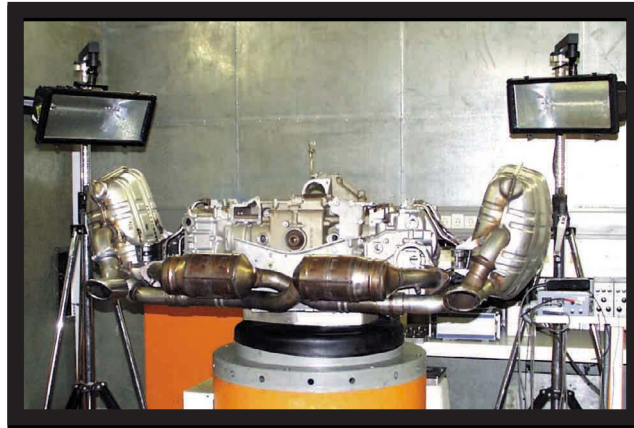


# Drelloscopie®

**DRELLOSCOP 3020:**  
 Visuelle Darstellung und Analyse  
 des Resonanzverhaltens von  
 KFZ-Antriebsaggregaten und  
 Abgassystemen an Schwingungs-  
 prüfständen.  
 Bild: Akustik und Schwingungs-  
 labor Fa. Porsche.



## AND MEASUREMENT.

### Highest light intensity.

Suitable for the illumination of large objects over greater distances.

Universally applicable in the development range.

Well suited for vibration studies.

Fast data capture with high precision and resolution through 16-bit micro-controller.

Flash energy automatically adaptable to different ranges of the flash sequence, or manually adjustable.

Two years guarantee (except flash tubes).

Drelloscop 3020, the stroboscope with the maximum light intensity for large area illumination. It consists of a supply/control unit with digital display, mounted in a 19" desktop housing for the connection of a separate hand lamp.

To protect the high-duty quartz-glass flash tube and the supply unit it has an automatic adaption of the flash energy to different flash frequencies.

In addition, the flash energy can also be set manually, which allows for short term operation with high flash energy in the case of fast flash frequencies.

Control of the flash frequency either manually internally, or externally through electric pulses

from 500 mV already, or through available pulse generators.

In the external control mode you can make a delayed flash triggering with digital display of the delay angle. In addition to the function „phase“ (image shifting), you can initialise a slow motion effect. Hereby the duration of one cycle is digitally displayed.

Instead of the standard hand lamp we can also supply splashproof and dust-proof lamps on request.

To obtain the best uniform illumination on large objects when using two lamps, the stroboscope is available as version Drelloscop 3020-2 with two lamp connectors. Both lamps can be operated in parallel, or individually.

**VISUAL VIBRATION ANALYSIS, OBSERVATION OF KINEMATIC EVENTS, AND SPEED MEASUREMENT WITH MAXIMUM FLASH ENERGY.**

The Drelloscop 3020 with one separate hand lamp, and the Drelloscop 3020-2 with two lamps offer maximum flash energy for all stroboscopic applications with large area illumination.

### Fields of application:

- > Contactless speed measurement.
- > Representation of mechanical movements or oscillations at an apparent standstill, or in slow motion.
- > Vibration analysis of drive units and exhaust systems in the automobile development.
- > Investigations of kinematic events in the machine construction, e.g. in the drive technics.
- > Cavitation investigations in the hydromechanics.
- > Inspection of the turbulence on the sieve of paper production machines.
- > High-speed illumination in the photography and the video technics.

FOR ALL WHO NEED TO KNOW

Technical Data:

■ Control of the flash frequency: Internally through microcontroller adjustable via rotary button. Externally selectively through positive pulses from 0.5V ... 30Vp, pulse interval ratio <1:1, through sine voltage from 1V ... 60Vpp, through reflection light screen, proximity switches, closing contact. Additional control via optocoupling, electronic phase shifter for image shifting from 0...360°. Slow motion mode with adjustable circulation time of the object with internal and external control mode.

■ Range of the flash frequency:

Internal control: 30...25,000 min<sup>-1</sup> or 0.5...416 s<sup>-1</sup>.

External control:

30...25,000 min<sup>-1</sup> or 0.5...416 s<sup>-1</sup>.

■ Digital display:

5 decades, 7 segment LEDs, 12 mm high, red, floating point, display with internal and external control either in min<sup>-1</sup>, s<sup>-1</sup> or degrees.

■ Resolution:

5 digits, angle display better 0.1°.

■ Accuracy of the time base:

0.001% (quartz-time base).

■ Lamp:

Hand lamp HL 4037 with reflector, connection cable and plug, 6 m long. On/off switch, tripod thread, installed plug-in type quartz-glass flash tube.

■ Light intensity:

> 10.000 Lux, automatic adjustment across the total range of the flash frequency, or manual adjustment.

■ Illuminated area:

Approx. 3000 mm diameter at 2 m distance.



■ Flash energy:

max. 7.5 Joules/flash, depending on the adjusted range of the flash frequency.

■ Half width of the flash:

Approx. 10...25 μs.

■ Pulse output:

1 V positive needle shaped pulses, internal resistance approx. 1 kOhm.

■ Supply voltage:

• version 01: 230V (+10%/-15%) 40-60 Hz.

• version 02:

115V (+10%/-15%) 40-60 Hz.

■ Fusing:

Safety fuse and electronic high voltage fuse

■ Permissible ambient temperature (operation):

0°C...+50°C.

■ Permissible storage temperature:

-20°C...+70°C

■ Housing:

light metal housing, service-friendly half shell design with handles, 19" standard housing.

■ Dimension/weight/Drelloscop 3020 or 3018:

W=450 mm, H=133mm, D=375mm (incl. handle)/17 kg.

■ Accessories (standard):

Hand lamp HL 4037 with reflector and quartz-glass flash tube.

■ Dimensions/weight Drelloscop 3020-2:

W=450 mm, H=266mm, D=375mm (incl. handle)/34 kg.

■ Accessories (standard):

2 hand lamps HL 4037 each with reflector and quartz-glass flash-tube.

■ Available supplements:

• Lamps:

wide-beam lamp LE 4047

splash-proof lamp LE 4040

• Pulse generators:

reflection light screen LS 5020/8-L

• proximity switches NJ2/8-L and NJ5/8-L.

• Transit case, tripod, polarisation glasses.



DRELLOSCOP 3020:

• Picture on top: 3/4 19" desktop unit, selectively available as

19" rack slide-in housing.

• Picture at right: Handlamp 4037 with reflector and quartz-glass flashtube; alternatively splash-proof lamp LE 4040, or LE 4047 (wide beam).

Options as per your needs.

- Drelloscop 3020-2, connection for two lamps, in parallel or single. Drelloscop 3018, light intensity as with Drelloscop 3020, but only external control of the flash frequency without digital display.
- Remote control unit for all functions.
- RS 232 Interface
- Predivider for the external synchronisation.
- Custom-oriented modifiable range of the flash frequency with internal and external control.
- Analog output 0.1 to 10V for writer connection.
- Lamp with UV adapter.
- Synchronisation through video-camera.
- Single flash operation with direct release, or inphase with control pulse.