

Electromagnetic tooth clutch 546

Design 1 & 2

Transmission of high torques combined with small mounting dimensions.



Electromagnetically operated tooth clutches transmit torque without slip. The level of torque that can be transmitted as well as the switching characteristics depend on the design of the toothing. All tooth shapes are possible with one or several fixed points for synchronising processes.

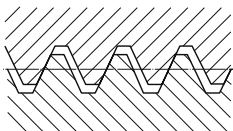
In other words, we always have the right solution for your application.

Features

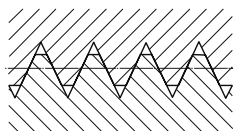
- Transmission of high torques combined with small mounting dimensions of the clutch
- Different tooth shapes for very different tasks
- Standard torque transmission up to 2,200 Nm
- For oil-based or dry running
- Also available as a module combined with shaft couplings

Tooth shapes

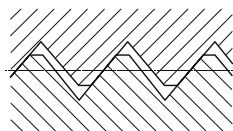
1. Normal



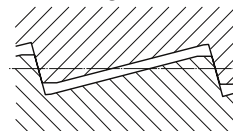
2. Normal – backlash-free



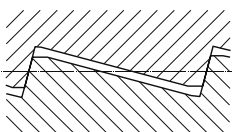
3. Overload



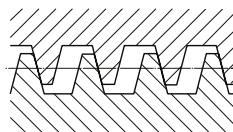
4. Saw – right



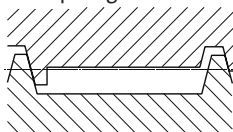
5. Saw – left



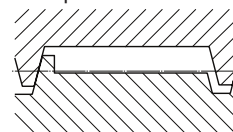
6. Claw



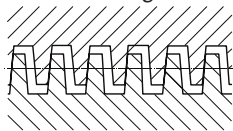
7. Step – right



8. Step – left



9. Self-retaining



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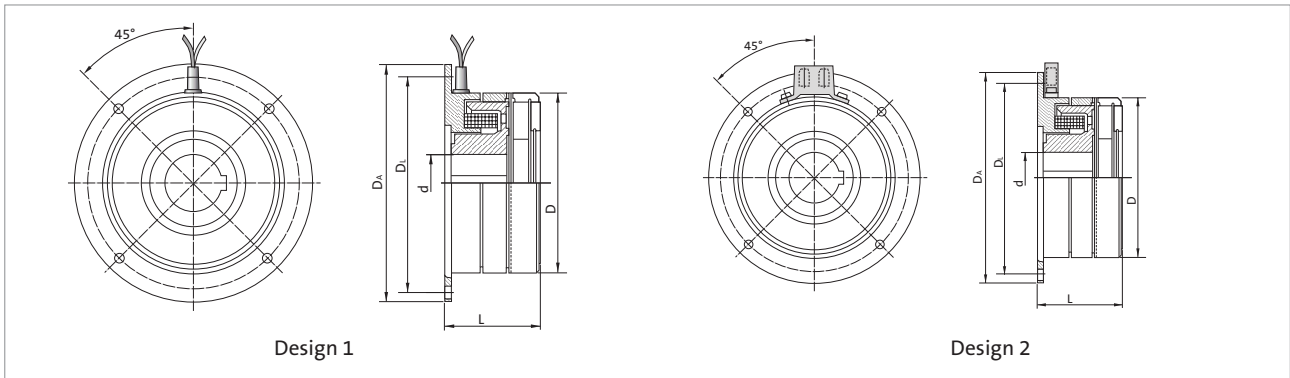
Design 1 & 2

Structure/function

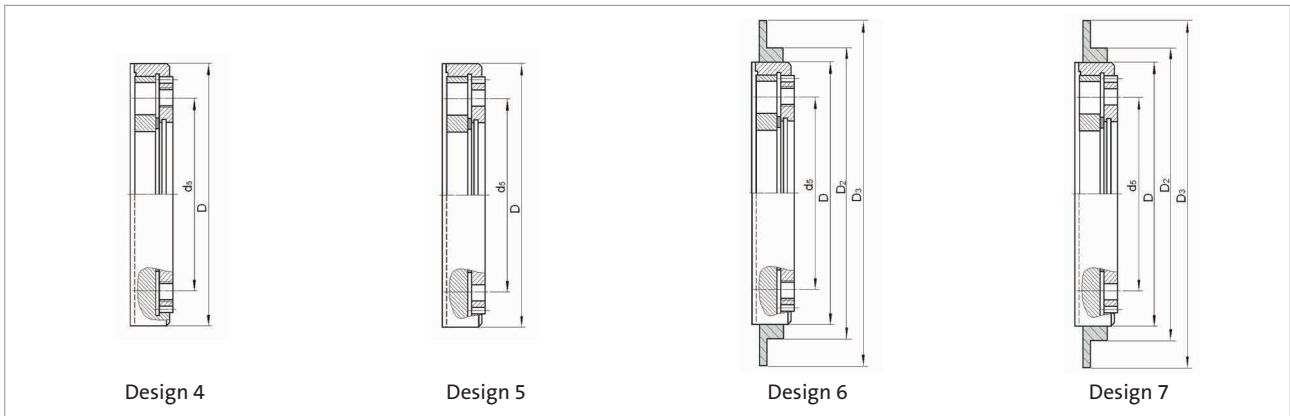
In the case of tooth clutches operated by means of working current, DC current in the coil is used to produce a magnetic force that generates the axial coupling force. In the case of tooth clutches operated by means of closed-circuit current, DC current in the coil is also used to produce a magnetic force.

The magnetic force overcomes the coupling force produced by springs and opens the clutch. The tooth clutches are available with or without a slip ring and can be used for oil-based or dry running without any significant alteration of the gear-changing characteristics.

Stator



Armature section



Technical specifications for tooth clutch 546

Size	Min./max. finish bore with keyway 6885/1	Rated torque	Max. speed	Coil power	Dimensions						
					D	D _A	D ₂	D ₃	d ₅	D _L	L
	d	M	n	P	[mm]						
	[mm]	[Nm]	[rpm]	[W]							
12	10 ... 15	20	4.800	13	57	70	-	-	36	63.5	32.5
13	10 ... 20/2	25	4,500	19	67	85	74	90	46	76	36,5
15	15 ... 25	50	4,500	21	82	100	90	115	60	92	41.5
21	20 ... 35	100	4,000	27	95	125	107	130	70	112	48.5
23	25 ... 42	250	3,500	36	114	140	126	165	80	125	53
25	30 ... 50	500	3,500	57	134	165	146	185	95	150	63.5
31	40 ... 70	1.000	3,000	80	166	195	178	218	120	180	72
32	50 ... 80	2.200	3,000	114	195	230	215	250	150	215	86

We would be happy to help and advise you with your individual dimensioning requirements.

www.lenze-selection.com

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