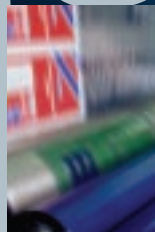


The right torque
at the right moment



torquemotor

1FW3



SIEMENS



Get the right Torque!

As much torque as you require:
the new 1FW3 complete torque motors

The right torque at the right time – this is decisive for high-tech machines both today and tomorrow. Using our new 1FW3 torque motors, you will always obtain higher precision at higher torques – and that at the right speeds. This means that your machine tools and production machines are fit for every task – no matter in which industry sector you are active. Torque motors from Siemens always precisely fit the bill: The permanent-magnet synchronous motors clearly show their strength as dynamic direct drives for all rotary axes. This means that you obtain precisely as much torque as you require, but you are always operating your machines at the optimum speed – without risk and in the profit zone.

Smooth without any mechanical system

If you are looking for mechanical transmission elements such as toothed belts or gears in our drive solutions with torque motors – then don't waste your time. In fact the force is transferred exactly to where it is required – directly in the machine.

There are many associated and decisive benefits: An extremely compact mechanical design is achieved by directly integrating the motor into the machine structure. This excludes unnecessary elasticities and gearbox play from the very start. Significantly lower weight and significantly reduced frictional losses increase the efficiency and the dynamic performance of your machines and plants. The repeat and positioning accuracy is significantly improved at the same time.

Ready to install – saving time and money

Our complete torque motors eliminate time-consuming installation and mounting procedures. This is because our drive solution reduces the number of components which have to be mounted in the assembly phase. The hollow shaft allows you to implement more flexible mechanical design and maintenance concepts. The 1FW3 plays a significant role in increasing the availability and cost-effective use of your production machines.

At home in all industry sectors

The new 1FW3 complete torque motor has already come through its trial period with flying colors in many important industry sectors. Whether as drive for extruder worm gears in fully electronic plastic injection molding machines or as roller drive in foil production machinery, or as printing machines or innovative drive solutions in paper, packaging and textile machines. The innovative 1FW3 generation clearly is the future.





High power in a team: The 1FW3 shows its full power here!

The 1FW3 complete torque motor is admirably equipped for every application. This is because it is part of a high-performance complete drive system comprising of individual components which are optimally harmonized with one another. This results in a single functional entity which gives your machine the full power it requires.

Highest power in the tightest space

Complete torque motors distinguish themselves thanks to their very compact design. The integrated water cooling ensures optimum heat dissipation and therefore guarantees an extremely high continuous torque. It ensures a constant predefined temperature of the cooling jacket through which water flows. The result – a direct drive with an extremely high power density.

System-based solution from a single source

Our complete torque motors develop their full performance only together with our well-proven SIMOVERT MASTERRDRIVES® Motion Control and SIMODRIVE® 611U drive converters and drive inverters. This is because together they form a perfectly harmonized overall system.



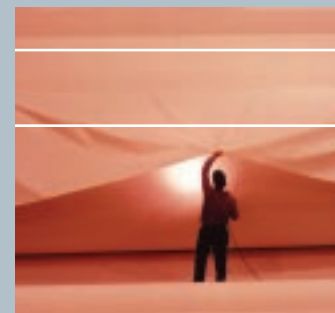
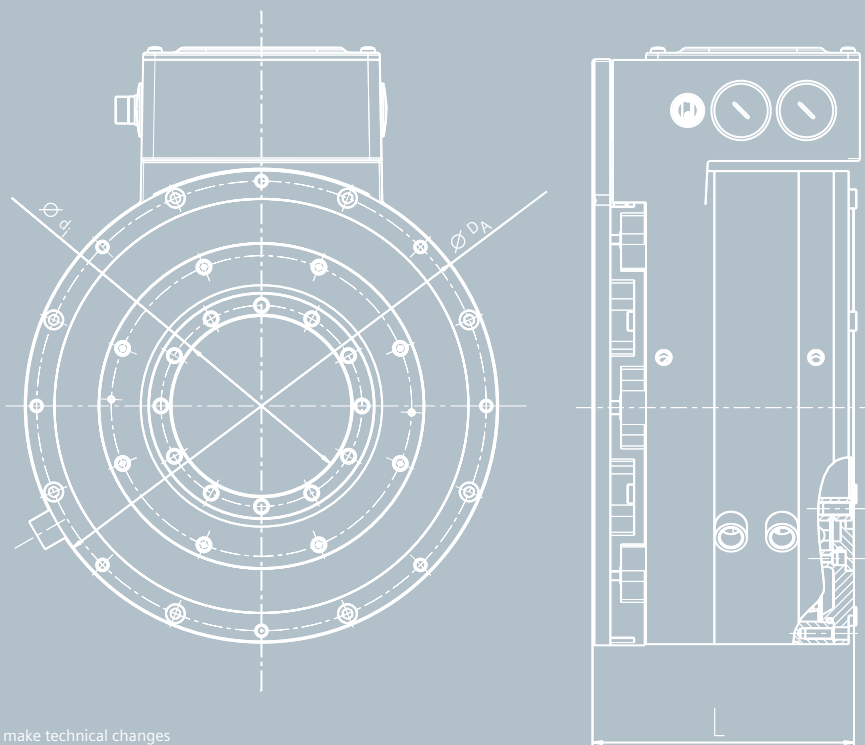
torquemotor

The optimum torque motor for every application: the 1FW3 versions at a glance

Our product range – what we can offer you

Rated torque M_N	Rated speed n_N	Maximum torque M_{Max}	Motor type	Outer stator diameter D_A	Inner rotor diameter d_i	Motor length L	Rotor moment of inertia	Motor weight	Type of construction	Degree of protection
Nm (lb _f -ft)	rpm	Nm (lb _f -ft)		mm (in)	mm (in)	mm (in)	kgm (lb _f -in-s)	kg (lb)		
300 (221)	500	600 (443)	1FW3 2 03	400 (16)	152 (6)	215 (8)	0.22 (1.95)	116 (256)	IM B 14	IP 54
500 (369)	500	1000 (738)	1FW3 2 05	400 (16)	152 (6)	265 (10)	0.35 (3.10)	150 (331)		
750 (553)	500	1500 (1106)	1FW3 2 08	400 (16)	152 (6)	315 (12)	0.47 (4.16)	180 (397)		
1000 (738)	500	2000 (1475)	1FW3 2 10	400 (16)	152 (6)	390 (15)	0.60 (5.31)	230 (507)		
1500 (1106)	250	3000 (2213)	1FW3 2 15	400 (16)	152 (6)	490 (19)	0.85 (7.52)	295 (650)		
2000 (1475)	250	4000 (2950)	1FW3 2 20	400 (16)	152 (6)	615 (24)	1.10 (9.73)	375 (827)		
2500 (1844)	200	4200 (3098)	1FW3 3 25	560 (22)	250 (10)	695 (27)	4.40 (39)	710 (1565)	IM B 35	
3500 (2581)	200	5900 (4352)	1FW3 3 35	560 (22)	250 (10)	795 (31)	5.80 (51)	815 (1797)		
5000 (3688)	200	8500 (6269)	1FW3 3 50	560 (22)	250 (10)	945 (37)	7.90 (70)	1030 (2271)		
7000 (5163)	200	11800 (8703)	1FW3 3 70	560 (22)	250 (10)	1145 (45)	10.70 (95)	1290 (2844)		

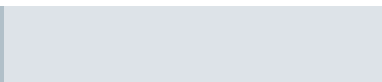
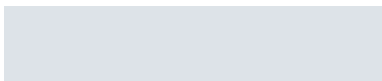
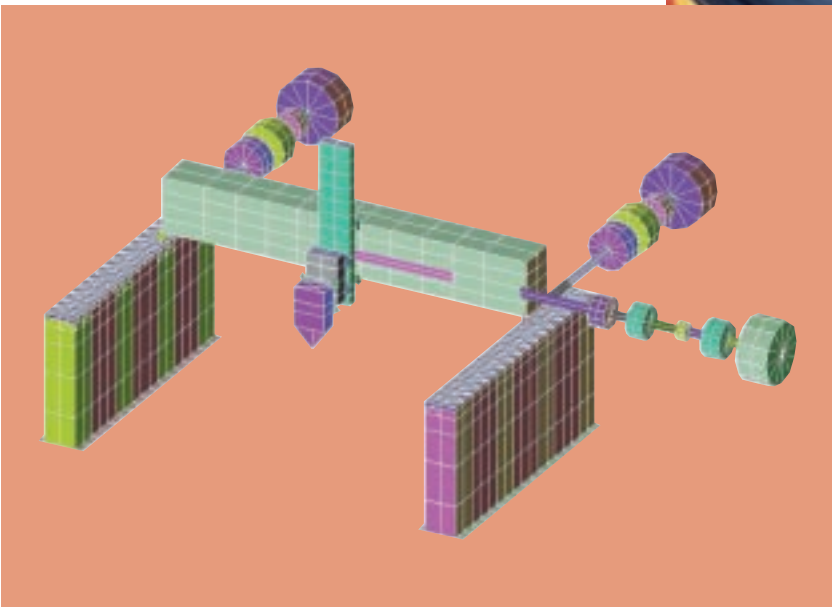
Motors for higher torques are being prepared.



1FW6 build-in torque motors are available on request.

This is what your machine could look like with an integrated torque motor:

An optimized mechanical design through simulation





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