

tEVA110

COMPACT GEARBOX DUMMY



DESCRIPTION

The tEVA110 is a gearbox dummy with changeable quill shaft, used in test beds for engines with original vehicle clutch or clutch dummies.

The modular design with replaceable quill shaft allows quick adaptation to different engines and couplings. The gearbox dummy comprises a solid housing with sensors for bearing temperature monitoring, an integrated bearing and a quill shaft. The torsional stiffness can be optimized by modifying the torsion bar geometry.

OPERATING RANGE

Torque: up to 1000 Nm
Speed: up to 10000 rpm

BENEFITS

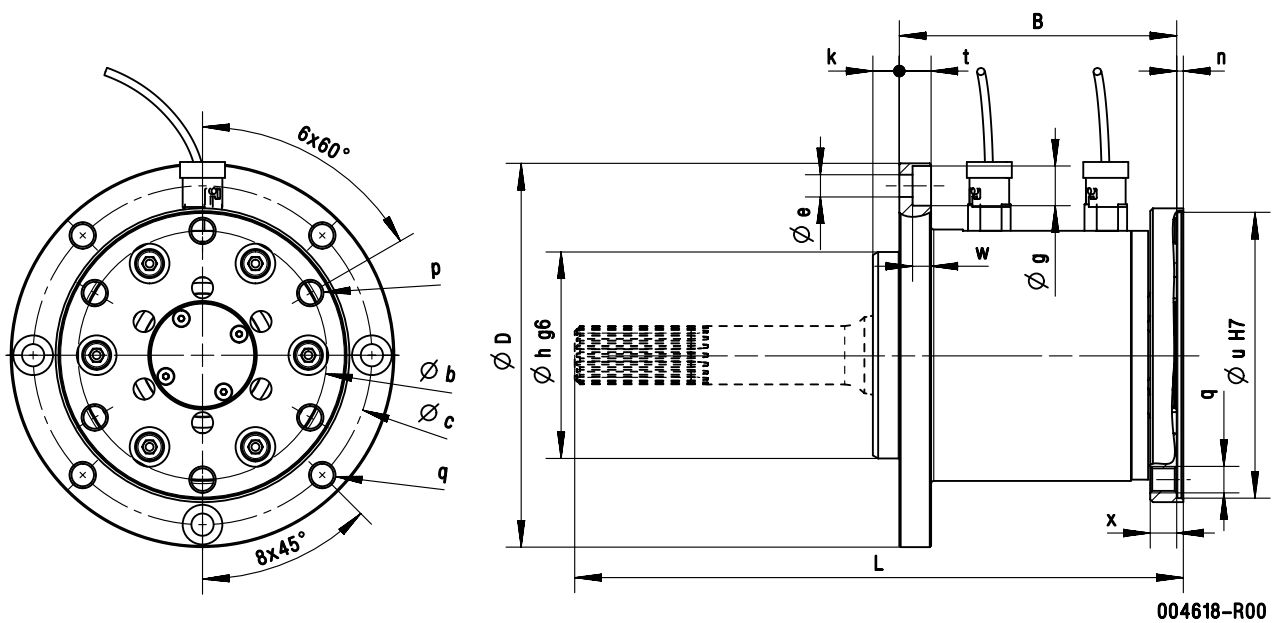
- modular design
- fast exchange of quill shaft
- direct interface to the coupling
- adaptable use of coupling
- integrated temperature monitoring
- compact design
- optional: integrated pilot bearing



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Mass m	[kg]	2.96
Maximum speed n_{max}	[rpm]	10000
Maximum torque ¹ T_{max}	[Nm]	1000
Minimum torsional stiffness ² c_T	[Nm/rad]	4500
Engine-side inertia J_1	[kgm ²]	Customer-specific
Gearbox-side inertia J_2	[kgm ²]	Customer-specific
Minimum operating temperature ϑ_{min}	[°C]	-30
Maximum operating temperature ϑ_{max}	[°C]	+100



The quill shaft geometry and composition is dependent on customer requirements.

The quill shaft (drawn with dashed lines) is only shown for clarity.

Gearbox dummy	Joint	D	B	b	c	e	g	h	k	n	p	q	t	u	w	x
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
tEVA110	CV05	145	104.8	74	128	8.4	15	78	10	4.5	M8	M10	12	86	7	10
	CV15	145	104.8	94	128	8.4	15	78	10	2.5	M10	M10	12	108	7	10

The installed length L is dependent on the application and is limited by the type of design and maximum speed.

¹The maximum torque must be the same as or larger than the maximum torque of the internal combustion engine, and is dependent on the geometry and the quill shaft material.

²The stiffness is dependent on the geometry and the material of the quill shaft.