

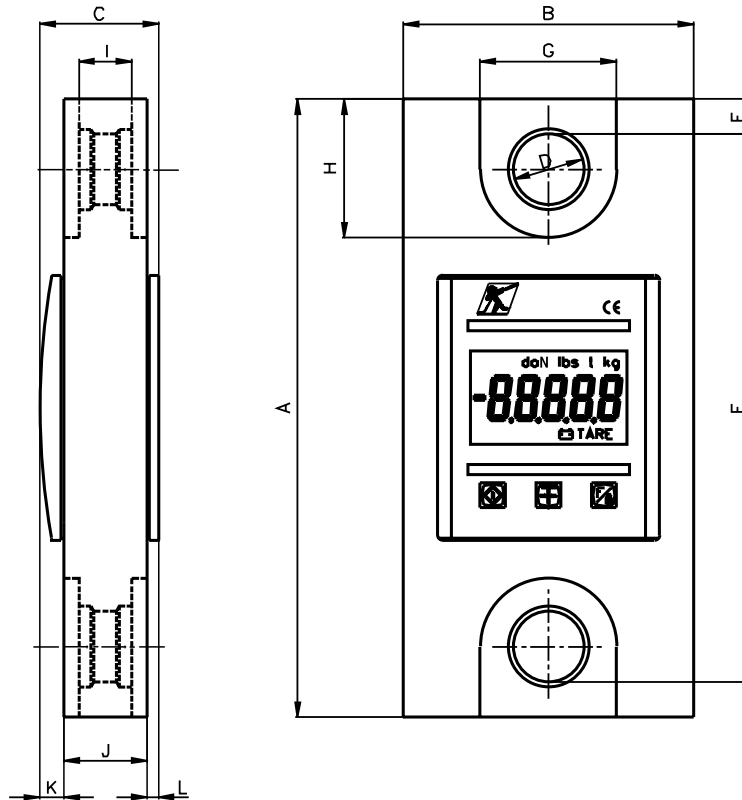


# technical sheet

## DYNAFOR LLZ load indicator with digital display capacities : 0.25 to 20 t

réf. : **T 2018 GB**  
rév. n° : **01**  
date : **05/2001**  
page : **2/2**

### Technical specification and dimensions :



Models	LLZ - 0,25	LLZ - 0,5	LLZ - 1	LLZ - 2	LLZ - 3,2	LLZ - 6,4	LLZ - 10	LLZ - 20
Code	0396980	0396981	0396982	0396983	0396984	0396985	0396986	0396987
Capacity	t	0,25	0,5	1	2	3,2	6,4	20
Accuracy 0.8 %	± kg	2	4	8	15	25	50	150
Smallest load increment	kg	0,5	1	2	5	10	20	50
Test load	t	0,5	1	2	4	6,4	12,8	40
Max. display	kg	250	500	1000	2000	3200	6400	20000
Height of display	mm	18	18	18	18	18	18	18
Weight	kg	1,1	1,1	1,1	1,3	1,5	2,3	7
Dimensions mm	A	220	220	220	233	243	275	371
	B	90	90	90	90	97	110	134
	C	42	42	42	48	48	62	72
	Ø D	14	14	14	22	22	42	54
	E	196	196	196	207	207	257	269
	F	12	12	12	13	18	34	51
	G	35	35	35	45	45	80	84
	H	36,5	36,5	36,5	46,5	51,5	95	120
	I	16	16	16	25	25	50,5	65
	J	27	27	27	33	33	56,5	67
	K	10	10	10	10	10	5	5
	L	5	5	5	5	5	-	-
Shackles class S NF E52-144								
Code	0437206	0437206	0437206	0437207	0437207	0437208	0437209	0437210
Capacity	t	1,5	1,5	1,5	3,25	3,25	6,5	25
Pin diameter	mm	13	13	13	20	20	25	50

## technical sheet

### DYNAFOR LLX LCD load indicators capacities : 250 kg to 250 t

réf. : T 2001 GB  
rév. n° : 7  
date : 03/03  
page : 1/2

#### General specification :

Lifting accessory in accordance with CE directives  
N°89/392 - 91/368 - 93/68 and European Standards N° EN 292 - EN 55 022  
- EN 50 082.2

Liquid cristal display (LCD) : 5 digits  
models LLX-0.25 to LLX-5 : 18 mm digits  
models LLX-12.5 to LLX-100 : 25 mm digits  
model LLX-250 : 44 mm digits

Ambient temperature range : -10°C to +40°C  
Temperature compensation : automatic zero adjustment when equipment  
free of any load is switched ON

Weatherproof and dustproof : IP65

Material : body in aluminium alloy

Finish : anodised black

Power supply : 3 x 1.5 V, AA or R6 (dia. 14 x 50 mm) standard

Power consumption : variable, depending on the  
setting of the functions

Battery life : 550 hours

Accuracy : +/- 0.2% of capacity

Operating coefficient : max. 2

Safety coefficient : 4



#### Push-button controls :

- ON / OFF (T1)
- TARE (up to 100% of capacity) (T2)
- PEAK HOLD (T3)



T1



T2



T3

#### Automatic functions :

- Automatic zero when switched on
- Low battery signal
- Overload indication

#### Adjustable functions (using a sequence of operations of the push-buttons) :

- Choice of unit measurement : Unit display (kg, t, short ton, lbs, daN, kN)
- Automatic shutdown after 20 minutes with no addition/reduction of load
- Response rate of the display

#### Output (BNC socket) :

- to connect to remote readout
- to connect to PC, for data processing and printing
- to connect to "Dynafor" printer

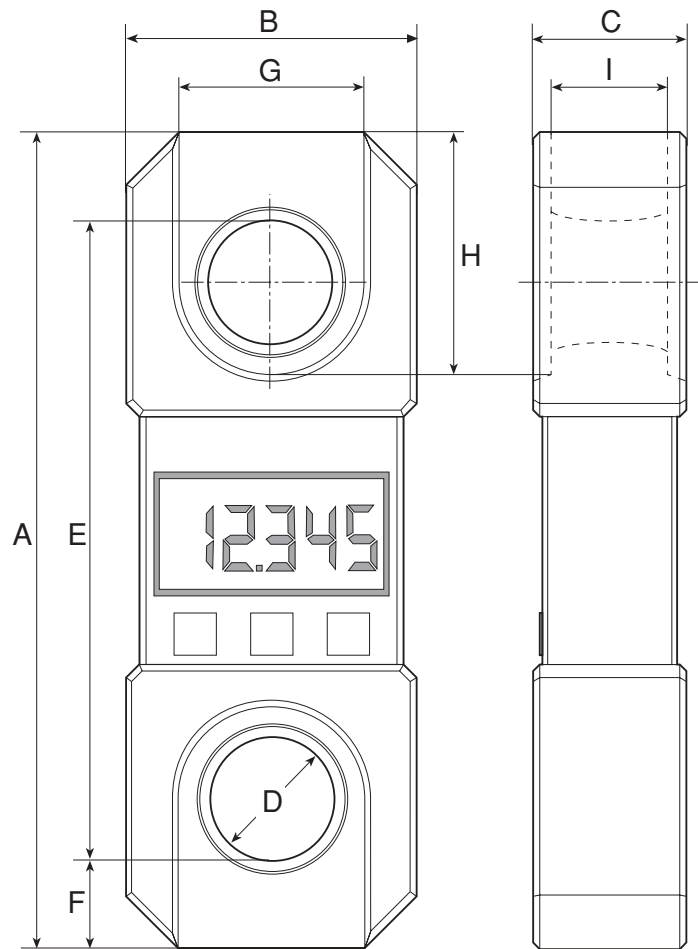
#### Options :

- Remote hand held display suitable for use with all models (ON/OFF; tare, Peak hold).
- RS232 for connection to PC, Printer, etc.
- Portable DYNAFOR printer : customised print-out with date and time.
- Supply network

**technical  
sheet**

**DYNAFOR LLX  
LCD load indicators  
capacities : 250 kg to 250 t**

réf. : **T 2001 GB**  
rév. n° : **7**  
date : **03/03**  
page : **2/2**



**Technical specification :**

Model		LLX-0.25	LLX-0.5	LLX-1.25	LLX-2.5	LLX-5	LLX-12.5	LLX-25	LLX-50	LLX-100	LLX-250	
Capacity	t	0.25	0.50	1.25	2.5	5	12.5	25	50	100	250	
Accuracy	±kg	0.5	1	2.5	5	10	25	50	100	200	500	
Smallest load increm.	kg	0.1	0.2	0.5	1	2	5	10	20	50	100	
Test load	t	0.5	1	2,5	5	10	25	50	85	145	333	
Max. display	kg/t	250.0	500.0	1250.0	2500	5000	12500	25000	50000	100.00	250,00	
Height of digits	mm	18	18	18	18	18	25	25	25	25	44	
Weight	kg	1.1	1.1	1.1	1.4	1.9	3.8	6.6	15.1	46	215	
Material		Aluminium alloy										
Dimensions	mm	A	190	190	190	214	226	310	360	440	660	905
		B	83	83	83	83	90	110	134	164	260	424
		C	56	56	56	56	56	58	68	98	118	248
		D	16	16	16	24	32	47	56	72	108	150
		E	166	166	166	184	197	243	272	332	488	685
		F	12	12	12	15	14,5	33,5	44	54	86	110
		G	47	47	47	47	54	70	84	104	174	250
		H	43	43	43	50	58	92	114	142	227	310
		I	16	16	16	25	32	48	58	86	104	190

# technical data sheet

**dynafor™ range LLXh**  
Electronic dynamometer  
with removable display unit  
W.L.L. : 15 to 250 t

ref. : **T 2027 GB**  
rev. n° : **01**  
date : **06/09**  
page : **1/2**

## Description

Range of electronics' traction dynamometers with removable display unit. The radio connection (2.4 G. Hertz) with 80 m working range is permanent between the LLXh sensor and the display unit.

The shape of the dynamometers enable the use of standard shackles on both ends.

The dynamometers of this range function in all positions for the measurement of force and suspended for weighing purpose.

Capacities: 15, 25, 50, 100 and 250 tons.

## Operating Principle

Strain gauge measurement of the extension, within its limits of elasticity, of a metal body subjected to traction stress.

The sensor generates an electrical signal that is proportional to the load. This signal is processed by a micro-processor analyser and then transmitted via radio waves to the display unit, which immediately displays the load applied to the sensor to which it is linked. The display unit is compatible with all of the LLX 2 model sensors, irrespective of their capacity.

## Provisions applied :

**Machine Directives** : 98/37/CEE

**European Standards** : EN 12100-1 and 12100-2

**CEM Directive** : 89/336/CEE

**Electrical Safety** : IEC 61010-1 2de Edition 2001

**Radio certifications** : CE :Radio test EN 300 440-2 V1.1.1 / USA & Canada : FCC part 15 / Australia : C-Tick ID

**R&TTE Directive** (1999/5/CE)

## Technical Specifications:

Precision: 0.2 % (ISO 376 . 21 °C)

Coefficient safety: minimum 4

Power supply: 3 x 1.5 V "AA" batteries. Removable Display 1 x LI ONE battery (delivered with charger)

The standard version of the equipment comes with batteries and power pack in a carrying case for capacities up to 50 t and wood case for 100 t and 250 t.

Protection : IP 65, NEMA 4 (sensor)

More details are available on page 2.

## Optional Accessories

PC connection Kit

Connecting shackles

Swivel hooks as LLX

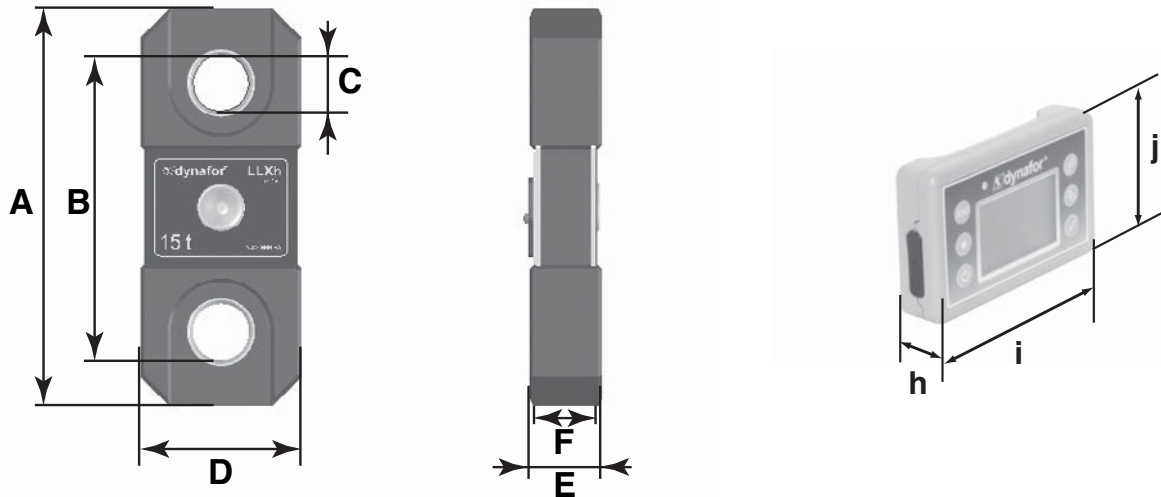
I.P. 67 Protection



# technical data sheet

**dynafor™ range LLXh**  
Electronic dynamometer  
with removable display unit  
W.L.L. : 15 to 250 t

ref. : **T 2027 GB**  
rev. n° : **01**  
date : **06/09**  
page : **2/2**



MODEL		LLXH 15 t	LLXH 25 t	LLXH 50 t	LLXH 100 t	LLXH 250 t	Display
Maximum capacity	t	15	25	50	100	250	ALL
Test load	t	30	50	100	200	500	-
Safety coefficient		Minimum 4					-
Precision		0,2 % according to ISO 376 . 21°C					-
	daN	30	50	100	200	500	-
Increment	daN	5	10	20	50	100	<-
Max. display		16500 daN	27500 daN	55000 daN	110.00 t	275.00 t	<-
Number height	mm	-	-	-	-	-	25
Autonomy		From 300 to 1000 h depending of functions					48 h
Radio scope	m	80 (in open field) (I.P. 67 = 60)					
RF Technology		2.4 Ghz					
Weight	kg	4	6.6	15.1	46	215	0.180
IP Protection		I.P. 65 (option : I.P. 67)					I.P. 54
Usage		From - 20° to 40°C					
Sensitivity to T°		0.05% per 10°C					
Sensor material		Aluminium					-
Dimensions mm	A	320	360	440	660	905	-
	B	247.5	277	338	488	685	-
	ØC	47.5	56	72	108	150	-
	D	130	134	164	260	424	-
	E	58	68	98	118	248	-
	F	48	58	86	104	190	-
	h	-	-	-	-	-	26.7
	i	-	-	-	-	-	131
j	-	-	-	-	-	82	

# technical data sheet

## dynafor™ range LLX2

Electronic dynamometer  
with removable display unit  
W.L.L. : 0.5 to 10 t

ref. : **T 2026 GB**  
rev. n° : **ind 04**  
date : **06/09**  
page : **1/2**

### Description

Range of precision electronic dynamometers appliances with removable display unit. The radio connection (2.4 G.Hertz) with 80 m in open field, working range is permanent between the unit and removable display unit.

The specific, patented shape of the attaching head enables either standard shackles or standardised accessories for chains.

The dynamometers of this range function in all positions for the measurement of force and suspended for weighing purposes.

The LLX 2 is available in two versions: Standard version with interlinking anchoring rings in the perpendicular surfaces, or an optional version with the anchoring rings both on the same side.

The standard version enables articulation of lifting accessories on both sides, thus avoiding stresses due to load movements and enhancing appliance precision. These assemblies are put together in our production line and cannot be modified later by the user.

### Operating Principle

Strain gauge measurement of the extension, within its limits of elasticity, of a metal body subjected to traction stress.

The sensor generates an electrical signal that is proportional to the load. This signal is processed by a micro-processor analyser and then transmitted via radio waves to the display unit, which immediately displays the load applied to the sensor to which it is linked. The display unit is compatible with all of the LLX 2 model sensors, irrespective of their capacity.

### Technical Specifications:

Precision: 0.1 % (ISO 376 . 21 °C)

Coefficient safety: minimum 4

Power supply: 3 x 1.5 V "AA" batteries. Removable Display 1 x LI ONE battery (delivered with charger)

The standard version of the equipment comes with batteries and power pack in a carrying case.

Protection : IP 66, NEMA 4 (sensor)

More details are available on page 2.

### Optional Accessories

PC connection Kit

Chain accessories with rapid connection

Connecting shackles

I.P. 67 Protection

### Provisions applied :

**Machine Directives** : 98/37/CEE

**European Standards** : EN 12100-1 and 12100-2

**CEM Directive** : 89/336/CEE

**Electrical Safety** : IEC 61010-1 2de Edition 2001

**Radio certifications** : CE :Radio test EN 300 440-2 V1.1.1 / USA & Canada : FCC part 15 / Australia : C-Tick ID

**R&TTE Directive** (1999/5/CE)



0,5 / 1 / 2 / 3,2 t



5 / 6,3 t



10 t

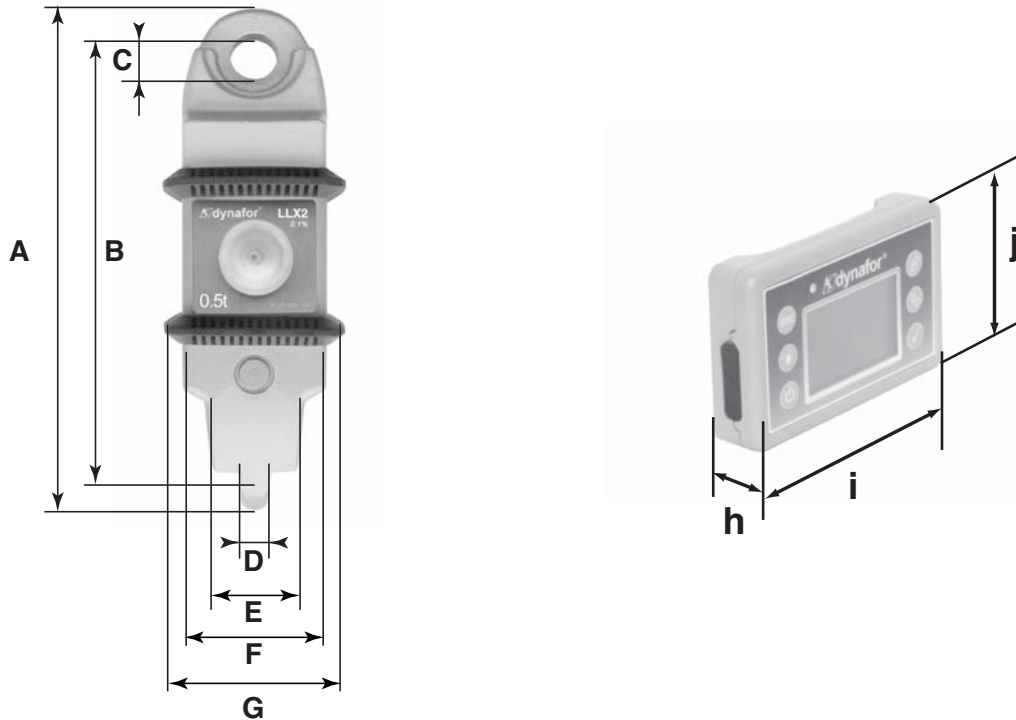


Coplanar Version

# technical data sheet

**dynafor™ range LLX2**  
Electronic dynamometer  
with removable display unit  
W.L.L. : 0.5 to 10 t

ref. : **T 2026 GB**  
rev. n° : **ind 04**  
date : **06/09**  
page : **2/2**



MODEL		LLX2 0.5 t	LLX2 1 t	LLX2 2 t	LLX2 3.2 t	LLX2 5 t	LLX2 6.3 t	LLX2 10 t	Display Unit
Maximum capacity	t	0.5	1	2	3.2	5	6.3	10	All
Test load	t	0.75	1.5	3	4.8	7.5	9.6	15	-
Safety coefficient		Minimum 4							-
Precision		0,1 % according to ISO 376 at 21°C (I.P. 67 = 0,2 %)							-
	daN	0.5	1	2	3.2	5	6.3	10	-
Increment	daN	0.1	0.2	0.5	0.5	1	1	2	<
Max. Display	daN	550	1100	2200	3520	5500	6930	11000	<
Number height	mm	-	-	-	-	-	-	-	25
Autonomy		From 300 to 1000 h depending of functions							48 h
Radio scope	m	80 (in open field) (I.P. 67 = 60)							
RF Technology		2.4 Ghz							
Weight	kg	2.300				3.350		6.45	0.180
IP Protection		I.P. 66 NEMA 4 (option : I.P. 67)							I.P. 54
Usage		From - 20° to 40°C							
Sensitivity to T°		0.05% per 10°C							
Head Material		Steel							-
Sensor Material		Aluminium						Steel	-
Dimensions mm	A	248	248	248	248	290	290	341	-
	B	224	224	224	224	254	254	296	-
	C	Ø 20	Ø 20	Ø 20	Ø 20	Ø 28	Ø 28	Ø 40	-
	D	10	10	10	10	16	16	20	-
	E	24	24	24	24	35	35	54	-
	F	80	80	80	80	80	80	80	-
	G	100	100	100	100	100	100	100	-
	h	-	-	-	-	-	-	-	26.7
	i	-	-	-	-	-	-	-	131
	j	-	-	-	-	-	-	-	82



Lifting accessory in accordance with EUROPEAN DIRECTIVES  
N° 89/392 - 91/368 - 93/68  
and with EUROPEAN STANDARDS EN 292 -  
EN 55 022 - EN 50 082.2.

**General specification:**

Liquid cristal display(LCD): 4 digits  
Height of digits : 14 mm  
Unit of measurement : daN / kg / lbs

Capacities daN	20	50	100	200
Accuracy daN	±0,15	±0,4	±0,8	±1,6
Smallest load daN	0,05	0,1	0,2	0,4
Overload coefficient	2	2	1,4	1,4
Coefficient Safety	>10	>10	>10	>10

Ambient temperature range : 0°C à 40°C  
Body in aluminium alloy for 20/50/100 daN models  
Body in stainless steel 316 L for 200 daN model  
Outer casing : ABS-PC  
IP 40 protection  
Overall dimensions :  
140 x 80 x 40 mm for 20/50/100 daN models  
147 x 80 x 40 mm for 200 daN model  
Anchor points :10 mm diameter  
Lost height :  
without hook : 125/130 mm  
with hook : 305 mm for 20/50/100 daN models  
with hook : 310 mm for 200 daN model  
with handful and hook : 275 mm for 200 daN model  
Weight : 220 g with batteries for 20/50/100 daN  
340 g with batteries for 200 daN  
Power supply : 2 x1,5 V -AA/R6 type  
Batterie life : 100 hours, with high quality batteries

**Push button controls :**

On /Off ( push button T1)  
100 % tare ( push button T2)  
Peak hold ( push button T3)

**Automatic functions :**

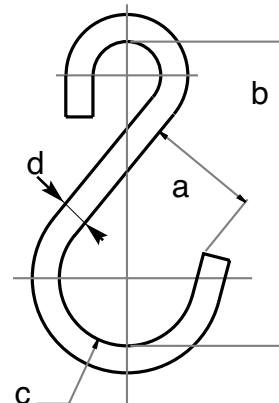
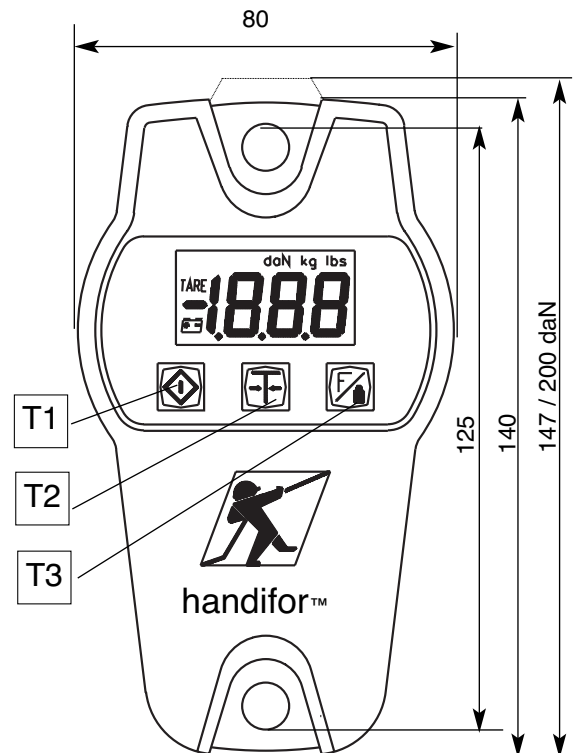
Automatic zero ( if the load applied is less than 10% of the unit capacity)  
Low battery indicator  
Overload indicator

**Adjustable functions :**

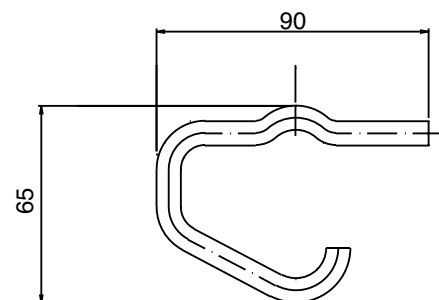
Weight unit : daN / kg / lbs

**Standards supply :**

Handifor™ unit  
Operating and maintenance instructions,  
2 batteries : 1,5 V, AA/R6 type.  
Pouch  
2 «S»hooks or  
1 hook and 1 handful for capacity 20 kg  
CE declaration of confirmity  
Packing box : 240 x 155 x 80 mm



	20/50/ 100	200
a	33	33
b	90	90
c	40	40
d	8	11



**Option :**  
Calibration certificate

# technical data sheet

DYNAFOR MWX LCD  
LCD load indicators  
capacities : 0,5 - 1 - 2 - 3,2 - 5 - 6,3 - 12,5 - 25 t

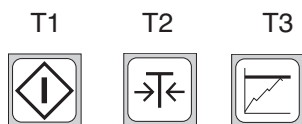
réf. : T 2025 GB  
rév. n° : 01  
date : 03/06  
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## General specification:

- Lifting accessory in accordance with CE directives
- Liquid cristal display (LCD) : 5 digits
- Height of digits : 25 mm for 0,5 t, 1 t, 2 t and 3,2 t  
44 mm for 5 t, 6,3 t 12,5 and 25 t
- Ambient temperature range : -10°C to +40°C
- Weatherproof and dustproof : IP65
- Material : body in aluminium alloy
- Finish : painted
- Top suspension: clevis master link
- Bottom hook with catch
- Power supply : 3 x 1.5 V, AA or R6
- Battery life : 350 hours variable, depending on the setting of the functions
- Accuracy : +/- 0.1% of capacity
- Operating coefficient : 1,25
- Safety coefficient : 4

## Push-button controls:

- ON / OFF (T1)
- TARE (up to 100% of capacity) (T2)
- PEAK HOLD (T3)



## Automatic functions:

- Automatic zero when switched on
- Low battery signal
- Overload indication

## Adjustable functions:

Using a sequence of operations of the push-buttons:

- Choice of unit measurement : Unit display (kg, t, ton, lbs, daN, kN)
- Automatic shutdown after 20 minutes with no addition/reduction of load
- Adjustable response rate of the display
- Connection mode to connect to remote readout
- Connection mode to connect to PC, for data processing and printing
- Connection mode to connect to "dynafor" printer

## Options:

- Infrared remote control with integrated push-button controls (ON/OFF, Tare, Peak hold)
- Hand held radio Remote Display, with integrated push-button controls (ON/OFF, tare, Peak hold).
- Radio controlled dynafor printer
- Radio controlled dynafor interface for PC connection



Models 0,5 to 12,5 t



Model 25 t

# technical data sheet

## DYNAFOR MWX LCD

### LCD load indicators

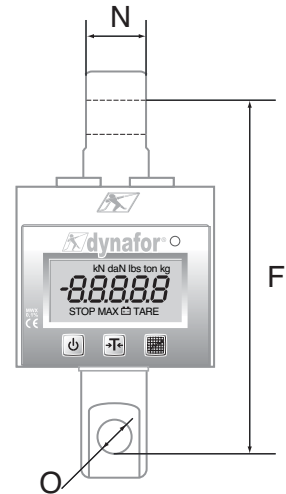
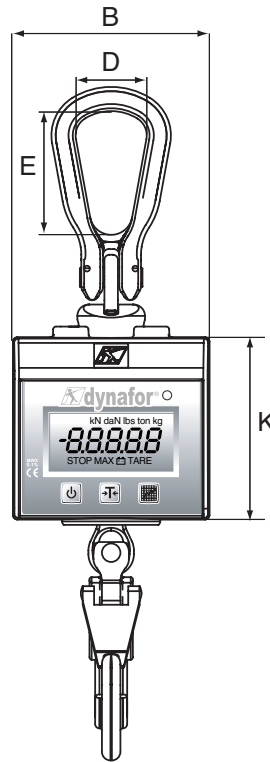
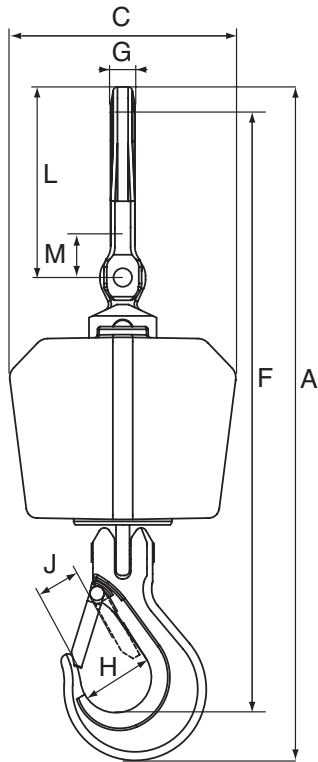
capacities : 0,5 - 1 - 2 - 3,2 - 5 - 6,3 - 12,5 - 25 t

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Model		0,5 t	1 t	2 t	3,2 t	5 t	6,3 t	12,5 t	25 t
Capacity	t	0,5	1	2	3,2	5	6,3	12,5	25
Accuracy (0,1%)	± kg	0,5	1	2	3,2	5	6,3	12,5	25
Smallest load increment	kg	0,2	0,5	1	1	2	2	5	10
Test load	t	0,65	1,25	2,5	4	6,25	7,8	15,5	31,25
Max. display	kg	500,0	1000,0	2000,0	3200	5000	6300	12500	25000
Heights of digits	mm	25	25	25	25	44	44	44	44
Weight	kg	4,3	4,3	4,3	4,3	9	9	20,5	18
Material		Aluminium alloy body							
Dimensions mm	A	470	470	470	470	694	694	913	-
	B	136	136	136	136	206	206	206	-
	C	160	160	160	160	203	203	203	206
	D	50	50	50	50	85	85	98	203
	E	87	87	87	87	148	148	203	-
	F	423	423	423	423	620	620	800	370
	G	17	17	17	17	27	27	54	-
	H	44	44	44	44	71	71	80	-
	J	30	30	30	30	41	41	63	-
	K	126	126	126	126	167	167	167	-
	L	128	128	128	128	225	225	316	167
M	18	18	18	18	26	26	50	-	
N	-	-	-	-	-	-	-	-	68
O*	-	-	-	-	-	-	-	-	52

\* Compatible with the shackle and th hook for dynafor LLX 25 t