DNA 2

PROFESSIONAL DIGITAL DYNAMOMETER

FORCE and WEIGHT measures in COMPRESSION and TENSION

Nominal Load from 100 kg to 5 t

COMPRESSIONE TRAZIONE
COMPRESSION TENSION

LCD DISPLAY

SOLLECITAZIONI DINAMICHE
DYNAMIC STRESSES

RECHARGEABLE Battery

Stabilità a lungo termine
Long term high stability

ACCURATEZZA ≤±0.05% ACCURACY

USB 2.0

Rapporto di taratura in COMPRESSIONE
Calibration report in COMPRESSION

ISO 376
Norma di riferiemnto
Reference standard

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAT N° 093
Calibration Centre
The products are NOT covered by accreditation

Certificato di Taratura ACCREDIA
A RICHIESTA
ACCREDIA Calibration Certificate
ON REQUEST

IP 40

The **DNA2** is a digital dynamometer designed to facilitate the measurement and calibration of forces generated by presses, clamps, ropes or chains in industrial environments or directly in the field.

The dynamometer consists of a highly reliable and accurate strain gauge load cell and a latest generation microprocessor indicator.

The indication is provided by a backlit LCD display with 5 digits, 13 mm high, for the display of the measurement and by a bar display indicating the percentage of the measured load with respect to the full scale.

The dynamometer is powered by an internal rechargeable Li-Ion battery with an autonomy of 50 hours in continuous operation without backlighting, to recharge the battery you can use the USB cable with the supplied 5Vdc power supply or connect it directly to the PC.

For continuous operation it is possible to keep the dynamometer powered through the USB port.

In the programming menu accessible from the keyboard you can set the units of measurement kg, t, lb, kN, daN, N and customize the behavior of the dynamometer by adjusting various functions such as **DIGITAL FILTER** that allows you to keep the measurement stable even in the presence of unstable weights, resolution, auto power off, etc. ...

Through the keyboard it is possible to set the function of **PICCO** in compression or traction to record the maximum force detected during the test.

MAIN FEATURES:

- HIGH MECHANICAL STRENGTH
- STAINLESS STEEL SENSOR AND ALUMINUM CASE
- 5 DIGIT LCD DISPLAY WITH BACKLIGHT
- CONVERSIONS IN UNITS OF MEASUREMENT
- PROGRAMMABLE RESOLUTION
- PROGRAMMBLE DIGITAL FILTER
- FUNCTIONS OF ZERO
- FUNCTION OF AUTO POWER OFF
- FUNCTIONS OF PEAK MAX. AND MIN.
- SUPPRESSION OF TARA
- ZERO TRACKING
- USB COMUNICATIONS
- KEY LOCK 🔒 FUNCTION TO PROTECT THE USE PARAMETERS FROM UNAUTHORIZED CHANGES
- **CALIBRATION REPORT IN COMPRESSION**

OPTION:
- INTERNAL DATA LOGGER WITH CLOCK and CALENDAR
- CALIBRATION REPORT IN TENSION
- ACCREDIA ACCREDITATION CETIFICATE

APPLICATIONS:

- VERIFICATION FALL-RATE LINES
- VERIFICATION OF SAFETY ROPES
- VERIFICATION CHAINS
- EXTRACTION TESTS FOR CONCRETE TUBES
- VERIFICATION THRUST FORCE AND TRAILER TRAILERS
- VERIFICATION FORCE GENERATED BY PRESSES OR FORKS
- VERIFICATION DOOR AND GATE CLOSING FORCE
- VERIFICATION PRESSES AND TEST BENCHES

Technical Data

Accuracy CLASS according ISO 376	**1 (from 10% to 100% F.S.)**
ACCURACY	$\leq \pm$ **0,05 % F.S.** [1]
NOMINAL LOAD	100 – 200 - 500 kg 1000 - 2500 – 5000 [2] kg
MEASUREMENT UNITS	Kg – t – lb – kN – daN - N
SERVICE TEMPERATURE STORAGE TEMPERATURE RELATIVE HUMIDITY	0 … +50 °C 0 … +60 °C < 90 % not condensed
TEMPERATURE EFFECT (1°C) a) on zero b) on sensitivity	 $\leq \pm$ 0,015% $\leq \pm$ 0,005%
INTERNAL RESOLUTION READING PER SECOND	16 bit 10 (100ms)
LCD DISPLAY BACKLIGHT CHARACTER HIGHT	CUSTOM 7 segment 13 mm
RESOLUTION **DIGITAL FILTER** FUNCTION **ZERO** FUNCTION **PEAK** FUNCTION **MENU LOCK** FUNZION (LOC) 🔒	1, 2, 5, 10 from 0 to 5 100 % F.S. COMPRESSION / TENSION Programming protection
COMUNICATION PORT TYPE OF TRANSMISSION TRANSMISSION OF MEASURES MAXIMUM DISTANCE	USB 2.0 on REQUEST or CONTINUE max. 10 data per second 5 m
POWER SUPPLY AUTONOMY BATTERY RECHARGE	RECHARGEABLE battery Li-Ion 3.6V 1800mA/h 50 hours (continuous operation) From USB port (5Vdc)

⚠️ *(1) Tests and calibrations performed in COMPRESSION.*
*(2) The dynamometer with a nominal load of **5000 kg** is guaranteed in TENSION up to **2500 kg**.*

MECHANICAL LIMIT VALUES:	
a) service load	100% F.S.
b) max permissible load	150% F.S.
c) breaking load	>300% F.S.
d) max permissible dynamic load	75% F.S.

PROTECTION CLASS (EN 60529)	IP40
CASE	ALUMINUM
SENSOR	STAINLESS STEEL
WEIGHT	~ 1.5 kg

OPTIONS: (to be purchased separately)

INTERNAL DATA LOGGER	
Clock and internal calendar	YES
Max recordable measurements	130.000
Recording frequency	programmable (Max 1 second)
Max duration Data Logger (3)	10000 hours
CALIBRATION REPORT	**in TENSION**
ACCREDIA CERTIFICATE	**COMPRESSION and TENSION**

⚠️ *(3) If the Data Logger is to be kept active for long times, it may be necessary to externally power the instrument or recharge it periodically.*
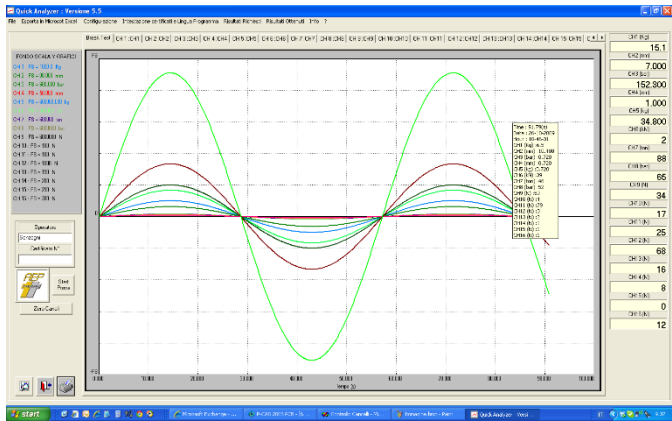
STANDARD indications

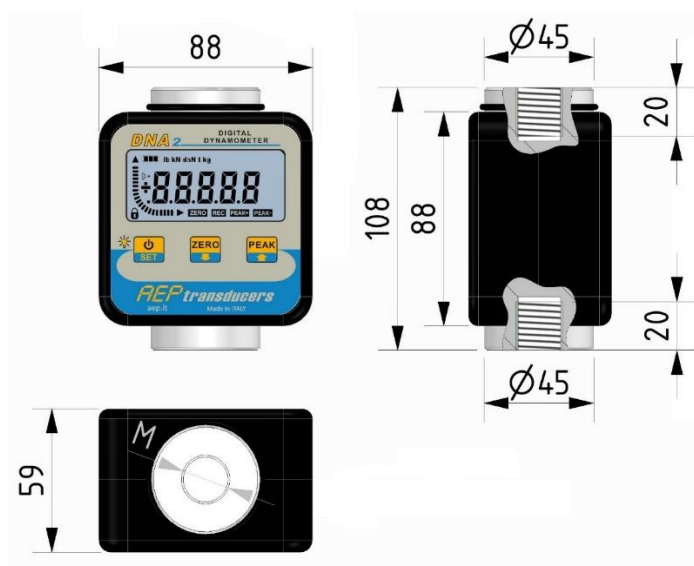| Full Scale	Display	Res.	Display	Res.	Display	Res.	Display	Res.	Display	Res.	Display	Res.
Kg	**kg**	**kg**	**t**	**t**	**lb**	**lb**	**kN**	**kN**	**daN**	**daN**	**N**	**N**
100	100.00	0.01	0.1000	0.0001	220.00	0.01	1.0000	0.0001	100.00	0.01	1000.0	0.1
200	200.00	0.01	0.2000	0.0001	440.00	0.01	2.0000	0.0001	200.00	0.01	2000.0	0.1
500	500.00	0.05	0.5000	0.005	999.95 1100.0	0.05 0.5	5.0000	0.0005	500.00	0.05	5000.0	0.5
1000	1000.0	0.1	1.0000	0.0001	2200.0	0.1	10.000	0.001	1000.0	0.1	10000	1
2500	2500.0	0.2	2.5000	0.0002	5500.0	0.2	25.000	0.002	2500.0	0.2	25000	2
5000	5000.0	0.5	5.0000	0.0005	9999.5 1100	0.5 1	50.000	0.005	5000.0	0.5	50000	5

Accessories supplied:

USB power supply (5VDC @700mA)	
USB cable	
CD containing MANUAL (IT / ENG) and USB DRIVER.	

Accessories: (to be purchased separately)

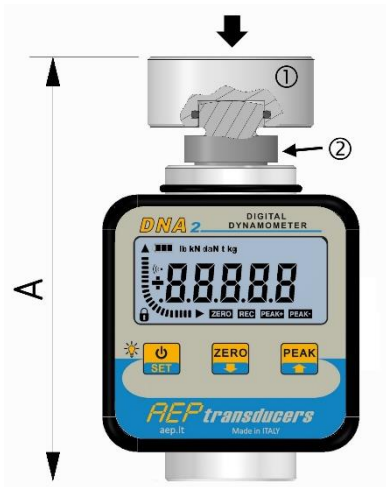|	
CASE for transport	
Loading head Spherical loading head Knuckle joints	
Quick Analyzer **Quick Analyzer Light** Professional software that interfaces directly to DNA2 and supports the operator in the various test functions, analysis, monitoring over time, data storage, **DATA LOGGER management**, transfer of measures on Microsoft Excel etc ...	

Dimensions (mm)

NOMINAL LOAD	M
100kg – 200kg - 500 kg	M12
1000 kg 2500kg - 5000kg	M20×1.5

COMPRESSION Applications

TENSION Applications

100, 200 e 500kg **A** = ~126mm

1t, 2.5t e 5t **A** = ~145mm

100, 200 e 500kg **B** = ~176mm

1t, 2.5t e 5t **B** = ~224mm

LOAD	CODE		ACCESSORIES
100 kg 200 kg 500 kg	CTIC13	①	Loading head
	CTS18M12	②	Spherical loading head
	CACCEM12	③	Knuckle joints
1000 kg 2500 kg 5000 kg	CTIC22	①	Loading head
	CTS25M20	②	Spherical loading head
	CACCEM20	③	Knuckle joints Max. static load **2500 kg**

Purchase code:

EDNA2-	Full scale		OPTION
	100K	1T	D = data logger
	200K	2T5	
	500K	5T	

Example: **E DNA2-200K D**

FCALTAEP	Calibration Report in TENSION

In order to improve the technical performances of the product, the company reserves the right to make any change without notice.