

WD100 – 200

Modular wheel drives WD

The WD wheel drive consists of an extremely short unit of wheel, integrated planetary gearbox and bearing. The combination with Nanotec's motors and controllers results in compact systems that simplify the development and optimization of self-propelled systems, such as service robots or AGVs. The wheel is available in a number of diameters and with different mounting flanges.

Compact design

The wheel, bearing and gearbox form a unit that requires little space but withstands high radial loads. By combining the wheel drive with motors with integrated controller the cabling effort and number of necessary components can be reduced further.

Maximum flexibility

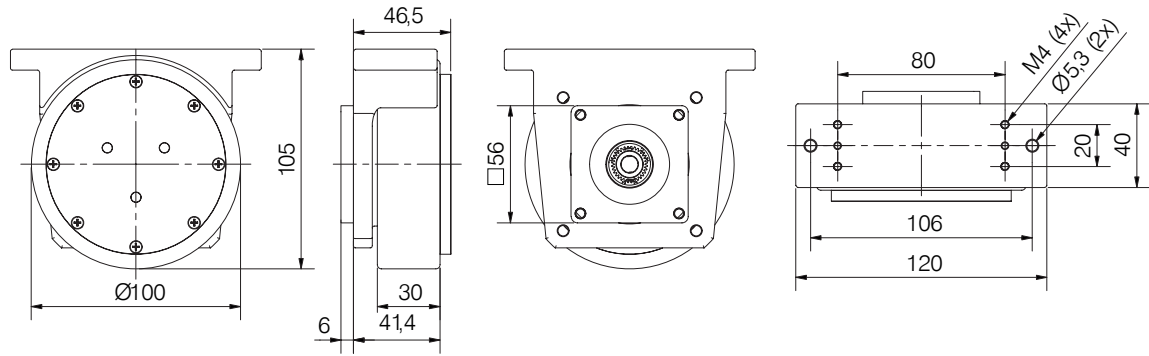
The wheel drives of the WD series can be combined with a wide range of motors, brakes and rotary encoders, and can be ordered with or without mounting bracket. Paired with Nanotec's PD6 motor, the STO safety function will soon be available as well.

Custom solutions

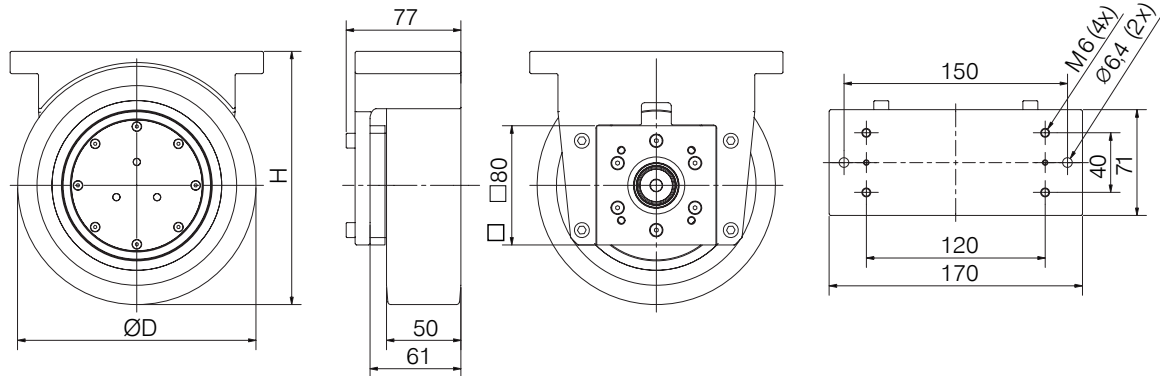
The wheel drive has a standard reduction of 1:16. Customized gear reductions are available on request. All other components can also be combined individually, and, thus, be perfectly matched to every application.



WD10030



WD16050



	Diameter „D“ (mm)	Height „H“ (mm)	Width (mm)	Payload (kg)	Reduction	Rated torque Gearbox (Nm)	Rated speed Gearbox (U/min)	Matching motors
WD10030	100	100	30	500	16 / more available	24.6	3,500	NEMA 23/24 / DB80
WD14050	140	150	50	580	16 / 20 / more available	24.6 / 28.6	3,500	NEMA 23/24 / APBA60 / DB80 / DF90
WD15050	150	160	50	620	16 / 20 / more available	24.6 / 28.6	3,500	NEMA 23/24 / APBA60 / DB80 / DF90
WD16050	160	170	50	640	16 / 20 / more available	24.6 / 28.6	3,500	NEMA 23/24 / APBA60 / DB80 / DF90
WD18050	180	190	50	720	16 / 20 / more available	24.6 / 28.6	3,500	NEMA 23/24 / APBA60 / DB80 / DF90
WD20050	200	210	50	840	16 / 20 / more available	24.6 / 28.6	3,500	NEMA 23/24 / APBA60 / DB80 / DF90

Configuration examples Wheel Drive with motor	WD16050-5620-23E PD4-EB59CD-E-65	WD14050-5611-60C APBA60L048030-E	WD20050-5616-90G DFA90L048017-A	WD20050-5611-90G DFA90L048017-A
Operating voltage	48 V	48 V	48 V	48 V
Gear ratio	20.03	10.84	15.51	10.84
Diameter	160 mm	140 mm	200 mm	200 mm
Payload	250 kg	400 kg	200 kg	200 kg
Rated torque wheel	11.3 Nm	12.9 Nm	14.1 Nm	9.8 Nm
Peak torque wheel	33.9 Nm	38.8 Nm	43.7 Nm	30.6 Nm
Rated power wheel	207 W	375 W	158 W	158 W
Rated speed AGV	1.46 m/s	2.03 m/s	1.13 m/s	1.61 m/s
Rated acceleration	0.56 m/s ²	0.46 m/s ²	0.70 m/s ²	0.49 m/s ²
Peak acceleration	1.69 m/s ²	1.39 m/s ²	2.19 m/s ²	1.53 m/s ²