

Dynamometer



For accurate measurement of tension forces.

The Dynamometer is a extremely robust and reliable instrument.

The Dynamometer conforms to Protection Class IP67 acc. to IEC529.

GIGAsense

Gigasense products within Force Measurement and Crane Safety are well known high quality products, built from many years' experience and used by leading heavy duty industry around the world.

Gigasense products meet the highest demands of performance level requirements.

We are represented by many selected local partners in more than 30 countries on six continents.

Dynamometer



Technical Data

INACCURACY

±0,6% of the max.capacity.

WORKING TEMPERATURE

Max.+60°C.

Max. 140°F

TAREING

The dynamometer can be tared to approx.10% of the full scale.

To obtain best accuracy the dynamometer should be supplied calibrated for a known tare.

SCALE

White lacquered with black graduation. The dynamometer can be graduated in kg, kp, N, lb., cwt. etc.

PROTECTION CLASS

IP 67, IEC 529 NEMA 4X

Range of application

The Dynamometer is an allweather instrument, equally suitable for use in the laboratory as out in the field for weighing and measuring mechanical forces.

Function

The pull rod movement operates the scale drum through a square thread stem. The power-absorbing element consists of specially made Belleville type spring washers, designed to be entirely free from wear. The spring washers cannot be overloaded.

Safety

Safety factor 5:1, guaranteed to withstand a load of 5 times full scale reading before rupture.

For Dynamometer Max capacity 5000lb (2200 kg, 22kN)

Safety factor 3,5:1 (Guaranteed to withstand a load of 3,5 times full scale reading before rupture).

The resistance to rupture is tested by the National Swedish Institute for Materials Testing.

The Dynamometer may be overloaded by 100% without impairing the accuracy. The PIAB Dynamometers, types M-G, have drop-forged steel eye brackets (SIS 2174, St 52-3N acc. to DIN 17100, 50 D acc. to BS 4360); giving a guaranteed impact resistance to -20°C.

The O-ring of the pull rod is protected by a neoprene rubber membrane. On instantaneous unloading, e.g. breaking test, the return movement of the pull rod is retarded by a specially made spring washer. The Dynamometer is approved by the National Board of Occupational Safety and Health for integral connection in the carrying system of a lifting device and for weighing of test loads in connection with inspection.

Dynamometer for remote reading

The Dynamometer used for remote reading is supplied with a builtin precision potentiometer. The potentiometer is directly connected to the scale mechanism of the instrument. The electrical resistance of the potentiometer varies in proportion to the load on the dynamometer. The resistance is indicated on a receiving instrument, calibrated individually and marked with the same serial number as the dynamometer.

The electrical connections are made on a connection block in a surface mounted connection box.

For Dynamometer Max capacity 5000lb (2200 kg, 22kN)

The connecting cable of the Dynamometer is either 1 foot 7" long (0.5 m) and equipped with a Tuchel plug or 6 feet long (2 m) without the Tuchel plug. If a Dynamometer with potentiometer is delivered without receiving instrument, a resistance chart with at least 10 incremental values is included.

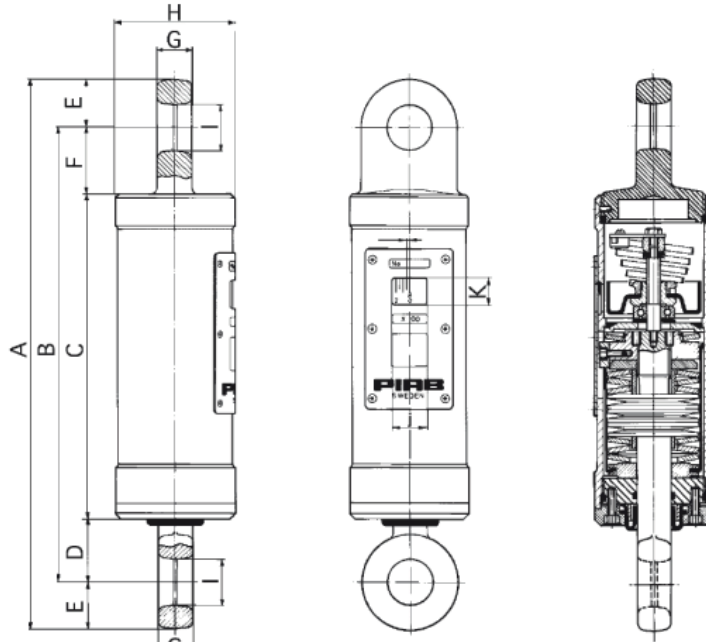
Contact function

The Dynamometer can be equipped with a built-on adjustable Switch Head. Using a microswitch, which is directly influenced by the pull rod, the Dynamometer gives an electrical contact function at a preset value. For further technical specifications please refer to PIAB info 9116-1 Switch Head Dynamometer



Protection against corrosion

The Dynamometer is fully pressure tight and each instrument is pressure tested. The external surfaces are zinc plated with clear chromate passivation. If the Dynamometer is to be used in a very corrosive atmosphere, it can be polyester lacquered.



ART. NO.	TYPE	CAPACITY	GRADUATION		DEAD WEIGHT	MEASURES IN MM									
			1	MM		A	B	C	D	E	F	G	H	I	JxK
300015	K*	0-250 kg	5 kg	2,2	1,9 kg	266	230	165	42	18	23	20	50	17	24x20
300020	A*	0-500kg	10 kg	2											
300025	B*	0-1000 kg	20 kg												
300030	Bx1,5	0-1500 kg	50 kg	3,6	2,3 kg	292	256	191	42	18	23	20	50	17	
300030	M	0-2000 kg	25 kg	2,3	7,8 kg	395	327	234	45	34	48	25	86	33	26x20
300035	O	0-3000 kg	50 kg	2,5											
300040	Q	0-5000 kg	50 kg	2,5	15 kg	413	329	230	45	42	55	30	122	40	
300045	S	0-10000 kg	100 kg	3,5	26,5 kg	495	385	260	60	55	65	45	149	56	
300050	U	0-20000 kg	200 kg	4,2	78 kg	675	505	300	102	85	103	70	228	81	65x23

The pull rod movement at full load is approximately 10 mm.

*On the types K-B with built-in potentiometer the length increases by 56 mm.

We reserve the right to change the specifications without notice.

**) Safety factor 4:1

Dynamometer Max Capacity 5000lb (2200 kg, 22kN)

ART. NO.	TYPE	CAPACITY	GRADUATION	DEAD WEIGHT	MEASUREMENTS IN INCHES (MM)									
					A	B	C	D	E	F	G	H	I	JxK
300233	B x 2.2	2200 kg	500 KG	5,1 lb 2,3 KG	11.500 (292)	10.078 (256)	7.016 (191)	1.656 (42)	0.703 (18)	0.906 (23)	0.781 (20)	1.969 (50)	0.672 (17)	0.938x0.781 (24x20)
300234	NB x 2.2	22kN	500 N											
300235	D x 2.2	5000 lb	1000 lb											



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