

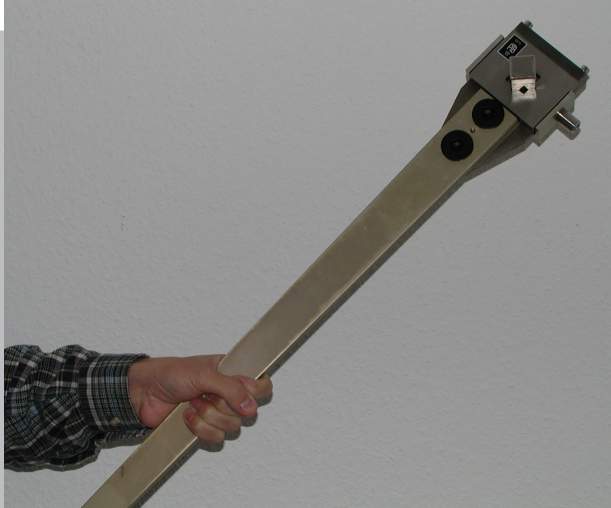


Torque Transfer Wrench Dm-TS



Comparison measurements of torque wrench calibrators and calibration of torque testing rigs

- Torque capacity from 2 N·m to 3.000 N·m
- Accuracy classes 0,2 and 0,1
- Low mass
- Design according to DKD-R 3-7



Torque Transfer Wrench Dm-TS

Description

For the adaptation to the device under test, a removable square drive (male) is used, which can be rotated in steps of 45° . It is held magnetically inside the wrench.

All torque transfer wrenches are protected against moisture; the torque transducer is hermetically sealed by a laser-welded metal bellows. An integrated temperature sensor (PT 100) allows to monitor the temperature of the transducer.

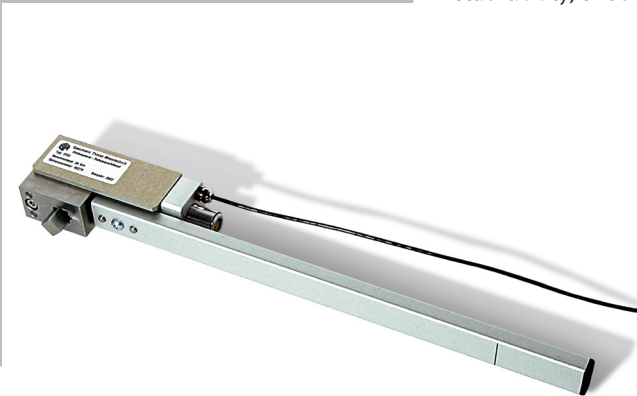
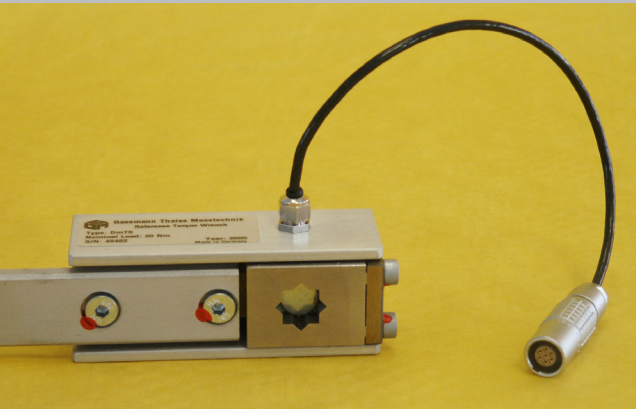
The lever arm is made from an aluminium profile, a groove of which serves as a cable channel - this avoids influences caused by varying cable lengths.

GTM torque transfer wrenches have a comparatively low mass, they are the feather-weights of the transfer wrench designs.

Options

In order to increase the possibilities of adaptation, square drives of different sizes are available for our torque transfer wrenches.

On request, we deliver the instruments in a plastic case (Peli-Case brand), which fulfils the US military standard MIL-STD 4150-H in terms of stackability, shock and moisture protection.



Torque Transfer Wrench Dm-TS

Metrology Specification

Nominal torque	M_{nom}	N·m	2	5	10	20	25	50	100	200	500	1,000	3,000		
Nominal sensitivity	C_{Nenn}	mV/V	1			2									
Classification characteristics according to DKD-R 3-7			see below												
Temperature influence on zero	TK_o	± %/K	0.005												
Temperature influence on span	TK_c	± %/K	0.005												
Nominal input impedance	R_e	Ω	380												
Nominal output impedance	R_a	Ω	350												
Insulation impedance	R_{is}	Ω	> 2·10 ⁹												
Reference excitation	U_{ref}	V	10												
Maximum excitation	$U_{e,max}$	V	12												
Nominal temperature range	$B_{t,nom}$	°C	-10 to +70												
Reference temperature	t_{ref}	°C	22 ± 1												
Operating temperature range	B_{tG}	°C	-20 to +85												
Cable connection			LEMO												
Protection rating			IP 60												

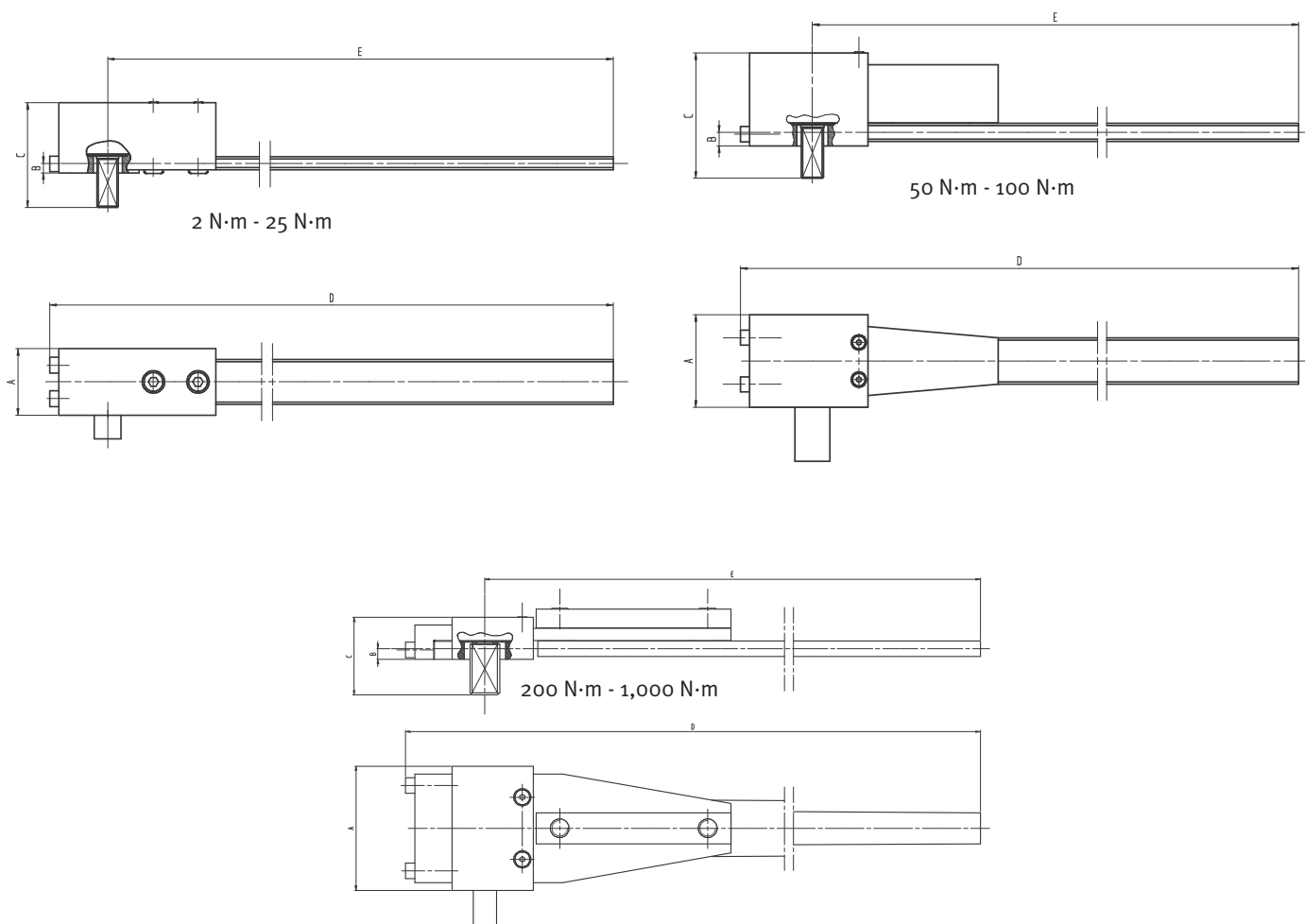
Excerpt from DKD-R 3-7

relative permissible errors of the torque transfer wrench (20 % - 100 % M_e)			class 0,1	class 0,2
relative reproducibility	b	± %	0.10	0.20
relative repeatability	b'	± %	0.05	0.10
relative zero deviation	f_o	± %	0.025	0.050
relative hysteresis	h	± %	0.125	0.250
relative indication / interpolation error	f_q / f_a	± %	0.05	0.10
minimum starting torque	M_A		≥ 2,000 r	≥ 1,000 r
relative measuring uncertainty		± %	0.020	0.040

*) not stated in DKD-R 3-7

Torque Transfer Wrench Dm-TS

Dimensions



Nominal torque	M _{nom}	N·m	2	5	10	20	25	50	100	200	500	1,000	3,000
Head width	A	mm			30			40	60	80	100		
Force axis offset	B	mm			4.3			5.8	4.0	6.8	7.0		
Overall height	C	mm			47			54	63.5	49	50	56	
Overall length	D	mm			276			481	581	792	1,089		on request
Lever length	E	mm			250			450	550	750	1,062	1,064	
A/F standard	SW	inch			3/8			1/2		3/4	1/1		
A/F optional	SW	inch			1/4 or 3/8			3/8		1/2	3/4		
Mass		kg			0.3			0.9	1.5	2.5	3.2		

Specifications subject to change without notice
all details describe our products in general form
they are not to be understood as expressed warranty
and do not constitute any liability whatsoever



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