MWD
LWD - CFA - Deep mixing - Soil mixing
DSM - Vibroflotation - Sand Compaction Piles
Diaphragm walls - Hydromills - Lugeon tests

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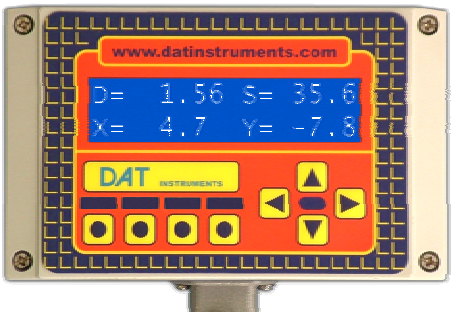
PRODUCTS

DAT WideLog



JET SDP / J

JET DSP 100 / IR

JET DSP 100 / D
JET DSP 100 / H

JET SDP / IB

JET 4000 AME / I

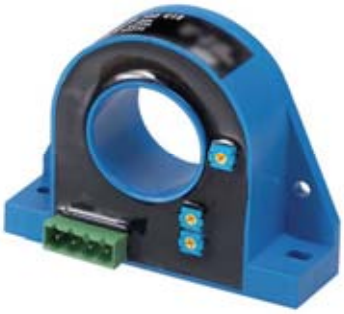
JET 4000 AME / J

SENSORS

JET WXYZ

JET INCL XY

JET FLOW / R



DAT AMP

JET PRESS
JET FORCE
JET TORQUE

JET PRLG

JET FLOW / C
JET ROT

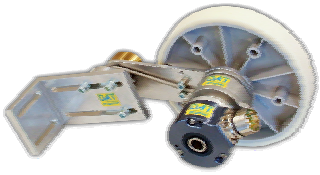
JET FLOWM

JET FLOW W24

JET PSTAT

JET ROT / H

JET DEPTH



JET DEPTH2

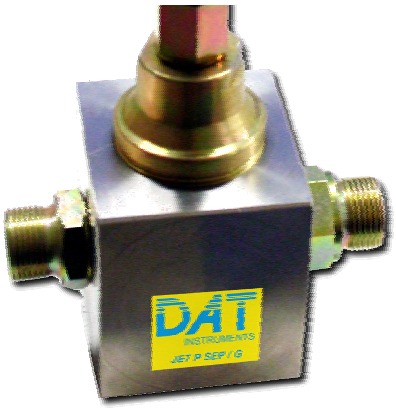
JET DEPTH3

HYDRAULIC SEPARATORS

JET P SEP / CFA
5", 50 bar

JET P SEP / CFE
85 mm, to be weld, 80bar

JET P SEP / D
⅜", 300 bar

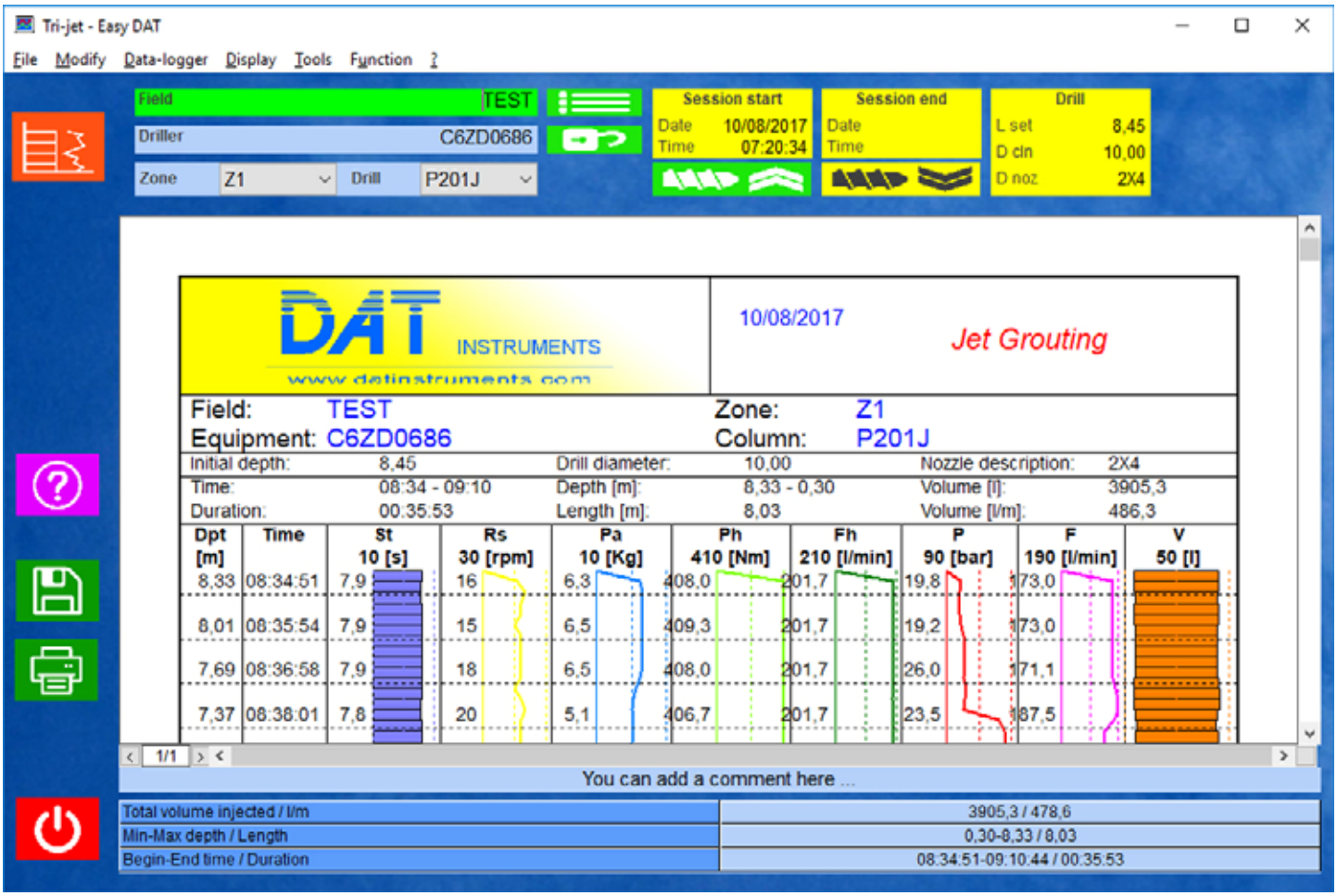


JET P SEP / G
¾", 1", 160 bar

JET P SEP / H
1", 1 ¼", 1 ½", 600 bar

SOFTWARE

Easy DAT is top quality software which let you organize and elaborate data, draw graphics and tables and print them. It is possible to transfer data from data logger to PC via USB PEN DRIVE.



- Just one Software for all Applications.
- Windows 10 Compatible.
- Graph and Printout Customization.
- Data exportation to CSV or XML file suitable with Microsoft Excel or OpenOffice Calc.
- Project transfer from a PC to datalogger with different kinds of piles and valves, in order to avoid set up in field.

TAM GROUTING GIN

DAT instruments produces data loggers and automatisms deployed for low pressure injections, TAM grouting (tubes-a-manchette), injection with packers and GIN (grouting intensity number).

- **Measuring** and **recording** of **pressure, flow** and **volume** parameters of cement grout.
- **Display**, directly on data logger LCD, of instantaneous pressure, flow rate and volume values.
- **Display in real time** of injection **graphics** and of summarizing reports.
- **Automatic stop** of the injector when maximum established pressure, maximum volume of the grout are reached, via GIN method or when achieving maximum duration.
- **Automatic restart** of pumping if, after being stopped, pressure goes under pre-established value.
- **Start** of the injectors directly from data logger keyboard.
- Sending from a PC of a **project** with different **kind of pile** and **valve** in order to avoid set up in field.
- **Data downloading to PC**, in order to create and print summarizing reports, to obtain easy and quick information files concerning injections carried out and to export data to Microsoft Excel.
- Possibility **to print data immediately**, via JET PRINT60 printer which can be installed into the data logger.
- Possibility to **connect** to PC **in real time**.

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(automatisms, accessories and sensors may be different in function of specific Customer's requirements.)

LUGEON TESTS

Lugeon test is used to measure the quantity of water injected into a segment of bored hole under a steady pressure; the value (Lugeon value) is defined as the loss of water in litres per minute and per metre borehole at a pressure of 10 bar.

- **Measuring** and **recording** of **pressure, flow** and **volume** parameters.
- **Display**, directly on data logger LCD, of instantaneous pressure, flow rate and volume values.
- **Display in real time** of injection **graphics** and of summarizing reports.
- **Automatic stop** of the injector when maximum established pressure, maximum volume are reached, via GIN method or when achieving maximum duration.
- **Automatic restart** of pumping if, after being stopped, pressure goes under pre-established value.
- **Start** of the injectors directly from data logger keyboard.
- Sending from a PC of a **project** with different **kinds of tests** in order to avoid set up in field.
- **Data downloading to PC**, in order to create and print summarizing reports, to obtain easy and quick information files concerning injections carried out and to export data to Microsoft Excel.
- Possibility **to print data immediately**, via JET PRINT60 printer which can be installed into the data logger.
- Possibility to **connect** to PC **in real time**.

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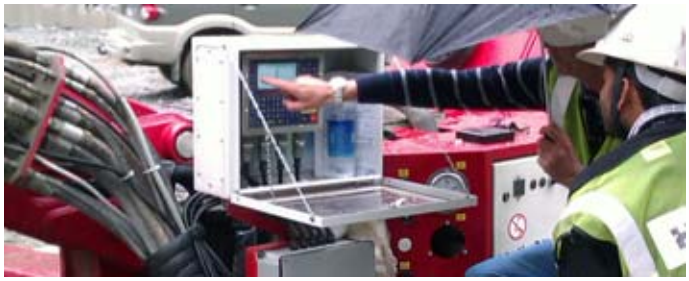
JET GROUTING

SINGLE-DOUBLE-TRIPLE

Jet grouting technique consists in injecting cement grout at high pressure. The double-fluid jet grouting technique consists in injecting air and cement, and allows to obtain piles with a greater diameter. Tri-fluid injection, consists in injecting simultaneously air, water and cement.

Display, directly on data logger LCD, of instantaneous and average recorded parameters, of graphics in terms of depth and of summarizing data.
Automatic start of the equipment when starting recording, **automatic stop** when reaching required depth, **automatic management** of rod ascent.
Automatic recognition of **rod changing** operation. Automatic recording suspension.
Sending from a PC of a **project** with different **kinds of pile** in order to avoid set up in field.
Data downloading to PC in order to process, file, export and print exhaustive reports.
Measuring and **recording** of the following parameters (by appropriate sensors, both during drilling and withdrawal rod movement):

- **drill depth** (JET DEPTH)
- **feed force** (JET FORCE)
- **translation rod speed** (JET DEPTH)
- **boring rod rotation torque** (JET TORQ)
- **boring rod rotation speed** (JET ROT)
- **X and Y mast inclination** (JET INCL XY)
- **cement pressure, flow and volume**
- **water pressure, flow and volume**
- **air pressure**
- **rod rise step time**
- **injected column length**
- **date** and **time** of drilling/jetting and **duration**
- soil relative **energy**
- input for **GPS receiver**



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DRILLING
MWD - LWD

Via real time parameters recording, it is possible to analyze the geomechanical characteristics of soil.
Depth based diagraph underlines different stratigraphical soil levels.

Display, directly on data logger LCD, of instantaneous and average recorded parameters, of graphics in terms of depth and of summarizing data.
Automatic start of the equipment when starting recording, **automatic stop** when reaching required depth.
Automatic recognition of **rod changing** operation. Automatic recording suspension.
Data downloading to PC in order to process, file, export and print exhaustive reports.
Measuring and **recording** of the following selectable parameters :

- **drill depth** (JET DEPTH)
- **feed force** (JET FORCE)
- **translation rod speed** (JET DEPTH)
- **boring rod rotation torque** (JET TORQ)
- **boring rod rotation speed** (JET ROT)
- **X and Y mast inclination** (JET INCL XY)
- **water pressure** (JET PRESS)
- **water flow and volume** (JET FLOW)
- **date** and **time** of drilling and **duration**
- soil relative **energy**
- input for **GPS receiver**

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CONTINUOUS FLIGHT AUGER PILING

CFA technique (continuous flight auger) is an injection method. The soil is drilled with a continuous flight auger and it is injected with concrete through the same auger. Once injection is finished a metal armour is placed in the ground.

Display, directly on data logger LCD, of instantaneous and average recorded parameters, of graphics in terms of depth and of summarizing data.
Automatic start of the equipment when starting recording, **automatic stop** when reaching required depth, **automatic management** of rod ascent (on/off control, optional: proportional).
Automatic recognition of **rod changing** operation. Automatic recording suspension.
Sending from a PC of a **project** with different **kinds of pile** in order to avoid set up in field.
Data downloading to PC in order to process, file, export and print exhaustive reports.
Measuring and **recording** of the following selectable parameters (by appropriate sensors, both during drilling and withdrawal rod movement):

- **drill depth** (JET DEPTH)
- **rod speed** (JET DEPTH)
- **translation rod speed** (JET DEPTH)
- **boring rod rotation torque** (JET TORQ)
- **boring rod rotation speed** (JET ROT)
- **X and Y mast inclination** (JET INCL XY)
- **concrete pressure** (JET PRESS)
- **concrete flow and volume** (JET FLOW)
- possible **rod rise step time**
- **injected pile length**
- **date**, **time** (beginning and end of work), **duration**
- input for **GPS receiver**

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DIAPHRAGM WALLS HYDROMILLS

Diaphragms must be carried out with all devices in order to obtain a proper work which follows project demand. Realized diaphragm verticality and rotation must be carried out carefully in order to grant impermeability to joints.

Data logger can display, on a wide monitor, and record, on an internal memory, the following parameters:

- **Depth** (m, with 1 cm resolution)
- **Inclination** on both X and Y axis to the vertical (with 0,1° resolution)
- **Grab rotation**, Z axis (with 1° resolution)
- X and Y axis deviation to the vertical (with 1cm resolution)

Data are acquired via sensors installed on digging equipment. Inclination sensor can be connected to the data logger via a cable (for real time) or via radio.

Data logger can record digging data in function of depth. During strokes necessary to create the diaphragm, each stroke data are recorded. Latest stroke data are also recorded to analyze the dig on the PC once in office.

The data logger can be set up via a PC. In this way, it is possible to calibrate sensors, set up data acquisition parameters and indicate fullscale graphic values.

Additional recorded parameters:

- **hydromills rotation speed**
- **mud pump pressure/flow**.

(automatisms, accessories and sensors may be different in function of specific Customer's requirements.)

SOIL MIXING
DEEP SOIL MIXING (DSM)

Soil mixing technique consists in injecting cement both during drilling and injection phase at a low pressure.
There are two kinds of operation: the superficial one and the deep one (deep soil mixing).

Display, directly on data logger LCD, of instantaneous and average recorded parameters, of graphics in terms of depth and of summarizing data.
Automatic start of the equipment when starting recording, **automatic stop** when reaching required depth, **automatic management** of **rod ascent** (on/off control calculated on volume/meter).
Automatic recognition of **rod changing** operation. Automatic recording suspension.
Sending from a PC of a **project** with different **kinds of pile** in order to avoid set up in field.
Data downloading to PC in order to process, file, export and print exhaustive reports.
Measuring and **recording** of the following parameters (by appropriate sensors, both during descent and withdrawal rod movement):

- **drill depth** (JET DEPTH)
- **feed force** (JET FORCE)
- **translation rod speed** (JET DEPTH)
- **boring rod rotation torque** (JET TORQ)
- **boring rod rotation speed** (JET ROT)
- **X and Y mast inclination** (JET INCL XY)
- **cement pressure** (JET PRESS)
- **cement flow rate and volume** (JET FLOWM)
- injected **litres / meter**
- treatment **length**
- **date**, **time** (beginning and end of work), **duration**
- input for **GPS receiver**

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VIBROFLOTATION SCP
(SAND COMPACTION PILES)

Vibroflotation is a technique using a vibrating probe which goes into the soil. Soil is compacted thanks to this vibrating action. Then, gravelly materials are put in the free space created by this action. These materials will increase soil solidity.

Display, directly on data logger LCD, of instantaneous and average recorded parameters, of graphics in terms of depth and of summarizing data.
Data downloading to PC in order to process, file, export and print exhaustive reports.
Measuring and **recording** of the following parameters (by appropriate sensors, both during descent and withdrawal hammer movement):

- treatment **depth** (JET DEPTH)
- **volume of added gravel** (number of grabs)
- **current absorbed by electric hammer**

or

- **pressure of hydraulic hammer**
- treatment **length**
- **date**, **time** (beginning and end of work), **duration**
- input for **GPS receiver**

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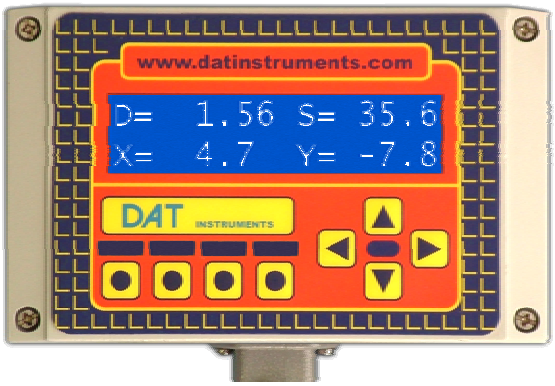
DEPTH METER AND INCLINATION

JET SDP / J provides the best technologies for an accurate measurement of inclination and borehole depth.
Optional: rod translation control function for injections (by setting rod stop seconds and step centimeters).

Cheap and easy !
Starter kit for drilling rigs.

JET DEPTH, depth sensor



JET SDP / J, display

JET DEPTH2, depth sensor

JET DEPTH3, depth sensor

Optional: sound/light alarm control panel while overreaching pre-established angle, **DAT**

JET INCL XY, inclinometer

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INSTRUMENTS

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- **Datalogger Production**
- **Design and Customization**
- **Installations Worldwide**
- **360° Customer Service**