

t2200 – ARC SPRING COUPLING



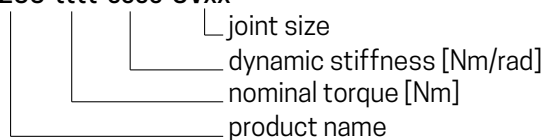
Description

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.

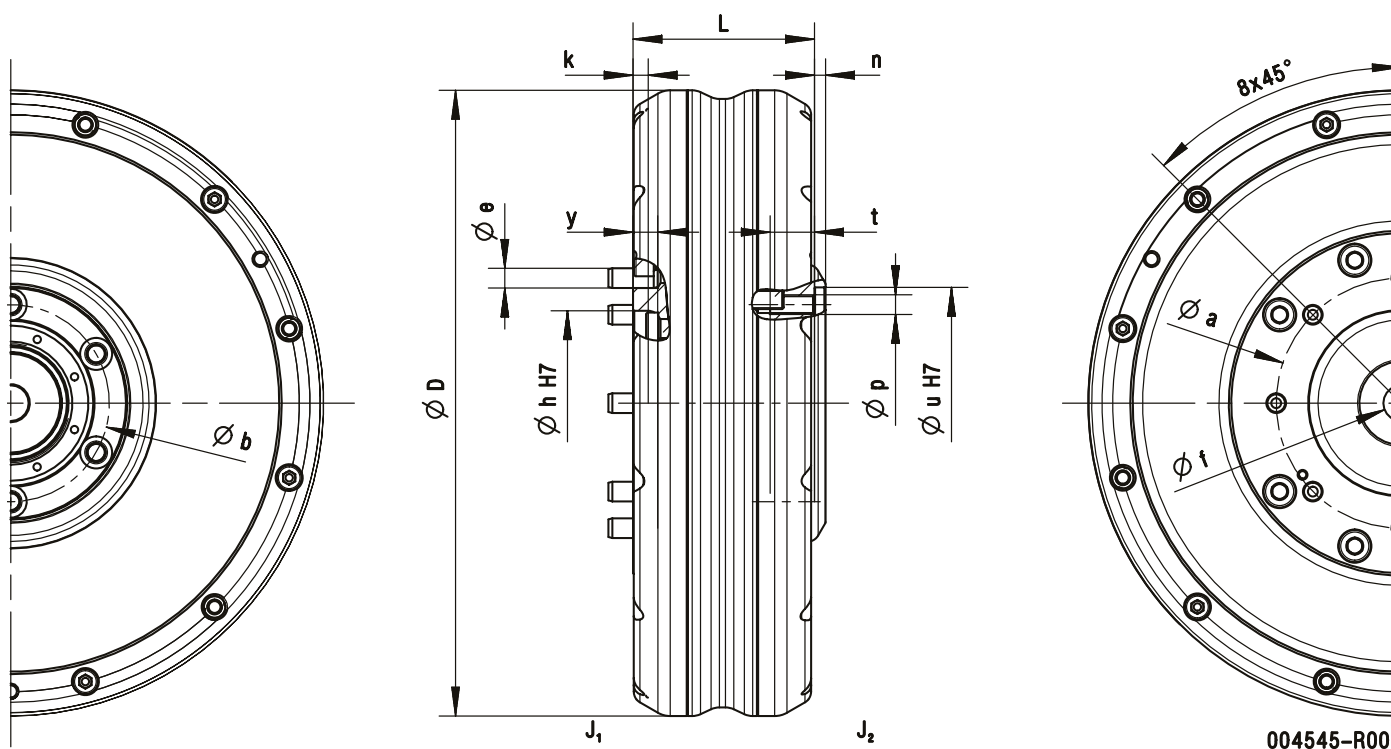
Coupling	Joint	T_{KN} [Nm]	c_{Tdyn} [Nm/rad]	T_{Kmax} [Nm]	n_{max} [rpm]	m [kg]	x_s [mm]	J_1 [kgm ²]	J_2 [kgm ²]	Ψ [-]	d [Nms/rad]	φ_{max} [°]
t2200-160-200	CV10	160	200	200	8500	9.86	30.9	6.86E-02	7.25E-03	0.8	2.0	57
t2200-260-315	CV10	260	315	315		10.18	30.5	6.98E-02	8.50E-03			
t2200-320-400	CV10	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_{KN} - Nominal torque²²
 c_{Tdyn} - Torsional stiffness
 T_{Kmax} - Maximum torque

n_{max} - Maximum speed
 m - Mass
 x_s - Center of gravity flange-side

J_1 - Inertia flange-side
 J_2 - Inertia shaft-side
 Ψ - Relative damping

d - Damping
 φ_{max} - Maximum torsional angle



004545-R00

Coupling	Joint	D [mm]	L [mm]	a [mm]	b [mm]	e (m6) [mm]	f [mm]	h (H7) [mm]	k [mm]	n [mm]	p [-]	t [mm]	u (H7) [mm]	y [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