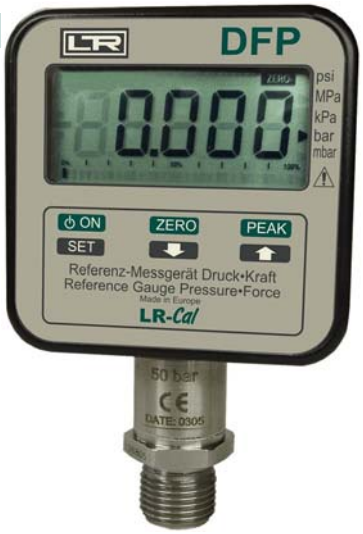
Digital Reference Pressure Gauge DFP, ±0.1%
Scalable Indication in Tons, kg, Newton

DFP

Digital Reference Pressure Indicator DFP

Scalable conversion to Force (to, kg, daN, KN)
Perfect for checking pressure gauges at hydraulic presses.



- **Accuracy: ±0.1% v.E., Pressure ranges up to 2000 bar**
- 1 year autonomy without recharging (battery operated)
- Pressure unit “bar”, conversion to Force
- PEAK function (positive and negative)
- Digital Filter (programmable)
- Pressure connection: 1/2" BSP male
- Clear easy to read LCD display with large numbers

The **DFP** is a microprocessor based digital pressure gauge, made of particulary high long-term stable analogue section and a 16 bit A/D converter which ensure 65,000 internal divisions. These features, together with a 0.1% accuracy class, make it ideal as a reference instrument: in fact the **DFP** is proposed as a first line sample for Quality Insurance Laboratories.

The Digital Reference Pressure Gauge **DFP** has internal batteries with 1 year autonomy, also guaranteed by the Auto-PowerOff function, which activates if no measurement changes are detected in the previous 30 minutes (adjustable).

The user can define his own engineering unit for force. The **DFP** is supplied calibrated in “bar” pressure unit as a normal pressure gauge. It is up to the installer to set the full scale value in the force unit used (kg or ton) by using the following formular:

$$F[N] = P \cdot D^2 \cdot \Pi / 40$$

P = Pressure in **bar**
D = Diameter of cylinder in **mm**

$$F[kg] = F[N] / 9{,}80665$$

F = force
N = Newton
kg = Kilogramm

Pressure → ***Force***

In order to increase the level of integration among components, a combined (traditional and SMT) technology has been used, that makes this reference gauge more resistant against mechanical stresses and vibrations and guarantees maximum reliability for the circuit.

As an option, the **DFP** is available with a RS232 interface. A connection cable and a simple software to read out the RS232 interface can be supplied on request.
Furthermore, a build-in version for panel mounting 83 x 83 mm with back connection, and a version for mains power supply (230 VAC) is available as option.

LR-Cal

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The Digital Reference Pressure Gauge **DFP** can be used with the portable calibration hand pumps **LPP 30** (pneumatic), **LPP 700** or **LPP 700** (hydraulic), as well as with the pressure comparison pumps **LSP**.

Left image: LSP; *Right image:* LPP 30

Technical Data:

Linearity and Hysteresis:	≤±0.1% v.E.
Reading per sec. (0 filter)	10 (100 ms)
Temperatures:	Reference: +23°C, Ambient 0...+50°C, Storage -10...+60°C
Temperature Effect (1°C):	on Zero ≤±0.002%; on Sensitivity ≤±0.002%
Programmable Functions:	Zero: 50%, digital Filter: 0...99% Display Resolution: 1, 2, 5 or 10 Digits Pressure Unit: bar, Force Units: kg, t, daN, KN (scalable) Baud Rate RS232-Interface (Option): 19200, 9600, 4800 Peak-Function: Positive (+) and Negative (-)
Display:	LCD, height 16 mm
Power Supply:	4 Alkaline Batteries 1,5 V (size AA)
Mechanical Limit Values (referred to nominal pressure):	Service Pressure: 100% FS; High Dynamic Pressure: 75% FS Permissible Pressure: max. 150% FS; Breaking Pressure:: >300% FS
Standard Process Coupling:	1/2" BSP male
Recommended Gasket:	USIT A 63-18
Tightening Torque:	28 Nm (Tightening Wrench: 27 mm)
Housing:	Material: Aluminum, Dimensions: appr. 132 x 80 x 48 mm
Protection:	IP 40
RS232-Interface (optional)	9-pole D-SUB (female)

Order-Code:

D F P - | | | | - | | | | | |

Range:											
0-10 bar.....	0	0	1	0	R	S	2	3	2	....with RS232-	0.001 bar
0-20 bar.....	0	0	2	0						Interface	0.002 bar
0-50 bar.....	0	0	5	0	(free / empty)					....without	0.005 bar
0-100 bar.....	0	1	0	0						RS232	0.01 bar
0-250 bar.....	0	2	5	0							0.02 bar
0-350 bar.....	0	3	5	0							0.05 bar
0-500 bar.....	0	5	0	0							0.05 bar
0-700 bar.....	0	7	0	0							0.05 bar
0-1000 bar.....	1	0	0	0							0.1 bar
0-1500 bar.....	1	5	0	0							0.2 bar
0-2000 bar.....	2	0	0	0							0.5 bar

Recommended Accessory: Usage of DFP with **LPP 30**: volume reducer, order-code **VRS-G12**.
Option: build-in version for panel mounting 83 x 83 mm, back conn.: add **-EBA** to the order-code of the instrument
Option: mains power supply 230 VAC (instead of batteries): add **-SNT** to the order-code of the instrument