t2200 SERIES

ARC SPRING COUPLING

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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-ttt-cccc-CVxx

- xx — joint size
- cccc — dynamic stiffness [Nm/rad]
- ttt — nominal torque [Nm]
- t2200 — product name

Example: t2200-510-630-CV15

OPERATING RANGE

Torque:	up to 800 Nm
Speed:	up to 8500 rpm
Stiffness:	200 - 1000 Nm/rad

BENEFITS

- suitable for high dynamic loads
- high damping and long lifetime
- 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.

tectos gmbh | gradnerstrasse 145 | 8054 graz | austria | t +43 316 228617 | f +43 316 228617-15 | info@tectos.at | www.tectos.at

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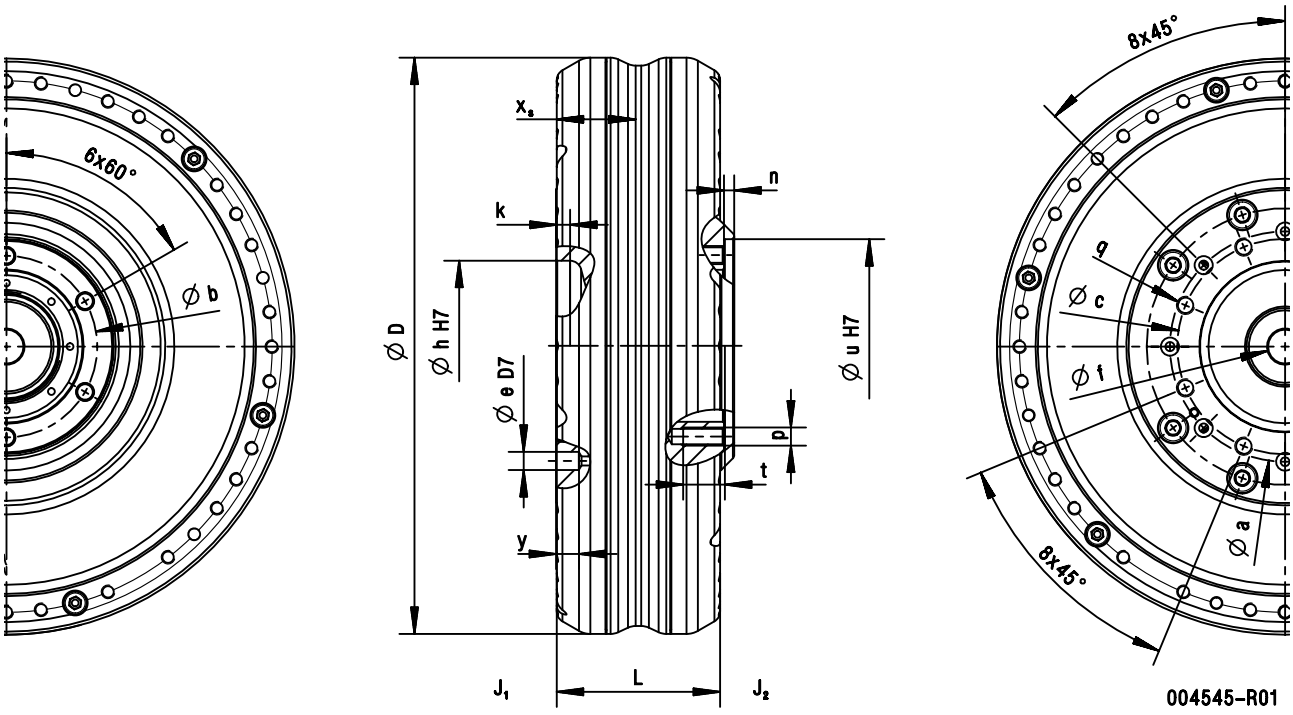
Coupling	Flange	T_{KN} [Nm]	c_{Tdyn} [Nm/rad]	T_{Kmax} [Nm]	n_{max} [rpm]	m [kg]	x_s [mm]	J_1 [kgm^2]	J_2 [kgm^2]	Ψ [-]	d [Nms/rad]	φ_{max} [°]
t2200-160-200	CV10	160	200	200	8500	9.86	30.9	6.86E-02	7.25E-03	0.8	2	57
t2200-260-315	CV10	260	315	315	8500	10.18	30.5	6.98E-02	8.50E-03	0.8	2	57
t2200-320-400	CV10	320	400	400	8500	11.17	33.6	7.65E-02	1.06E-02	0.8	2	57
	CV15					11.09	33.5		1.48E-02			
t2200-420-515	CV10	420	515	515	8500	11.49	33.2	7.77E-02	1.18E-02	0.8	2	57
	CV15					11.41	33.0		1.17E-02			
t2200-510-630	CV10	510	630	630	8500	11.81	33.8	7.90E-02	1.31E-02	0.8	2	57
	CV15					11.73	33.6		1.29E-02			
t2200-800-1000	CV10	800	1000	1000	8500	11.74	34.0	7.78E-02	1.32E-02	0.8	2	57
	CV15					11.68	33.8					

T_{KN} - Nominal torque[1]
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



Coupling	Flange	D [mm]	L [mm]	a [mm]	b [mm]	c [mm]	e (D7) [mm]	f [mm]	h (H7) [mm]	k [mm]	n [mm]	p [-]	q [-]	t [mm]	u (H7) [mm]	y [mm]
t2200	CV10	254	74	101.5	80	95	8	14.5	75	6	4.5	M8	M8	18	94	10
	CV15				94							M10		22	108	

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[1]The nominal torque must be equal to or greater than the maximum combustion engine torque

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