



# 3320

## Standard Air Capacitors

*Datasheet*



# HAEFELY

Current and voltage – our passion

Designed by

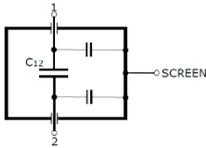


# General Description

3320 standard air capacitors are especially built for high accuracy dissipation factor ( $\tan \delta$ ) measurements or for calibrating measuring bridges together with the 3721.

Because of their high insulation resistance, small self-inductance and dissipation factor, these standard capacitors may be used within large frequency ranges

For a stable dissipation factor ( $\tan \delta$ ), the outer case is equipped with a moisture indicator. If value is too high, the included silica gel cartridge can be easily dried in an oven and reused.



$$C = C_{12} + \frac{C_{10} * C_{20}}{C_{10} + C_{20}}$$

| Features   | Advantages   |
|--|--|
| <ul style="list-style-type: none"> <li>Highly stable capacitance with no influence from atmospheric pressure and humidity</li> </ul> | <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Can be used in HV laboratories even at non reference climate conditions</li> </ul>        |
| <ul style="list-style-type: none"> <li>Very low internal dissipation factor</li> </ul>   | <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Suitable for calibrations or reference laboratories</li> </ul>                            |
| <ul style="list-style-type: none"> <li>Coaxial Lemo 3 connectors</li> </ul>  | <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Can be directly connected to Tettex measuring bridges manufactured since 1985.</li> </ul> |
| <ul style="list-style-type: none"> <li>Enclosed in housing filled with dry air to protect against dust and moisture</li> </ul>       | <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Protected against dust and moisture.</li> </ul>   |
| <ul style="list-style-type: none"> <li>Equipped with a drying agent (Silica gel) and humidity indicator on the top</li> </ul>        | <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> It will advise when the draying agent (re-usable) must be dried.</li> </ul>               |

## Applications

- Calibration laboratories
- Reference laboratories

## Accessories

- 3721  $\tan \delta$  Standards



# Technical Data

| Measurement  |                        |             |           |                                  |
|--|------------------------|-------------|-----------|----------------------------------|
|  | Nominal Value          |             | Tolerance | Measured accuracy                |
| Nominal Voltage  | 2 kV                   |             |           |                                  |
| Main Capacitance C <sub>12</sub> (pF)                      | 10                     | 3320/10     | ± 0.2 %   | ± 0.02 % ± 0.01 pF               |
|  | 100                    | 3320/100    |           |                                  |
|  | 1000                   | 3320/1000   |           |                                  |
|  | 10000                  | 3320/10'000 |           |                                  |
| Partial Capacitance C <sub>10</sub> & C <sub>20</sub> (pF) | 65                     | 3320/10     | + 5 pF    | ± 0.1% RD ± 1 x 10 <sup>-5</sup> |
|  | 70                     | 3320/100    | + 10 pF   |                                  |
|  | 80                     | 3320/1000   | + 10pF    |                                  |
|  | 210                    | 3320/10'000 | + 40 pF   |                                  |
| Dissipation Factor (tan δ)                                 | < 1 x 10 <sup>-5</sup> |             |           | ± 1 x 10 <sup>-5</sup>           |

| Environmental           |                                  |
|-------------------------|----------------------------------|
| Operating temperature   | 0 °C +40 °C                      |
| Storage temperature     | -20 °C +70 °C                    |
| Humidity <sup>(1)</sup> | 5 ... 90 % r.h. , non-condensing |

<sup>(1)</sup>The capacitor is equipped with a draying agent (Silica gel) to keep the inner housing dry. Above specifications are valid for inner case humidity below 50 % non-condensing.

| Mechanical             |  |             |
|------------------------|--|-------------|
| Dimensions (W x D x H) | 360 x 360 x 450 mm (14.2 x 14.2 x 17.7 in) |             |
| Weight                 | 10 kg (22 lb)                              | 3320/10     |
|                        | 10 kg (22 lb)                              | 3320/100    |
|                        | 13 kg (28.7 lb)                            | 3320/1000   |
|                        | 35 kg (77.2 lb)                            | 3320/10'000 |

## Global Presence

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Current and voltage – our passion



HIGH VOLTAGE



INSTRUMENTS



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