

# t2200 SERIES

## ARC SPRING COUPLING



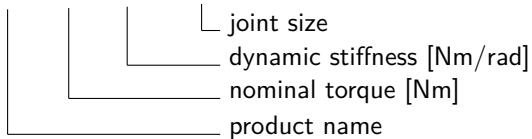
### DESCRIPTION

The t2200 is an arc spring coupling especially designed for deployment in test beds. It works like a dual mass flywheel. Because of its modular spring design, it is possible to tailor its stiffness behavior to the unit under test.

### NAMING

The product is named according to the following convention:

**t2200-tttt-cccc-CVxx**



Example: t2200-510-630-CV15

### OPERATING RANGE

Torque: up to 800 Nm  
Speed: up to 8500 rpm

### BENEFITS

- suitable for high dynamic loads
- high damping and long lifetime
- stiffness adjusted by spring placement
- wide stiffness range

### FUNCTION

As for a vehicle dual mass flywheel, the test bed dual mass flywheel boasts exceptional damping behavior.

Stiffness adjustment is achieved by using different spring configurations in the arc spring coupling. The standard t2200 specifications cover a nominal torque range of 160 - 800 Nm for a torsional stiffness of 200 - 1000 Nm/rad.



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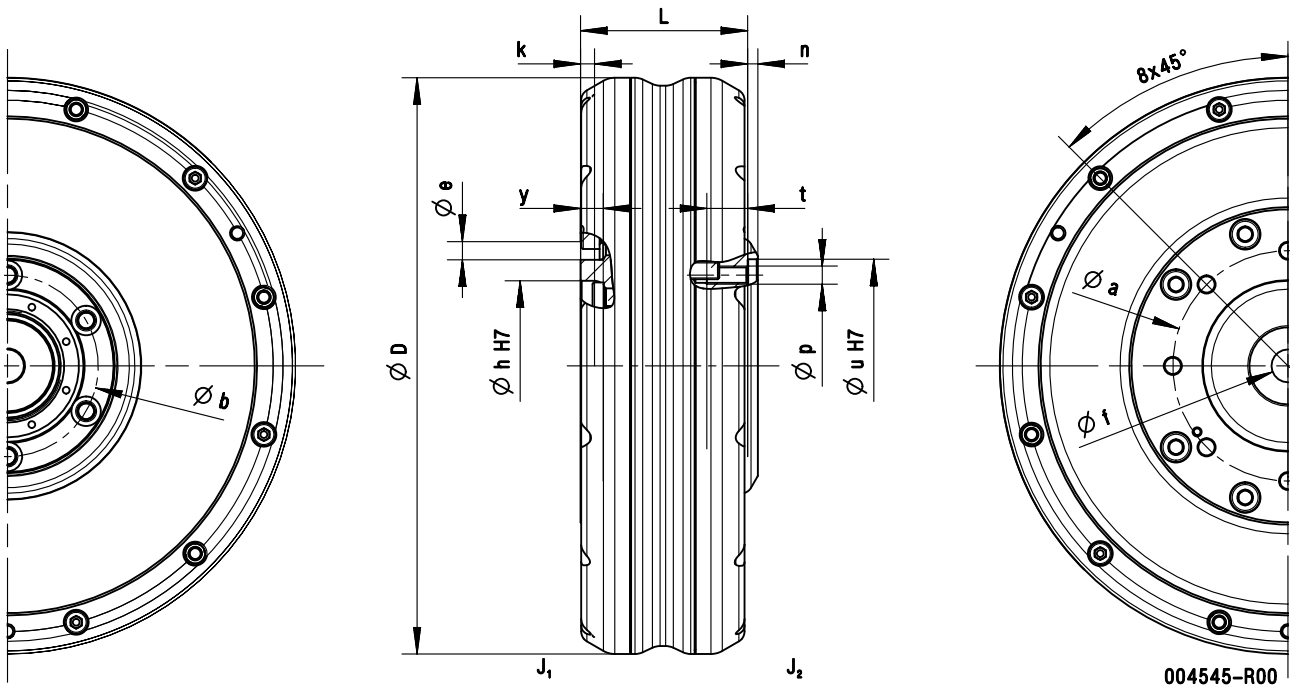
## ARC SPRING COUPLING

| Coupling       | Joint | T <sub>KN</sub><br>[Nm] | C <sub>Tdyn</sub><br>[Nm/rad] | T <sub>Kmax</sub><br>[Nm] | n <sub>max</sub><br>[rpm] | m<br>[kg] | x <sub>s</sub><br>[mm] | J <sub>1</sub><br>[kgm <sup>2</sup> ] | J <sub>2</sub><br>[kgm <sup>2</sup> ] | Ψ<br>[-] | d<br>[Nms/rad] | φ <sub>max</sub><br>[°] |
|----------------|-------|-------------------------|-------------------------------|---------------------------|---------------------------|-----------|------------------------|---------------------------------------|---------------------------------------|----------|----------------|-------------------------|
| t2200-160-200  | CV10  | 160                     | 200                           | 200                       | 8500                      | 9.86      | 30.9                   | 6.86E-02                              | 7.25E-03                              | 0.8      | 2.0            | 57                      |
| t2200-260-315  | CV10  | 260                     | 315                           | 315                       |                           | 10.18     | 30.5                   | 6.98E-02                              | 8.50E-03                              |          |                |                         |
| t2200-320-400  | CV10  | 320                     | 400                           | 400                       |                           | 11.17     | 33.6                   | 7.65E-02                              | 1.06E-02                              |          |                |                         |
|                | CV15  | 320                     | 400                           | 400                       |                           | 11.09     | 33.5                   | 7.65E-02                              | 1.48E-02                              |          |                |                         |
| t2200-420-515  | CV10  | 420                     | 515                           | 515                       |                           | 11.49     | 33.2                   | 7.77E-02                              | 1.18E-02                              |          |                |                         |
|                | CV15  | 420                     | 515                           | 515                       |                           | 11.41     | 33.0                   | 7.77E-02                              | 1.17E-02                              |          |                |                         |
| t2200-510-630  | CV10  | 510                     | 630                           | 630                       |                           | 11.81     | 33.8                   | 7.90E-02                              | 1.31E-02                              |          |                |                         |
|                | CV15  | 510                     | 630                           | 630                       |                           | 11.73     | 33.6                   | 7.90E-02                              | 1.29E-02                              |          |                |                         |
| t2200-800-1000 | CV10  | 800                     | 1000                          | 1000                      |                           | 11.74     | 34.0                   | 7.78E-02                              | 1.32E-02                              |          |                |                         |
|                | CV15  | 800                     | 1000                          | 1000                      |                           | 11.68     | 33.8                   | 7.79E-02                              | 1.32E-02                              |          |                |                         |

T<sub>KN</sub> - Nominal torque<sup>1</sup>  
 C<sub>Tdyn</sub> - Torsional stiffness  
 T<sub>Kmax</sub> - Maximum torque  
 n<sub>max</sub> - Maximum speed

m - Mass  
 x<sub>s</sub> - Center of gravity flange-side  
 J<sub>1</sub> - Inertia flange-side  
 J<sub>2</sub> - Inertia shaft-side

Ψ - Relative damping  
 d - Damping  
 φ<sub>max</sub> - Maximum torsional angle



| Coupling | Joint | D<br>[mm] | L<br>[mm] | a<br>[mm] | b<br>[mm] | e (D7)<br>[mm] | f<br>[mm] | h (H7)<br>[mm] | k<br>[mm] | n<br>[mm] | p<br>[-] | t<br>[mm] | u (H7)<br>[mm] | y<br>[mm] |
|----------|-------|-----------|-----------|-----------|-----------|----------------|-----------|----------------|-----------|-----------|----------|-----------|----------------|-----------|
| t2200    | CV10  | 254       | 74        | 101.5     | 80        | 8              | 14.5      | 75             | 6         | 4.5       | M8       | 18        | 94             | 10        |
|          | CV15  | 254       | 74        | 101.5     | 94        | 8              | 14.5      | 75             | 6         | 4.5       | M10      | 22        | 108            | 10        |

Other dimensions available on request

2018-01-18 <ff3c8e25493b82d25e50dbd4d0e0135058f289cf> DS EN 10

<sup>1</sup>The nominal torque must be equal to or greater than the maximum combustion engine torque