For over 90 years Keeler has continued to innovate, design and manufacture world class ophthalmic instruments in our Windsor factory.

In 1986 the Pulsair Tonometer revolutionised non-contact tonometry with its unique hand held and portable system bringing a new dimension to patient care and the management of space and time.

Pulsair and tonometry are synonymous - the 5th generation intelligent hand held model combines contemporary style together with new technologies and the new Pulsair Desktop brings the Pulsair name to those requiring a chinrest desktop device.

Applanation Tonometry is a widely practiced and respected technique; the Keeler Applanation Tonometer (KAT™ and the new digital D-KAT) will match that level of respect with our exceptional build quality and manufacturing consistency.
Both Pulsair Desktop and Pulsair intelliPuff have exceptional patient visualisation; the slim profiles of the Pulsair optical mainframe allow the clinician to maintain visual contact with the patient at all times during the measurement process.

The Pulsair Desktop has a small and space saving footprint that combined with the elegant, slim optical mainframe allows it to blend seamlessly into the clinical environment. The openness of the design increases the confidence of both patient and clinician.

Pulsair intelliPuff brings versatility to tonometry; wall mounted or desk mounted the lightweight hand held optical mainframe allows the clinician to measure all patients with equal comfort and respect. The flexibility of use and space saving makes this instrument virtually unbeatable for performance and value.

Pulsair Tonometers - stylish and practical

Less is more. Pulsair Desktop is uncomplicated and therefore quick to use for the novice and professional alike. Taking control of tonometry has never been easier or faster. Clear user controls and a colour video alignment screen combine to set a new standard in usability.

Sophisticated Technology

Keeler Pulsair tonometers use advanced optical and sensor technology for positional detection and puff control. Pulsair Desktop and Pulsair intelliPuff have software controls to manage the measurement data; if two consecutive readings are within +/-1mmHg of each other the Pulsair will inform the user that sufficient readings may have been taken for that eye, saving precious time and increasing patient comfort.
Being hand held, Pulsair intelliPuff avoids the need to position the patient in a chinrest removing an entire process from the patient journey – fast and easy to use while the patient is already seated in an examination chair, space and time under control.

Engineering and design excellence
Pumps, solvent control valves, pleasure chamber and optical mainframe are all designed to function optimally leading to efficient and fast measurement. LED illumination provides a constant and reliable light source for the alignment camera and the positional detection systems.

Quietly cost effective, the Pulsair tonometers require no sterile consumables, printing is under your control so ongoing costs are managed.

### Pulsair Specifications

#### Pulsair Desktop

- **Calibration range**: 5mmHg to 50mmHg
- **Measurement scale**: mmHg (millimetres of mercury)
- **Displayed accuracy**: 0.1mmHg
- **Display**: 4 character dot matrix scrolling
- **Illumination system**: LED infra red
- **Working distance**: 20mm
- **Dimensions**: 260 x 215 x 220mm (H x D x W)
- **Base unit weight**: 2.465Kg
- **Handpiece dimensions**: 315 x 150 x 46mm (H x D x W)
- **Handpiece weight**: 0.890Kg
- **Umbilical cord length**: 2.0m
- **Printer**: Thermal line printer

#### Part Numbers:
- 2417-P-2006: Pulsair Desktop Tonometer
- 2964-S-801: Chinrest Papers
- 2206-7004: Printer Paper

#### Pulsair intelliPuff

- **Calibration range**: 5mmHg to 50mmHg
- **Measurement scale**: mmHg (millimetres of mercury)
- **Displayed accuracy**: 0.1mmHg
- **Display**: 4 character dot matrix scrolling
- **Illumination system**: LED infra red
- **Working distance**: 20mm
- **Dimensions**: 260 x 215 x 220mm (H x D x W)
- **Base unit weight**: 2.465Kg
- **Handpiece dimensions**: 315 x 150 x 46mm (H x D x W)
- **Handpiece weight**: 0.890Kg
- **Umbilical cord length**: 2.0m
- **Printer**: Thermal line printer

#### Part Numbers:
- 2016-P-2001: intelliPuff unit
- 2016-7006: Printer paper roll
Goldmann applanation principle
Keeler Applanation Tonometers operate according to the Goldmann applanation principle by measuring intraocular pressure from the force required to flatten (applanate) a constant area (3.06mm) of the cornea.

New D-KAT Digital Applanation Tonometer
Discover the new standard ... the Keeler D-KAT Digital Applanation Tonometer. Designed and manufactured in the UK to the same exacting standards as all Keeler products, the Keeler D-KAT delivers reliability and ease of use.

More reliable and accurate
With less moving parts, the D-KAT is more reliable, accurate and recalibration takes just seconds.

T type or R type
The D-KAT is available in both T type and R type variants. The T type is removable and is convenient to use on multiple slit lamps. The R type can be fixed to the Slit Lamp.

New D-KAT - Digital Applanation Tonometer
For the original, beautifully engineered, KAT™ Tonometers, please see overleaf.

The new standard
Part Numbers
- 2414-P-2032: D-KAT – Keeler Digital Applanation Tonometer T type
- 2414-P-2042: D-KAT – Keeler Digital Applanation Tonometer R type

Accessories
- 3414-P-7010: D-KAT Digital Tonometer luxury carrying case
- 2414-P-5001: D-KAT Digital Tonometer doubling prism
- 2414-P-5032: D-KAT Digital Tonometer T type guide plate
- 2414-P-5042: D-KAT Digital Tonometer R type mounting post
- 2414-P-5005: D-KAT Digital Tonometer calibration arm assembly
- 1909-P-7129: D-KAT Digital tonometer replacement battery

D-KAT Specifications
Installation: Keeler Digital T type: Fitted to the guide plate on the optical axis for the microscope and illumination unit arm
Keeler Digital R type: for tower illumination Slit Lamps
Measurement range: 5 – 65 mmHg (0.66 – 8.65 kPa)
Measurement deviation: 0.49 mN or 1.5% of measurement value, whichever is the greater
Operating temperature range: from 10°C to 35°C
Reverse span (Hysteresis): < 0.49 mN
Net weights:
- Keeler Digital T type: 0.37 kg (without accessories)
- Keeler Digital R type: 0.58 kg (without accessories)

LED display
With its LED display and internal electronics it allows for the fast accurate measurement of IOP, (intraocular pressure).

D-KAT Features
- British built
- LED display for ease of use in darkened environments
- Lightweight and portable
- Display reading to 1 decimal point
- Low battery usage
- Low moving parts, ensuring increased reliability and less maintenance

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  - 2414-P-5032: D-KAT Digital Tonometer T type guide plate
  - 2414-P-5042: D-KAT Digital Tonometer R type mounting post
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KAT™ - Keeler Applanation Tonometer

The Goldmann principle is considered to be the most prevalent method of tonometry as it is the most widely accepted method of determining the approximate intraocular pressure.

The Keeler manufactured applanation tonometers are designed and built to our exacting standards to give you the accuracy and quality you expect from a Keeler device.

**T type, R type or BQ type**

The take-away T type KAT™ is fitted to the guide plate on the optical axis for the microscope and illumination unit arm. The fixed R type is mounted on a post fitted to the microscope optical body. The BQ KAT™ is designed specifically to fit the Haag Streit BQ, BP and BX Slit Lamps and fits directly to the optics support arm.

**Robust and reliable**

Our all-metal parts, manufactured to a high precision-engineering design will withstand the test of time and deliver reliable and repeatable results year after year.

The T type and R type KAT™ will be supplied with a reusable doubling prism, the calibration check bar and either the R type post or the T type aluminium guide plate for Slit Lamp use.

To protect your investment when travelling or when the instrument is not in use, purchase our high quality aluminium carrying case to ensure your tonometer will always be stored and protected.

**KAT™ Specifications**

- **Measurement force**
  - By leverage weight

- **Installation:**
  - Keeler T type: for tower illumination Slit Lamps
  - Keeler R type: for tower illumination Slit Lamps

- **Measurement range**
  - 0 - 80 mmHg (0 – 10.64 kPa)

- **Approximation of the impact force**
  - Standard divergence: 0.49 mN < _ 3s < _ 1.5 % of the measurement head for a 0 nominal value to 58.84 mN measurement range

- **Operating temperature range**
  - from 10°C to 35°C

- **Measurement accuracy**
  - _< 0.49 mN

- **Net weights:**
  - Keeler T type: 0.41 kg (without accessories)
  - Keeler R type: 0.69 kg (without accessories)
  - Keeler BQ type: 0.712 kg (without accessories)

- **Part Numbers**

<table>
<thead>
<tr>
<th>Part Numbers</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2414-P-2030</td>
<td>KAT - Keeler Applanation Tonometer T type</td>
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<td>2414-P-2040</td>
<td>KAT - Keeler Applanation Tonometer R type</td>
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<td>2414-P-2020</td>
<td>KAT - Keeler Applanation Tonometer BQ type</td>
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<td>2414-P-5001</td>
<td>KAT aluminum carrying and storage case</td>
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<td>2414-P-5032</td>
<td>KAT R type guide plate</td>
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<td>2414-P-5042</td>
<td>KAT T type measuring post</td>
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<tr>
<td>2414-P-5005</td>
<td>Calibration arms set</td>
</tr>
</tbody>
</table>

**KAT™ - the gold standard of tonometry**

**KAT T type (Take-away)**

**KAT R type (Fixed)**

**KAT BQ type**

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**T type guide plate**

**R type measuring point**

**Doubling prism**