

SENSiQ[®] Weighbeam Cylindric WBC 50 t ... 70 t

- Service temperature up to 120°C
- Separate mounting of connecting cable through connector
- Simple mechanical design
- Simple and economical installation through direct screwing onto the connecting structure



Application

- Scrap bucket, roller table weighing and tundish scales
- Silo and hopper scales
- Crane scales

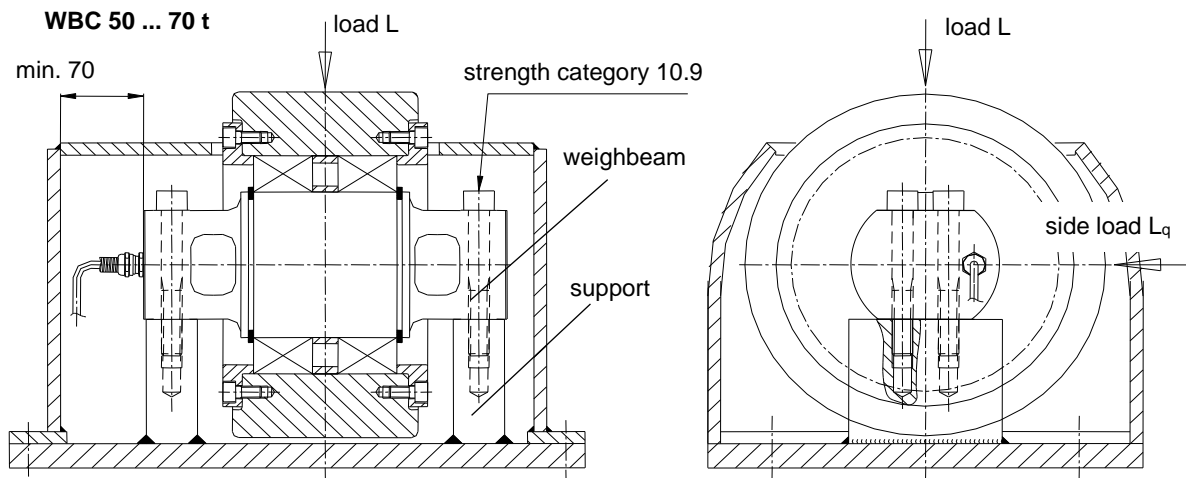
Construction

- Rugged design, low head-room
- Plug-in connector
- High-grade stainless steel

Function

- Simple and economical installation through direct screwing to the connecting structure without movable parts
- No need for additional tie-rods and hold-downs
- High long-term stability
- High degree of repeatability
- Separate mounting of weighbeam and connecting cable possible
- Easy cable exchange

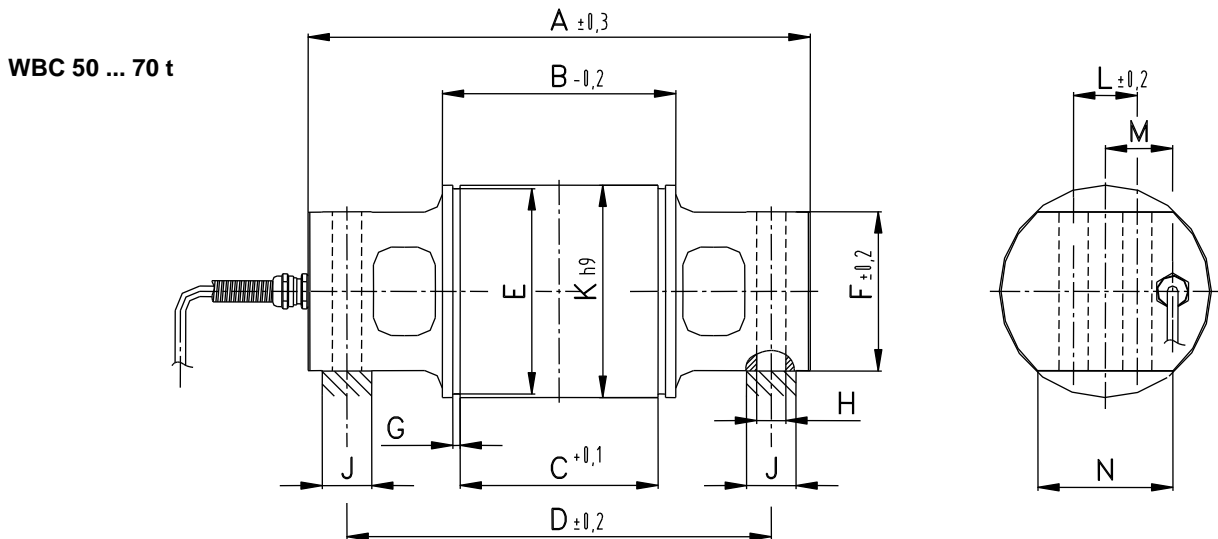
Operating principle (application tundish scale)



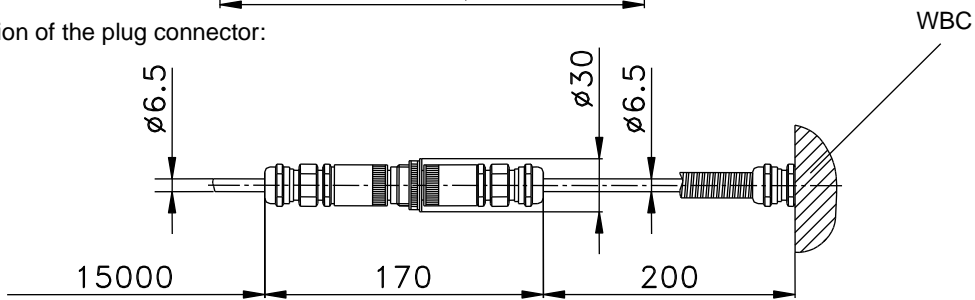
Technical data

		WBC 50 t	WBC 60 t	WBC 70 t	Reference
Rated capacity	E_{max}	50 t	60 t	70 t	
Limit load = maximum admissible load	L_l	100 t	120 t	140 t	
Rupture load	L_d	150 t	180 t	210 t	
Max. admissible side load (with screw friction)	L_{qmax}	5 t	5 t	5 t	
Max. admissible side load (with form fit)	L_{qmax}^*	35 t	42 t	49 t	
Sensitivity	C_n	1,3 mV/V	1,0 mV/V	1,1 mV/V	E_{max}
Combined error	F_{comb}	± 0.5%			C_n
Creeping under load (30 min)	F_{cr}	± 0.05%			C_n
Input resistance	R_e	380 Ω ± 5 Ω			T_r
Output resistance	R_a	350 Ω ± 2 Ω			T_r
Reference supply voltage	U_{sref}	10V			
Max. supply voltage	U_{smax}	15V			
Nominal temperature range	B_{tn}	- 10°C to + 80°C			
Service temperature range	B_{tu}	- 15°C to + 120°C			
Reference temperature	T_r	+ 22°C			
Storage temperature range	B_{st}	- 50°C to + 130°C			
Temperature effect on zero signal	TK_o	± 0.1% / 10K			C_n in B_{tn}
Temperature effect on sensitivity	TK_c	± 0.07% / 10K			C_n in B_{tn}
Dead weight	m_e	14 kg	22 kg	27 kg	
Corrosion protection		metallic bright, stainless			
Protection class		IP 65			
Cable specification		Special silicone RAL 7000 (grey) Ø 6.5 mm x 15 m, - 30°C to + 150°C			
Colour code		Black: Input + (82) Red: Output + (28) Green-yellow: Screening	Blue: Input - (81) White: Output - (27)		

Mounting Dimensions



Position of the plug connector:



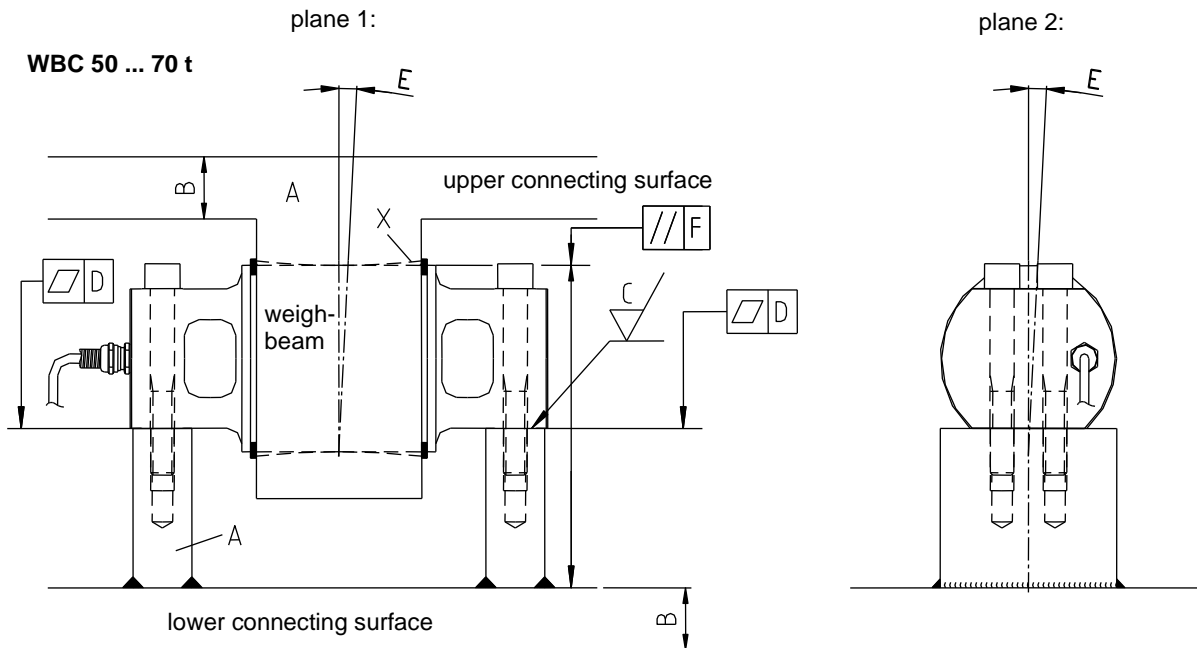
Variant	A mm	B mm	C mm	D mm	E mm	F mm	G mm
WBC 50 t	230	88	67	190	∅ 96,5 _{h12}	80	3.15
WBC 60 t	284	132	112	240	∅ 116 _{h13}	90	4.15
WBC 70 t	330	146	127.8	290	∅ 126 _{h13}	96	4.15

Variant	H mm	J mm	K mm	L mm	M mm	N mm
WBC 50 t	∅ 16.5	40	∅ 100	36	35	57
WBC 60 t	∅ 16.5	40	∅ 120	36	38	76
WBC 70 t	∅ 16.5	40	∅ 130	40	43	85

Dimensions E and G for retaining ring DIN 471

Recommended tolerance of the bore (dimension K): F8

Connecting surface quality requirements



- Material quality "A":
Usually construction steel of a minimum quality S355 is used
- Plate thickness "B":
Depends on stiffness of total construction. Plate thickness of connecting surface must be at least 40% of the weighbeam height (dimension F on page 3)
- Surface quality "C":
Requisite mean roughness of the connecting surfaces is 6.3 μm
- Planeness "D":
Maximum admissible planeness tolerance within the two outer conjoint connecting surfaces for each weighbeam is 0.05 mm
- Angular deviation error to vertical axis "E":
Angle deviation of connecting surface to vertical axis in both planes of view must not exceed $\pm 2^\circ$

- Plane parallelism "F":
Upper and lower connecting surfaces to the weighbeam have to be plane parallel to minimum 0.1 mm
Plane 1:
Possibly execute load input convex (detail „X“).
Plane 2:
Construction is angle compensating (also for elastic deflections).

Variant	Order number
WBC 50 t	V013257.B04
WBC 60 t	V013257.B05
WBC 70 t	V013257.B06
<u>Spare Part:</u> 15 m connecting cable with plug socket	V023643.B01

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