

t710 SERIES

MANUAL TELESCOPIC SHAFT

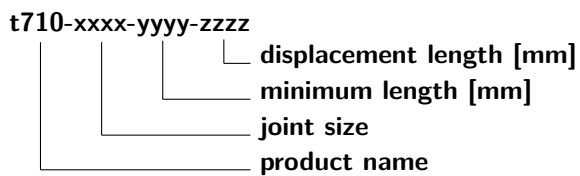


DESCRIPTION

The t710 is a special shaft for use in test beds for which a large amount of longitudinal compensation is required. A sophisticated displacement principle allows different changes in length depending on the maximum speed, installed length and joint size. The CV joints provide the t710 telescopic shaft with all advantages associated with the t700 series.

NAMING

The product is named according to the following convention:



Example: t710-CV15-0420-0100

OPERATING RANGE

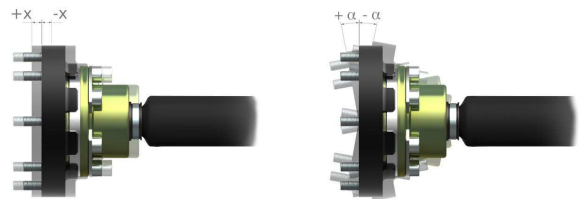
Torque: up to 6000 Nm
Speed: up to 10000 rpm

BENEFITS

- large longitudinal compensation
- long life
- 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] |
|-------|-------|-------------------|--------------------|-----------|-----------------|---------------------------|---------------------------|
| t710 | CV05 | 580 | 10000 | ±16 | ±10 | -40 | +80 |
| | CV10 | 1300 | 10000 | ±12 | ±10 | -40 | +80 |
| | CV15 | 2500 | 10000 | ±16 | ±10 | -40 | +80 |
| | CV21 | 3500 | 10000 | ±24 | ±10 | -40 | +80 |
| | CV30 | 3500 | 5000 | ±25 | ±10 | -40 | +80 |
| | CV32 | 6000 | 5000 | ±25 | ±10 | -40 | +80 |

T_{max} - Maximum torque

n_{max} - Maximum speed

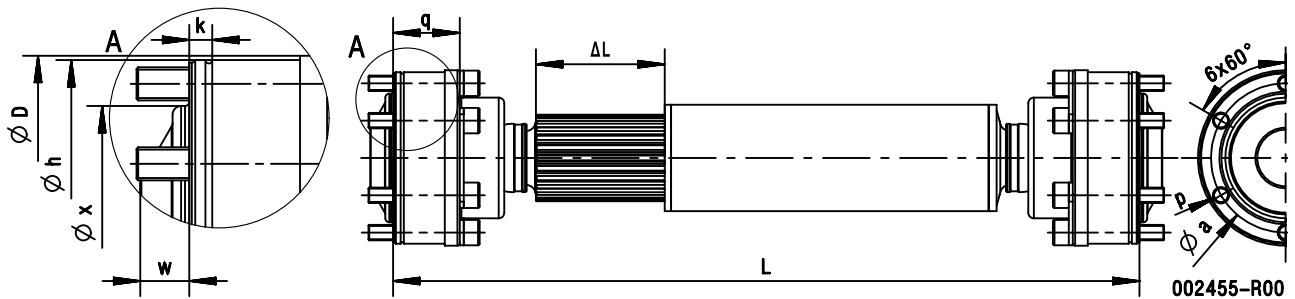
X - Maximum axial compensation

α - Maximum angular displacement

ϑ_{min} - Minimum operating temperature

ϑ_{max} - Maximum operating temperature¹

The maximum speed is dependent on the design and the installed length and can vary from the values specified.



| Shaft | Joint | D [mm] | a [mm] | $h^{+0.00}_{-0.05}$ [mm] | k [mm] | p [-] | q [mm] | w [mm] | x [mm] |
|-------|-------|-----------|-----------|-----------------------------|-----------|----------|-----------|-----------|-----------|
| t710 | CV05 | 88.4 | 74.0 | 86 | 10.5 | M8 | 22.8 | 14.50 | 65.00 |
| | CV10 | 96.0 | 80.0 | 94 | 6.0 | M8 | 33.8 | 15.00 | 64.00 |
| | CV15 | 110.5 | 94.0 | 108 | 6.0 | M10 | 42.0 | 14.40 | 81.00 |
| | CV21 | 132.0 | 108.0 | 128 | 6.0 | M12 | 47.9 | 18.10 | 90.00 |
| | CV30 | 150.2 | 128.0 | 148 | 7.0 | M12 | 53.9 | 22.00 | 112.00 |
| | CV32 | 188.0 | 155.5 | 180 | 7.0 | M16 | 57.8 | 24.50 | 136.00 |

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

¹The t710 can be operated at up to 100°C for a short time.