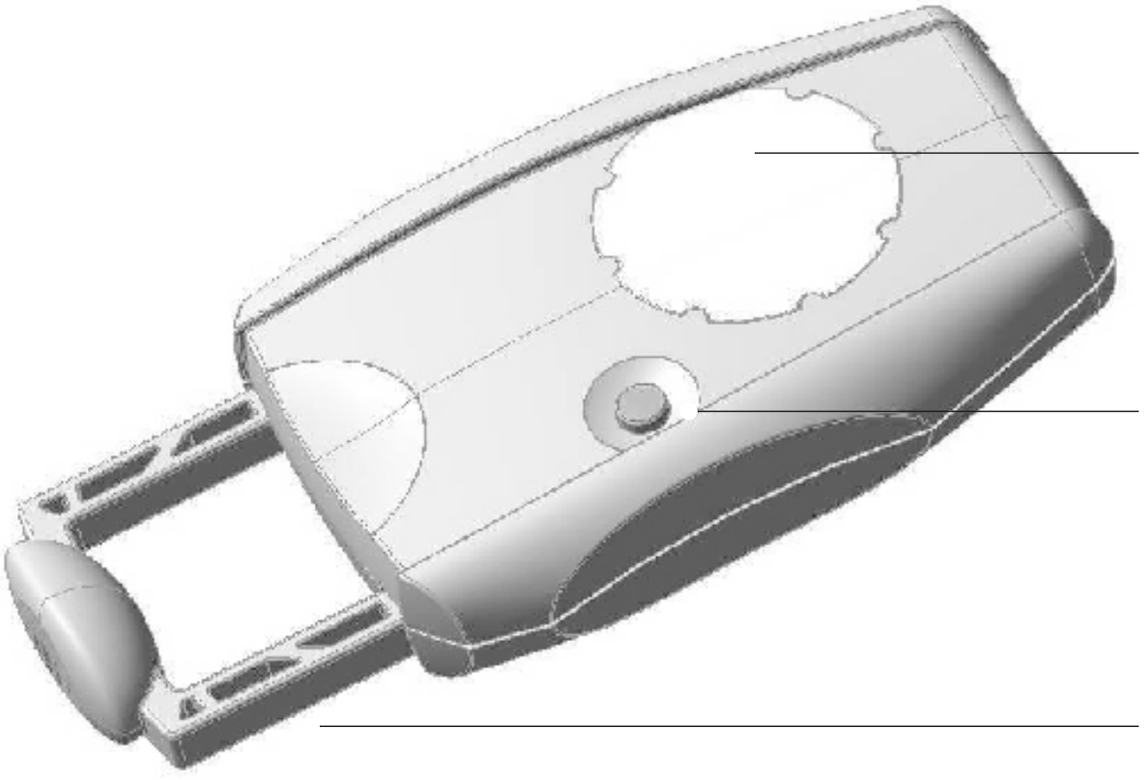
USER MANUAL ERT300

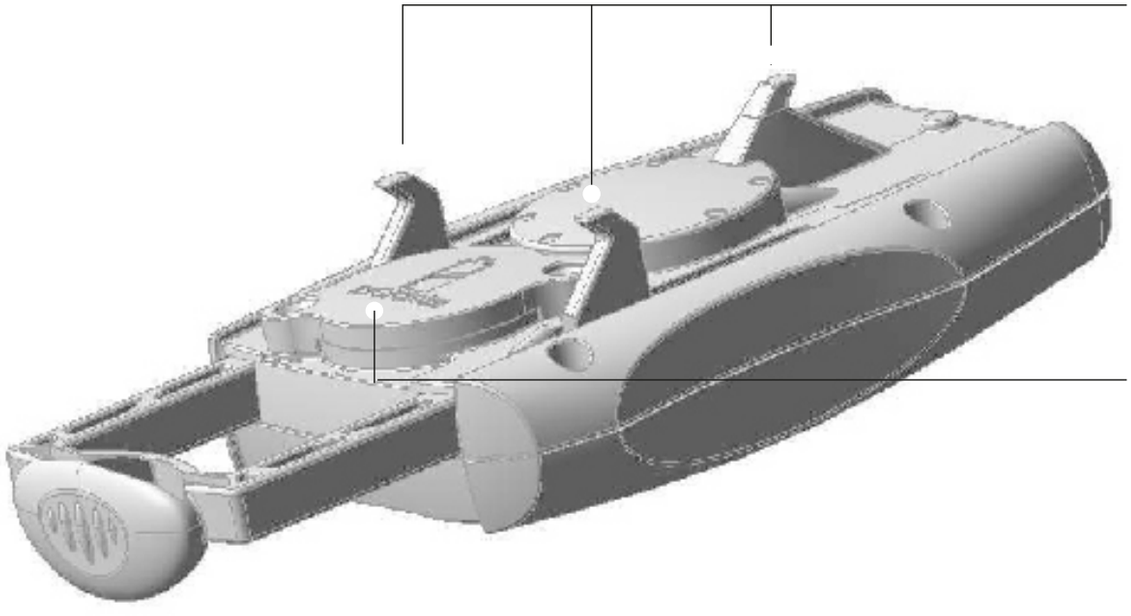
ERT300 Tennis String Tester



LCD Display

Start button

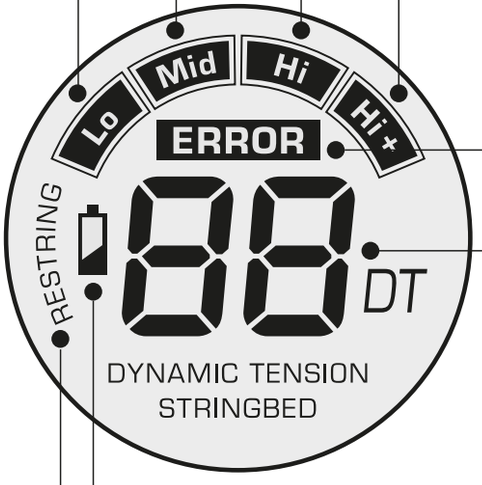
Lever



Claws

2 x Cr2032 Batteries

What information gives the ERT300



DT range / Power of play

Lo	DT 28…34	Defensive play
Mid	DT 35…41	Dynamic, offensive play
Hi	DT 42…46	Fast, aggressive play
Hi+	DT 47…54	Very fast, extremely aggressive play

ERROR - NO DT DETECTION!
Change holding position - hold on Grip instead of throat
Remove the device and place it again
Tension to low for detection or incorrect handling

DYNAMIC TENSION DT
DT is the string bed stiffness
- Higher DT for more control
- Lower DT for more power (ball speed up)

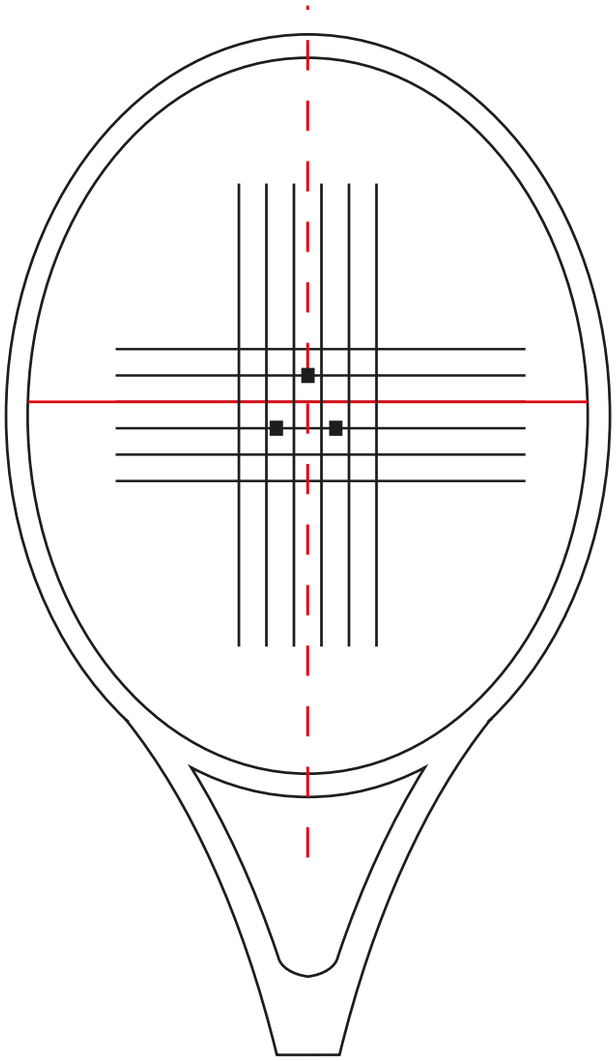
If BATTERY sign apears replace the Batteries
2 pce type Cr2032 (+ pole face up)

Advise to Restring the racket

String tension kp/kg/lbs.
To be read out at the DT System Disc

DT is the string bed stiffness. The DT-Value is the ball force in kilopond (kp/kg) that I is needed to deflect the string bed 1 cm at the sweet spot (ball impact).
International standard. units: kp/cm or Newton/mm.
DT determines the playing characteristics POWER and CONTROL.
DT is the only realistic and precise value to be measured on a strung racket.

How to measure the string bed stiffness

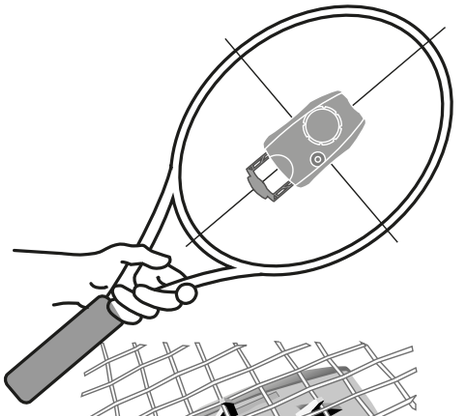


jump the widest cross string

- Clip the ERT300 in the center of the string bed
- Push the red start button
- After a few seconds read out the values
- When the ERROR sign appears :

⇨ change holding position from throat to grip!
⇨ remove the device and place it again
⇨ DT Value to low (under 20 DT) restring the racket

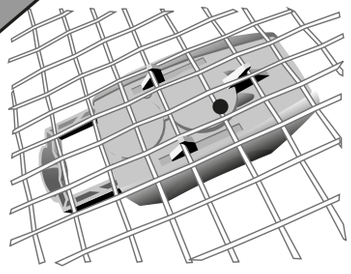
Instructions



1

Hold the racket at the throat (or grip)

During the measurement hold the racket steady, do not touch the string bed or put down the racket!



2

Clip the ERT300 in the center of the string bed

The 3 claws hold the device parallel to the strings by gentle spring tension (jump the widest cross string).

3

Push the ON button to start the DT test

The ball impact is simulated electronically
(you will feel gentle vibrations).
The exact readings are displayed after 6 - 8 seconds.
(after the reading the device switches off automatically)

DT-Range / Power and aggressiveness of play

Example: Mid, dynamic and offensive play

DYNAMIC TENSION DT

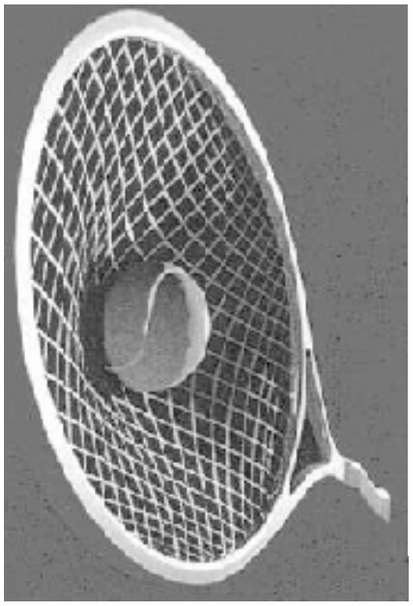
Example: 38 DT

String tension kp/kg (lbs) to be read out at the DT-Disc

Important:
The ERT300 Tennis String Tester must be clipped at the center of the string bed. If it is placed outside the center, e.g. towards the top or bottom, the measured value will change. Normally in such a case the stringing appears to be tighter. This corresponds to the reality. We however are interested in the impact zone. Variations can also occur as a result of incorrect or defective stringing.

For exact comparative measurements (rechecks) the ERT300 must always be applied to exactly the same point, count or mark the strings.

What is the DT-Value



DYNAMIC TENSION DT

The DT-Value is the stiffness of the string bed that effects during the ball impact of any tennis racket.

DT determines the playing characteristics POWER and CONTROL.

Higher DT provides more control

Lower DT provides more power (ball speed up)

DT is ball power in kilo pond (kp/kg) required to depress the string bed 1 cm at the sweet spot (ball impact). International standard units kp/cm or Newton/mm

The DT-Value is measured with the ERT300 by electronic simulation of the ball impact (vibrations). All factors of infuence (see below) are automatically taken into account.

Main factors of DT infuence:
Racket: type, headsize, string pattern, frame stiffness
String: material, gauge, combination (hybrid)
Stringer: technique, experience, accuracy
Stringing Maschine: accuracy of the calibration, general technical condition
Environment: temperature, humidity, altitude

DT is the only realistic (since close to play) and precise value that can be measured directly at the strung racket.

How to find your DT-Value

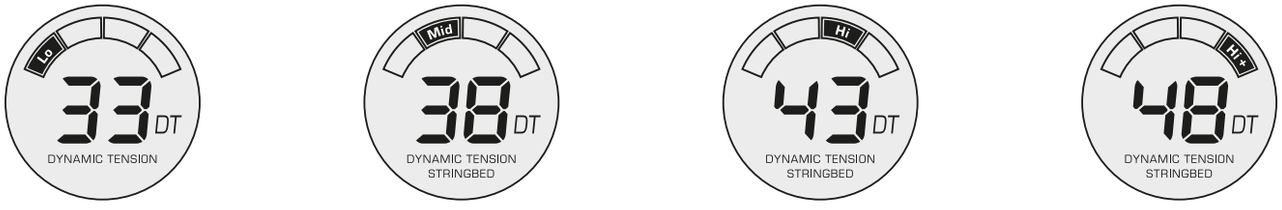
The DT value can be mainly determined by 4 ranges:
Lo (Low)
Mid (Medium)
Hi (High)
Hi+ (High Plus)
(not to be mixed with the racquet size)

Each player determines his DT reference value respectively DT playing range best suited for his power level and style of play (overlapping possible).
Optimum stringing ensures play with maximum ball control and power reducing fatigue and the rebound shock.

PLAYING

KNOW YOUR BEST DT VALUE

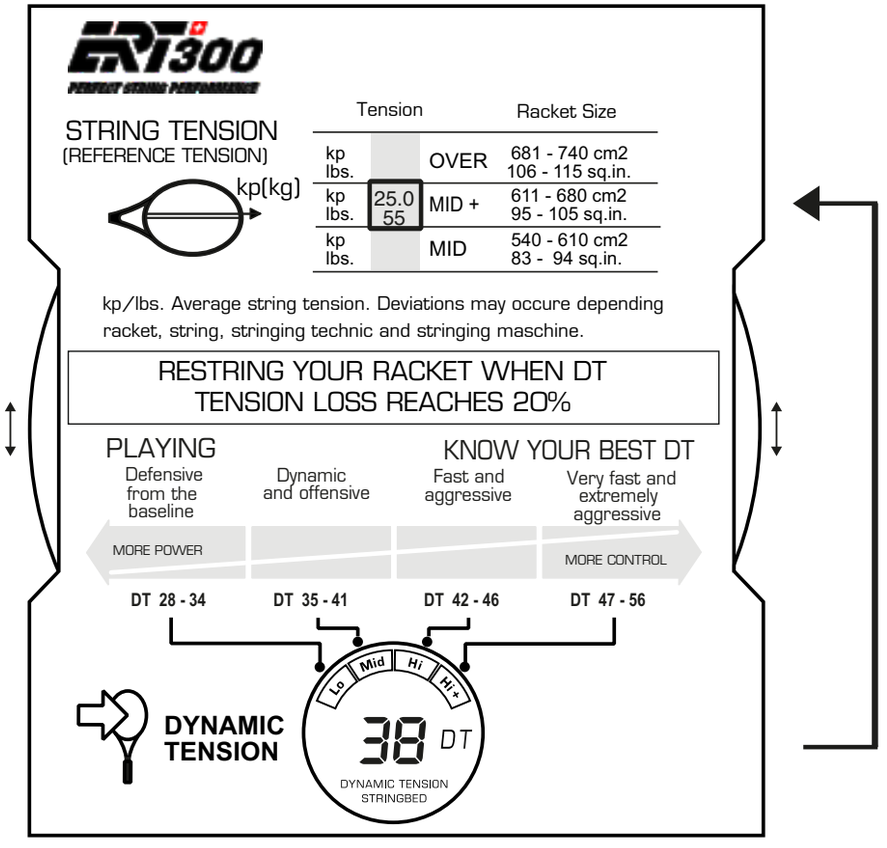
Defensive from the baseline	Dynamic and offensive	Fast and aggressive	Very fast and extremely aggressive
MORE POWER			MORE CONTROL
DT 28 - 34	DT 35 - 41	DT 42 - 46	DT 47 - 56
Lo	Mid	Hi	Hi+



The string bed is the engine of the racket. The proper combination of racket/string and Dynamic Tension (DT) suited for a specific style of play is necessary to obtain maximum player performance.

How to know the string tension kp/kg(lbs)

Use the enclosed DT-Disc for reading out the CURRENT string tension kp/kg (lbs)



Example:

Racquet size MID+ (98 sq.in)
kp/kg (lbs.)

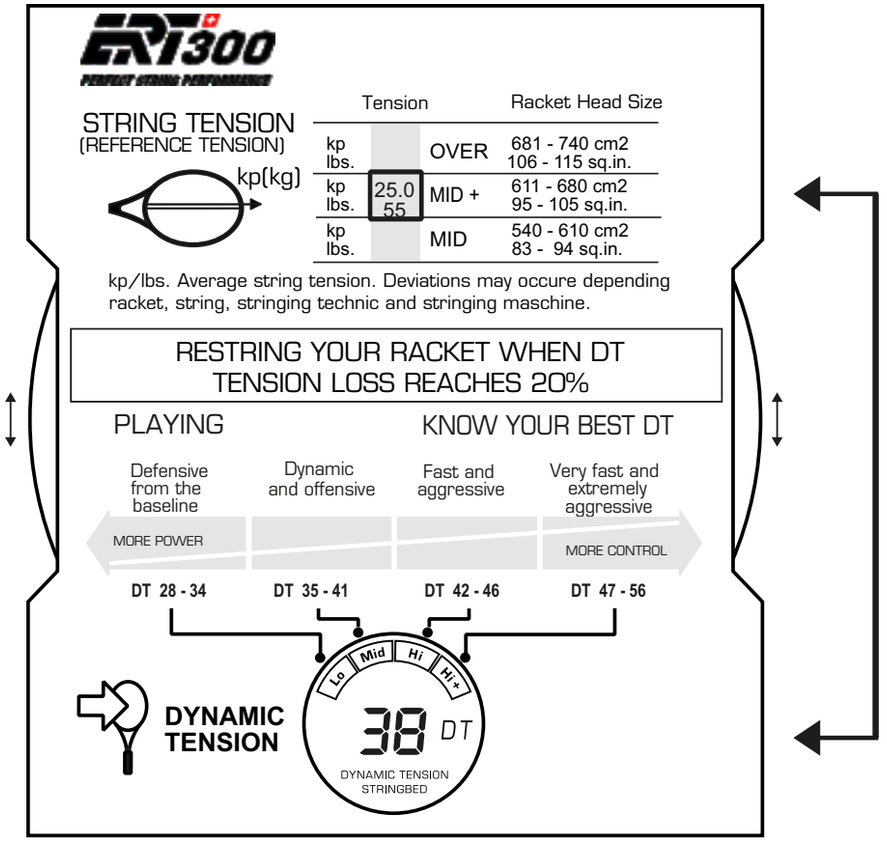
Measured DT-value

Set the measured DT-Value	38 DT
Read out the average string tension	25 kp/kg (55 lbs)

After the stringing process, the tension of an individual string can no longer be measured directly. The string bed stiffess DT is measured precisely by electronic simulation of the ball impact. The corresponding string tension kp/kg (lbs) can be read at the DT-disc as an average value.

How to obtain the required DT-Value

After determing of the suitable DT-Value the corresponding machine pull tension set in kp/kg or lbs. is to be read out at the DT-Disc.



Example:

Racket Head Size MID+(98 sq.in)
kp/kg (lbs)

Required string bed stiffness of DT 38 which means dynamic and offensive play

Set the required DT-value	38 DT
Read out the corresponding string tension	25 kp/kg (55lbs)
String the racket with	25/24 kp/kg (55/53lbs)

The effective resulting DT-Value may deviate slightly. This is not unusual and is subject to string specs, racket specs, stringing technique and stringing maschine etc.
The experienced stringer will adjust the tension on his stringing machine accordingly.
Check periodically the machine pull tension, clamps and clampholders!
Do not forget: Within the first 2 to 4 hours after stringing, there is often a remarkable tension loss of 2-4 DT, called the stabilization losses.
The amount of tension loss is generally related to the type of string (material).

Know when to restring your racket

All string materials start loosing tension after the racket is strung through repeated impacts and through aging even if it has not been used

For optimum string performance restring your racket when the DT-Value has decreased by 20%

Important to know!
DT values below 26 can lead to:
- Poor ball control
- Health problems like Tennis Elbow, Hand and Back problems

Technical data	ERT300 TENNIS STRING TESTER
Field of application	Tennis rrackets
Dynamic system	Electronic simulation of ball impact
Measuring of the resonance frequency	Converting the string bed stiffness DT
DYNAMIC TENSION DT	20…65 DT (kp/cm; Newton/mm)
Accuracy	+/- 1 kp/cm (+/- 1 digit)
Display	Measurement time 6…8 sec.
Dimensions	110 x 50 x 25 mm
Weight	50 g
Ambient temperature	5…45° Celsius / 40…115° Fahrenheit
Relative humidity	20%…80% (not waterproof)
Batteries	2 pce Cr2032 Replace batteries when battery sign appears in display.

⚠WARNING

INGESTION HAZARD - **DEATH** or serious injury can occur - A swallowed button cell or coin battery can cause **Internal Chemical Burns** in as little as **2 hours** - Keep new and used batteries **OUT OF REACH OF CHILDREN** - **Seek immediate medical attention** if a battery is suspected to be swallowed or inserted inside any part of the body - For treatment informations call: National Battery Ingestion Hotline

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CE RoHS