



# ENGINE INSTRUMENTS — LEUTERT SERIES

## (Engine indicators – Type 50Z1)

LEUTERT Engine Indicators have a world-wide reputation for precision accuracy and perfect design

### Outstanding Features of LEUTERT Engine Indicators

- Minimum reciprocating mass
- Pressure springs are double-coiled. They operate in tension.
- Pistons, cylinders and springs are detachable and interchangeable.
- Ease and simplicity in handling and operation.
- Rugged design.



Measuring Range:	see spring table below
Engine Sizes:	Up to n = 400 R.P.M. or max dp/dt = 18 x 103 bar/ sec.
Max Diagram Height:	50mm
Max Diagram Length:	80mm
Drum Diameter:	Standard 50mm - Paper Size: 180 x 65mm
	Special Modification 40mm - Paper Size: 145 x 65mm
Dimension of Instrument:	165 x 130 x 90mm
Natural Frequency/ sec.:	270 / √f (f = measuring scale)
Standard Connection:	W 27 x 23.75 Dia. 10 T.P.I.
Weight:	1.5 kg (without wooden box)
	4.4 kg (with wooden box)

		Table of Indicator Springs Type 50Z1																
Piston Size	Ø mm	Part. No. 4651.071.	03000	04000	05000	06000	07000	08000	09000	10000	11000	12000	13000	14000	15000	16000	17000	18000
		Spring - No.	50/2 bar	50/2.5 bar	50/3 bar	50/4 bar	50/5 bar	50/6 bar	50/7 bar	50/8 bar	50/10 bar	50/11 bar	50/12 bar	50/14 bar	50/16 bar	50/20 bar	50/25 bar	50/30 bar
1/1	20.27	Scale mm/bar max pressure_bar	25 2	20 2.5	16 3	12 4	10 5	8 6	7 7	6 8	5 10	4.5 11	4 12	3.5 14	3 16	2.5 20	2 25	1.5 30
1/5	9.06	Scale mm/bar max pressure_bar								1.2 40	1 50	0.9 55	0.8 60	0.7 70	0.6 80	0.5 100	0.4 125	0.3 150
1/10	6.41	Scale mm/bar max pressure_bar								0.6 80	0.5 100	0.45 110	0.4 120	0.35 140	0.3 160	0.25 200	0.2 250	0.15 300
1/20	4.53	Scale mm/bar max pressure_bar								0.3 160	0.25 200	0.225 220	0.2 240	0.175 280	0.15 320	0.125 400	0.1 500	0.075 600

### Standard Accessories

- 1 wooden case
- 1 spring
- 1 measuring scale
- 1 block indicator paper (40s)
- 1 coil tightening hook
- 1 oil can for polish and links
- 2 screw drivers
- 1 flat pliers
- 1 cylinder spanner
- 1 spanner connection nut
- 1 cylinder cleaner
- 1 stand for instrument
- 1 spring table
- 1 instruction manual