

# **BEARING & TOOL CENTRE**



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#### Our Sister Concern: RELIEF SERVICE CENTRE

Repairs, Removal of Jaw Error, Bore Gauge Extension, Instrument Modifications & Spares

#### **Quotation**

#### 88 Force meter

Size	FG 5000 – 5 kg	FG 20 kg	FG 5100 – 100 kg.	FG 5020
Lutron Make Rs.	14810	16000	25950	19700
Catalog	Page No 3	Page No 6,7	Page No 10	Page No 8

#### 88 – 1 | Force meter - Insize Make

Code – (ISF	<b>F-F</b> )	10	20	30	50	100	200	300	500	1K	2K	3K	5K
Rs.					9692	9692	9692	9692	9692	30802	30802	36143	41484
Page No		12	12	12	12	12	12	12	12				
Type		A								В			
	N	10	20	30	50	100	200	300	500	1000	2000	3000	5000
Capacity	Kgf	1	2	3	5	10	20	30	50	100	200	300	500
Graduation	N	0.05	0.1	0.2	0.2	0.5	1	2	2	5	10	20	20
Accuracy +/- 1% full scale						+/- 2%	full scal	e					

<sup>\*\*\*</sup> Warranty – 12 Months, Certificate – No

#### 88 – 2 Digital Force Gauge - Insize Make

Code – (ISF-DF)	10	20	50	100	500	1000	1KA	2KA	5KA	10KA	20KA	50KA	100KA
Rs.	26556		26829	26829	26829	26556	26829	66295	27241	82541	96258		
Page No	13		13	13	13	13							
Type	A (Inte	A (Internal Sensor)					B (Internal Sensor)						
Load Capacity	10N	20N	50N	100N	200N	500N	1KN	2KN	5KN	10KN	20KN	50KN	100KN
Resolution (N)	0.005	0.01	0.01	0.05	0.1	0.1	0.5	1	1	5	10	10	50
Meas. Range	10% -1	10% -100 full scale +/- 2% full scale											
Accuracy	+/- 0.59	-/- 0.5% full scale											

<sup>\*\*\*</sup> Warranty - 12 Months, Certificate - No

#### 88 – 3 Optional Accessory - RS232 Cable and Software | ISF-DF-CABLE | Rs. 1603

#### 88 – 4 Testing Stand - Insize Make

Code	ISF-MT1K
Rs.	35859
<b>Load Capacity</b>	1000N
Travel	200mm (3mm vertical movement per revolution of handle
	wheel)
Dimension	196 X 250 X 446 mm
Weight	13 kgs
Catalog	Page No 14

<sup>\*\*\*</sup> Warranty –12 Months, Certificate – No

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### **Terms & Conditions –**

- Goods offered Subject to Prior Sale
- Price Validity: "15 Days from Date of Quotation"
- C.S.T 2% extra against form C. Otherwise 5% without form C For Out of Gujarat Sales only.
- VAT 5% extra for Sales within Gujarat. Prices Ex-Godown Ahmedabad.
- Payment against Proforma Invoice, Packing, Forwarding & Freight extra.
- Bank Detail Kotak Mahindra Bank Ltd.
- **Branch** Shivranjini
- Bank IFSC Code KKBK 0000 810
- Bank Account No. 08102 00000 2689
- Note While making payment online do mention your Company's name.
- TIN NO 24070901229, CST No. 24570901229
- We are looking forward to your valued orders.

### **LUTRON MAKE**

# 5 Kg/20 Kg FORCE GAUGE

Model: FG-5000A, FG-20KG

ISO-9001, CE



5 Kg full scale, Model : FG-5000A 20 Kg full scale, Model : FG-20 Kg



## **LUTRON ELECTRONIC**

#### **FEATURES**

- \* 5000 g, 20 KG wide capacity, high resolution, accuracy & repeatability.
- \* Display unit : gram, Newton & oz.
- \* Tension & compression capability .
- \* Peak hold (Max. load).
- \* Zero button.
- \* Full capacity zero (tare) control.
- \* Fast/Slow response time push button.
- \* Positive or reverse direction select.
- \* Full line accessories ( adapters ).
- \* Hand held & stand mounted available.
- Microprocessor circuit & exclusive load cell transducer.
- \* Over load protection.
- \* RS-232 computer interface (optional).
- \* Professional test stand (optional).



Test stand, optional Model : FS-1001



## 5 Kg FORCE GAUGE, Model: FG-5000A

FEATURES				
* Wide capacity, high resolution, high accuracy,	* Positive or reverse display direction select.			
high repeatability.	* Full line accessories ( adapters ) are included.			
* 3 kind display unit.	* Hand held & stand mounting available.			
* Tension & compression capability .	* Low power consumption gives long battery life.			
* Peak hold ( Max. load ) can be held in display	* Build in low battery indicator.			
during make tension or compression measurement.	* Microprocessor circuit & exclusive load cell			
* Zero button can operate both for normal measuring	transducer.			
& the " peak hold " operation.	* Over load protection.			
* Full capacity zero (tare) control capability.	* RS-232 computer interface ( optional ).			
* Fast/Slow response time push button.	* Professional test stand ( optional ).			

	SPECIF	ICATIONS	
Display	LCD ( Liquid crystal display ).	Full Scale	Approx. 2.0 mm max.
	5 digits, 10 mm ( 0.4" ) digit size.	Deflection	
Display	Positive or Reverse direction, select by	Power Supply	6 x 1.5 V AA (UM-3) size battery
Direction	the push button on the front panel.		or DC 9V adapter (not included).
Function	Tension & Compression (Push & Pull).	Power	Approx. DC 24 mA
	Normal force, Peak hold ( Max. load )	Consumption	
Peak hold	Will freeze the display value of the	Transducer	Exclusive load cell.
	Peak load ( Max. load ).	Operating	0°C to 50°C ( 32°F to 122°F ).
Zero	Zero button can be operated both for	Temperature	
	"normal force" or "peak hold" operation.	Operating	Less than 80% RH.
Measure	5000 g/176.40 oz/49.03 Newton.	Humidity	
Capacity		Dimension	227 x 83 x 39 mm ( 8.9 x 3.3 x 1.5 inch ).
Resolution	1 g/0.05 oz/0.01 Newton.	Weight	551 g ( 1.2 LB )/with batteries.
Min. Display	3 g/0.10 oz/0.03 Newton.	Mounting	Mounting holes are provided on the
Accuracy	± (0.4 % + 1 d), within 23± 5℃.	Holes	back case, easy stand mounting.
Unit select	g/oz/Newton	Data output	Optional,
Update time	Fast Approx. 0.2 second.		RS-232 serial computer interface
	Slow Approx. 0.6 second.	Accessories	Operating manual1 PC.
Over range	Display show " " when in over	Included	Flat-head adapter 1 PC.
Indicator	range status.		Hook adapter 1 PC.
Overload	Max. 7 kg.		Cone head adapter 1 PC.
Capacity			Chisel head adapter 1 PC.
Zero/tare	Max. full capacity.		120 mm extension rod 1 PC.
Control			Carrying case 1 PC.
Circuit	Exclusive microprocessor LSI-circuit.	Optional	Test stand, Model : FS-1001
		Accessories	Wedge grip, Model: WG-01

#### OPTIONAL EQUIPMENT & ACCESSORY

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TEST STAND	Test stand, cooperate with Force gauge FG-20KG, FG-5000A, whole system will be
Model: FS-1001	become the useful tool for material's tension & compression analysis.
	Size: 630 x 250 x 230 mm. Weight: 7.02 Kg ( 15.4 LB ).
Wedge grip	Wedge grip, the optional accessory to install to the base of FS-1001 be used to hold
Model: WG-01	the tested material.

#### FORCE GAUGE with RS-232 COMPUTER INTERFACE

FG-5000A-RS232	All the function are same as the FG-5000A but with RS-232 computer interface.
SW-U101-WIN	Software for data logging & data recorder.

<sup>\*</sup> Appearance and specifications listed in this brochure are subject to change without notice.

0408-FG5000A

# FORCE GAUGE

Model: FS-1001

ISO-9001, CE, IEC1010



#### **FEATURES**

- \* Optional; test stand, be connected with FG-5000A, FG-20KG, FG-5000A-232, FG-20KG-232, whole system will be a useful tool for material's tension and compression analysis.
- \* Size: 650 x 250 x 230 mm.





# 20 Kg FORCE GAUGE

Model: FG-20KG

ISO-9001, CE, IEC1010



### **FEATURES**

- \* Tension & compression capability .
- 20 Kg, wide capacity, high resolution, high accuracy, high repeatability.
- \* 3 kind display unit, Kg/LB/Newton.
- \* Separate sensor.
- \* Peak hold (Max. load) measurement.
- \* Zero button can operate both for normal & " peak hold " operation.
- \* Full capacity zero (tare) capability.
- \* Fast/Slow response time.
- \* Positive or reverse display direction.
- \* Hand held & stand mounting.
- Microprocessor circuit & exclusive load cell transducer.
- \* Over load protection.





# 20 Kg FORCE GAUGE, Model: FG-20KG

FEATURES				
* Wide capacity, high resolution, high accuracy,	Positive or reverse display direction select.			
high repeatability.	* Full line accessories ( adapters ) are included.			
* 3 kind display unit.	* Hand held & stand mounting available.			
* Tension & compression capability .	* Low power consumption gives long battery life.			
* Peak hold ( Max. load ) can be held in display during	* Build in low battery indicator.			
make tension or compression measurement.	* Microprocessor circuit & exclusive load cell			
* Zero button can operate both for normal measuring	transducer.			
& the " peak hold " operation.	* Over load protection.			
* Full capacity zero (tare) control capability.	* RS-232 computer interface ( optional ).			
* Fast/Slow response time push button.	* Professional test stand ( optional ).			

	SPECIFICATIONS					
Display	LCD ( Lie	quid crystal display ).	Full Scale	Approx. 2.0 mm max.		
	5 digits, 10 mm ( 0.4" ) digit size.					
Display	Positive	or Reverse direction, select by	Power Supply	6 x 1.5 V AA (UM-3) size battery		
Direction	the push	button on the front panel.		or DC 9V adapter (not included).		
Function	Tension	& Compression (Push & Pull).	Power	Approx. DC 24 mA		
	Normal f	force, Peak hold ( Max. load ).	Consumption			
Peak hold	Will free	ze the display value of the	Transducer	Exclusive load cell.		
	Peak loa	d ( Max. load ).	Operating	0°C to 50°C( 32°Fto 122°F).		
Zero	Zero but	ton can be operated both for	Temperature			
	"normal	force" or "peak hold" operation	Operating	Less than 80% RH.		
Measure	20.00 Kg/44.10 LB/196.10 Newton.		Humidity			
Capacity			Dimension	227 x 83 x 39 mm ( 8.9 x 3.3 x 1.5 inch ).		
Resolution	0.01 Kg/	0.01 LB/0.05 Newton.	Weight	551 g ( 1.2 LB )/with batteries.		
Min. Display	0.01 Kg/	0.01 LB/0.05 Newton.	Mounting	Mounting holes are provided on the		
Accuracy		6 + 2 d), within 23°C ± 5°C.	Holes	back case, easy stand mounting.		
Unit select	Kg/LB/N		Data output	Optional,		
Update time	Fast	Approx. 0.2 second.	Ai	RS-232 serial computer interface		
0	2.2	Approx. 0.6 second.	Accessories	Operating manual1 PC.		
Over range	1	show " " when in over	Included	Flat-head adapter 1 PC.		
Indicator	range status.		$\dashv$	Hook adapter 1 PC.		
Overload	Max. 30 kg.			Cone head adapter 1 PC.		
Capacity			4	Chisel head adapter 1 PC.		
Zero/tare	Max. full capacity.			120 mm extension rod 1 PC.		
Control	<del> </del>		<u> </u>	Carrying case 1 PC.		
Circuit	Exclusive	e microprocessor LSI-circuit.	Optional	Test stand, Model : FS-1001		
			Accessories	Wedge grip, Model : WG-01		

#### OPTIONAL EQUIPMENT & ACCESSORY

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TEST STAND	Test stand, cooperate with Force gauge FG-20KG, FG-5000A, whole system will
Model: FS-1001	be become the useful tool for material's tension & compression analysis.
	Size: 630 x 250 x 230 mm. Weight: 7.02 Kg ( 15.4 LB ).
Wedge grip	Wedge grip, the optional accessory to install to the base of FS-1001 be used to hold
Model: WG-01	the tested material.

#### FORCE GAUGE with RS-232 COMPUTER INTERFACE

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FG-FG20KG-RS232	All the function are same as the FG-20KG but with RS-232 computer interface.
SW-U101-WIN	Software for data logging & data recorder.

<sup>\*</sup> Appearance and specifications listed in this brochure are subject to change without notice.

0408-FG20KG

# FORCE GAUGE

Model: FG-5020

ISO-9001, CE, IEC1010





## **FEATURES**

- \* 20 Kg, Kg/LB/Newton.
- \* Tension or Compression, Peak hold, Zero.
- \* Positive/ Reverse display.
- \* 5 digits LCD with back light.
- \* RS-232 computer interface.
- \* Full line accessories, optional test stand.
- \* DC 1.5V battery (UM-3, AA) x 6 or DC 9V adapter in.





**LUTRON ELECTRONIC** 

### 20 Kg x 0.01 Kg, Kg/LB/Newton, RS232

# **FORCE GAUGE**

Model: FG-5020

#### **FEATURES**

*	Large LCD display with back light.
*	20 Kg, wide capacity, high resolution, high accuracy, high repeatability.
*	3 kind display unit : g, oz, Newton.
*	Tension & compression capability .
*	Peak hold (Max. load) can be held in display during make tension or compression measurement.
*	Zero button can operate both for normal measuring & the " peak hold " operation.
*	Full capacity zero (tare) control capability.
*	Fast/Slow response time push button.
*	Positive or reverse display direction select.
*	Full line accessories ( adapters ) are included.
*	Hand held & stand mounted gauges are available.
*	Low power consumption gives long battery life.
*	Build in low battery indicator.
*	Microprocessor circuit & exclusive load cell transducer.
*	Over load protection.
*	RS-232 computer interface.
*	Built-in DC 9V power adapter input socket.
*	Professional test stand (optional).

#### SPECIFICATIONS

Display	LCD ( Liquid crystal display ). 5 digits, 16 mm ( 0.63" ) digit size. Back light.
Display Direction	Positive or Reverse direction, select by the push button on the front panel.
Function	Tension & Compression (Push & Pull).  Normal force, Peak hold (Max. load).
Peak hold	Will freeze the display value of the Peak load ( Max. load ).
Zero	Zero button can be operated both for "normal force" or "peak hold" operation
Unit select	g/oz/Newton
Measure Capacity	20.00 Kg/44.10 LB/196.10 Newton.
Resolution	0.01 Kg/0.01 LB/0.05Newton.
Min. Display	0.02 Kg/0.07 LB/0.3 Newton,
Accuracy	$\pm$ (0.5 % + 2 digits), within 23 $\pm$ 5°C. * Under the test weight on 10 Kg & 20 Kg.

Update time	Fast Approx. 0.2 second.			
	Slow Approx. 0.6 second.			
Over range	Display show " " when in over			
Indicator	range status.			
Data output	RS-232 serial computer interface.			
Overload	Max. 30 kg.			
Capacity				
Full Scale	Approx. 0.4 mm max.			
Deflection	× 100 101 00 000 000 000 000 000 000 000			
Zero/tare	Max. full capacity.			
Control				
Circuit	Exclusive microprocessor LSI-circuit.			
Power Supply	6 x 1.5 V AA (UM-3) size battery			
The constitution of the co	or DC 9V adapter (not included).			
Power	Approx. DC 28 mA			
Consumption	* * * * * * * * * * * * * * * * * * *			
Transducer	Exclusive load cell.			
Operating	0°C to 50°C ( 32°F to 122°F ).			
Temperature	,			
Operating	Less than 80% RH.			
Humidity				
Dimension	215 x 90 x 45 mm ( 8.5 x 3.5 x 1.8 inch ).			
Weight	650 g ( 1.43 LB )/with batteries.			
Mounting	Main instrument with mounting holes are			
Holes	provided on the back case, easy stand			
	mounting.			
Accessories	Operating manual 1 PC.			
Included	Flat-head adapter 1 PC.			
(0.000 to 100 to	Hook adapter1 PC.			
	Cone head adapter1 PC.			
	Chisel head adapter 1 PC.			
	120 mm extension rod1 PC.			
	Carrying case1 PC.			
Optional	* Test stand, Model : FS-1001			
Accessories	* Wedge grip, Model : WG-01			
Accessories				
	* RS232 cable, Model : UPCB-01			
	* USB cable, Model : USB-01			
	* Software for data logging & data			
	recorder.			
	Model: SW-U801-WIN.			

<sup>\*</sup> Appearance and specifications listed in this brochure are subject to change without notice.

0601-FG5020

# FORCE GAUGE 100 Kg

Model: FG-100KG

ISO-9001, CE, IEC1010





## **FEATURES**

- \* Tension & compression capability.
- \* 100 Kg, wide capacity, high resolution, high accuracy and high repeatability.
- \* 3 kind display unit, Kg/LB/Newton.
- \* Separate sensor.
- \* Peak hold (Max. load) can be held in display during make tension or compression measurement.
- Zero button can operate both for normal measuring & the peak hold operation.
- Full capacity zero (tare) control.
- Fast/Slow response time select.
- \* Positive or reverse display direction select.
- \* Hand held & stand mounting available.
- \* Low power consumption gives long battery life.
- \* Microprocessor circuit & exclusive load cell transducer.
- \* Over load protection.



# **100 Kg FORCE GAUGE**

Model: FG-100KG

FEATURES				
* Tension & compression capability .	* Full capacity zero (tare) control capability.			
* 100 Kg, wide capacity, high resolution, high accuracy,	* Fast/Slow response time push button.			
high repeatability.	<ul> <li>Positive or reverse display direction select.</li> </ul>			
* 3 kind display unit, Kg/LB/Newton.	* Hand held & stand mounting available.			
* Separate sensor.	* Low power consumption gives long battery life.			
* Peak hold ( Max. load ) can be held in display during	* Build in low battery indicator.			
make tension or compression measurement.	* Microprocessor circuit & exclusive load cell			
* Zero button can operate both for normal measuring	transducer.			
& the " peak hold " operation.	* Over load protection.			

		SPECIFIC	CATIONS		
Display	LCD ( L	iquid crystal display ).	Circuit	Exclusive microprocessor LSI-circuit.	
	5 digits, 10 mm ( 0.4" ) digit size.		Sensor type	S type load cell.	
Display	Positive	or Reverse direction, select by	Power Supply	6 x 1.5 V AA (UM-3) size battery	
Direction	the pus	h button on the front panel.		or DC 9V adapter (not included).	
Function		& Compression (Push & Pull). force, Peak hold (Max. load).	Power Consumption	Approx. DC 24 mA	
Peak hold	100000000000000000000000000000000000000	eze the display value of the ad ( Max. load ).	Operating Temperature	0 to 50 ℃ ( 32 to 122 °F ).	
Zero		tton can be operated both for force" or "peak hold" operation	Operating Humidity	Less than 80% RH.	
Unit select	Kg/LB/N	Newton	Dimension	Main instrument :	
Measure Capacity	100 Kg/220 LB/980 Newton.			227 x 83 x 39 mm ( 8.9 x 3.3 x 1.5 inch Sensors with two hooks : 130 x 51 x 18 mm ( 4.7 x 2.0 x 0.7 inch	
Resolution	0.10 Kg/0.20 LB/1.0 Newton.		1		
Min. Display	Kg/ LB	Newton.		Cable length :	
Accuracy		% + 2 digits), within 23 ± 5 °C.		2 meters.	
	under the test weight on 100 Kg & 10 Kg.		Weight	Main instrument :	
Update time	Fast	Approx. 0.2 second.		450 g ( 0.99 LB ).	
(1)	Slow Approx. 0.6 second.		_	Sensors	
Over range	Display	show " " when in over		380 g ( 0.84 LB ).	
Indicator	range st	atus.	Mounting	Main instrument with mounting holes a	
Overload Capacity	Max. 150 kg.		Holes	provided on the back case, easy stand mounting.	
Sensor full Scale Deflection	Approx. 1 mm max.		Accessories Included	Operating manual	
Zero/tare Control	Max. ful	I capacity.		Carrying case 1 PC	

<sup>\*</sup> Appearance and specifications listed in this brochure are subject to change without notice.

0408-FG100KG

# **INSIZE MAKE**

#### FORCE GAGE



- Push and pull test
- Peak(max.) or tracking mode







V type push tip(included)



knife-edge pushtip (included)



point push tip(included)



pull clamp(included)



extension rod(included)

#### SPECIFICATION

Code		ISF-F10	ISF-F20	ISF-F30	ISF-F50	ISF-F100	ISF-F200	ISF-F300	ISF-F500
	N	10	20	30	50	100	200	300	500
Capacity	kgf	1	2	3	5	10	20	30	50
Graduation	N	0.05	0.1	0.2	0.25	0.5	1	2	2.5
Accuracy		±1% (of loa	d capacity)						

#### STANDARD DELIVERY

Main unit	1pc
Pushtip	4pcs (flat, V type, knife-edge, point)
Pull clamp	1pc
Extension rod	1pc

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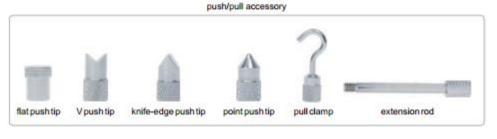
#### DIGITAL FORCE GAGE





- Push and pull test
- Units: N, gf, kgf, ozf, lbf
- 500 memories
- Automatic power off
- Metal case
- LCD display with backlight, can turn 180°
- Overload alarm

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#### SPECIFICATION

Code	ISF-1DF10*	ISF-1DF50*	ISF-1DF100*	ISF-1DF500*	ISF-1DF1000*
Load capacity (N)	10	50	100	500	1000
Resolution (N)	0.01	0.01	0.1	0.1	1
Accuracy	±0.3% (of load capacity)				
Measuring mode	tracking, peak (max.), low and high limits with judgement				
Power supply	built-in rechargeable battery				
Dimension	150×73×33mm				
Weight	450g				

#### STANDARD DELIVERY

Main unit	1pc
AC/DC adapter	1pc
USB cable and software	1pc
Push/pull accessory	6pcs (flat push tip, V push tip, knife-edge push tip, point push tip, pull clamp, extension rod)

#### **OPTIONAL ACCESSORY**

Printer	ISF-DF-PRINTER

<sup>\*</sup>Add suffix on code No. to devote AC voltage and plug

#### TEST STAND FOR DIGITAL FORCE GAGE CODE ISF-MT1K

 For tensile and compress test with force gages (code ISF-1DFxx and ISF-DFxx)

 To be used in vertical and horizontal orientation



horizontal orientation test







#### SPECIFICATION

Load capacity	1000N
Travel	200mm (3mm vertical movement per revolution of handwheel)
Dimension	196 x 250 x 446mm
Weight	13kg

**OPTIONAL ACCESSORY** 

Digital scale (range: 200mm, resolution: 0.01mm/0.0005")

ISF-MT1K-SCALE