t750 SERIES

TORSION BAR SHAFT WITH FRICTION DAMPING

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DESCRIPTION

The t750 torsion bar shaft with Frictional Damping was especially designed for use in test beds for mid-range and heavy duty engines. This type of design allows the drive train to be precisely adapted to different engine types. The torsion bar is tuned to the first eigenfrequency between idle and starter speed. The friction linings provide damping for the torques caused by large vibration amplitudes.

NAMING

The product is named according to the following convention:

t750-yyyy-llll

- **length [mm]**
- **joint size**
- **product name**

Example:t750-CV60-0947

OPERATING RANGE

Torque: up to 40000 Nm

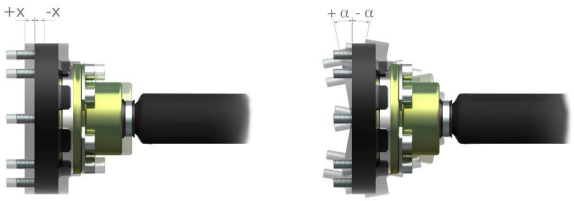
Speed: up to 2000 rpm

BENEFITS

- compact design
- precise running
- reduced axial stress on unit under test and dynamometer
- fine tuning of eigenfrequency
- outstanding damping characteristics
- low maintenance

FUNCTION

The CV joint takes up the longitudinal, angular and axial displacement without adding any higher order speed or torque fluctuations to the drive train.



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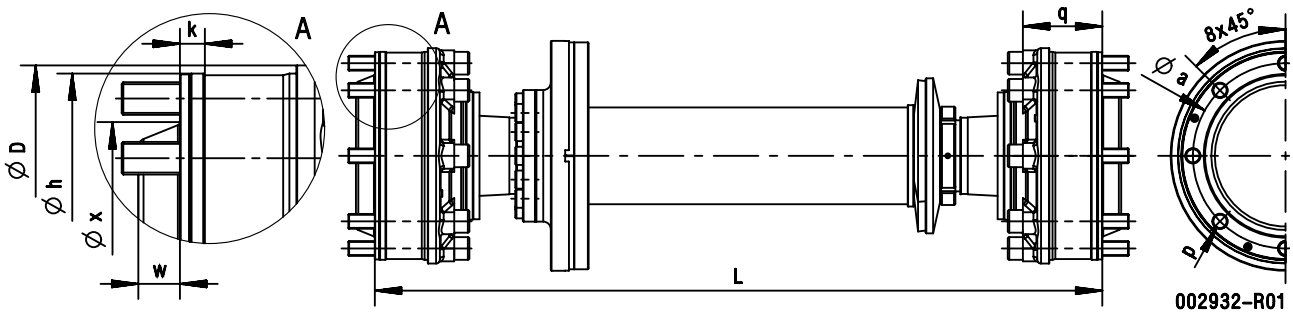
Shaft	Joint	T_{max} [Nm]	n_{max} [rpm]	X [mm]	α [°]	ϑ_{min} [°C]	ϑ_{max} [°C]
t750	CV42	19700	3000	±24	±10	-40	+80
	CV60	40000	2000	±30	±3	-40	+80

T_{max} - Maximum torque
n_{max} - Maximum speed
X - Maximum axial compensation
α - Maximum angular displacement
ϑ_{min} - Minimum operating temperature
ϑ_{max} - Maximum operating temperature[1]



Shaft	Joint	D [mm]	a [mm]	$h^{+0.00}_{-0.05}$ [mm]	k [mm]	p [-]	q [mm]	w [mm]	x [mm]
t750	CV42	199.80	165.0	192.00	10.0	M16	79.35	29.7	142.35
	CV60	284.80	245.0	275.00	15.0	M20	105.00	25.0	214.50

The installed length L is dependent on the application and is limited by the type of design and maximum speed. Higher speeds are available on request.

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[1] The t750 can be operated at up to 100°C for a short time.

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