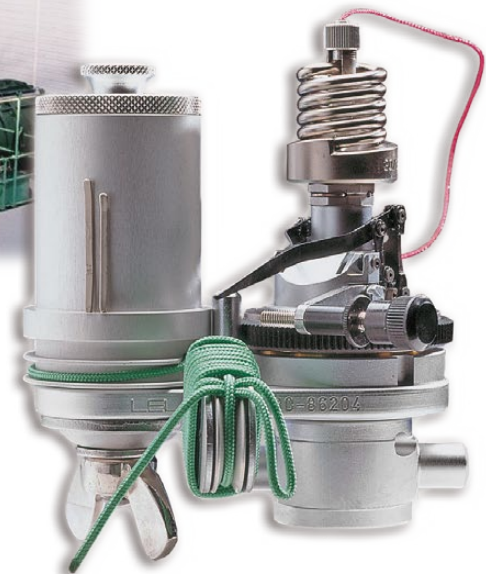
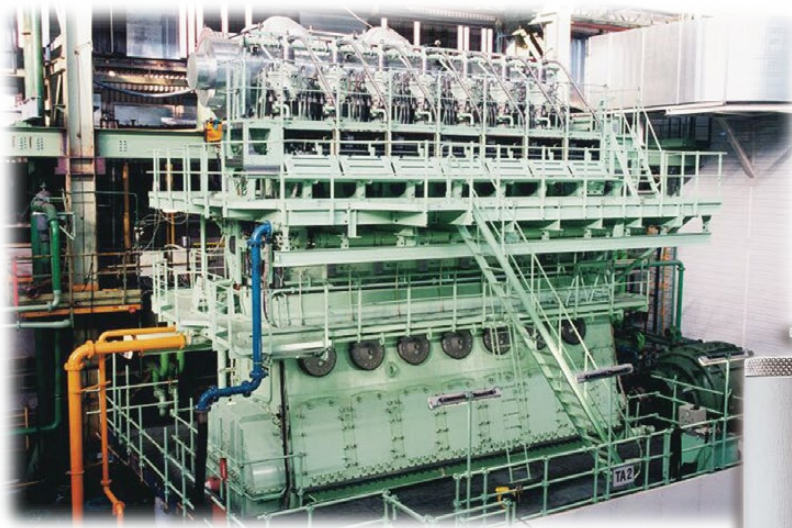


## Engine Indicator Type 30



### **Cylinder Pressure Monitoring**

The mechanical pressure indicator type 30 measures dynamic pressures. It is especially designed to analyze large two and four stroke Diesel engines.

## Description

Leutert engine indicators are used on diesel engines, gas engines, air compressors, pumps, etc. A metal stylus draws a clear pressure-path diagram which records the pressure curve within the engine cylinders as influenced by the piston stroke. The recording drum can be moved by means of a string, which is pulled manually or by the engine. If the drum is driven by the engine, the diagram may be planimeted.

Our indicators are designed to cover various ranges of speed and rates of pressure-change.

It will always be advisable to operate with small diagrams as far as possible, in consideration of the oscillating masses. In doubtful cases it is suggested to forward particulars of the operating conditions, and on orders to give particulars regarding kind of engine, pressures to be measured, engine stroke and r.p.m.

The selection of the correct indicator size depends not only on the r.p.m but also on the rate of pressure rise at time unit dp/dt. If the above stated limit values are exceeded, the resulting acceleration would cause too high an indication of pressure. Size of piston and spring are selected such that the maximum natural frequency is attained. With regard to the accelerations, for best results the diagram length should be progressively reduced as the r.p.m. approaches the designed maximum of the indicator.



Type 30 complete in wooden box

## Features

- Individually calibrated high accuracy heat treated springs
- Rugged and proven design
- Easy and simple operation by unskilled operator
- Cheapest way to analyze your engine
- Ready-to-use equipment

## Technical specifications

Measuring range	: see spring table below
Engine range	: up to n = 1,000 rpm or max. dp/dt = $18 \times 10^3$ bar/sec
Max. diagram	: 30 mm/60 mm (height/length)
Drum diameter	: 40 mm
Paper size	: 145 mm x 45 mm
Dimensions	: 120 mm x 105 mm x 85 mm
Weight	: 1.1 kg without wooden box 4.0 kg with wooden box
Standard connection	: W 27 x 1/10"

## Standard accessories

1 wooden box, 1 spring, 1 measuring scale, 1 block indicator paper each 40 sheets, 1 cord tightening hook, 1 oil can for piston and links, 1 screw driver, 1 flat plier, 1 hollow spanner, 1 cylinder cleaner, 1 stand for instrument, 1 bundle indicator cord, 1 tube incl. 5 recording pencils, 1 vacuum washer, 1 operating instructions

Table of Indicator Springs Type 30				
Piston	Scale	Max. Pressure	Spring-No.	Part-No.
1/5	0.20 mm/bar	150 bar	30 / 30 bar	4611.0.71.14000
1/5	0.16 mm/bar	200 bar	30 / 40 bar	4611.0.71.16000
1/5	0.12 mm/bar	250 bar	30 / 50 bar	4611.0.71.17000

Piston diameter 9.06 mm