



## GML Series Coaxial Wheel Hub Drive

The GML Series Wheel Drive uses planetary gearing for a coaxial system. The motor is located directly behind the wheel without axle offset. This results in a cylindrical structure from the wheel to the motor.

This drive can be used as a direct drive or as a differential drive and can be combined with a steering drive to form a drive-steer unit.

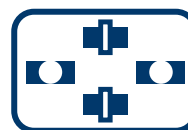
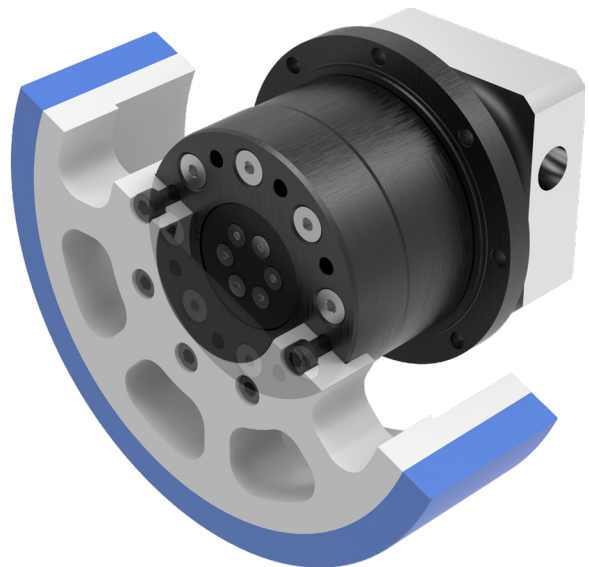
### Your Advantages

- Compact design with very short overall length
- Motor mount customized to your motor, no additional coupling needed.
- Directly mount wheel to the gearbox output flange
- Integrated wheel bearing for high loads
- Very high efficiency
- 3 frame sizes available
- Fully sealed and maintenance-free
- Optional wheel available



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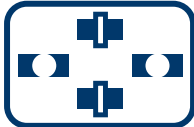

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## GML Chassis Types

Various chassis concepts are used in driver-less transport vehicles. These are differentiated according to their movement behavior. AGVs and AMRs have different requirements for maneuvering. For an AGV, a line-moving vehicle, the alignment of the vehicle frame is fixed by the chassis. This leads to increased space requirements when cornering. For an AMR, a surface-mobile vehicle, the orientation of the vehicle frame can be set independently of the vehicle position.

The required movement can be achieved using different combinations of travel, steering, and combination steering/travel wheel drives as well as non-driven wheels used for load support. The GML is ideal for these chassis types:

Chassis Type		Features
Tricycle Drive		<ul style="list-style-type: none"> <li>• Drive via the two rear wheels</li> <li>• Steering movements are carried out via the nose wheel</li> <li>• Maneuverable due to separate steering axle</li> <li>• Good load distribution on uneven surfaces</li> </ul>
Differential (Skid-Steer) Drive		<ul style="list-style-type: none"> <li>• Drive is via the middle pair of wheels</li> <li>• Steering through different speeds on the two wheels</li> <li>• Line movements through two drives and two support wheels</li> <li>• No separate steering drive necessary</li> </ul>
4 Drives with Mecanum Wheels		<ul style="list-style-type: none"> <li>• Mecanum wheels provide area-moving travel through four travel drives without steering drive</li> <li>• Mounting of the Mecanum wheels ensures area-moving travel due to different speeds of the drive axles</li> </ul>

## Technical Specifications

GML Series		64		84		118	
		Ratios		4, 12, 16, 20, 28, 40:1			
Nominal Output Torque ( $T_{2n}$ )	Nm (lb-in)	4:1	30 (265)	63 (558)	139 (1230)		
		All other ratios	49 (434)	116 (1027)	243 (2151)		
Max Acceleration Output Torque ( $T_{2b}$ )	Nm (lb-in)	4:1	51 (451)	116 (1027)	232 (2053)		
		All other ratios	60 (531)	145 (1283)	296 (2620)		
Emergency Output Torque ( $T_{2not}$ )	Nm (lb-in)	-	97 (859)	250 (2213)	557 (4929)		
Nominal Speed ( $n_{1n}$ )	RPM	-	3500	3000	2500		
Max Speed ( $n_{1max}$ )		-	6000	6000	5000		
Standard Output Backlash (j)	arcmin	4:1	< 10	< 10	< 8		
		All other ratios	< 14	< 14	< 12		
Allowable Radial Load ( $F_{rad}$ )*	N (lbs)	-	2600 (585)	3900 (877)	7000 (1574)		
Allowable Axial Load ( $F_{axial}$ )	N (lbs)	-	2400 (540)	4000 (899)	7200 (1619)		
Noise Level ( $L_{PA}$ )	dB(A)	-	< 66	< 68	< 70		
Wheel Diameter	in	-	7	8	10		
Efficiency at Load		4:1		94%			
		All other ratios		92%			
Service Life			> 30,000 hours				
Lubrication			Mineral Grease EP0				
Protection Rating			IP 65				

\* Load applied at center of output shaft @100 RPM

### DISCLAIMER

Dimensions and technical information are subject to change without notice. We are continuously updating and developing our products and reserve the right to make changes to the dimensions and specifications. For the most up-to-date information, please visit [www.gamweb.com](http://www.gamweb.com)

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