

PIAB CRANEWEIGHER



For weighing and force measurement where the demands for accuracy, reliability and safety are high. The PIAB Craneweigher is constructed for continuous service under the most severe conditions.

RANGE OF APPLICATION

The PIAB Craneweigher is an all-weather instrument, equally suitable for use in or out of doors and may be supplied with or without remote-reading instruments for weighing and for measuring of mechanical forces.

The PIAB Craneweigher is exceptionally well suited for measurements in breaking tests, as the max. load pointer remains at the breaking point or max. value reached.

FUNCTION

The pull rod operates the pointer through a spring loaded floating transmission mechanism. This allows the PIAB craneweigher to withstand very severe shock loads and rapid unloading.

The power-absorbing element consists of specially made Belleville type spring washers, so designed as 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.) The resistance to rupture is tested by the National Swedish Institute for Materials Testing.

The craneweigher may be overloaded by 100% without impairing the accuracy.

The scale is protected by thick acrylic glass and a heavy duty removable wire shield.

The craneweighers, types WA-WG 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 -4°F (-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 PIAB Craneweigher is approved by the National Swedish 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.

PROTECTION AGAINST CORROSION

The PIAB Craneweigher is fully pressure tight and each instrument is pressure tested. No leakage is permitted.

The external surfaces are zinc plated

with clear chromate passivation. If the craneweigher is to be used in a very corrosive atmosphere, it can be epoxy-lacquered.

PIAB CRANEWEIGHER FOR REMOTE READING

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

the craneweigher. The electrical connections are made in the terminal box to a numbered connection block.

A craneweigher with potentiometer cannot be equipped with max. pointer. If a craneweigher with potentiometer is delivered without receiving instrument, a resistance chart with at least 10 incremental values is included.

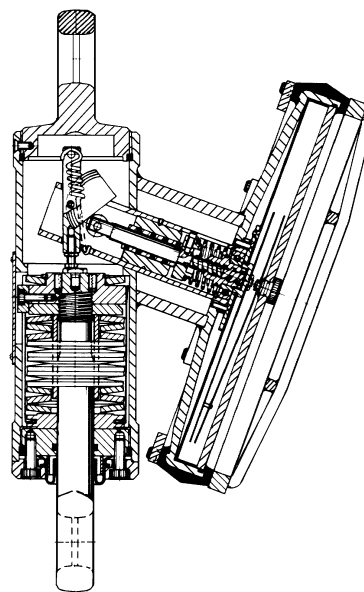
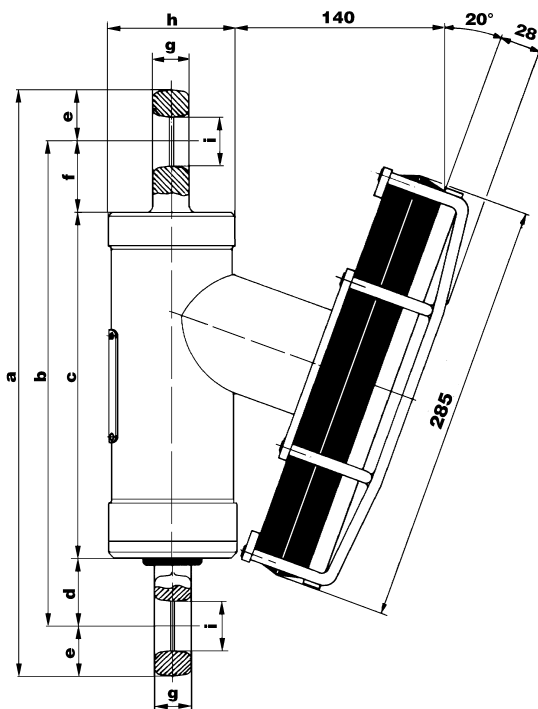
PIAB CRANEWEIGHER WITH CONTACT FUNCTION

The PIAB Craneweight can be equipped with a built-on adjustable contact head. Using a microswitch, which is directly influenced by the pull rod, the craneweight gives an electrical contact function at a previously set value. The contact head is built-on as an extension of the craneweight. For the types WA-WO the extension is about 3.15/16" (100 mm), for WQ about 4.1/3" (110 mm),

for WS about 3.5/64" (78 mm) and for the types WU-WE about 3.35/64" (95 mm).

The Craneweights types WA-WO can be equipped with up to two microswitches and types WQ-WE with up to five microswitches.

The electrical connections are made in the terminal box to a numbered connection block.



TECHNICAL DATA

ACCURACY
± 0.5% of the max. capacity.

WORKING TEMPERATURE
Max. 140°F (+60°C).
If the crane weight is used above objects emitting strong radiant heat, e.g. in foundries, it should be equipped with the heat radiation shield and machine glass. Machine glass cannot be equipped with max. pointer.

TAREING
The crane weight can be tared to approx. 10% of the full scale. To obtain the best accuracy, the crane weight should be supplied calibrated for a known tare.

SCALE
Ø 11.15/64" inclined 20° to facilitate reading from below. The scale is white lacquered with black graduation. It is also available with intermediate graduation.

MAX. DEFLECTION
Approx. 330°.

GRADUATION
The crane weight can be graduated in kg, kp, N, lb, cwt., etc.

ART.NO.	TYPE	CAPACITY	GRADUATION	DEAD WEIGHT	MEASUREMENTS IN INCHES AND (MM)								
					A	B	C	D	E	F	G	H	I
300420	WA	500 kg	5 kg	35 lb. (16 kg)	15.9/16 (395)	12.7/8 (327)	9.7/32 (234)	1.49/64 (45)	1.11/32 (34)	1.57/64 (48)	63/64 (25)	3.25/64 (86)	1.19/64 (33)
300421	NWA	5 kN	50 N										
300422	WC	1100 lb.	10 lb.										
300425	WB	1000 kg	10 kg	35 lb. (16 kg)	15.9/16 (395)	12.7/8 (327)	9.7/32 (234)	1.49/64 (45)	1.11/32 (34)	1.57/64 (48)	63/64 (25)	3.25/64 (86)	1.19/64 (33)
300426	NWB	10 kN	100 N										
300427	WD	2200 lb.	20 lb.										
300430	WM	2000 kg	20 kg	35 lb. (16 kg)	15.9/16 (395)	12.7/8 (327)	9.7/32 (234)	1.49/64 (45)	1.11/32 (34)	1.57/64 (48)	63/64 (25)	3.25/64 (86)	1.19/64 (33)
300431	NWM	20 kN	200 N										
300432	WN	4400 lb.	50 lb.										
300435	WO	3000 kg	20 kg	35 lb. (16 kg)	15.9/16 (395)	12.7/8 (327)	9.7/32 (234)	1.49/64 (45)	1.11/32 (34)	1.57/64 (48)	63/64 (25)	3.25/64 (86)	1.19/64 (33)
300436	NWO	30 kN	200 N										
300437	WP	6600 lb.	50 lb.										
300440	WQ	5000 kg	50 kg	53 lb. (24 kg)	16.1/4 (413)	12.15/16 (329)	9.1/16 (230)	1.49/64 (45)	1.21/32 (42)	2.11/64 (55)	1.3/16 (30)	4.51/64 (122)	1.37/64 (40)
300441	NWQ	50 kN	500 N	79 lb. (36 kg)	19.1/2 (495)	15.5/32 (385)	10.15/64 (260)	2.23/64 (60)	2.11/64 (55)	2.9/16 (65)	1.49/64 (45)	5.55/64 (149)	2.13/64 (56)
300442	WR	11000 lb.	100 lb.										
300445	WS	10000 kg	100 kg										
300446	NWS	100 kN	1 kN	196 lb. (89 kg)	26.37/64 (675)	19.7/8 (505)	11.13/16 (300)	4.1/64 (102)	3.11/32 (85)	4.1/16 (103)	2.3/4 (70)	8.31/32 (228)	3.3/16 (81)
300447	WT	22000 lb.	200 lb.										
300450	WU	20000 kg	200 kg										
300451	NWU	200 N	2 kN	278 lb. (126 kg)	32.23/32 (831)	24.27/32 (631)	15.15/64 (387)	4.27/32 (123)	3.15/16 (100)	4.49/64 (121)	3.47/64 (95)	9.7/32 (234)	4.17/32 (115)
300452	WV	44000 lb.	500 lb.										
300455	WG	25000 kg	200 kg										
300456	NWG	250 kN	2 kN	278 lb. (126 kg)	32.23/32 (831)	24.27/32 (631)	15.15/64 (387)	4.27/32 (123)	3.15/16 (100)	4.49/64 (121)	3.47/64 (95)	9.7/32 (234)	4.17/32 (115)
300457	WH	55000 lb.	500 lb.										
300460	WE	50000 kg	500 kg										
300461	NWE	500 kN	5 kN	278 lb. (126 kg)	32.23/32 (831)	24.27/32 (631)	15.15/64 (387)	4.27/32 (123)	3.15/16 (100)	4.49/64 (121)	3.47/64 (95)	9.7/32 (234)	4.17/32 (115)
300462	WF	110000 lb.	1000 lb.										

The pull rod movement at full load is approximately 2.5/64".

We reserve the right to change without notice.

APPLICATIONS FOR THE PIAB CRANEWEIGHER

The Institute of Technology in Stockholm, Metal Working Department, uses a 22000 lb. (10000 kg) PIAB Craneweigher to measure weights and to ensure that the overhead crane is not being overloaded.



In this shipyard they use a 110000 lb. (50000 kg) PIAB Craneweigher for weighing ship sections and for testing anchor windlass and winches.



When making lifting gear (ropes, slings, hooks, shackles, etc.) a tension testing machine is used fitted with a 110000 lb. (50000 kg) capacity PIAB Craneweigher. This testing machine is used for proof loading and for testing to destruction. The latter is facilitated by the non-return pointer which indicates the max. loading reached.



GIGASENSE
Force Measurement

Gigasense AB, Box 123, S-184 22 Åkersberga, Sweden.
Phone Int +46-8-540 839 00. Fax Int +46-8-540 213 64.
Internet: www.gigasense.se E-mail: info@gigasense.se