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



Exclusive Representative in Japan



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| tEVA110 | | |
|--|---------------------|-------------------|
| Mass | [kg] | 2.96 |
| Maximum speed | [rpm] | 10000 |
| Maximum torque ¹ | [Nm] | 1000 |
| Minimum torsional stiffness ² c_T | [Nm/rad] | 4500 |
| Engine-side inertiaJ1 | [kgm ²] | Customer-specific |
| Gearbox-side inertiaJ $_2$ | [kgm ²] | Customer-specific |
| Minimum operating temperature | [°C] | -30 |
| Maximum operating temperature | [°C] | 100 |



The quill shaft geometry and composition is dependent on customer requirements and the engine type. The quill shaft (drawn with dashed lines) is only shown for clarity.

| Gearbox dummy | Joint | D | В | b | с | е | g | h (gб) | k | n | р | q | t | u (H7) | w | x |
|---------------|-------|------|-------|------|------|------|------|-----------|------|------|-----|-----|------|-----------|------|------|
| | | [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 |

 $^{^{1}}$ The 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.

 $^{^{2}}$ The stiffness is dependent on the geometry and the material of the quill shaft.