

Weighbeam DWB 40 t ... 200 t



- Improved Combined Error: $\pm 0.07\%$
- Improved TK_C Error: $\pm 0.03\% / 10\text{ K}$

Further Features:

- Six-wire circuit
- Service temperature up to $150\text{ }^\circ\text{C}$
- Integrated sensor for temperature monitoring
- Separate mounting of connecting cable through connector

Application

- Ladle turret scales
- Ladle ferries
- Scrap bucket, roller table weighing and tundish scales
- Silo and hopper scales

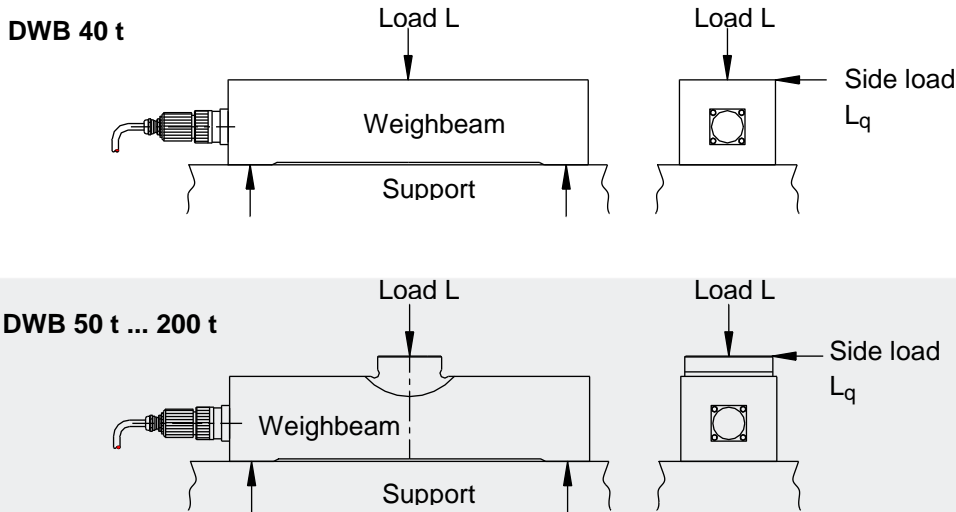
Construction

- Compact, flat design
- From 50 t: Locating head for form locking absorption of side forces
- Plug-in connector

Function

- Simple and economical installation through direct screwing to the connecting structure without movable parts
- No need for additional tie-rods and hold-downs
- Virtually impervious to shock loads and unavoidable side forces
- Suitable to the construction of service free scales in severe environments
- Minimal measurement value reaction on high interferential forces and moments
- High long-term stability
- High degree of repeatability
- Separate mounting of weigh-beam and connecting cable possible
- Easy cable exchange

Operating principle



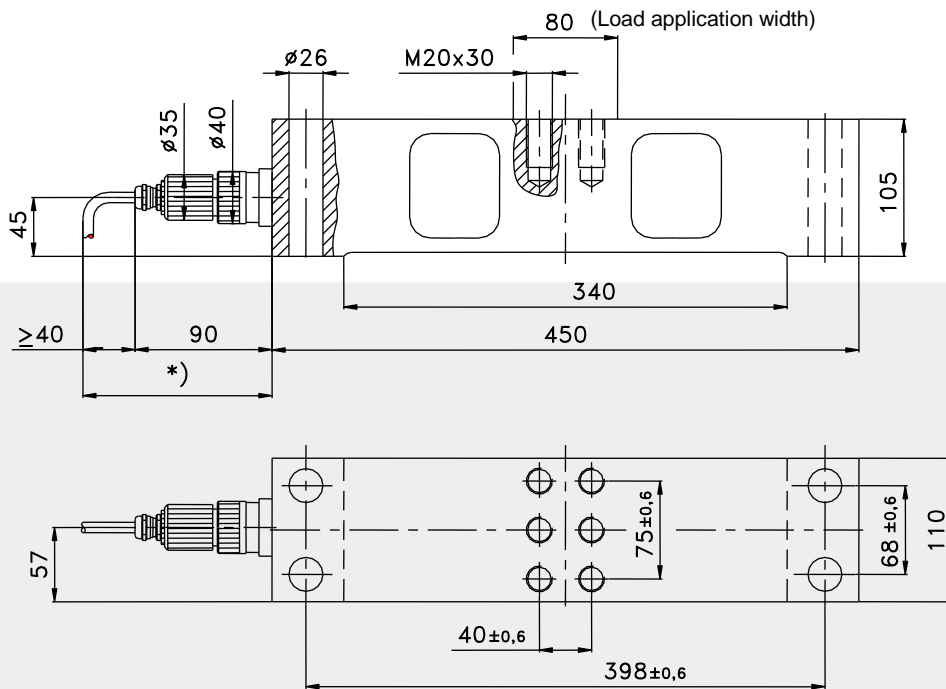
Technical Data

		DWB 40 t	DWB 50 t	DWB 100 t	DWB 150 t	DWB 200 t	Reference
Rated capacity	E_{max}	40 t	50 t	100 t	150 t	200 t	
Limit load (with $L_q = 0.15 \times L_n$) Limit load = Maximum admissible load	L_l	100 t	120 t	210 t	290 t	360 t	
Rupture load (with $L_q = 0.15 \times L_n$)	L_d	160 t	200 t	350 t	480 t	600 t	
Max. admissible side load	L_{qmax}	40 t	50 t	85 t	120 t	150 t	
Sensitivity	C_n	0.95 mV / V	1.08 mV / V	1.38 mV / V	1.57 mV / V	1.63 mV / V	E_{max}
Combined error	F_{comb}	±0.1 %	±0.07 % *)				C_n
Creeping under load (30 min)	F_{cr}	±0.05 %					C_n
Input resistance	R_e	694 Ω ± 8 Ω					T_r
Output resistance	R_a	700 Ω ± 4 Ω					T_r
Reference supply voltage	U_{sref}	10 V					
Max. supply voltage	U_{smax}	36 V					
Nominal temperature range	B_{tn}	-10 °C ... +100 °C					
Service temperature range	B_{tu}	-15 °C ... +150 °C					
Reference temperature	T_r	+22 °C					
Storage temperature range	B_{ts}	-40 °C ... +180 °C					
Temperature effect on zero signal	TK_o	±0.05 % / 10 K *)					C_n in B_{tu}
Temperature effect on sensitivity	TK_c	±0.03 % / 10 K *)					
Dead weight	m_e	39 kg	40 kg	55 kg	85 kg	120 kg	
Corrosion protection		hot dip galvanized					
Protection class		IP65					
Cable specification		Silicone: Ø 8.5 mm x 15 m, screened, including plug socket; Bending radius: ≥ 40 mm, Temperature range: -50 °C ... +180 °C; Wire assignment: 6 wires for measurement value; 2 wires for temperature monitoring					
Colour code		Black: Input + (82) Blue: Input - (81) Red: Output + (28) White: Output - (27) Yellow: Sense + (82.1) Green: Sense - (81.1) Lila/Brown: Temperature sensor PT100					

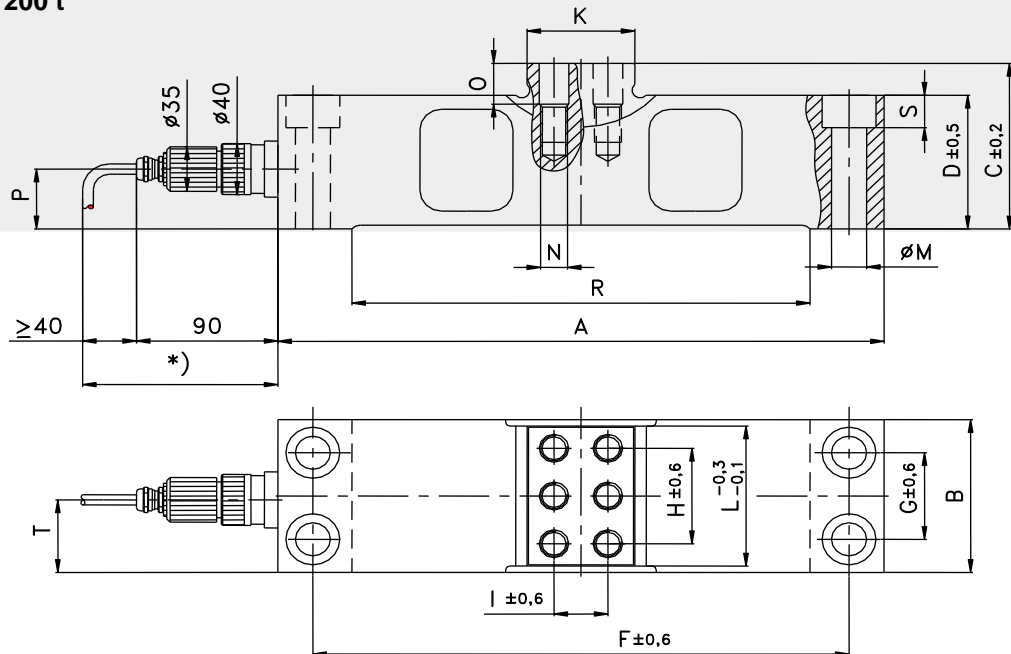
*) in the isothermal state

Mounting Dimensions

DWB 40 t



DWB 50 t ... 200 t



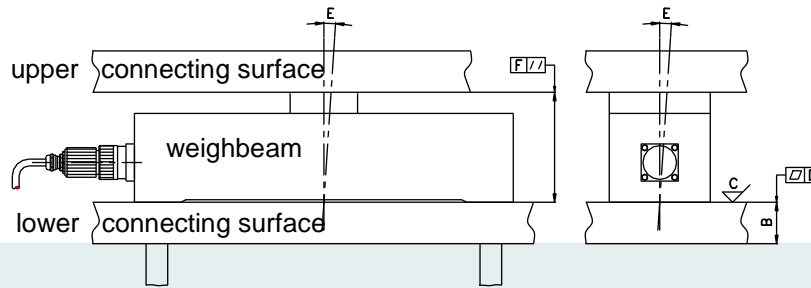
*) The optional version of the DWB with angular connector requires only 65 mm for the connection plus 15 mm for separating both parts of the connector.

Variant	A mm	B mm	C mm	D mm	F mm	G mm	H mm	I mm	K mm	L mm	M *) mm	N	O mm	P mm	R mm	S mm	T mm
DWB 50 t	450	120	130	105	398	68	75	40	80	110	26 (M24)	M20 x 30	32	45	340	25,5	57
DWB 100 t	500	140	143	118	444	80	90	44	90	130	30 (M27)	M24 x 36	38	54	370	28,5	63
DWB 150 t	560	160	158	133	500	94	102	44	90	150	33 (M30)	M24 x 36	38	66	410	32	69
DWB 200 t	620	180	175	150	560	114	110	44	90	160	33 (M30)	M24 x 40	40	75	450	32	76

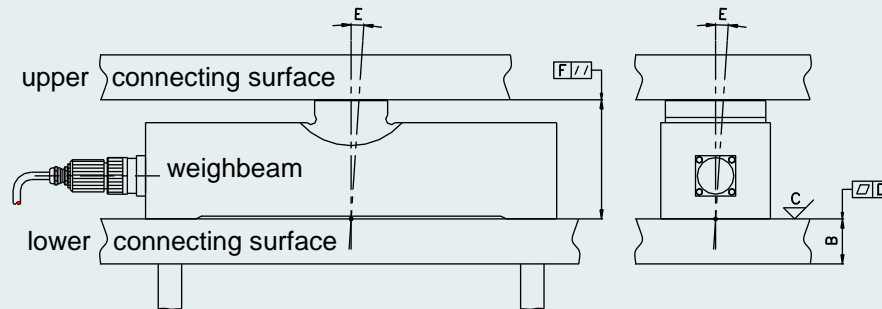
*) screw size

Connecting surface quality requirements

DWB 40 t



DWB 50 t ... 200 t



- 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
- Surface quality "C":
Requisite mean roughness of the connecting surfaces is 6.3 µm
- Planeness "D":
Maximum admissible planeness tolerance within every connecting surface 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 min. 0.1 mm

Variant	Order No.	Variant *)	Order No.
DWB 40 t	V094838.B01	DWB 40 t PUR	V094839.B01
DWB 50 t	V094838.B02	DWB 50 t PUR	V094839.B02
DWB 100 t	V094838.B03	DWB 100 t PUR	V094839.B03
DWB 150 t	V094838.B04	DWB 150 t PUR	V094839.B04
DWB 200 t	V094838.B05	DWB 200 t PUR	V094839.B05
<u>Spare Part:</u> Connecting cable 15 m with plug socket	V090162.B01		

***) Deviant technical data of the PUR variant:**

suitable for outdoor use (better protection class IP66), Temperature range for storage and use: -40 °C ... +80 °C. Additionally, the PUR-types are equipped with an integrated overvoltage protection.