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Your movement solutions

TGB GROUP

With more than 20 years experience in business, TGB group is one of the leaders of movement solutions for industrial and energy market. We develop and manufacture Technological products with high standars in realibility and quality, distributed world wide.

With our own Manufacture Facilities located in Asia, and our R+D centre in Europe, we are able to provide competitive solutions, based on customized projects, and keep flexibility on deliveries, accommodating any volume requested by our customers.

We keep the spirit of continuous improvement, and we focus our strategy to support our customers plans and follow the market trend on technology and quality. We Move your movement solutions...



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APPLICATION EXAMPLES

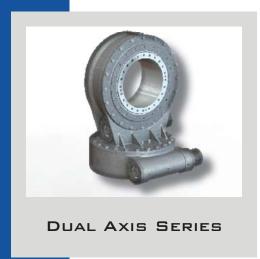












APPLICATION EXAMPLES













SLEW DRIVES



1.SLEWING DRIVES CHARACTERISTICS

Slewing drives present some characteristics that should be taken into account to choose the proper series for each application. The main points to consider are the ones following:

- The maximum output speed must be less than 1rpm.
- The standard temperature working range of a slewing drive is established between -20 and 70°C.
- The slewing drives can be used both in horizontal and in vertical position. In case installing it in vertical position please consult the TGBgroup Technical department.
- The load diagrams for each drive show its limit static load with a safety factor of 1. TGBgroup recommends adding an application factor to the loads according to the following table. To assure the drive chosen is the right one, the load case of the application must be below the limit curve.

Application	Application criteria	Application factor
Casting	Extreme application	1.5
Machines for building / cranes	Extreme application	1.25
Vehicles and mounting on vehicles	Extreme application	1.25
Forklifts / Bulldozers	Light shocks	1.1
Treatment plants	Vibrations	1.25
Wind turbines	Danger of streaking	2.0
Robots	Rigidity	1.25
Antennas	Precision	1.5
Machines-tool	Precision	1.5
Measurement technique	Smooth operation	2.0

The load diagrams are also limited by the bolts. They are only valid if all the bolts of the slewing drive are used to fix it to the structure. The quality of the bolts is considered grade 10.9, the threaded length should be at least 1.5 times the bolt diameter and the recommended flange thickness 2 times the bolt diameter. If the bolt curve does not appear in the chart, this means that this curve is above the slewing ring chart.

In case you have questions regarding the application for breach of any point of the ones mentioned above or various load cases are applied, we recommend contacting TGBgroup Technical Department. In case the slewing drive chosen does not adapt to your application we recommend consulting the slewing ring catalogue, as there exist a major variety of products and features.

2.TRANSPORT, HANDLING AND STORAGE

Transport only in horizontal position avoiding possible impacts. The vertical series should be transported and stored in vertical position. The slewing drive should be manipulated carefully and wearing working gloves all the time. The threaded holes can be used to fix bolts to handle the slewing drive in a safety way with a hoisting device. Store always in horizontal position and in closed rooms.

3.Installation

Previous to the installation, a cleaning of the slewing drive and the structure where is going to be mounted must be done. It is not allowed the use of steam high pressure systems. It should be checked that the slewing drive is fully supported by the structure. The supporting surface must accomplish some requirements considering a maximum flatness deviation. The slewing drive must be mounted without any external loads. It is convenient to perform working tests in the structure before the loads are applied. The bolts used must be from the dimension, quantity and quality indicated.

4.LUBRICATION

For all applications a proper lubrication is necessary for a smooth operation of the slewing drive. There are three parts that need to be lubricated: the slewing ring raceway, the screw worm and the bearings. The quantity of grease required is around 60cc for the screw worm, 10cc for each tapered roller bearing and 10cc each 250mm of diameter for the slewing ring raceway. The procedure to regrease consists in injecting grease into all grease nipples one after the other while rotating the slewing drive. The slewing drives must be regreased after each cleaning and also before and after large periods of inactivity.

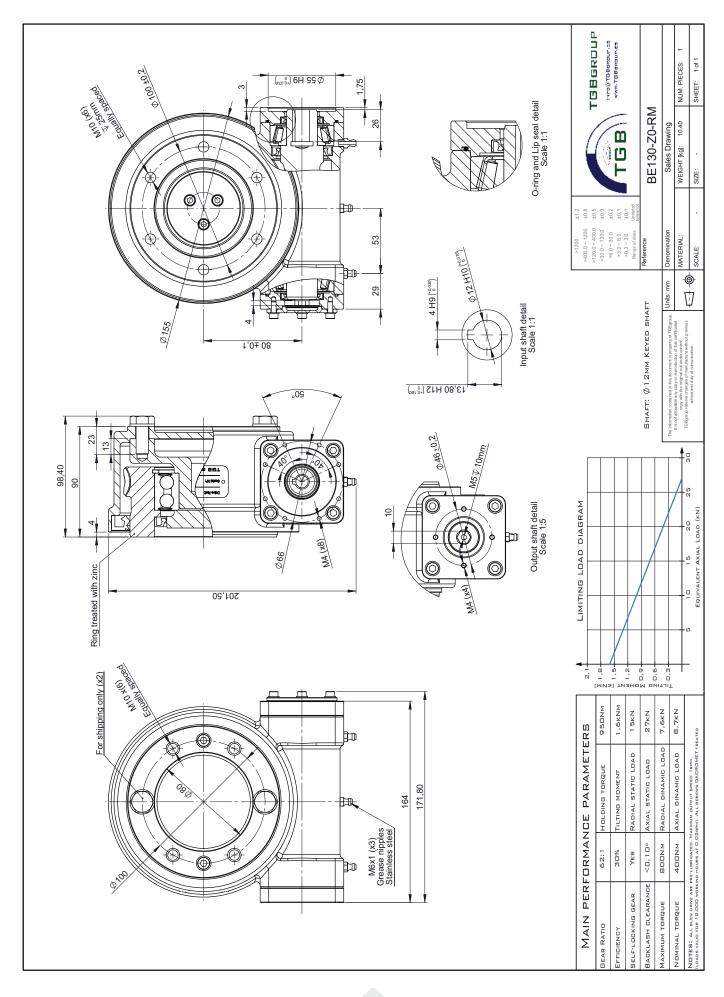
Re-lubrication is needed to assure a minimum quality on the grease inside the drive. In case no comparative results are available, the following table can be used as a reference.

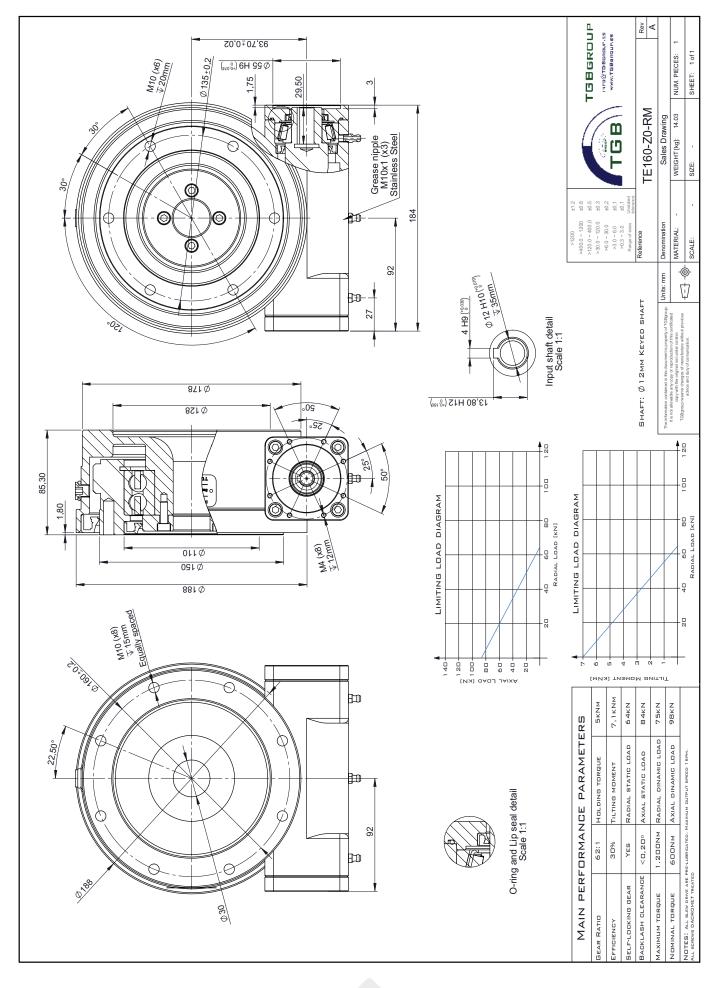
Working conditions	Slewing Ring and Screw Worm Re-lubrication intervals			
Rotational speeds <0,5rpm Non extreme environmental conditions (solar trackers)	Every 400 hours of operation or once every 12 months			
Rotational speeds >0,5rpm Non extreme environmental conditions (man lift, industrial applications)	Every 200 hours of operation or once every 6 months			
Extreme climatic conditions (sea / desert / Arctic climate / very dirty surrounding) (tunnelling machines/steel mills)	Every 100 hours of operation or once every 3 months			
Bearing re-lubrication intervals				
All working conditions	Every 400 hours or every 12months			

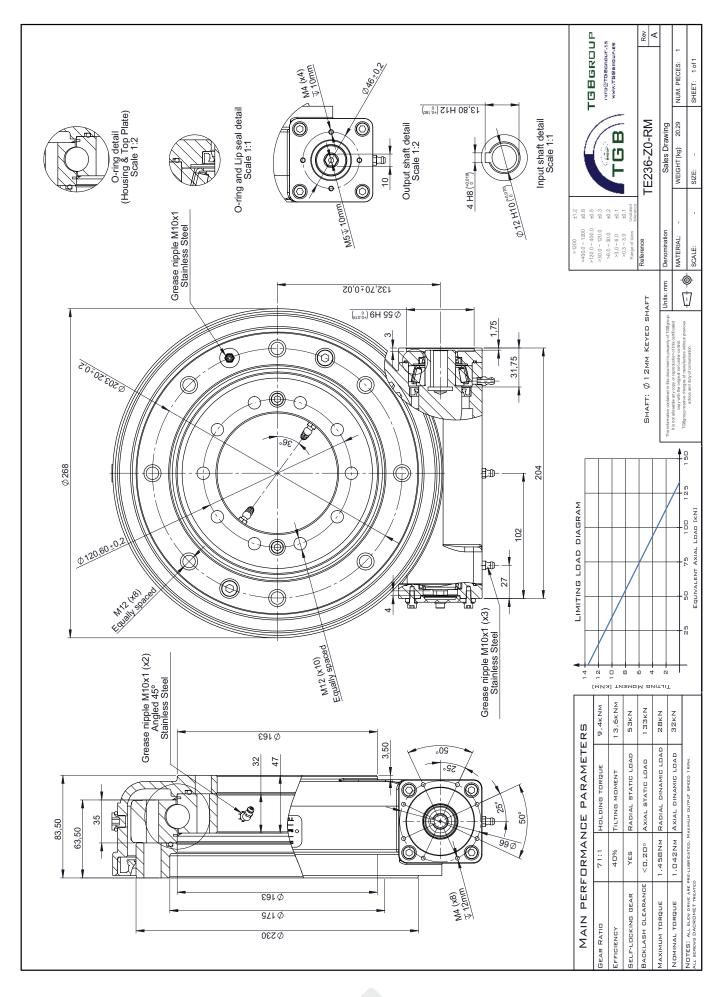
To choose the proper type of grease for each application, please contact TGBgroup technical department.

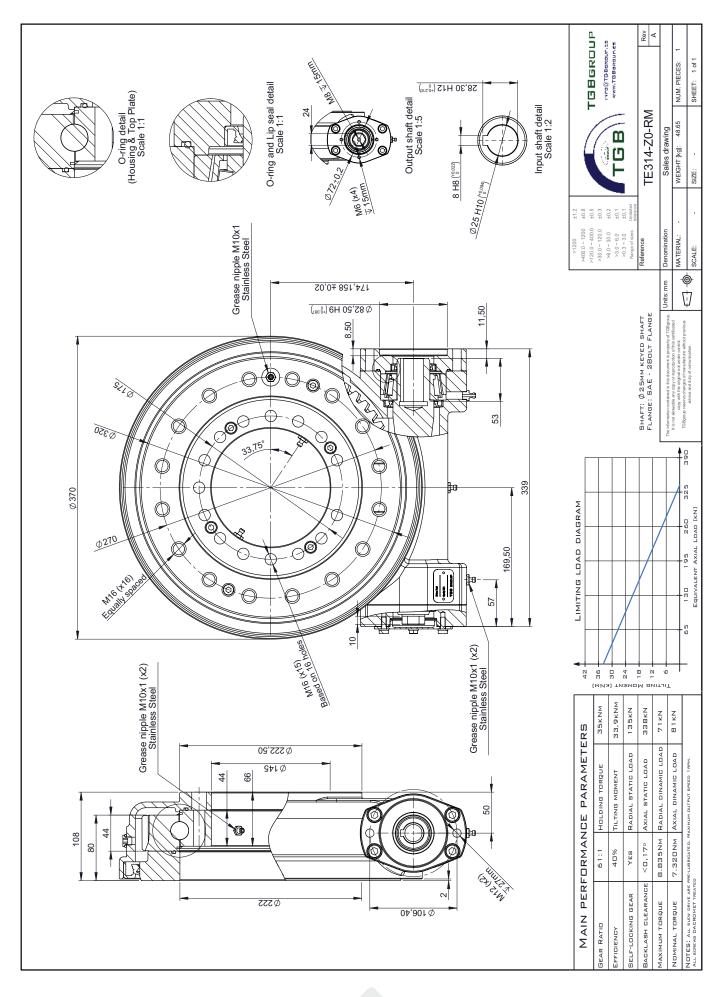
5. MAINTENANCE / SECURITY CONTROLS

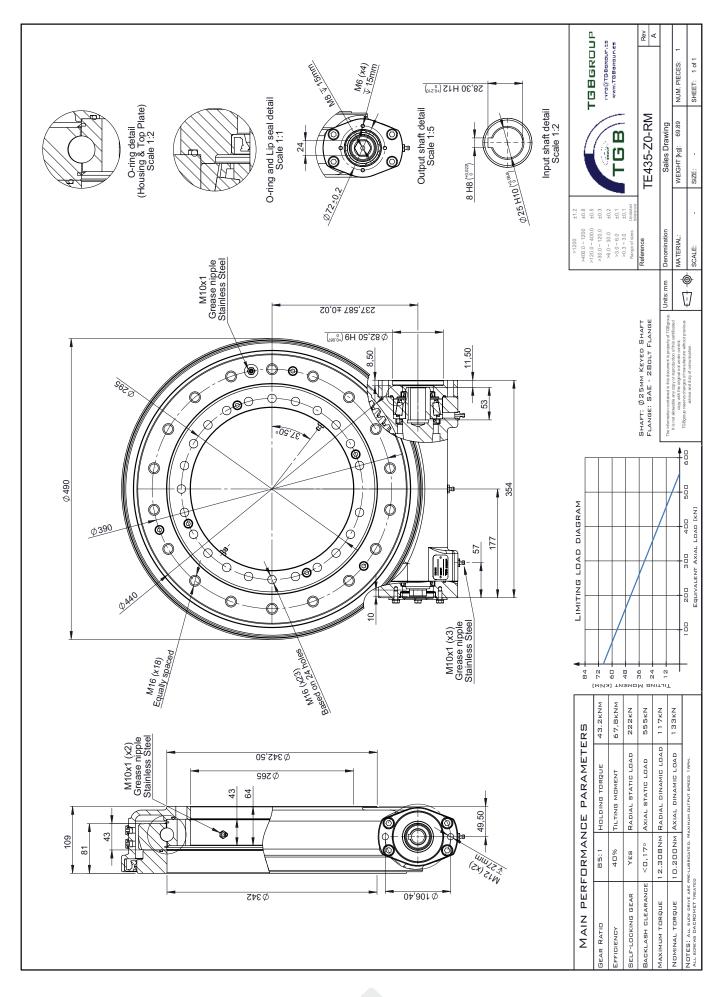
TGBgroup recommends retightening the bolts to the prescribed torque after no more than 100 working hours to compensate the possible settling. This should be done without external loads applied on the bolts union. This inspection should be repeated from then on every 3 months of working. The frequency of the inspection must be reduced under special working conditions.

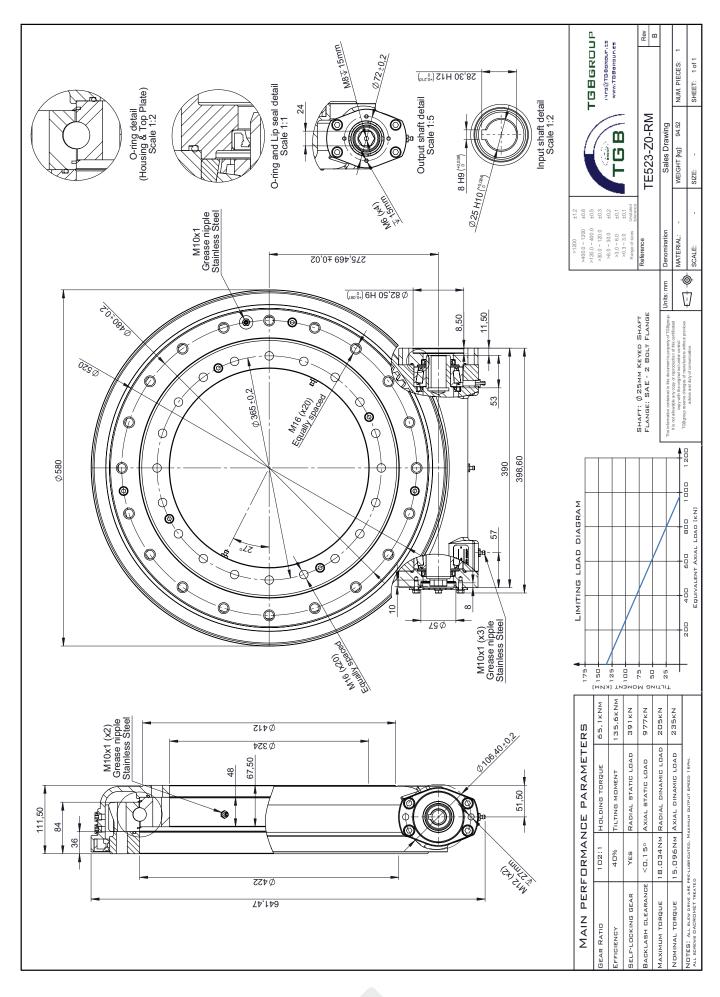


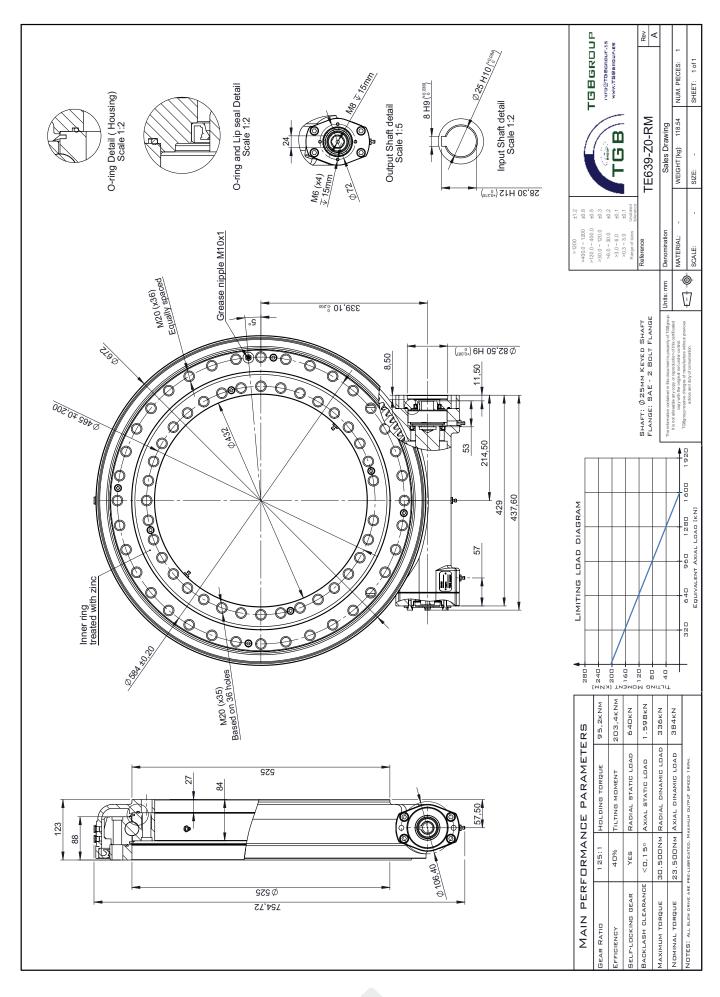


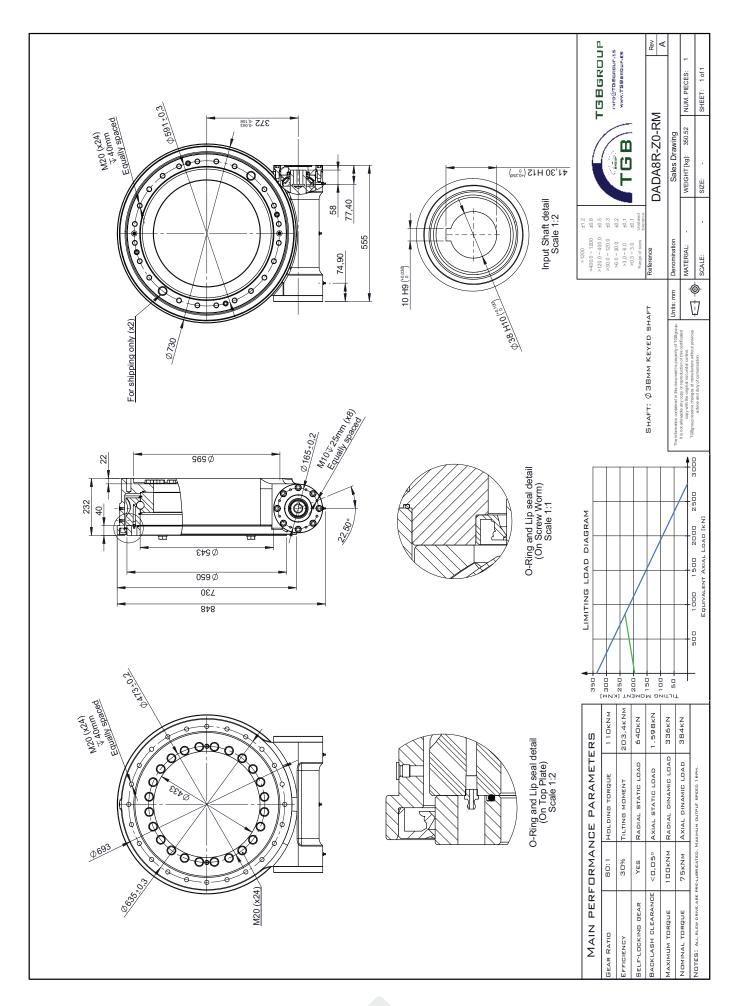




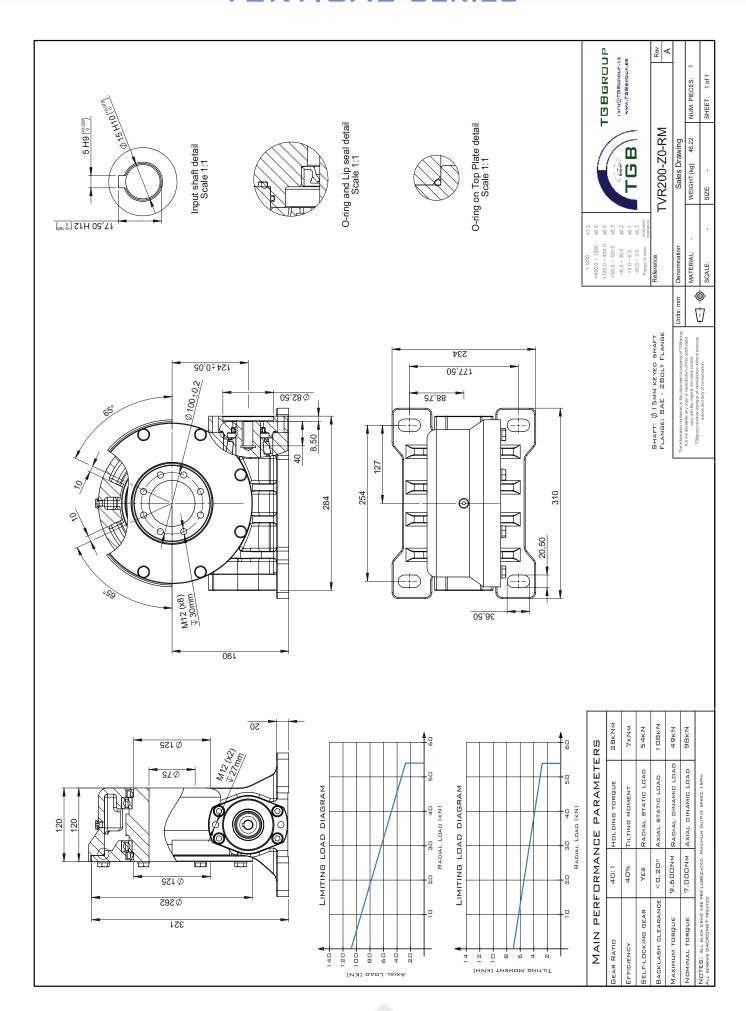




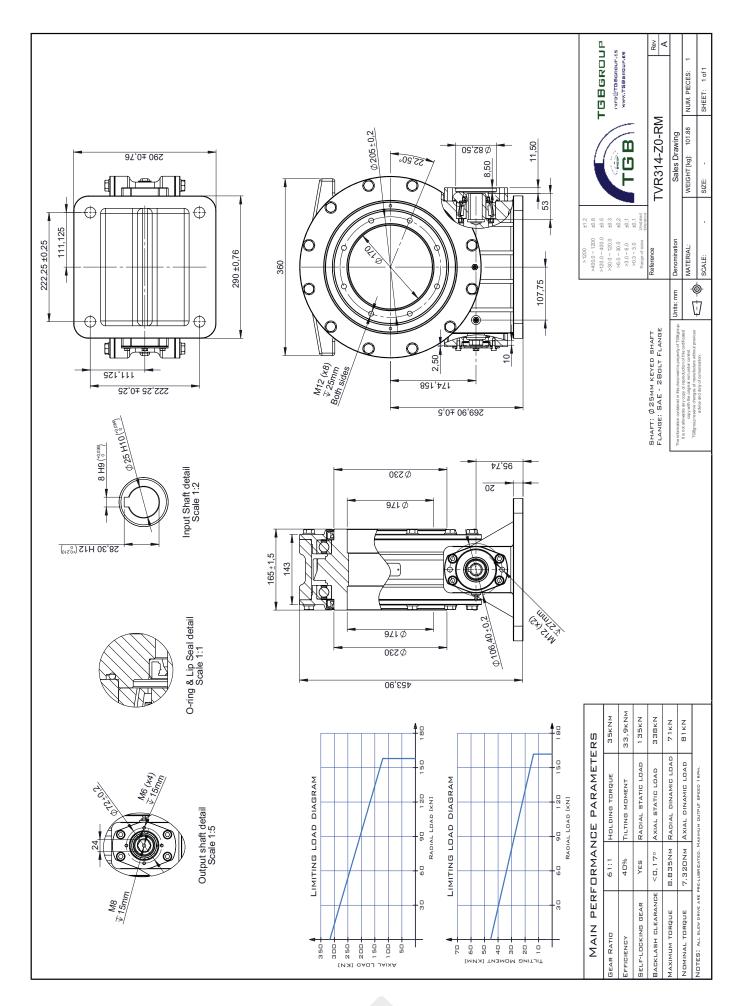




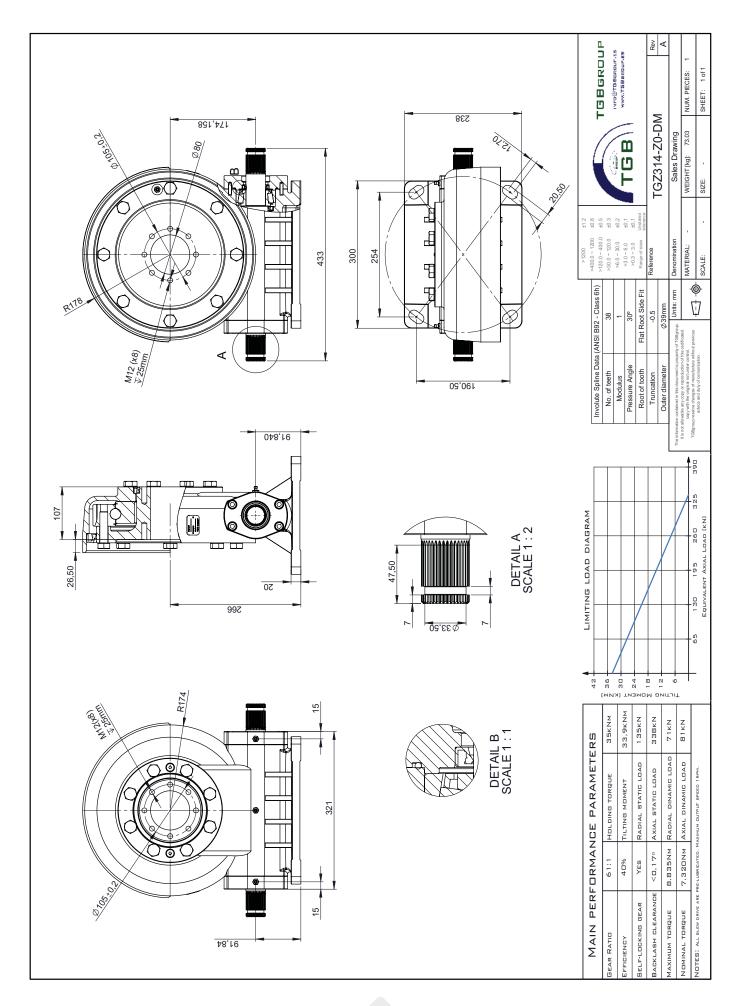
VERTICAL SERIES



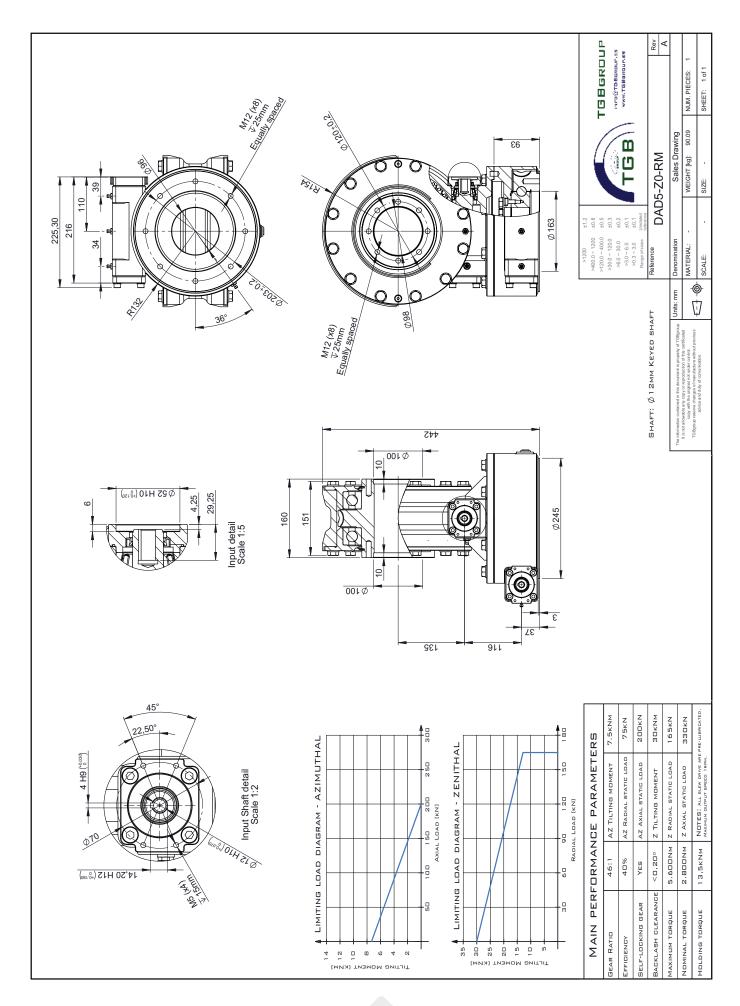
VERTICAL SERIES



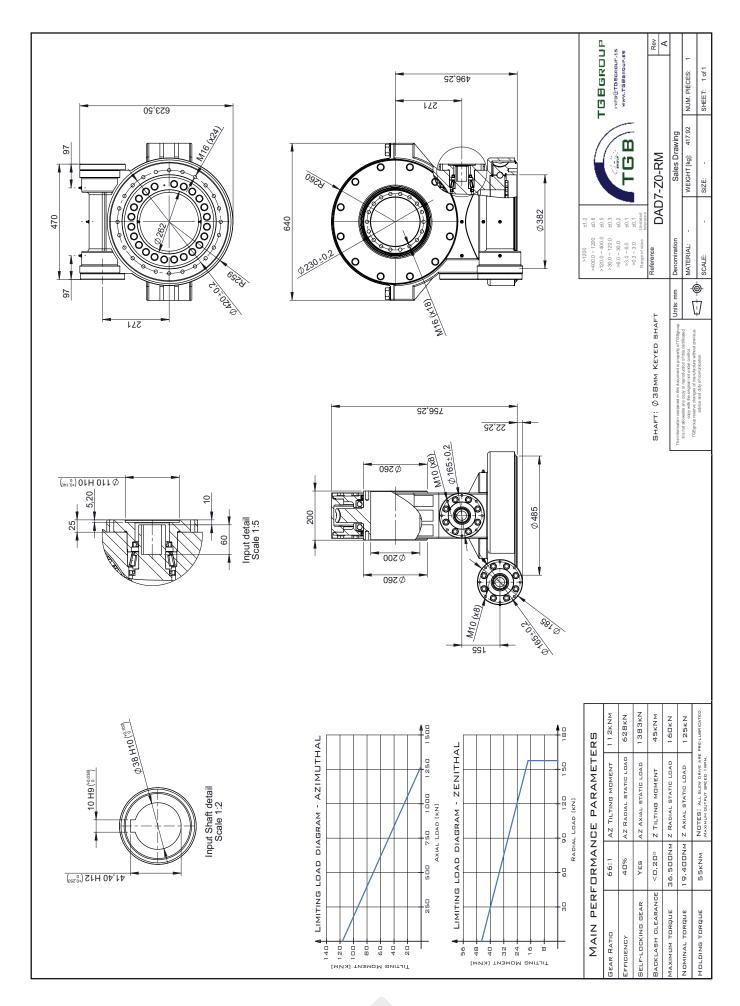
VERTICAL SERIES



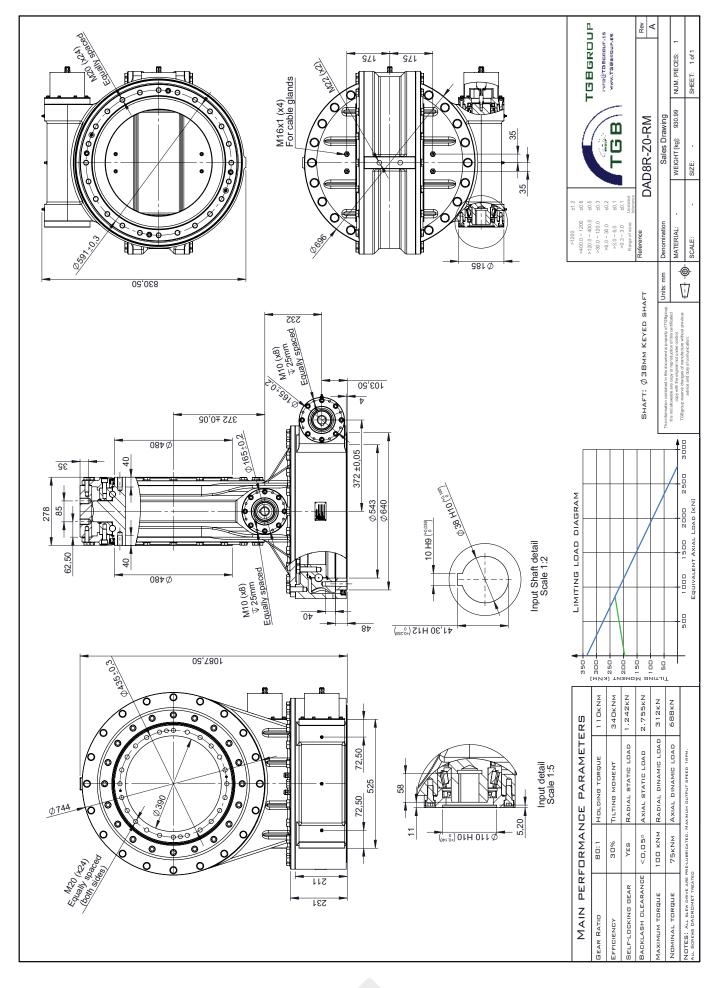
DUAL AXIS SERIES



DUAL AXIS SERIES



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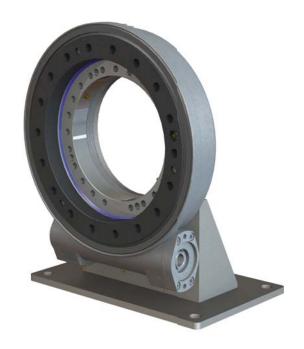
ACCESSORIES

TGBgroup also provides different accessories to attach our drives to the customers structures.

Some examples of these accessories that we usually provide are shown below.

VERTICAL SUPPORT





SQUARE END FLANGE





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Your movement solutions



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