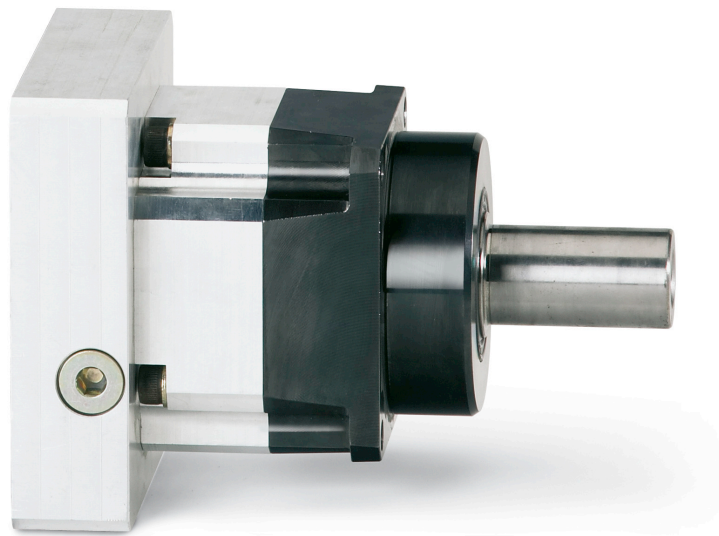


Servo-Gearboxes

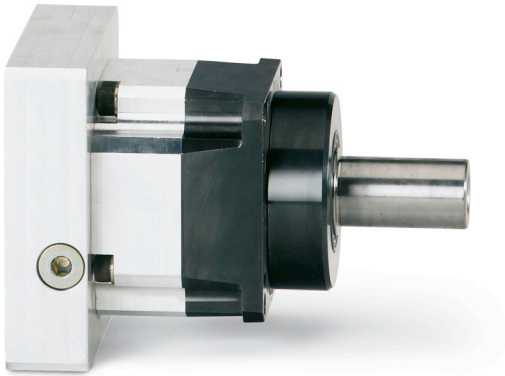
GTM - for precise applications



Servo-Gearboxes

GTM - for precise applications**Documentation**

- Project Planning Manual

**High-precision and flexibility**

- High-precision gearing for highest positioning accuracy
- minimum power dissipation in continuous operation
- minimum
- Optimized gear tooth forming for silent operation
- Environment-resistant, hermetically sealed housing
- High acceleration torque is achievable through a compact and rigid construction

Characterized by a particularly high power density and low backlash, the high-precision GTM range of planetary gearboxes has been designed for mounting directly on servo motors. Their high degree of efficiency makes these gearboxes suitable for the S1 continuous operation and therefore ideal for use in printing presses, for example.

Combined with the dynamic IndraDyn motors they achieve the highest speeds, acceleration and optimum positioning accuracy. The single-stage or two-stage gearboxes can be supplied with a plain shaft or keyway and also with reduced backlash on request.

Technical data

Gearbox	Transmission ratio	i	Nominal Input Speed	Max. input speed	Maximum output speed	Nominal input torque	Nominal output torque	Max. output torque	Backlash		Torsional stiffness	Efficiency	Moment of inertia			
			n_{IN}						Standard	Reduced				D	η	J
			[1/min]						[arc-min]	[arc-min]				[Nm/arc-min]	[%]	[kgm ²]
GTM060-NN1-004	Single-Stage	4	3000	5000	1250	6.25	25	12.5	≤ 6	≤ 3	3.5	97	0.16			
GTM060-NN1-005		5	4000											8000	1260	5
GTM060-NN1-007		7	5000	10000	1000	2	20	4								
GTM060-NN1-010		10	6000											1000	2	20
GTM060-NN2-020	Two-Stage	20	4000	6300	315	1.25	25	2.5	≤ 8	≤ 6	94	0.12				
GTM060-NN2-050		50	6000	10000	200	0.5		1					50	≤ 6	0.1	

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Gearbox	Transmission ratio	i	Nominal Input Speed	Max. input speed	Maximum output speed	Nominal input torque	Nominal output torque		Max. output torque	Backlash		Torsional stiffness	Efficiency	Moment of inertia			
			[1/min]							Standard	Reduced				D	η	J
GTM075-NN1-004	Single-Stage	4	3000	5000	1250	21.3	85	42.5	170	≤ 6	≤ 3	8.2	97	0.55			
GTM075-NN1-005		5	4000	6300	1260	20	100	40	200		≤ 3			0.47			
GTM075-NN1-007		7	5000	8000	1143	12.1	85	24.3	170		≤ 3			0.41			
GTM075-NN1-010		10	6000	10000	1000	6	60	11	110		≤ 3			0.38			
GTM075-NN2-020	Two-Stage	20	4000	6300	315	4.25	85	8.5	170	≤ 8	≤ 6		94	0.47			
GTM075-NN2-050		50	6000	10000	200	2	100	4	200		≤ 6						
GTM100-NN1-004	Single-Stage	4	2500	4000	1000	42.5	170	85	340	≤ 4	≤ 2	24	97	2			
GTM100-NN1-005		5	3000	5000		40	200	80	400		≤ 2			1.64			
GTM100-NN1-007		7	4000	6300	900	24.3	170	48.6	340		≤ 2			1.36			
GTM100-NN1-010		10	5000	8000	800	12	120	22	220		≤ 2			1.22			
GTM100-NN2-020	Two-Stage	20	3000	5000	250	8.5	170	17	340	≤ 6	≤ 4		94	1.56			
GTM100-NN2-050		50	5000	8000	160	4	200	8	400		≤ 4			1.44			
GTM140-NN1-004	Single-Stage	4	2000	3200	800	105	420	210	840	≤ 4	≤ 2	48	97	6.75			
GTM140-NN1-005		5	2500	4000		100	500	200	1000		≤ 2			5.54			
GTM140-NN1-007		7	3000	5000	714	60	420	120	840		≤ 2			4.59			
GTM140-NN1-010		10	4000	6300	630	28	280	56	560		≤ 2			4.1			
GTM140-NN2-020	Two-Stage	20	2500	4000	200	21	420	42	840	≤ 6	≤ 4		94	5.29			
GTM140-NN2-050		50	4000	6300	126	10	500	20	1000		≤ 4			4.96			
GTM180-NN1-004	Single-Stage	4	1500	2500	625	255	1020	510	2040	≤ 4	≤ 2	148	97	24.5			
GTM180-NN1-005		5	2000	3200	640	240	1200	480	2400		≤ 2			18.8			
GTM180-NN1-007		7	2500	4000	571	145.7	1020		2040		≤ 2			14.5			
GTM180-NN1-010		10	3000	5000	500	72	720	144	1440		≤ 2			12.3			
GTM180-NN2-020	Two-Stage	20	2000	3200	160	51	1020	102	2040	≤ 6	≤ 4		94	6.95			
GTM180-NN2-050		50	3000	5000	100	24	1200	48	2400		≤ 4			5.45			

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Gearbox	Transmission ratio	i	Nominal Input Speed	Max. input speed	Maximum output speed	Nominal input torque	Nominal output torque		Max. output torque	Backlash		Torsional stiffness	Efficiency	Moment of inertia			
			$n_{IN N}$							Standard	Reduced				D	η	J
			[1/min]							[arc-min]	[arc-min]				[Nm/arc-min]	[%]	[kgm ²]
GTM240-NN1-003	Single-Stage	3	800	2000	667	600	1800		3000	≤ 4	≤ 2	340	97	128			
GTM240-NN1-004		4	1000		500	625	2500		5000		≤ 2			97.6			
GTM240-NN1-005		5	1200	2500	600	3000		6000	≤ 2		76.4						
GTM240-NN1-007		7	1500	3000	429	357.1	2500		5000		≤ 2			59.9			
GTM240-NN1-010		10	2000	3500	350	180	1800	300	3000		≤ 2			51.1			