

## Weighbeam DWR 50 ... 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

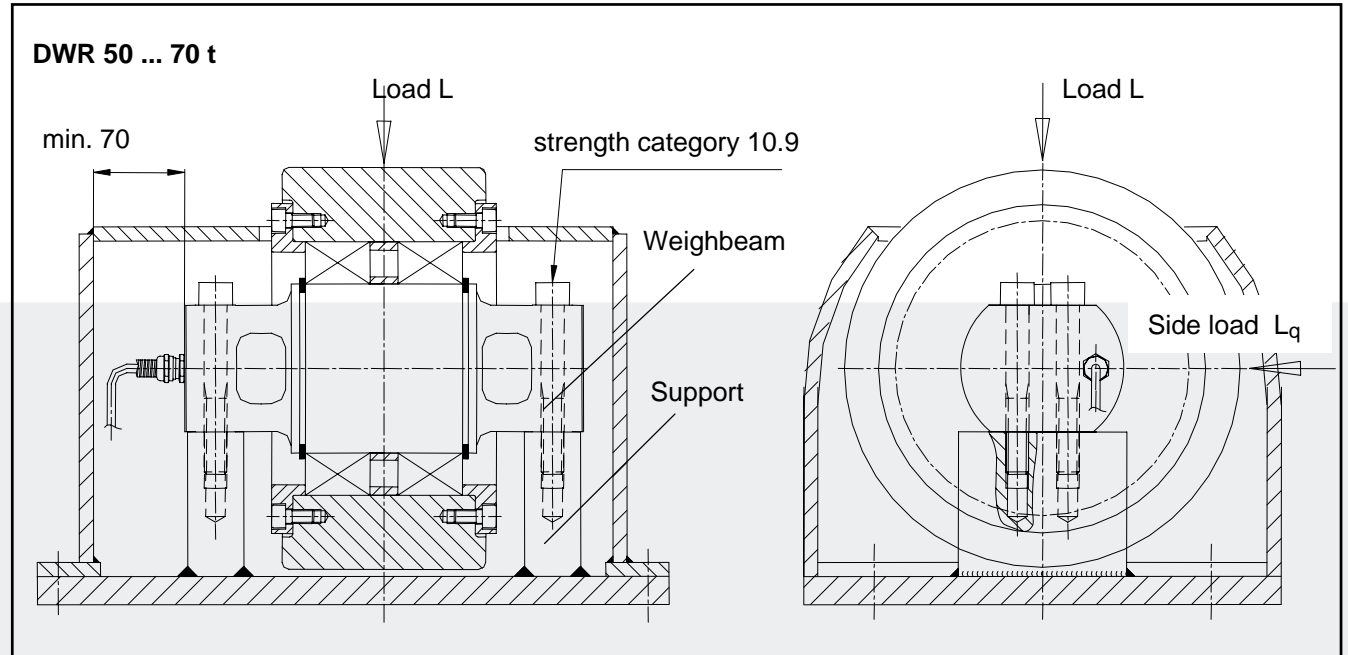
### Construction

- Rugged design, low headroom
- 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

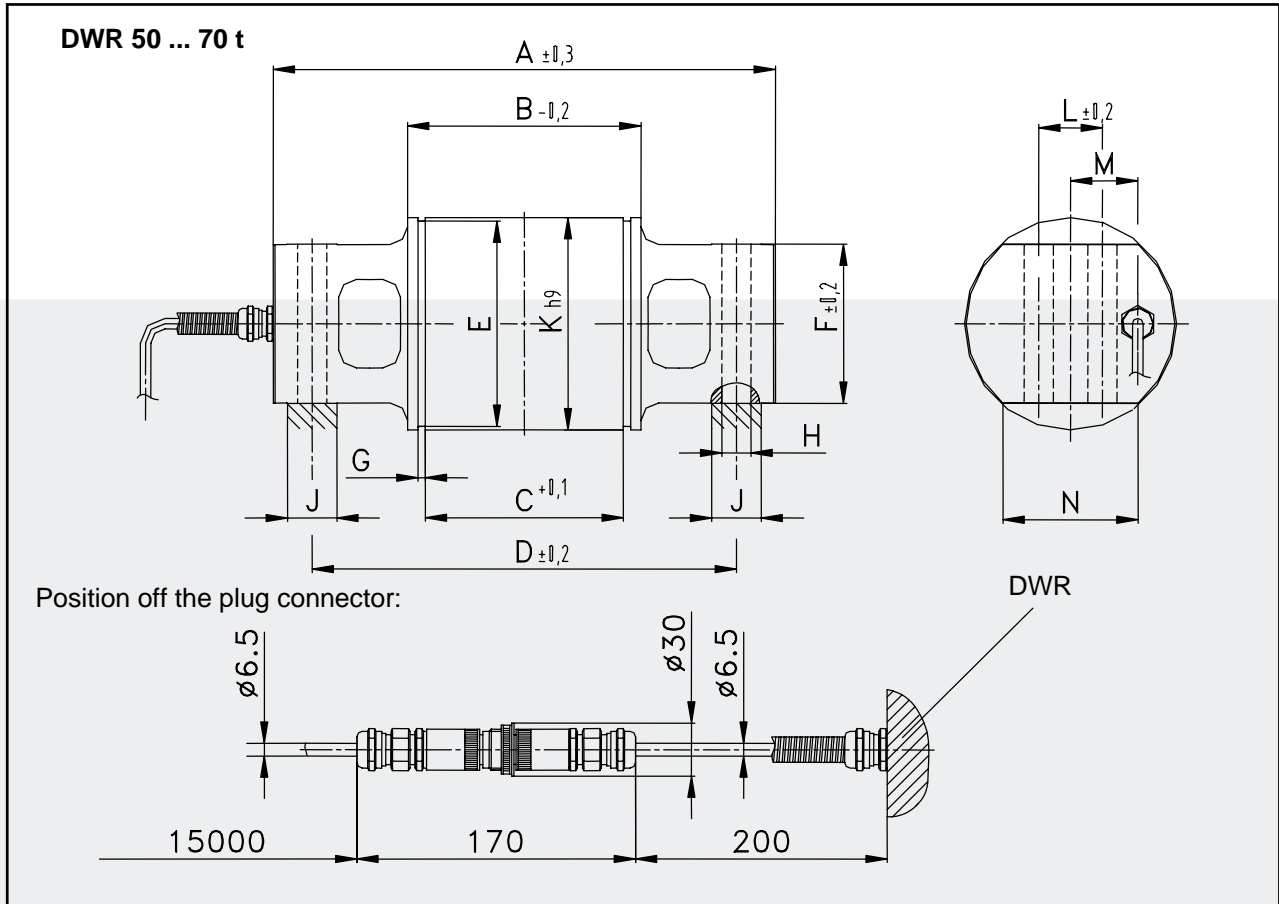
## Operating principle (application tundish scale)



## Technical Data

		DWR 50 t	DWR 60 t	DWR 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 ± 3 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)	Blue:	Input - (81)	
		Red:	Output + (28)	White:	Output - (27)	
		Green-yellow:	Screening			

## Mounting Dimensions

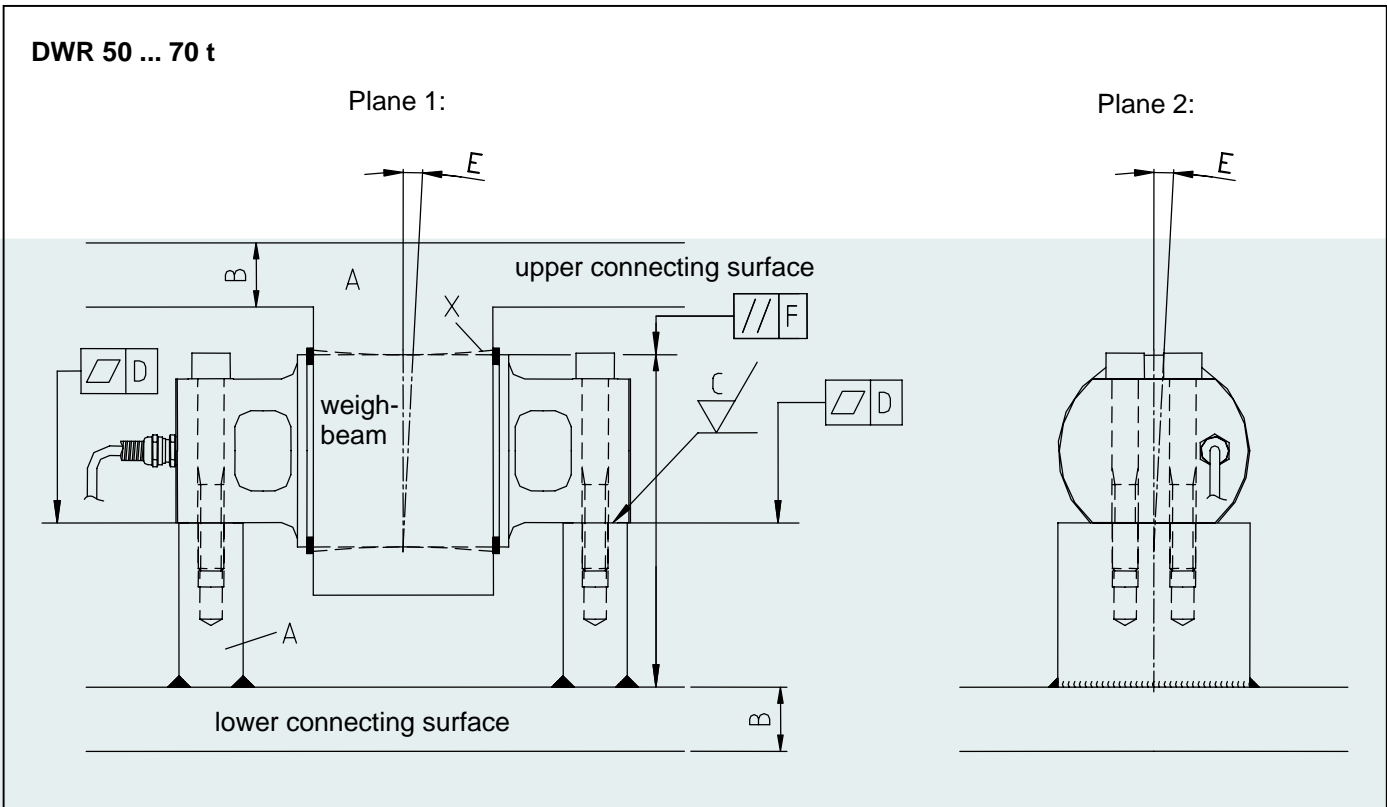


Variante	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	J mm	K mm	L mm	M mm	N mm
<b>DWR 50 t</b>	230	88	67	190	Ø 96,5 <sub>h12</sub>	80	3,15	Ø 16,5	40	Ø 100	36	35	57
<b>DWR 60 t</b>	284	132	112	240	Ø 116 <sub>h13</sub>	90	4,15	Ø 16,5	40	Ø 120	36	38	76
<b>DWR 70 t</b>	330	146	127,8	290	Ø 126 <sub>h13</sub>	96	4,15	Ø 16,5	40	Ø 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  $\mu\text{m}$
- 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 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 No.
DWR 50 t	V 013 257 .B04
DWR 60 t	V 013 257 .B05
DWR 70 t	V 013 257 .B06
<u>Spare Part:</u> 15 m connecting cable with plug socket	V 023 643 .B01

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