Know when to restring

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

**Restring the racquet when the DT-value has decreased by 10% to maximum 20%**

**Never play tennis when the DT-value below 28**

(Low ball control, risk of tennis elbow and back problems)

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**Technical data**

**ERT 300 TENNISCOMPUTER**

- **Field of application**: Tennis racquets
- **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 4...6 sec., Display 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 x CR 2032 coin type

Replace batteries when battery sign appears in display.
Always use a proper desk top. plus pole up

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**Micro computer for precise determination of strings and playing characteristics of any Tennis Racquet.**
**Product Information - Manual**

### ERT 300 Tenniscomputer

- **LCD Display**
- **Push button**
- **Lever**
- **Claws**
- **Batteries 2 x CR 2032**

### What information gives the ERT 300

**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
  - Tension too low or incorrect handling
  - Place the device again

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

**Replace the batteries 2 x CR 2032 coin type**

**Restring the racquet at the latest**
- (Not recommended to play tennis when DT below 28)

**String tension kp, lbs.**
- To be read out at the DT system disc

**kp, lbs.**

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DT is the string bed stiffness. The DT-value is the ball force in kilopond (kp) that is needed to deflect the string bed 1 cm at the sweet spot (ball impact).

Internat. standard. units: kp/cm or Newton/mm.

DT determines the playing characteristics POWER and CONTROL.
### How to measure the string bed stiffness

- **Clip the ERT 300 in the center of the string bed**
- **Push the button**
- **After a few seconds read out the values determining the playing characteristics**

**Instructions**

1. **Hold the racquet at the throat as shown**
   During the measurement hold the racquet steady, do not touch or put down the racquet.

2. **Clip the ERT 300 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 button to start the DT test**
   The ball impact is simulated electronically (gentle vibrations).
   The exact readings are displayed after 6...8 seconds. (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, lbs.**
  - To be read out at the DT-disc (page 38)

**Important:** The ERT 300 Tennis computer 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 ERT 300 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 racquet. 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) required to depress the string bed 1 cm at the sweet spot (ball impact).

Internat. standard units kp/cm or Newton/mm

The DT-value is measured with the ERT 300 Tennis computer by electronic simulation of the ball impact (vibrations). All factors of influence such as racquet type, racquet size, string pattern and string characteristics are automatically taken into account.

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

How to find the optimum DT-value

The DT can be mainly determined by 4 ranges: Lo, Mid, Hi, Hi+ (not to be mixed with the racquet size)

Each player determines his DT reference value respectively DT playing rang 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**

- **Defensive from the baseline**
- **Dynamic and offensive**
- **Fast and aggressive**
- **Very fast and extremely aggressive**

<table>
<thead>
<tr>
<th>DT</th>
<th>28 - 34</th>
<th>35 - 41</th>
<th>42 - 46</th>
<th>47 - 56</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lo</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Mid</td>
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<tr>
<td>Hi</td>
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<td></td>
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<tr>
<td>Hi+</td>
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</tbody>
</table>

**Know your best DT**

The string bed is the heart of the racquet. The proper combination of string and Dynamic Tension DT suited for a specific style of play is necessary to obtain maximum player performance.
After determining the suitable DT-value, the corresponding machine pull tension set in kp (kilopond) or lbs. (pounds) is to be read out at the DT-disc.

Example:

<table>
<thead>
<tr>
<th>Racquet size MID+ (98 sq.in.)</th>
<th>kp (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required string bed stiffness of DT 38 which means dynamic and offensive play</td>
<td></td>
</tr>
</tbody>
</table>

Set the required DT-value 38 DT
Read out the corresponding string tension 25 kp (55 lbs.)

String the racquet with 25/24 kp (55/53 lbs.)

The effective resulting DT-value may deviate slightly. This is not unusual and is subject to string material, racquet design, string pattern and stringing technique etc.

Check periodically the machine pull tension.

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.