



**TGB GROUP
TECHNOLOGIES**

A large, light-colored metal slewing ring bearing is shown in the background, occupying the upper half of the page. It has a thick outer ring with a flange and several mounting holes. A smaller inner ring is visible inside it. The text "TGB GROUP TECHNOLOGIES" is overlaid in the center of the inner ring.

YOU CALL, WE PRODUCE



*we*move

Your movement solutions

TGB GROUP

TECHNOLOGIES

With over 20 years of experience in bearings, gears and power transmission, the TGB Group has become a global leader in the development and production of movement solutions for the industrial and renewable energy markets. The TGB Group has manufacturing facilities on different continents which enables us to provide competitive solutions and customise projects while being able to retain a flexible manufacturing system and offer worldwide deliveries!

Our aim is to forge long lasting relationships with our customers by demonstrating our commitment throughout the engineering process, by exceeding customer expectations, by providing excellent service and by offering the best value for money.

Our knowledge and experience will enable you to make the right choice!

TGB Group Technologies S.L.







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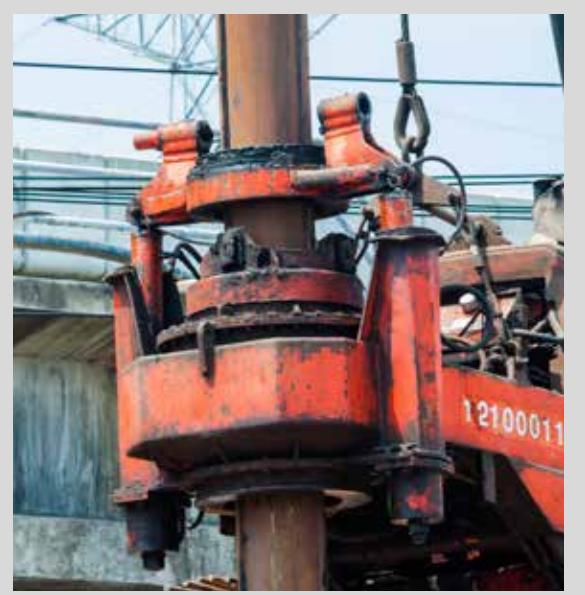
www.tgb-group.com

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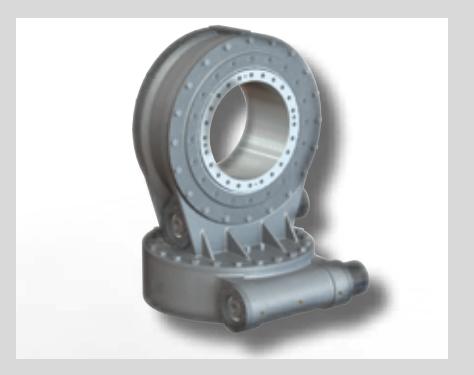
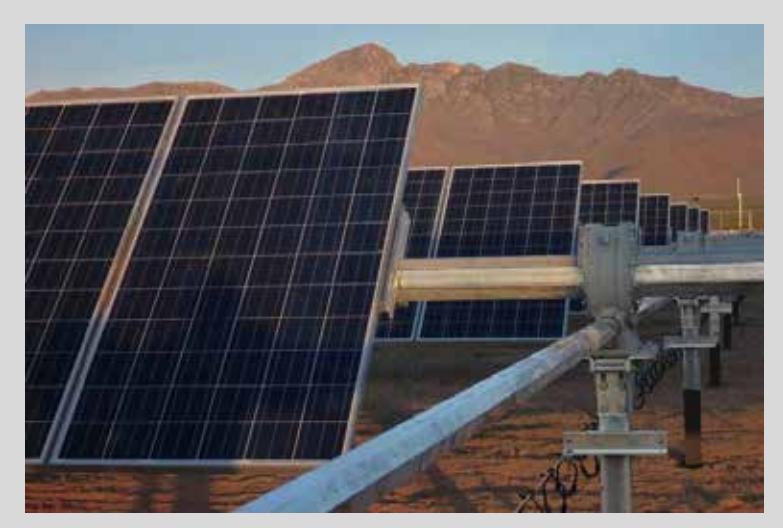
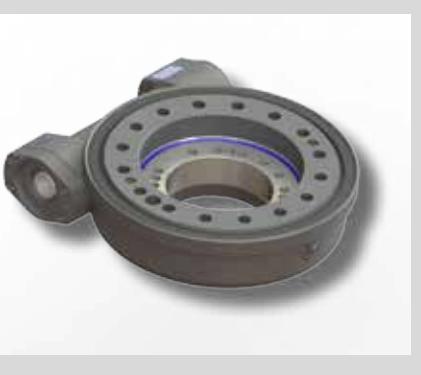
APPLICATION EXAMPLES - INDUSTRIAL



APPLICATION EXAMPLES - INDUSTRIAL



APPLICATION EXAMPLES - SOLAR



APPLICATION EXAMPLES - SOLAR

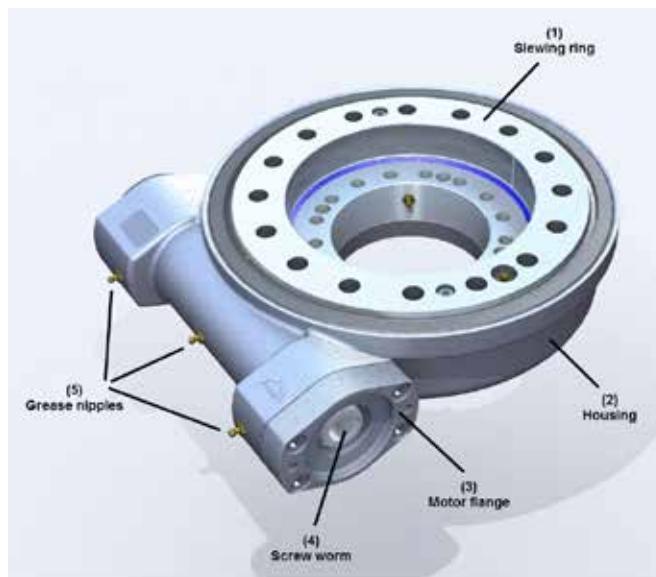


BASIC INSTRUCTIONS

1. INTRODUCTION

Slewing drives are compact rotary systems designed to be installed directly on the customer's applications which give rotational movement to the structure while at the same time are able to withstand high loads and critical environmental conditions due to its enclosed system.

Slewing drives are composed by a slewing ring (1), mounted on or inside a housing (2) which is where it is also assembled the screw worm (4) which is the part in charge of the transmission of the torque to the slewing ring. Inside that housing, there are also a couple of bearings which hold the screw worm together with their corresponding motor cap and encoder cap (3). These caps can be adapted to fit directly a hydraulic motor or a gearbox by means of an adapter flange. The drive has its own grease nipples (5) that allow the re-greasing of the slew drive for maintenance.



2. TGB GROUP SLEW DRIVES

TGB Group has different slew drives models prepared for different kind of applications.

- **BE Series:** Slew drive with high precision and low backlash for industrial applications. Fully enclosed with lip seals to ensure an IP65 on the system. With globoid slewing ring teeth and straight screw worm provides more smoothness on the rotational movement but reduces the maximum allowable torque.
- **LBE Series:** Light version of the BE series with aluminum housing to reduce the system weight.
- **TE Series:** Slew drive with globoid screw worm and helicoidal teeth on the slewing ring, which is able to withstand high loads due to its 4 teeth in contact. This kind of slew drive is prepared for high torque applications like solar plants and uses a lip seal to guarantee the IP65.
- **TGE Series:** Low cost slew drive similar to the TE series with lower precision and with a simple seal between the slewing ring and the housing.
- **TGO Series:** Open version of the TGE series for applications in clean environments.
- **TGZ Series:** Vertical serie with a slewing ring inside the housing.
- **TVR Series:** Vertical serie that uses bearings or bushings to fix the geared ring inside the housing.
- **DAD Series:** Combined Vertical and Horizontal series to give a full rotational movement in azimuth and zenith directions.

All the drives mentioned above can be adapted according to clients requirements, for example adding some of the following modifications: splined shaft, slewing rings with double raceway, holes in imperial, etc.

BASIC INSTRUCTIONS

3. 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 it is recommended to fix the slew drive with the screw worm on the lower position. For other mounting positions 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 ensure 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.

TGBgroup offers also the possibility of making customized designs in case none of the slew drives that appear on this catalogue fit for your application. TGBgroup can also offer a complete solution including motor and gearbox calculated following the loads supplied by the customer according to each application.

BASIC INSTRUCTIONS

4. 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 eyebolts to handle the slewing drive in a safety way with a hoisting device. Store always in horizontal position and in closed rooms. Keep it away from areas where it could get wet.

5. 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. Before the installation of the slew drive on the structure, please check the slew drive for physical damage and ensure that the drive moves smoothly. If the slew drive makes noise before installation, please check whether lubrication is good enough.

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 maximum value for flatness deviation can be reached only once each 180°. The maximum values for each size of slew drive are shown on the table below.

Slew Drive Size		236	314	435	523	639
Flatness deviation	[in]	0.004	0.005	0.006	0.006	0.008
	[mm]	0.1	0.12	0.15	0.15	0.2

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. Bolts with a fully threaded shaft and split washers should not be used. The grip ratio (grip length divided by the diameter of the bolt) shall be observed, from minimum ≥ 2 to maximum ≤ 10 (recommended value 5). The threaded length should be at least 1.5 times the bolt diameter. The slew drive function, lifespan, and durability of the bolt connection are affected in case of non-compliance of the above mentioned points. On the below table the recommended tightening torques for each bolt size can be observed.

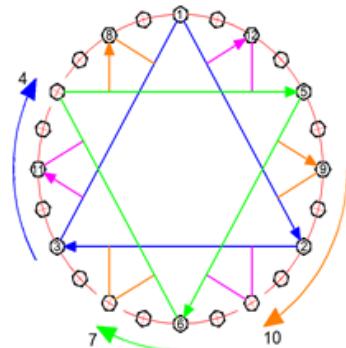
Mounting bolt dimension	Tightening torque (Nm) Quality grade 10.9
M6	15 ± 1
M8	37 ± 3
M10	72 ± 6
M12	126 ± 10
M16	312 ± 25
M20	609 ± 50

Mounting bolt dimension	Tightening torque (lbs·ft) Quality grade 10.9
1/4-20 UNC	12 ± 1
5/16-18 UNC	24 ± 2
3/8-16 UNC	45 ± 4
1/2-13 UNC	110 ± 7
5/8-11 UNC	210 ± 18
3/4-10 UNC	380 ± 36

For the tightening of the bolts, the following procedure should be followed in order to avoid deviation between bolt tightening forces:

- Slightly apply thread locker to the bolt threads (last three to five filets) in order to ensure uniform frictional resistance.
- Preload the bolts crosswise in 3 steps: 30%, 80% and 100% of the tightening torque. The scheme shows the order to be followed when tightening the bolts.

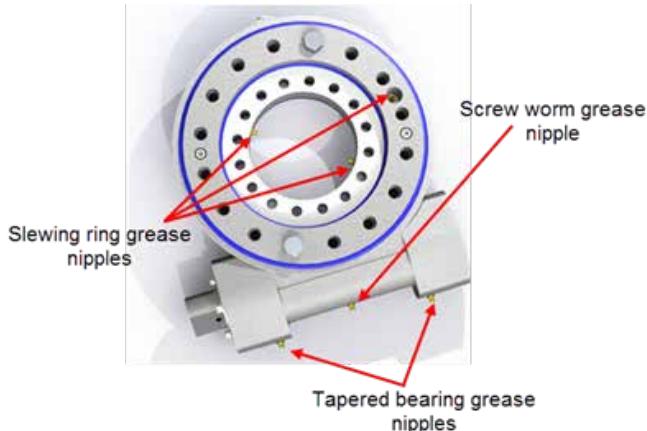
Once the screw is tightened, mark the surface of the screw and the structure surface. It is useful to inspect the bolts tightening



BASIC INSTRUCTIONS

6. LUBRICATION

For all applications a proper lubrication is necessary for a smooth operation of the slewing drive. All the TGBgroup slew drives are supplied slightly pre-lubricated but it is always recommended to add grease prior to initial operation. 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 re-grease consists in injecting grease into all grease nipples one after the other while rotating the slewing drive. The slewing drives must be re-greased 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.

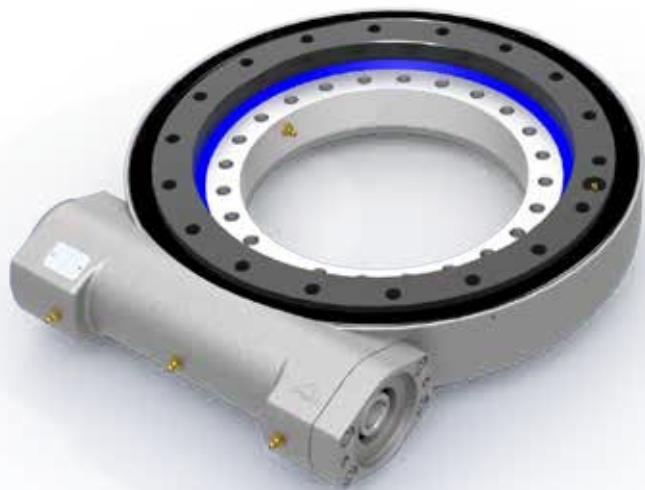
Working conditions	Slewing Ring and Screw Worm Re-lubrication intervals
Rotational speeds <0,5rpm Non extreme environmental conditions (solar trackers)	Every 400 hours of operation or once every 12 months
Rotational speeds >0,5rpm Non extreme environmental conditions (man lift, industrial applications)	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.

7. 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.

BE SERIES



DESCRIPTION

The BE series consists in a straight screw worm and a globoid slewing ring which guarantees a smooth and controlled rotation of the slew drive by sacrificing the maximum holding torque that the teeth can withstand.

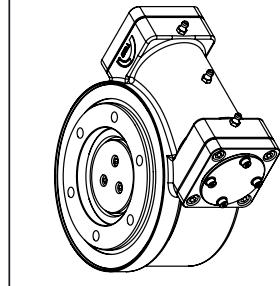
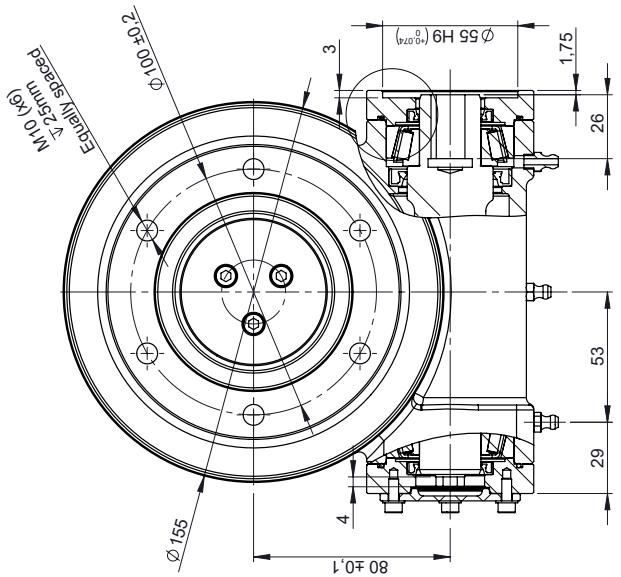
This kind of slew drive includes an external lip seal that provides a higher protection against dust and water.

MAIN FEATURES

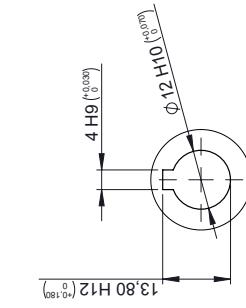
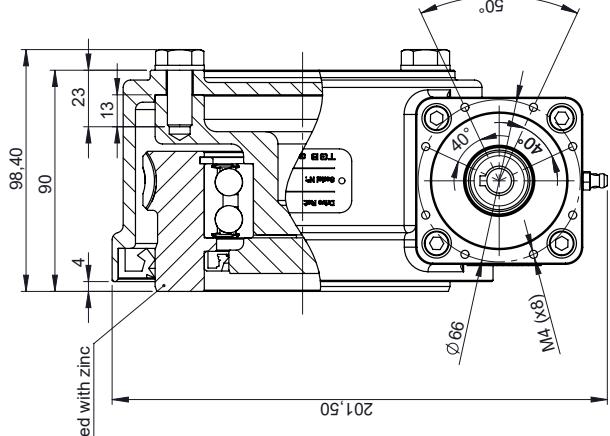
- HNBR Lip seal - resistant to UV light
- Ingress protection: IP 65
- Can be supplied with different colors or with special paint for extra corrosion protection
- Sizes in Metric and Imperial; Shaft types: Keyed shaft or Splined shaft

MAIN APPLICATIONS

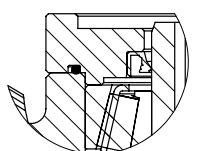
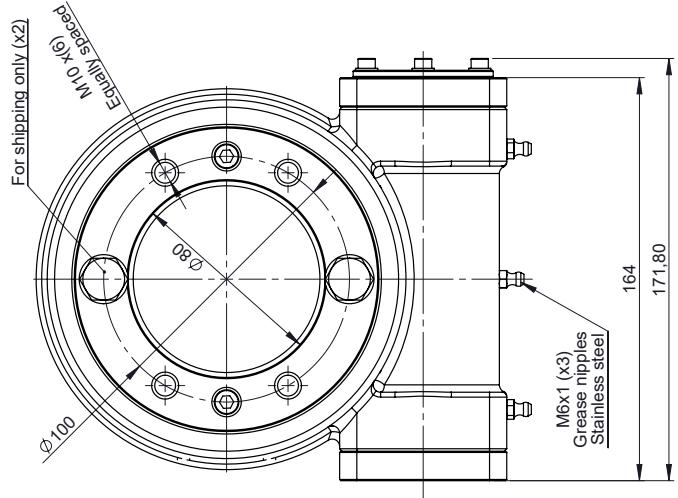
- Robotics, Offshore applications, Grabs, Excavators, Trailers, Cranes, Antennas, Aerial platforms, Forklifts, etc.



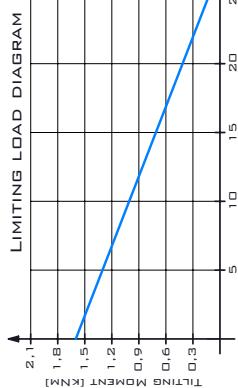
Input shaft detail
Scale 1:1



Output shaft detail
Scale 1:5



O-ring and Lip seal detail
Scale 1:1



MAIN PERFORMANCE PARAMETERS

GEAR RATIO	6:2:1	HOLDING TORQUE	950 Nm
EFFICIENCY	30%	TLITING MOMENT	1.6 kNm
SELF-LOCKING GEAR	YES	RADIAL STATIC LOAD	1.5 kN
BACKLASH CLEARANCE	< 0.34°	AXIAL STATIC LOAD	27 kN
MAXIMUM TORQUE	800 Nm	RADIAL DYNAMIC LOAD	7.6 kN
NOMINAL TORQUE	400 Nm	AXIAL DYNAMIC LOAD	8.7 kN

NOTES: ALL BE GEAR DRIVES ARE PRE-LUBRICATED. MAXIMUM OUTPUT SPEED 1 RPM.
(LOADS VALID FOR 10,000 WORKING HOURS AT 0.02 RPM). ALL SCREWS DIAKROMET TREATED



BE130-Z1-RM

Sales Drawing

Weight [kg]:

Size:

Scale:

Sheet:

>1200	±1.2
>000 - 1200	±0.8
>200 - 400.0	±0.5
>30.0 - 120.0	±0.3
>6.0 - 30.0	±0.2
>3.0 - 6.0	±0.1
>0.3 - 3.0	±0.1
Range of sizes Unquoted values	

Reference

BE130-Z1-RM

Sales Drawing

Weight [kg]:

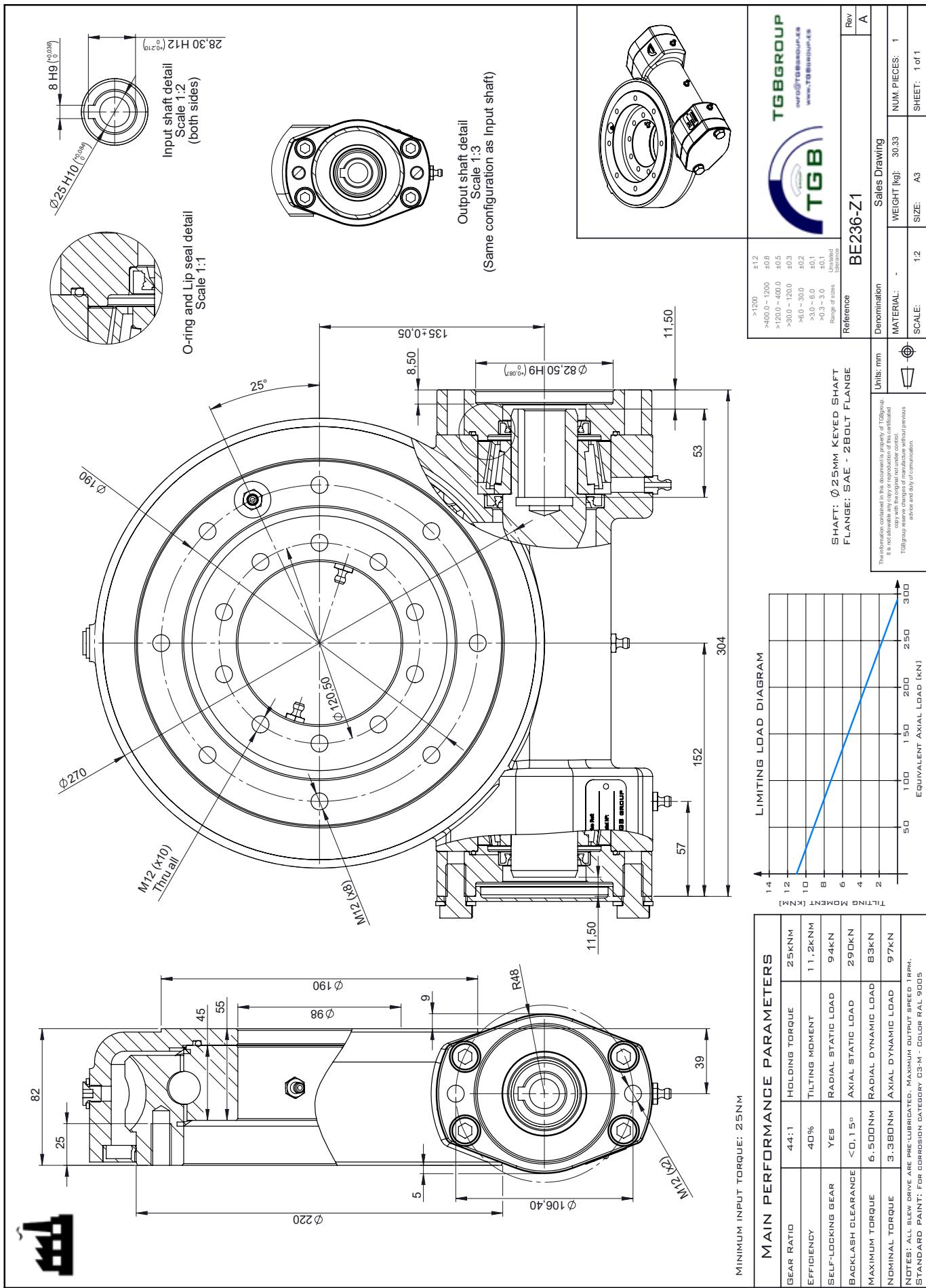
Size:

Scale:

Sheet:

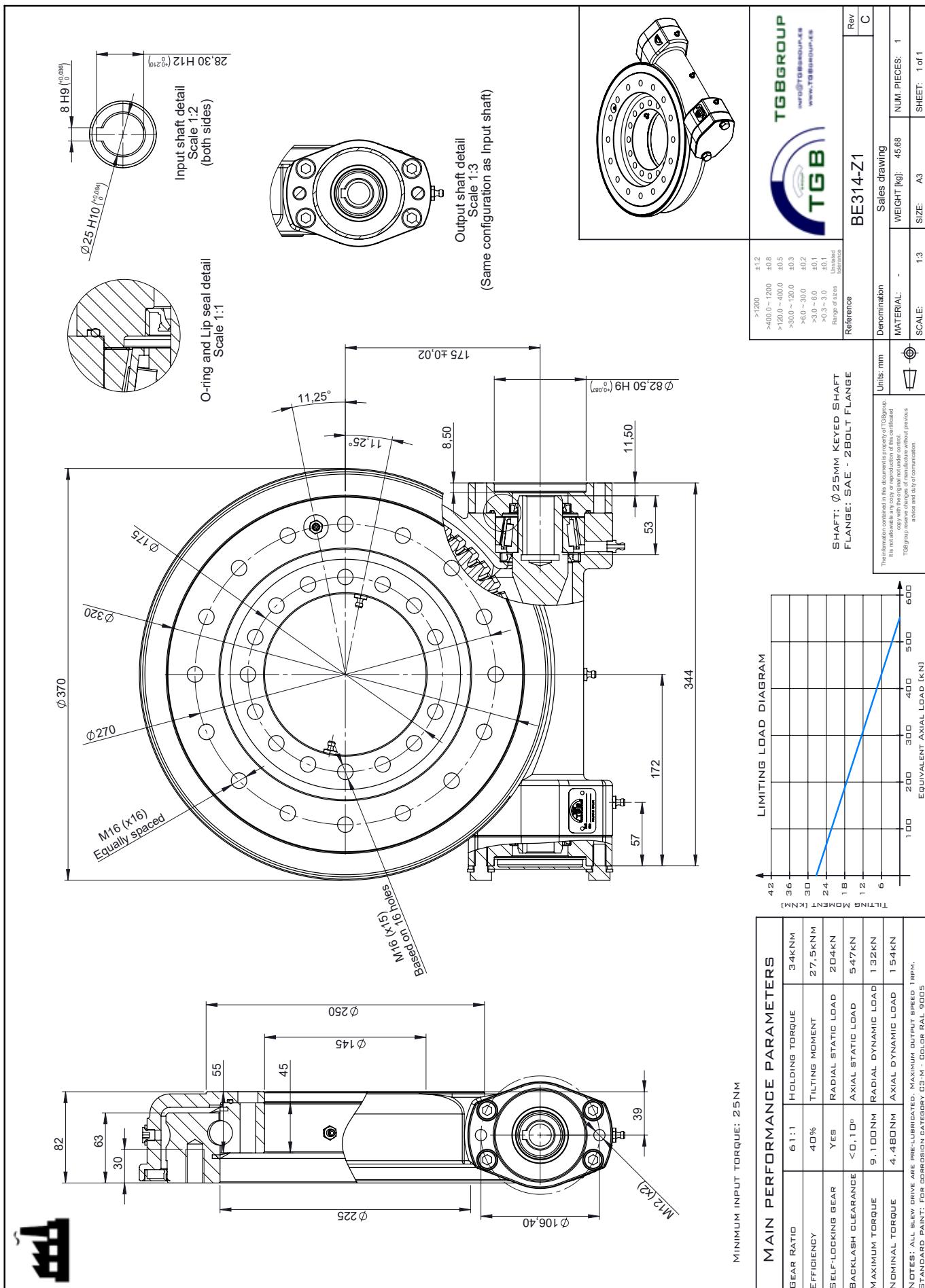
BE SERIES

METRIC



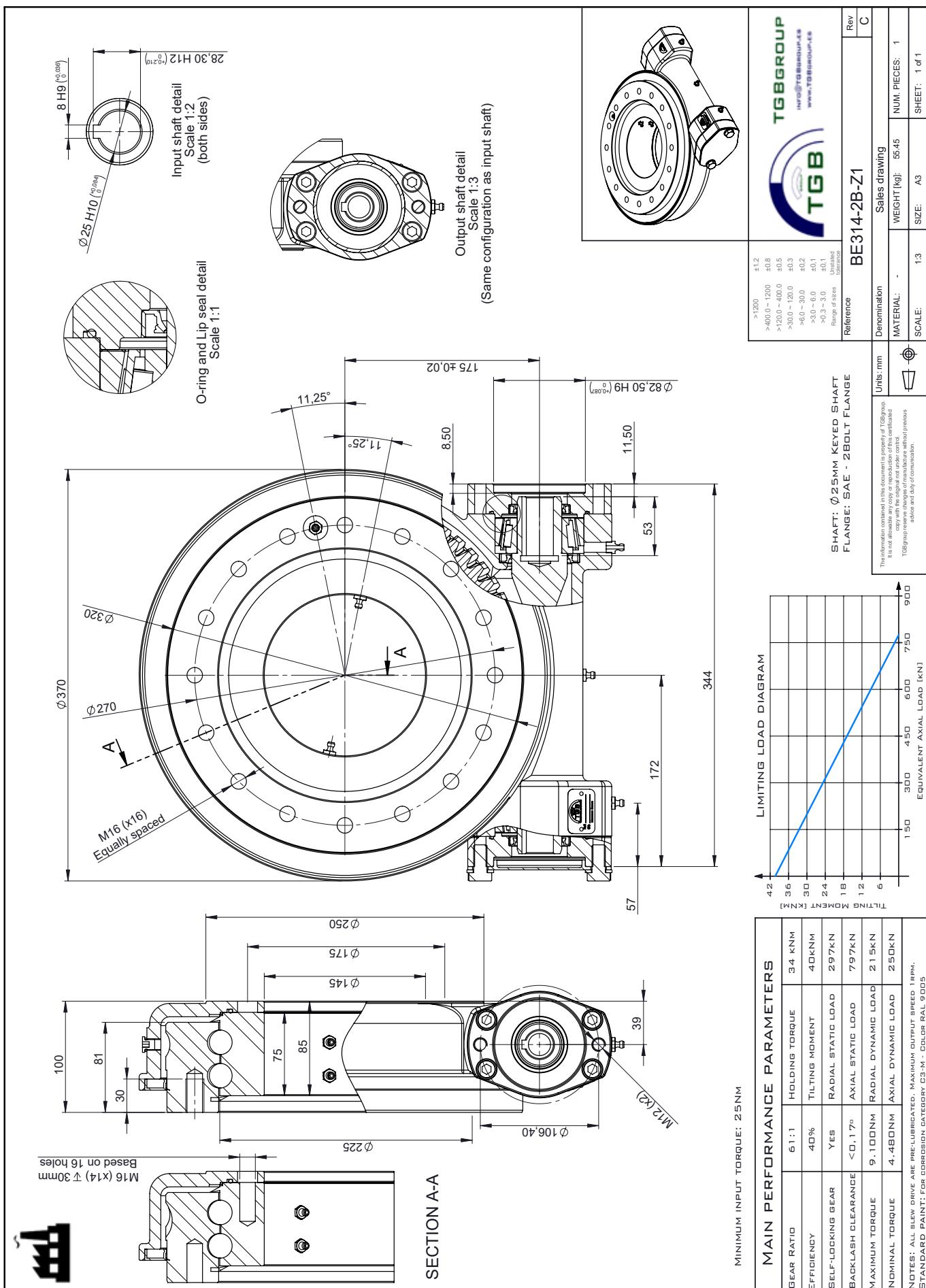
BE SERIES

METRIC



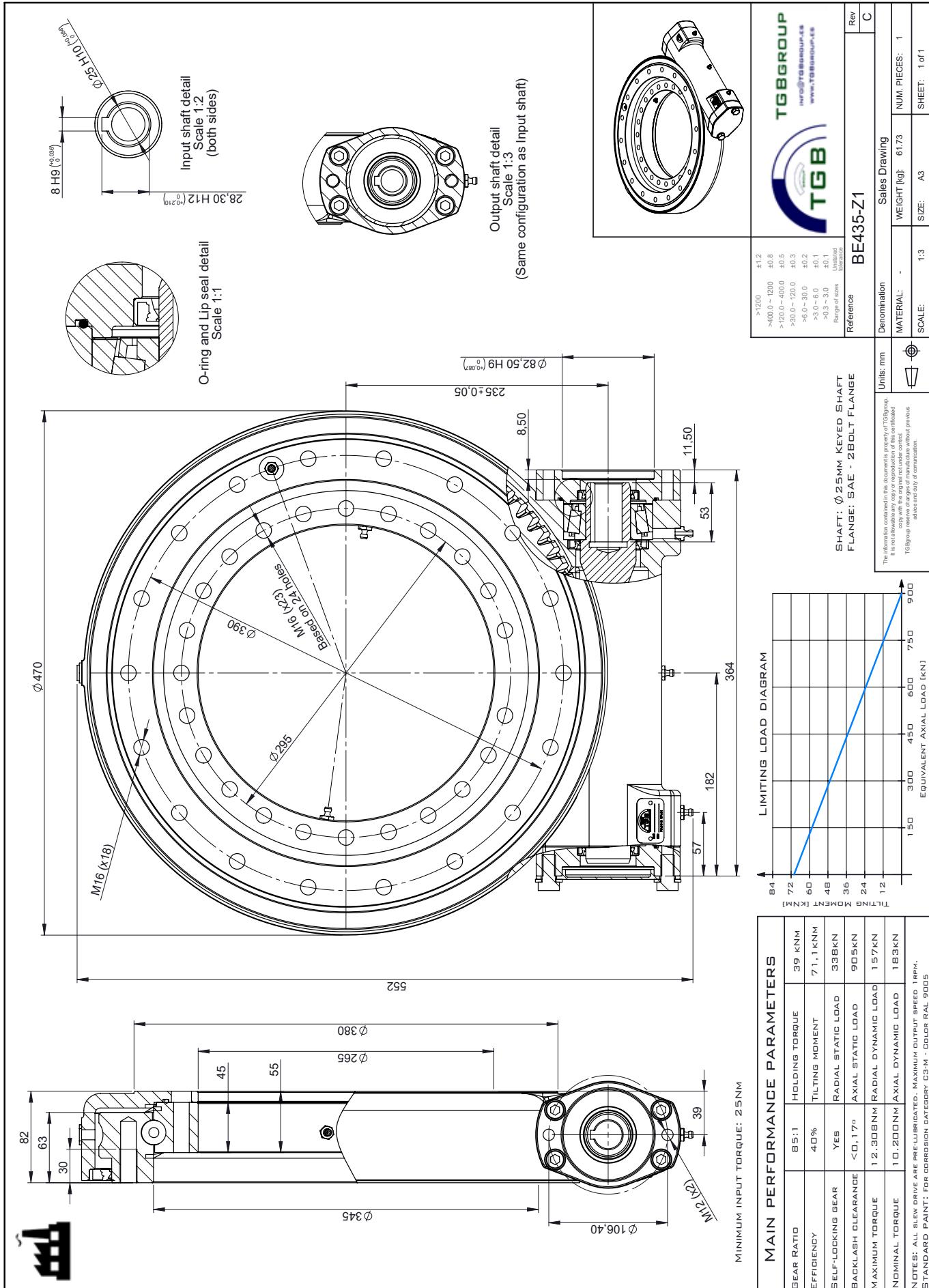
BE SERIES

METRIC



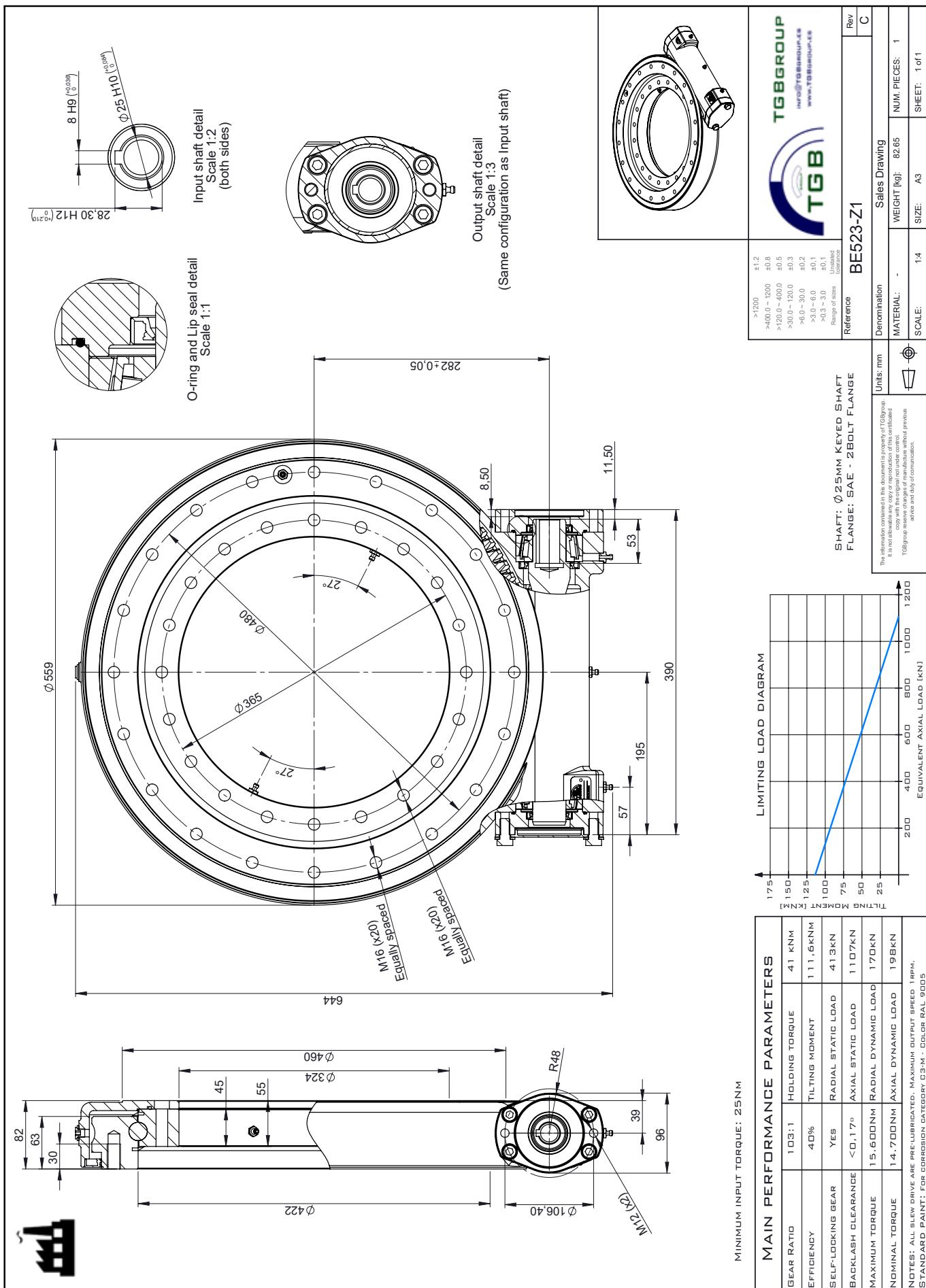
BE SERIES

METRIC

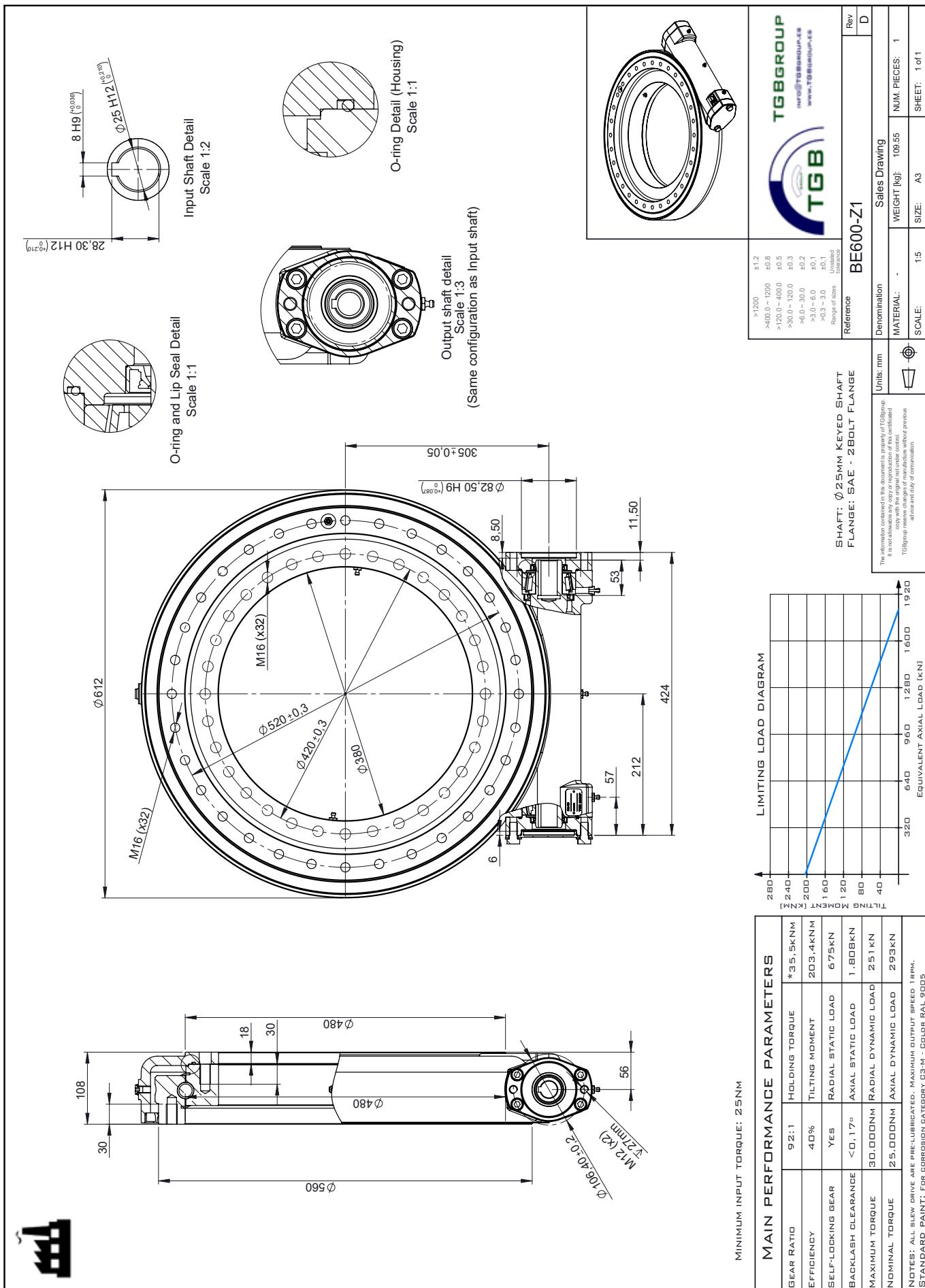


BE SERIES

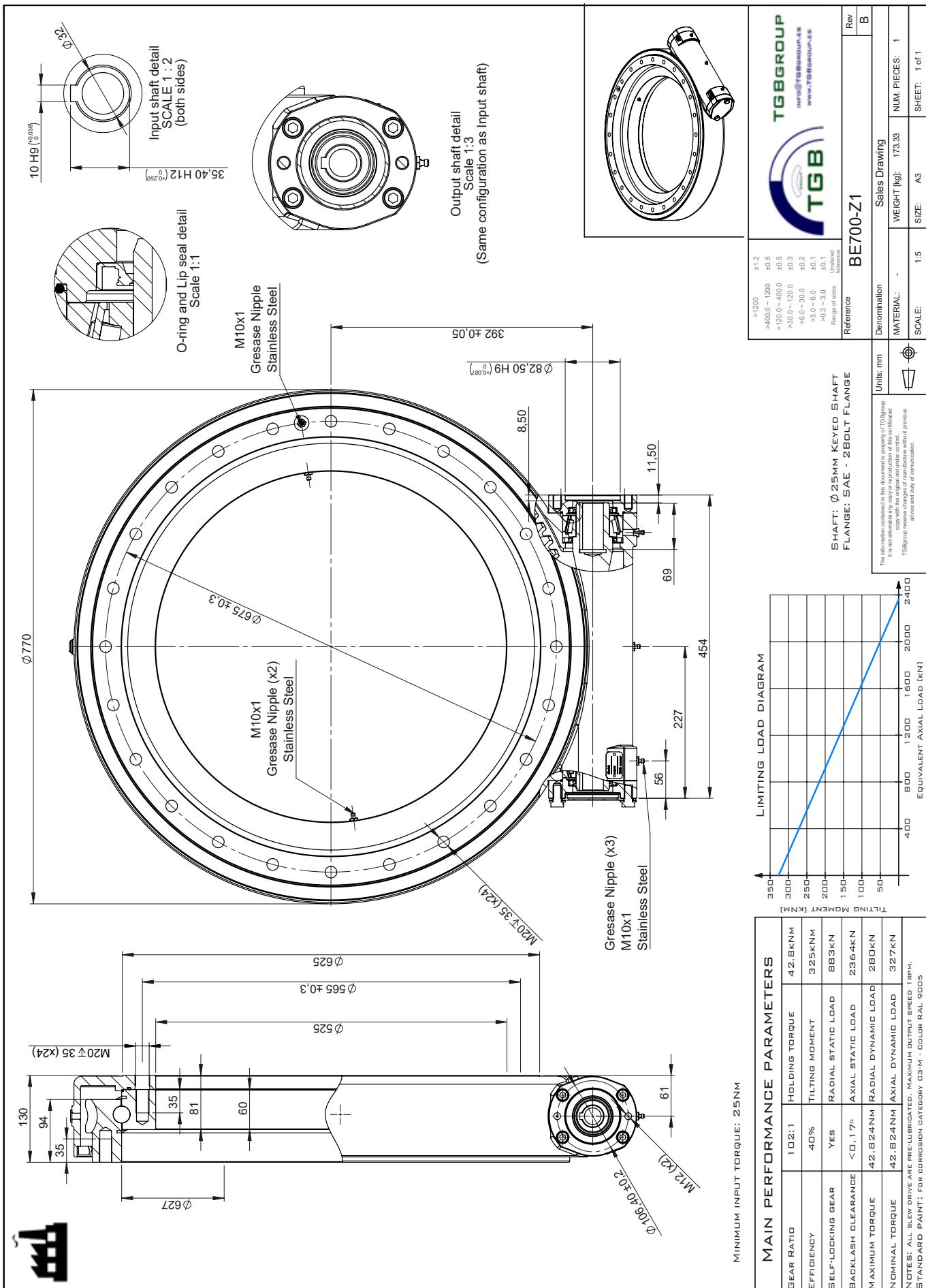
METRIC



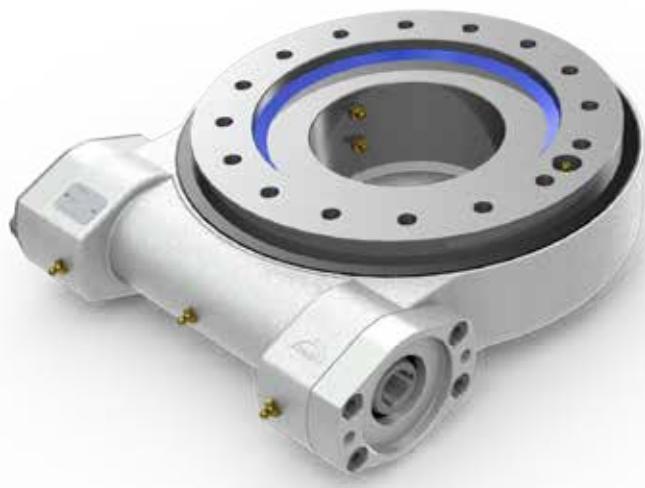
BE SERIES
METRIC



BE SERIES
METRIC



LBE SERIES



DESCRIPTION

The LBE series are low weight drives that have the same geometry and dimensions as the BE drives but with a housing of aluminum. This modification reduces considerably the slew drive weight which allows to use it in special applications where weight is critical.

This kind of slew drive includes an external lip seal that provides a higher protection against dust and water.

MAIN FEATURES

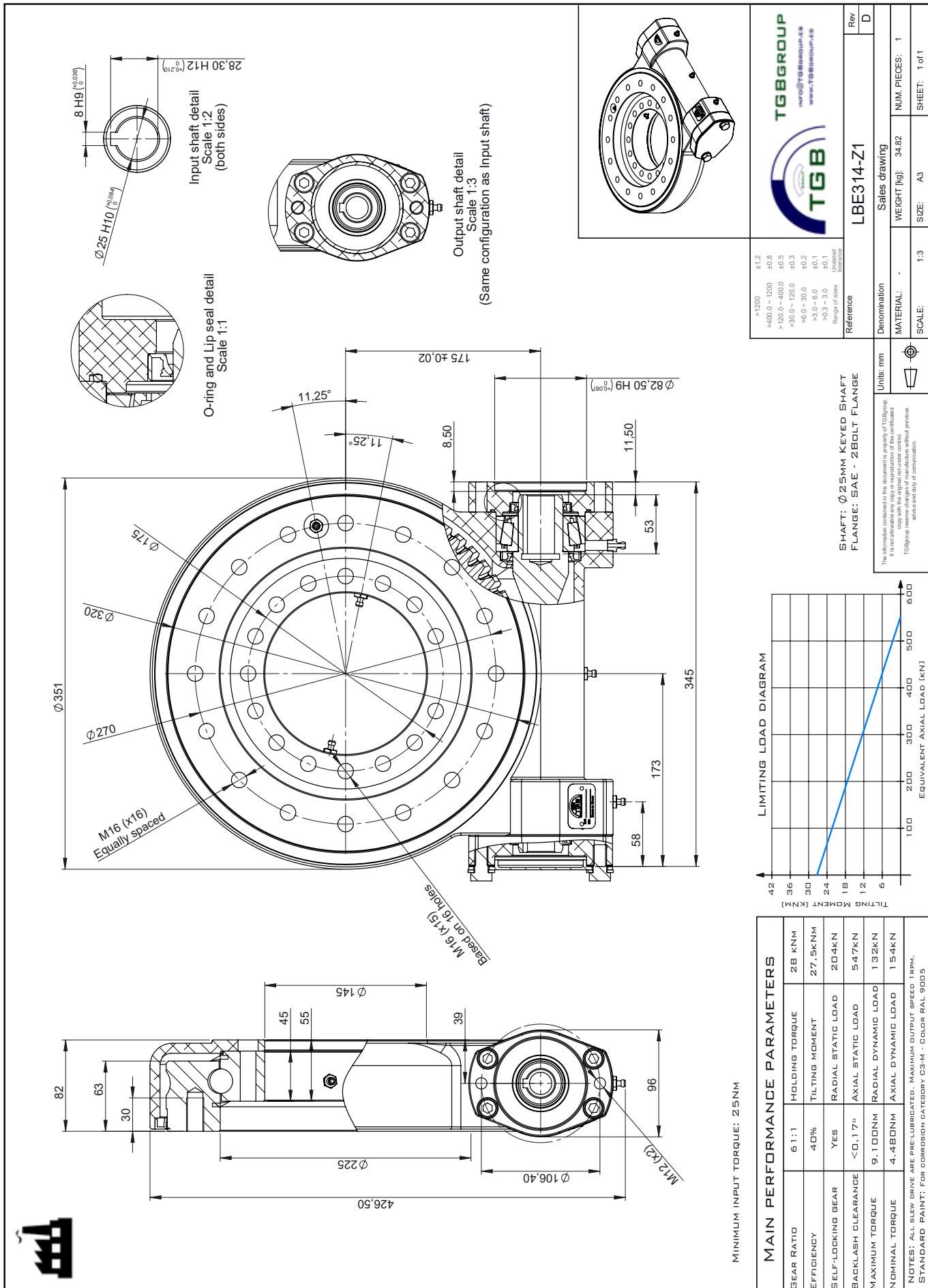
- HNBR Lip seal - resistant to UV light
- Ingress protection: IP 65
- Aluminum Housing
- Can be supplied with different colors or with special paint for extra corrosion protection
- Sizes in Metric and Imperial; Shaft types: Keyed shaft or Splined shaft

MAIN APPLICATIONS

- Robotics, Aerial platforms, etc.

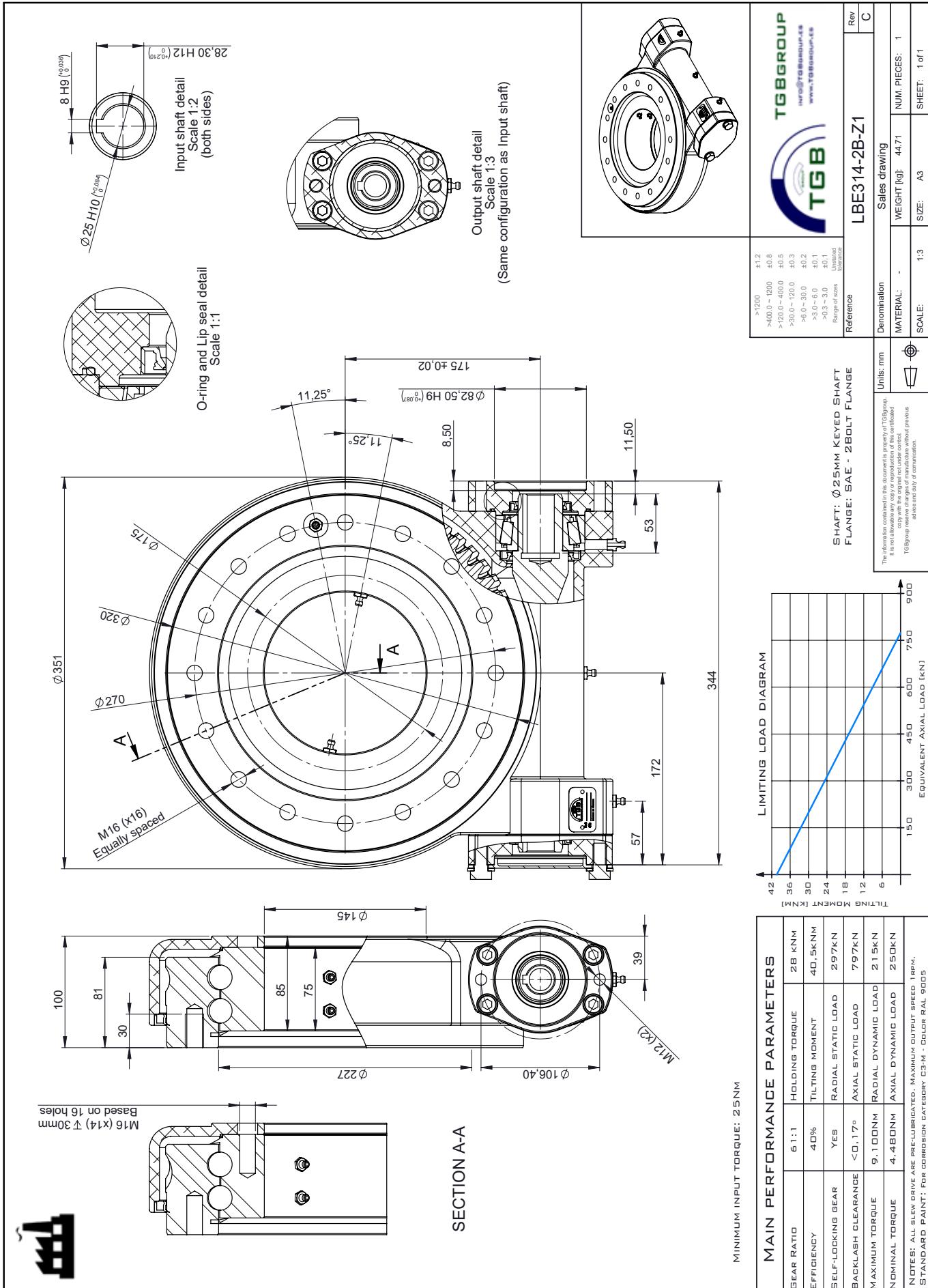
LBE SERIES

METRIC



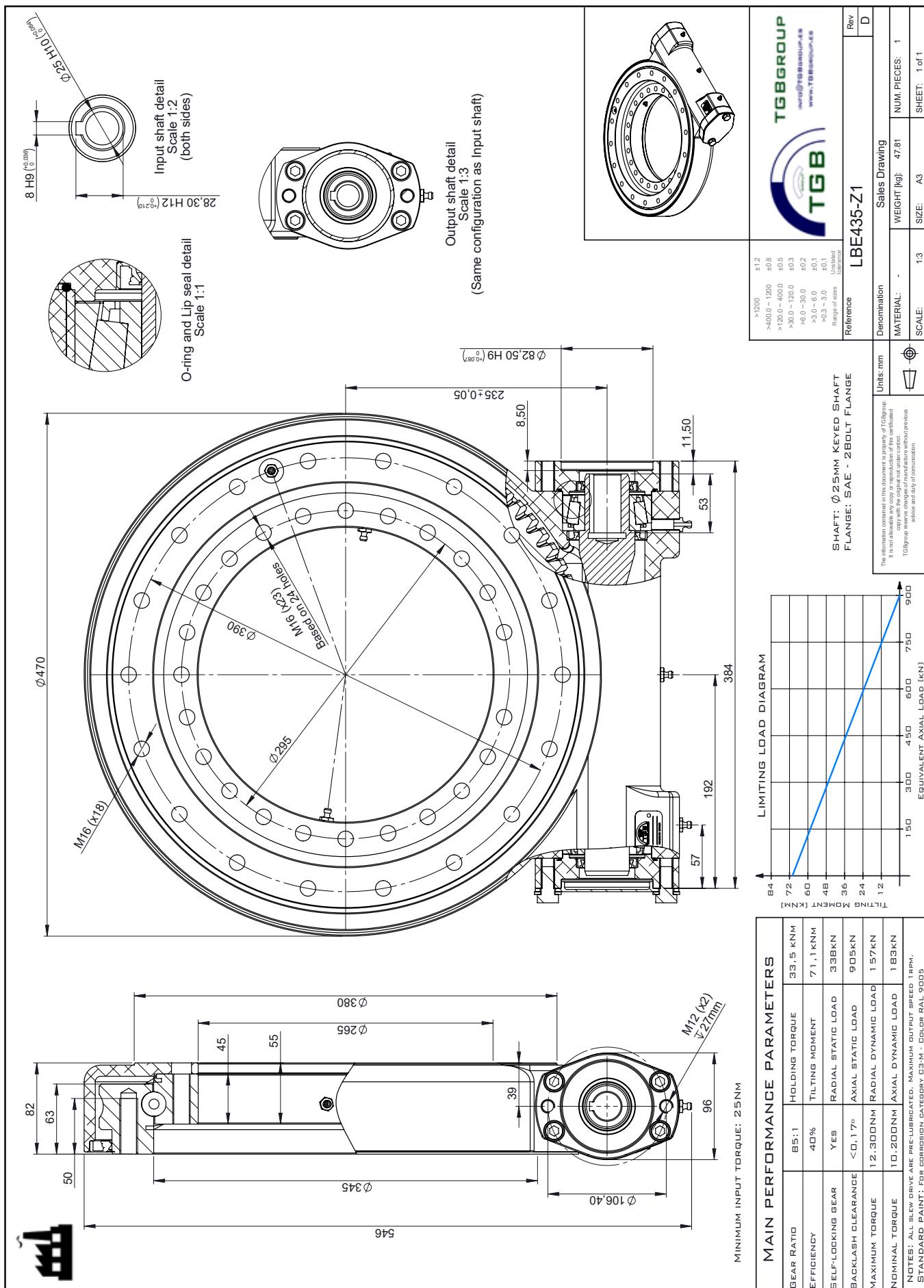
LBE SERIES

METRIC



LBE SERIES

METRIC



TGO SERIES



DESCRIPTION

The TGO series are the open version for the TGE series, so the inner components are exactly the same, while the housing does not cover the slewing ring like on the previous series.

MAIN FEATURES

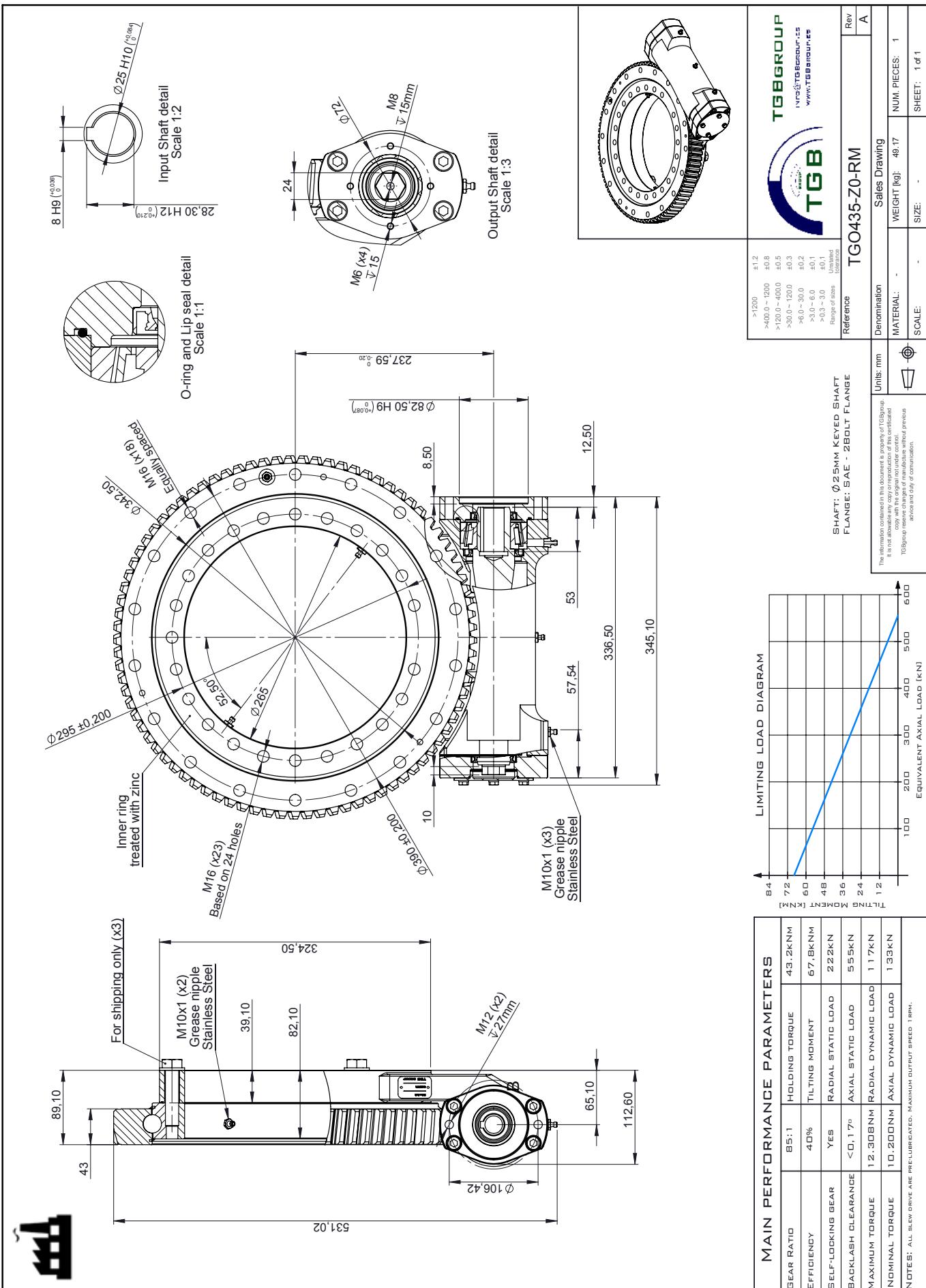
- Can be supplied with different colors or with special paint for extra corrosion protection
- Sizes in Metric and Imperial; Shaft types: Keyed shaft or Splined shaft

MAIN APPLICATIONS

- Vacuum trucks, cranes, etc.

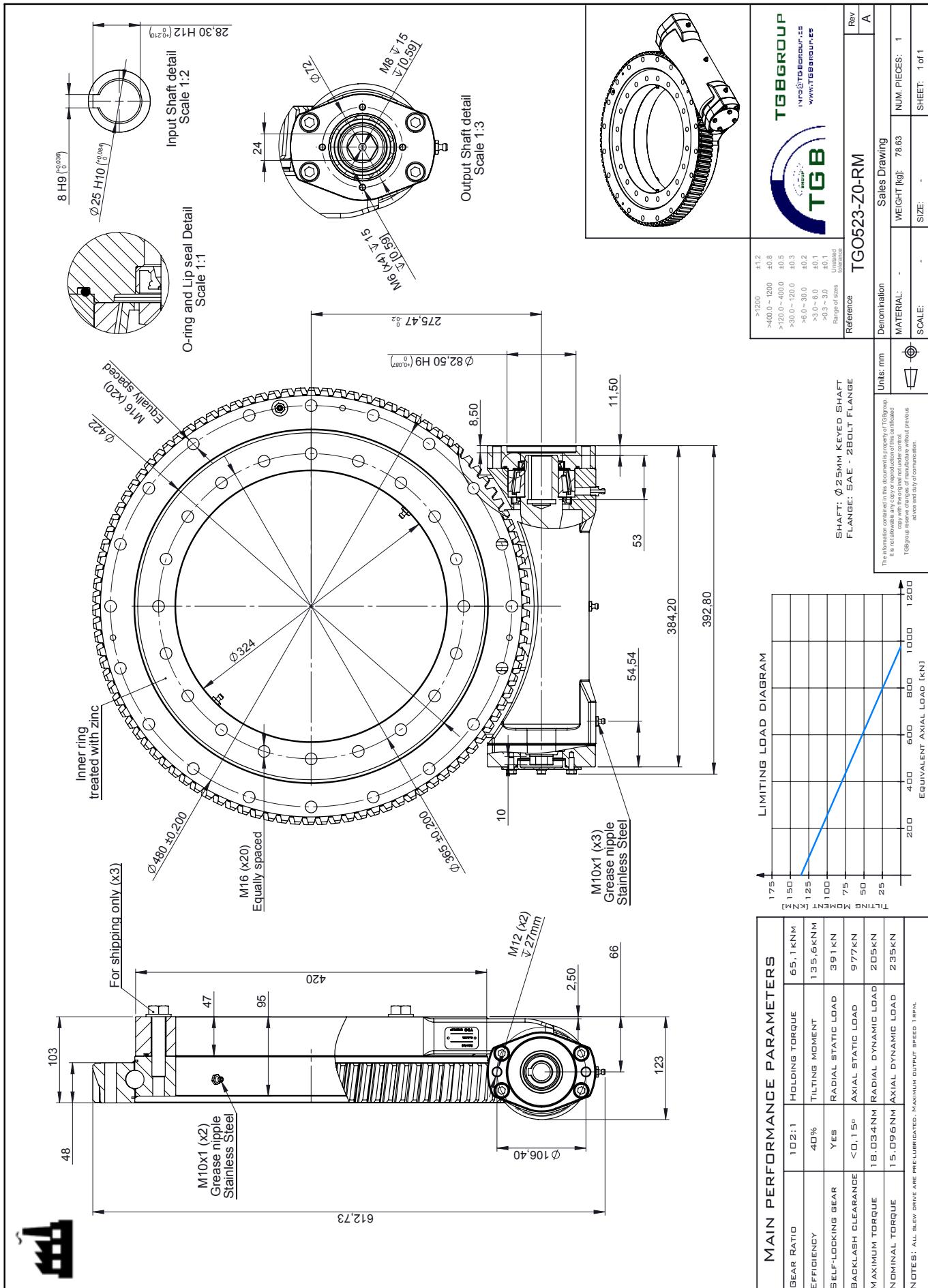
TGO SERIES

METRIC



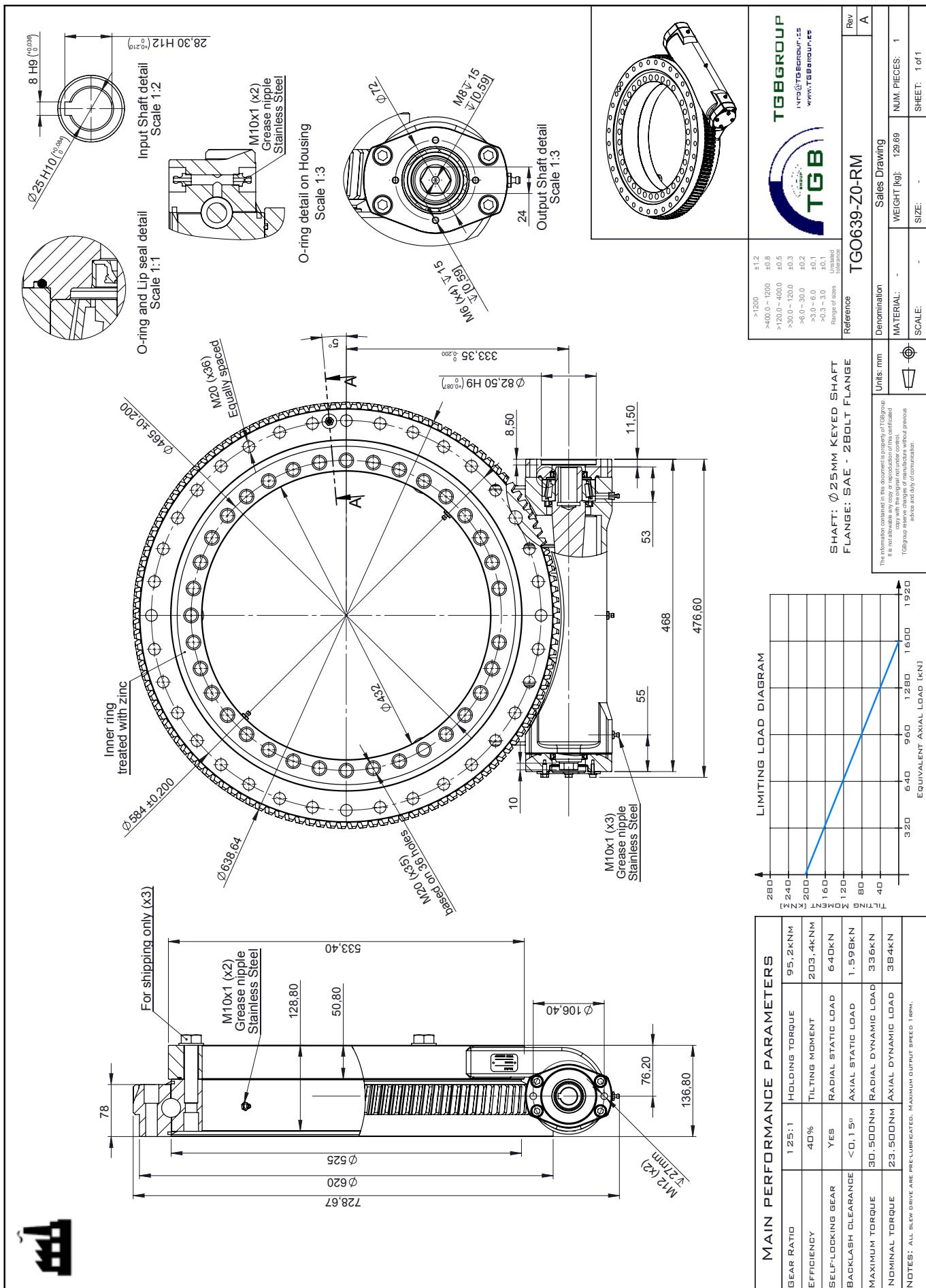
TGO SERIES

METRIC



TGO SERIES

METRIC



2-WORM SERIES



DESCRIPTION

The double worm series are slew drives designed to withstand higher torques than the previous series as they are driven by two screw worms at the same time, which makes the slew drive to resist nearly the double of tooth force.

This kind of slew drive includes an external lip seal that provides a higher protection against dust and water.

MAIN FEATURES

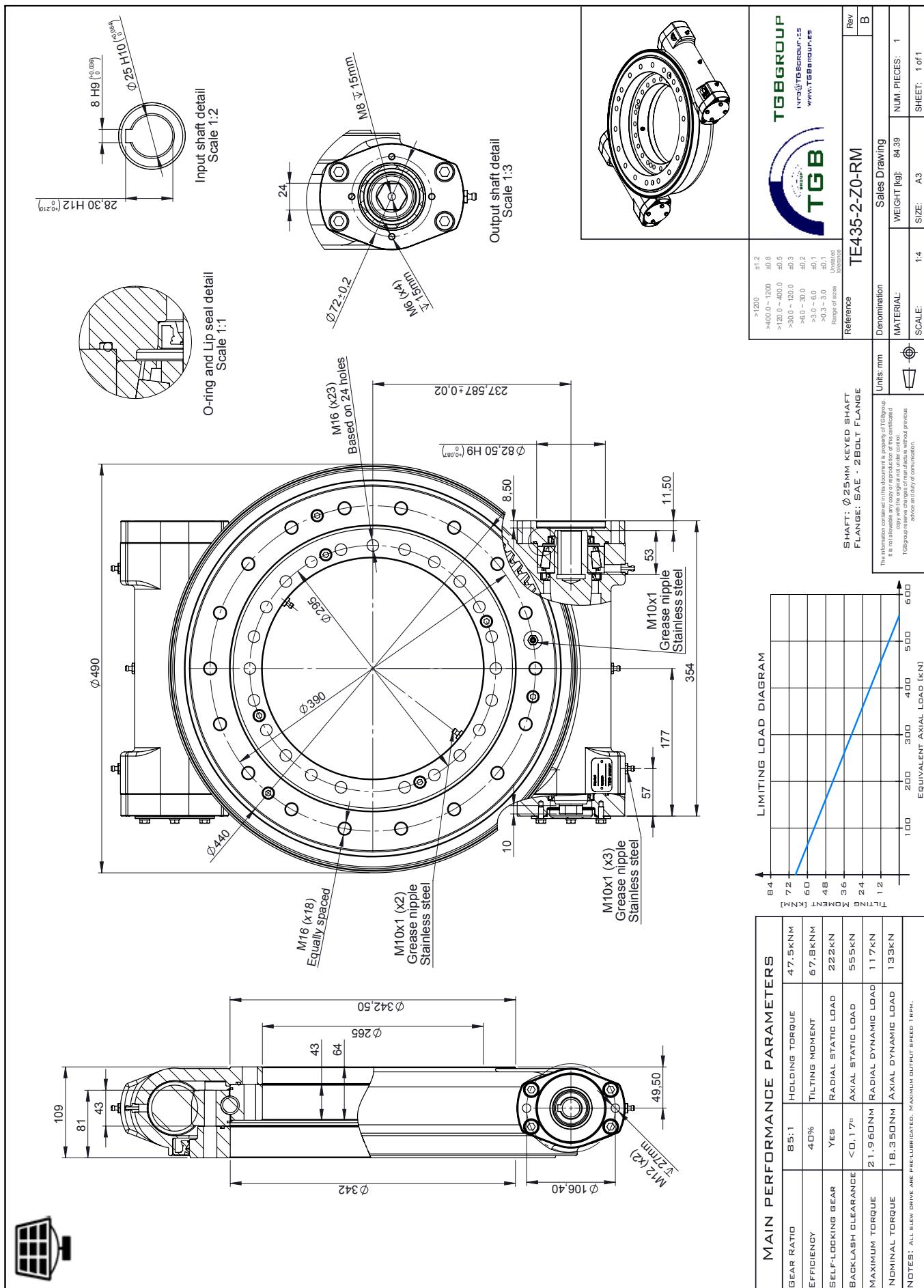
- HNBR Lip seal - resistant to UV light
- Ingress protection: IP 65
- Can be supplied with different colors or with special paint for extra corrosion protection
- Sizes in Metric and Imperial; Shaft types: Keyed shaft or Splined shaft

MAIN APPLICATIONS

- Cranes, Forklifts, etc.

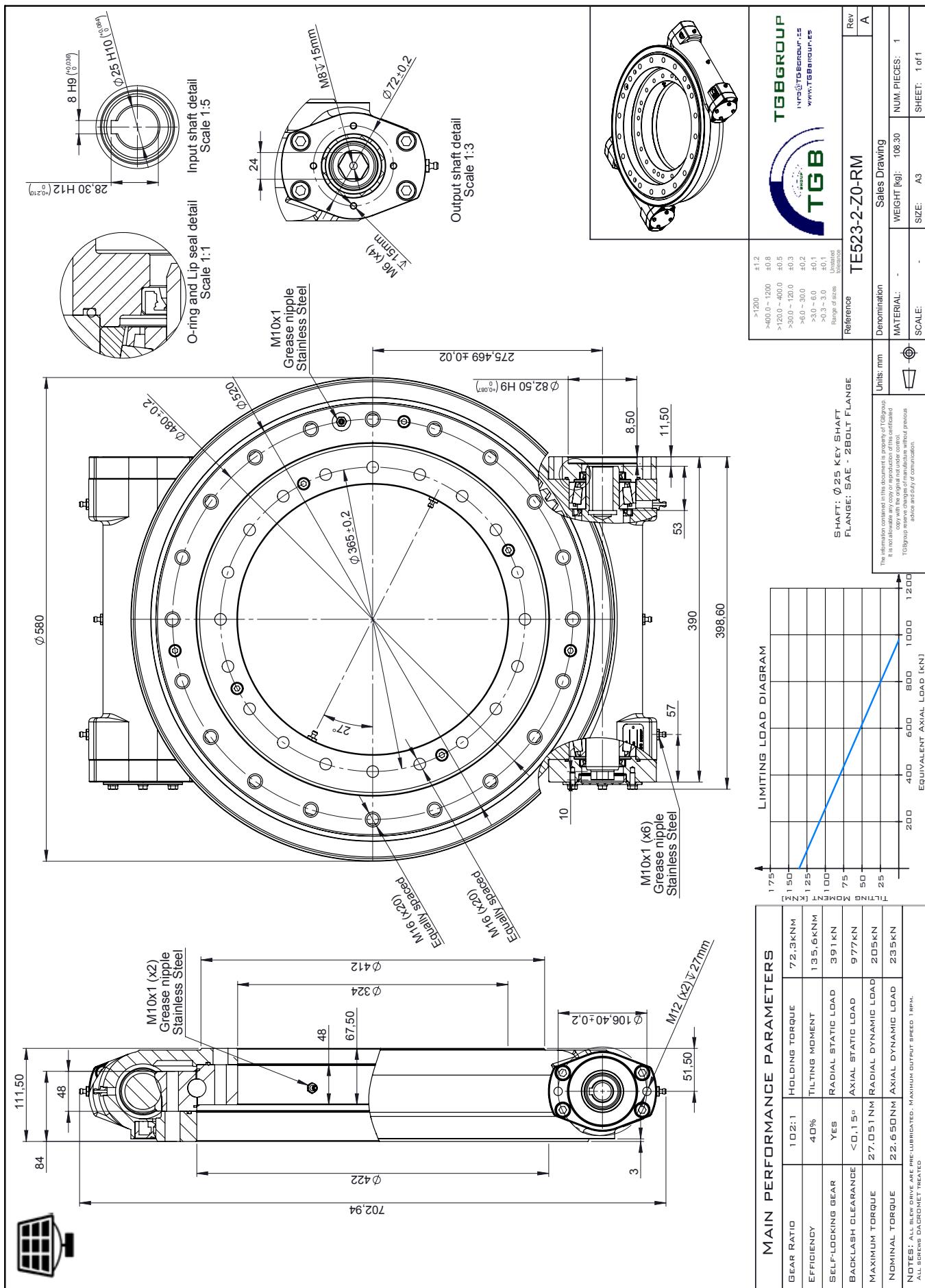
DOUBLE WORM SERIES

METRIC



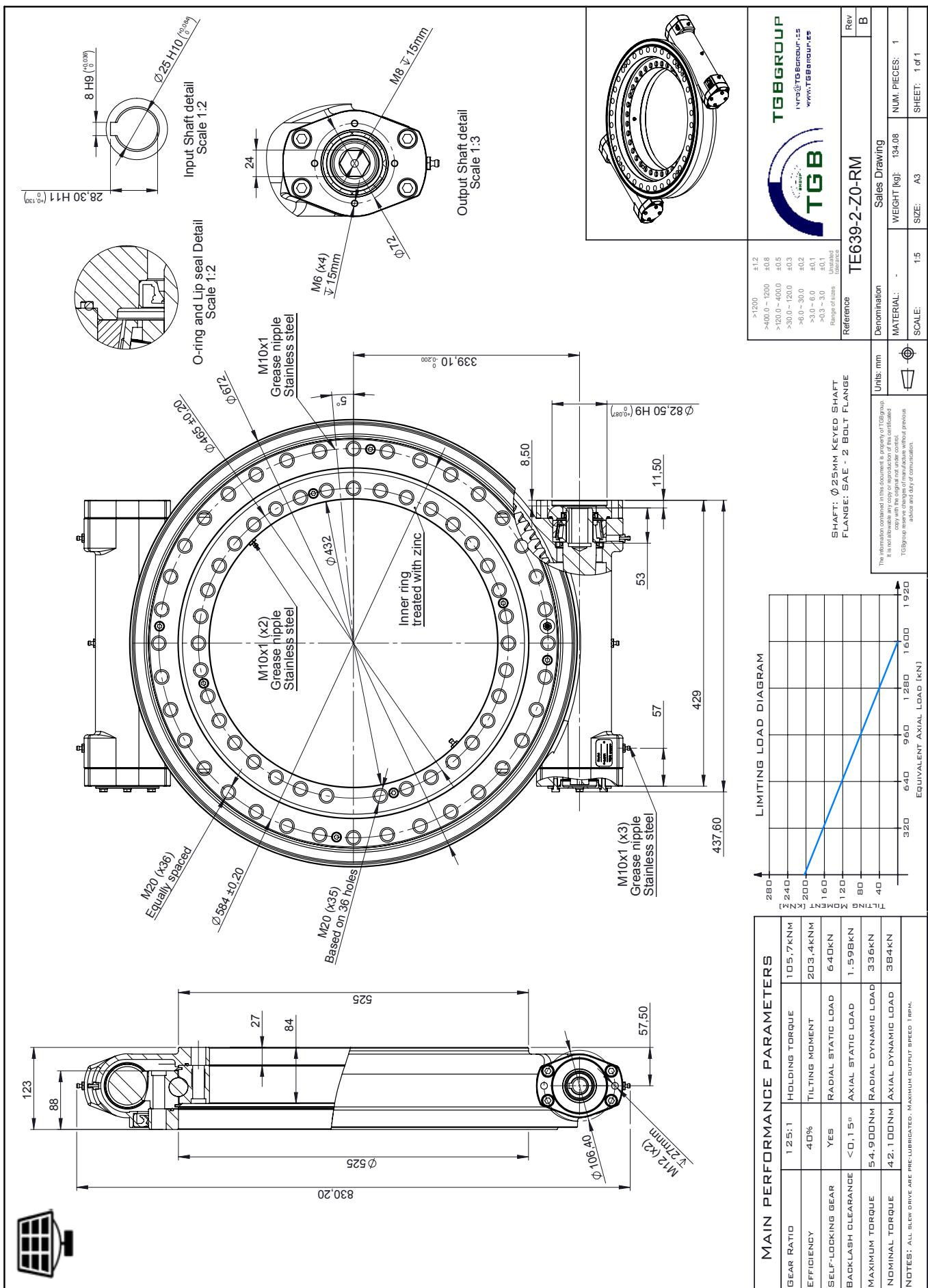
DOUBLE WORM SERIES

METRIC



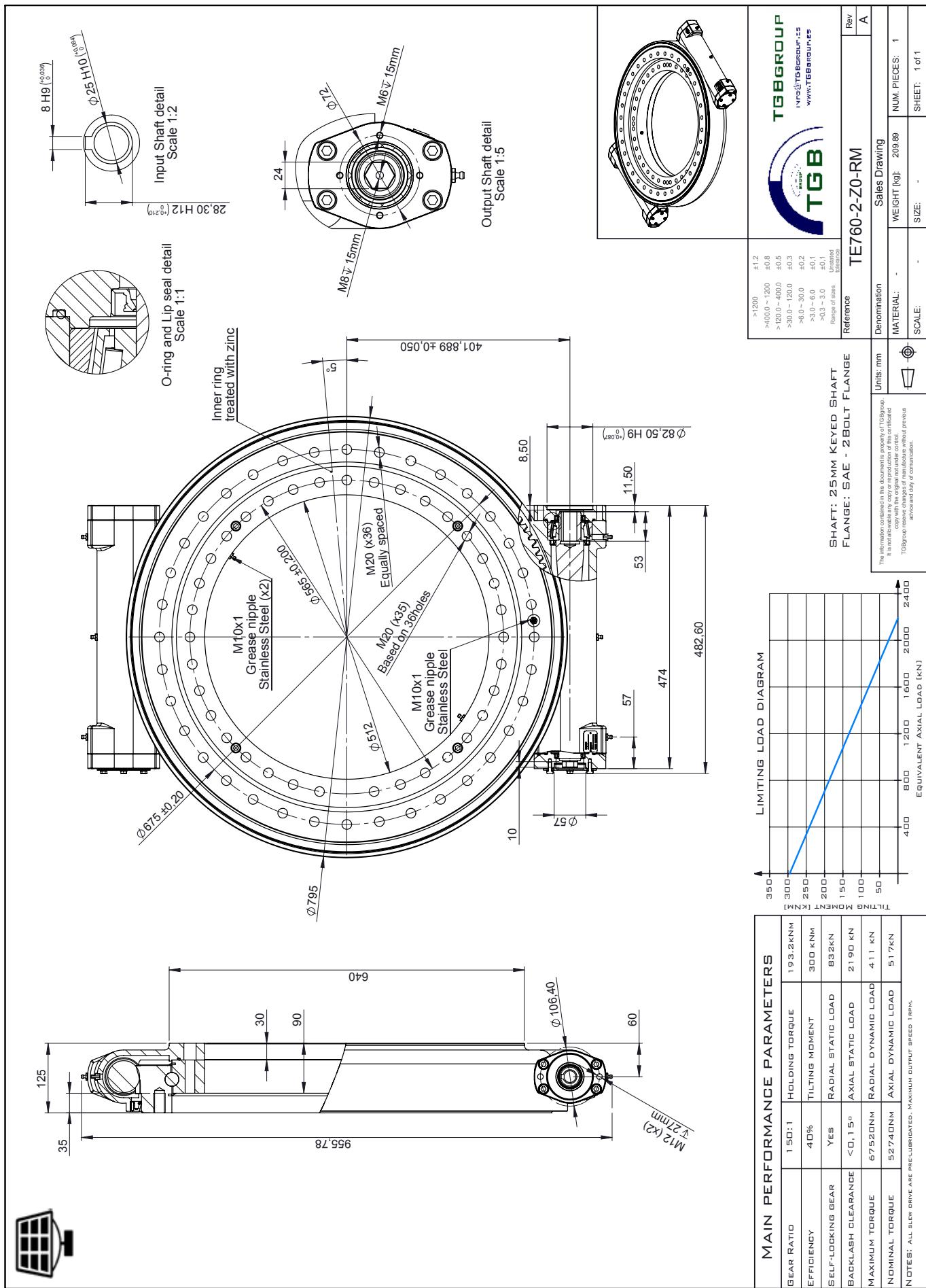
DOUBLE WORM SERIES

METRIC



DOUBLE WORM SERIES

METRIC



TE SERIES



DESCRIPTION

The TE series are slew drives which consist on a globoid screw worm and a helical slewing ring which provide a high contact ratio between the screw worm teeth and the slewing ring teeth (between 3 to 4 teeth are always in contact). This fact allows this serie of slew drive to withstand high holding torques, which are quite critical for solar trackers applications where the slew drive must resist high loads due to wind gusts.

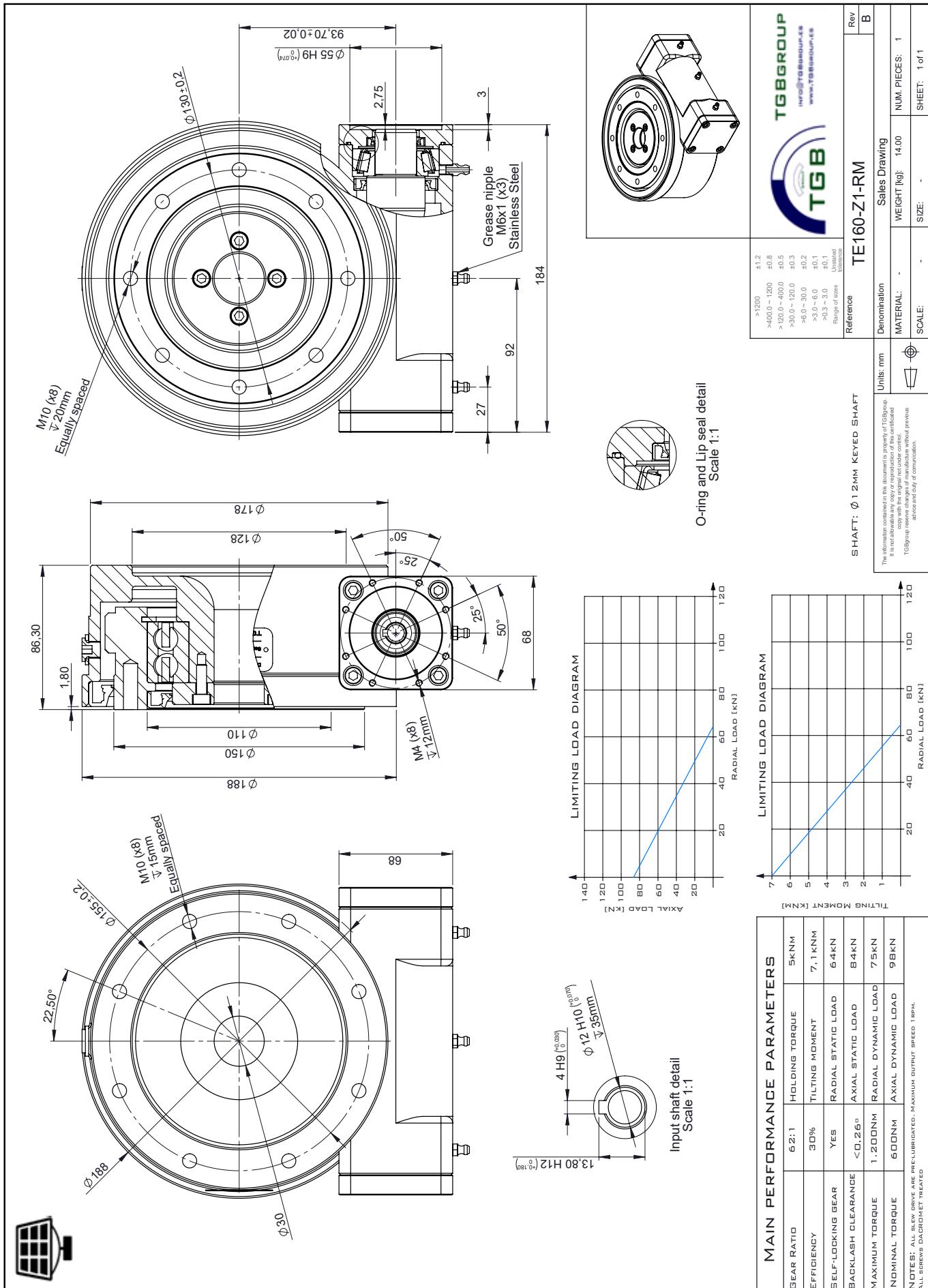
This kind of slew drive includes an external lip seal that provides a higher protection against dust and water.

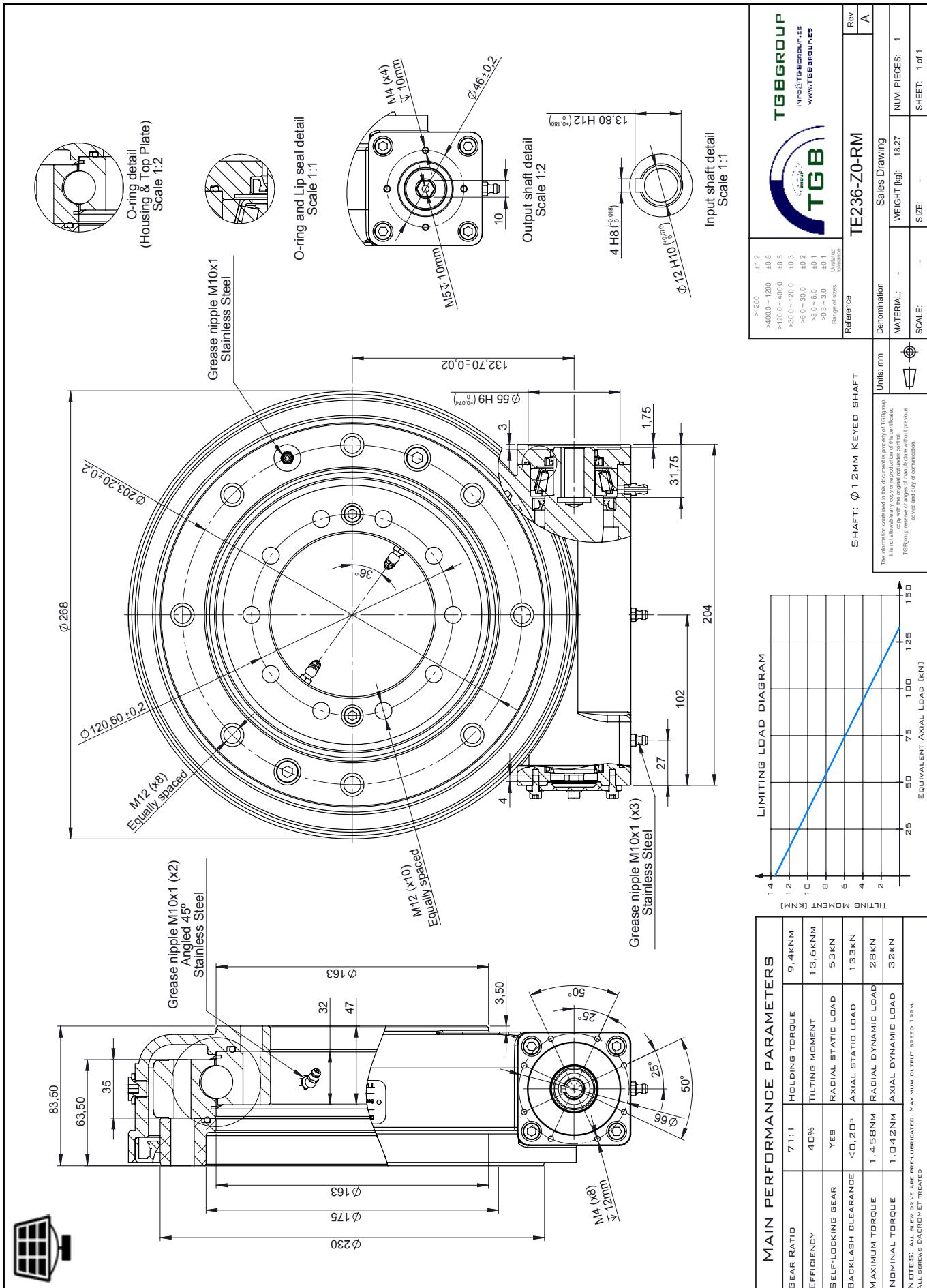
MAIN FEATURES

- HNBR Lip seal - resistant to UV light
- Ingress protection: IP 65
- Can be supplied with different colors or with special paint for extra corrosion protection
- Sizes in Metric and Imperial; Shaft types: Keyed shaft or Splined shaft

MAIN APPLICATIONS

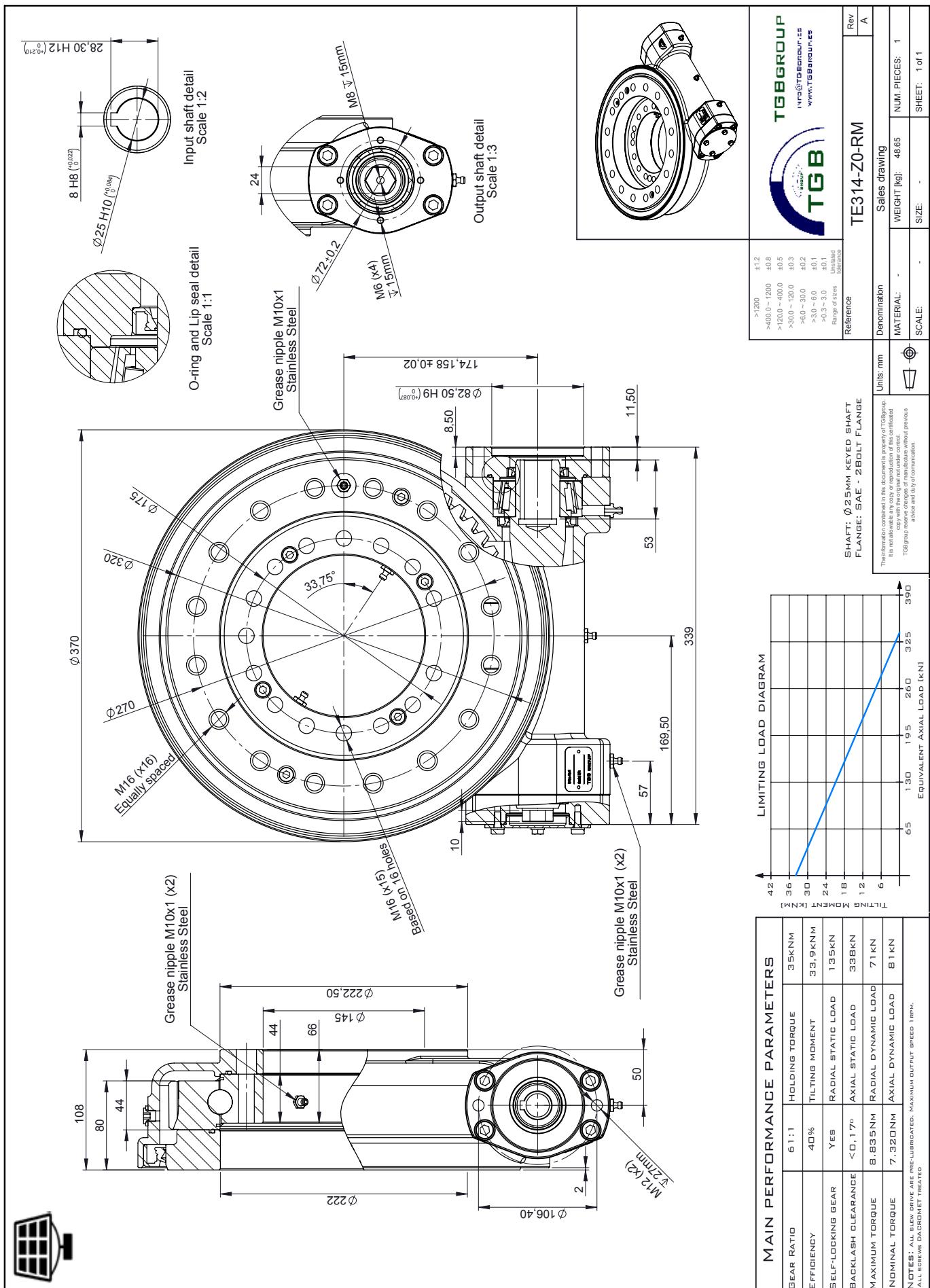
- Solar trackers



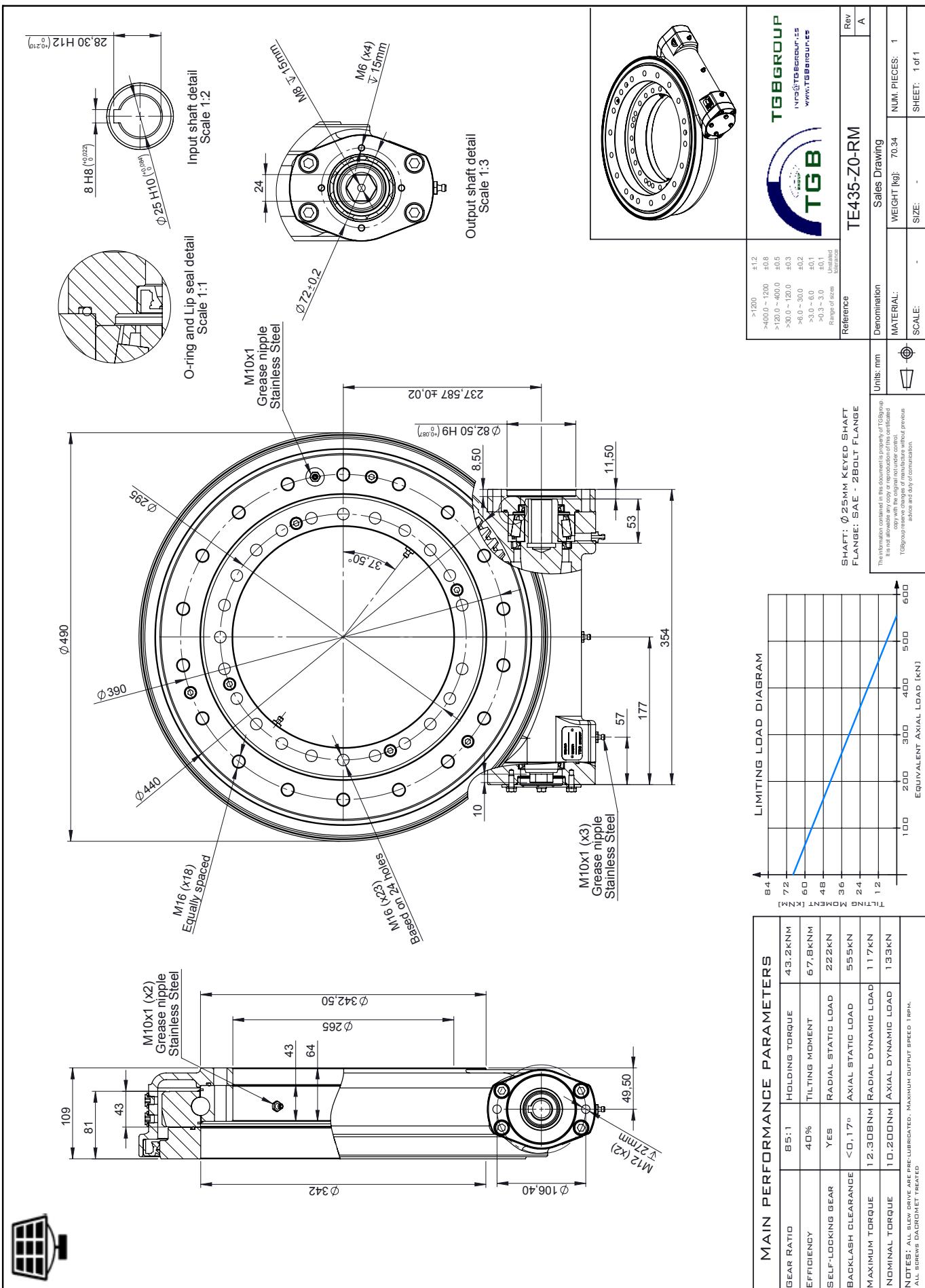


TE SERIES

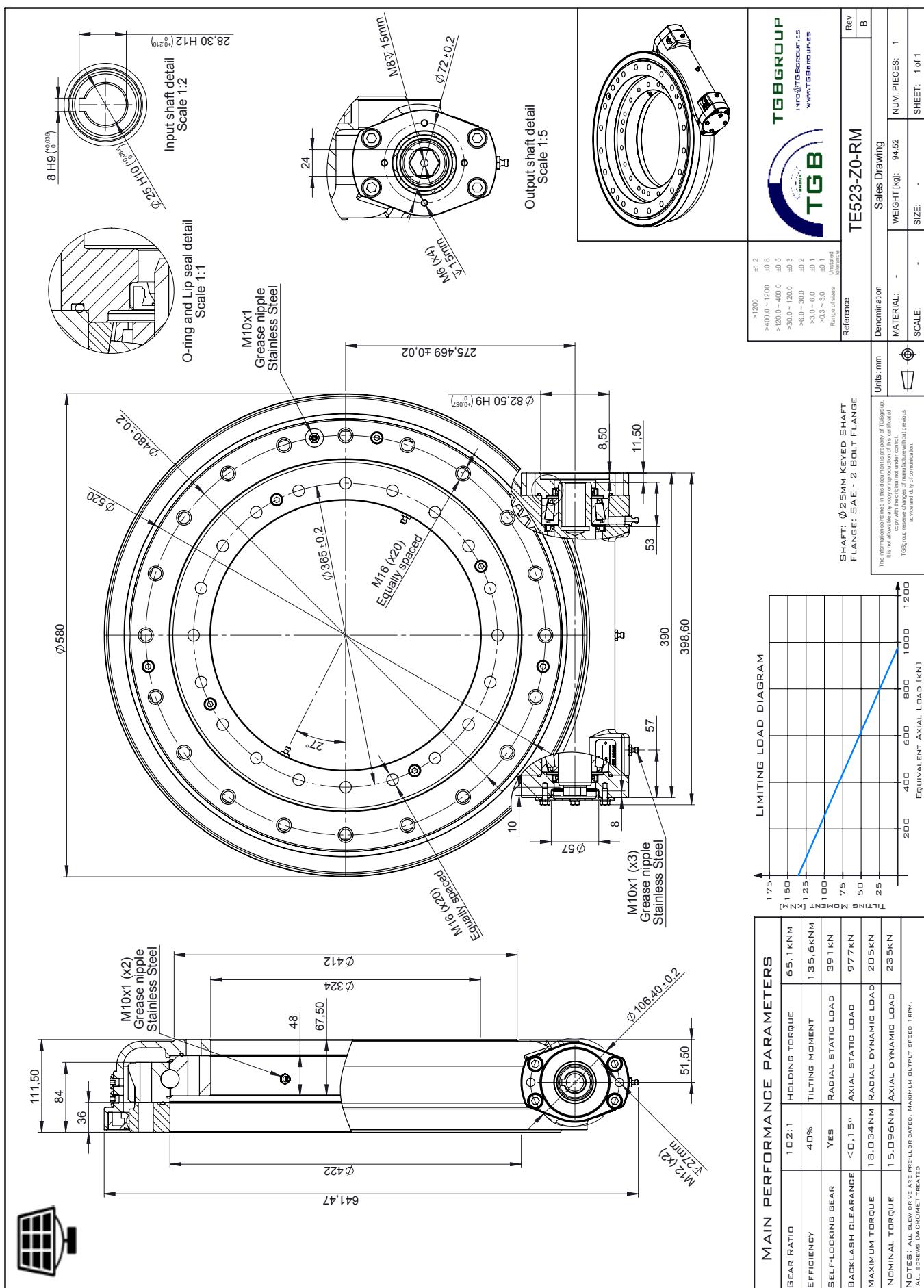
METRIC



TE SERIES
METRIC

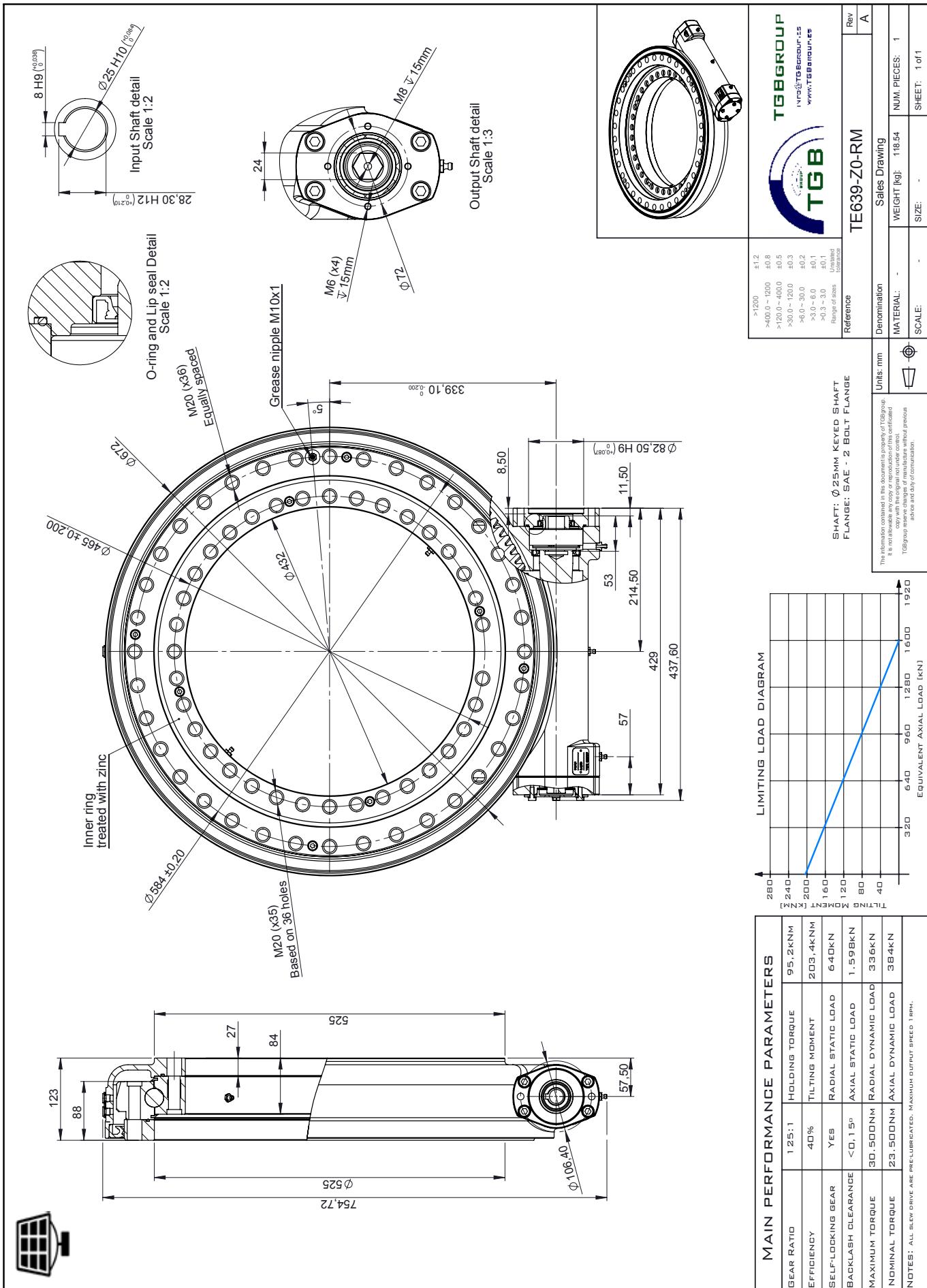


TE SERIES
METRIC



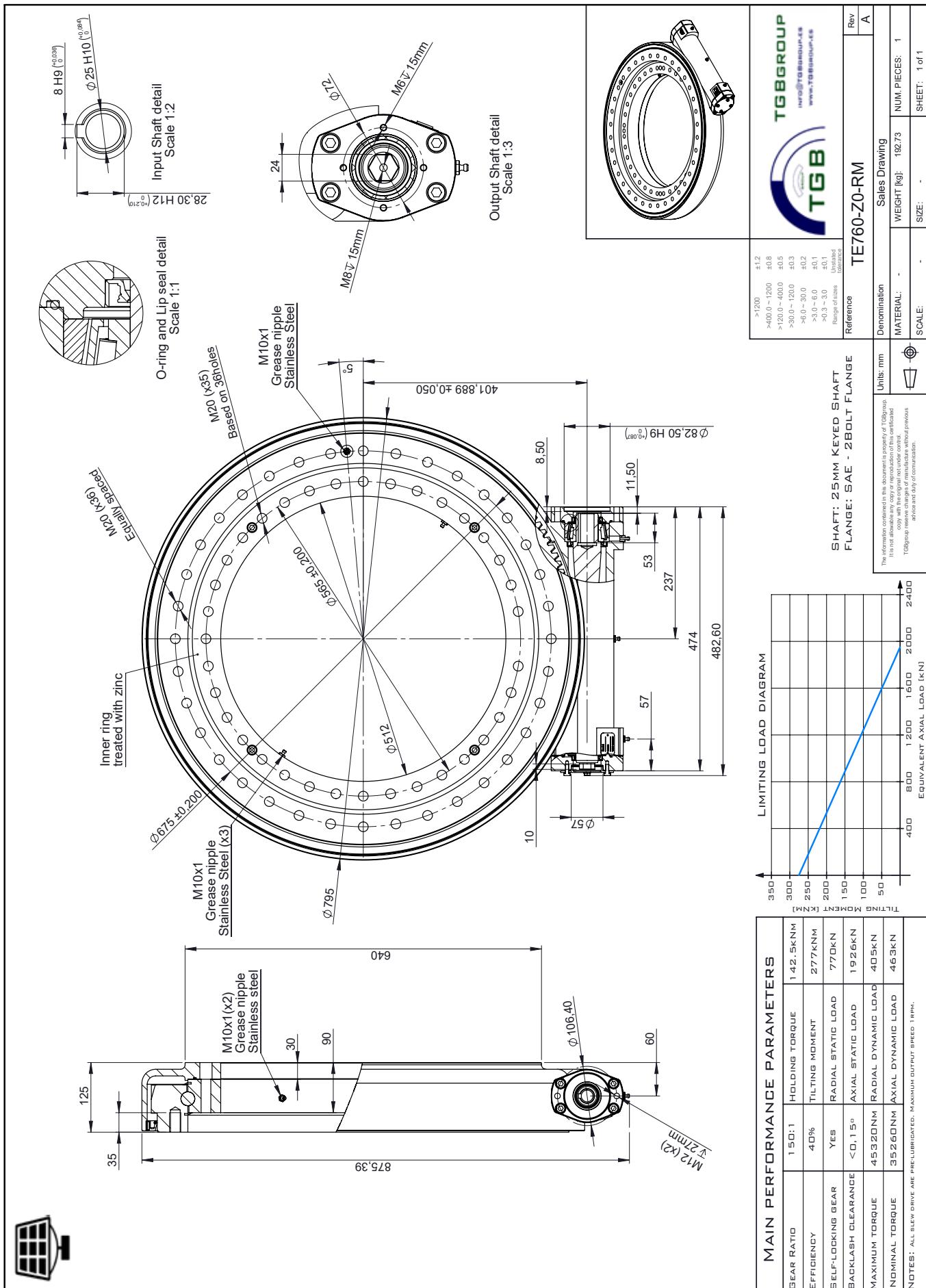
TE SERIES

METRIC



TE SERIES

METRIC



TGE SERIES



DESCRIPTION

The TGE series are the most standard and low cost slew drives as they only have a standard seal to protect the inner parts of the slew drive. The inner parts of this slew drive are a helical slewing ring combined with a globoid screw worm which can withstand high loads due to the amount of teeth in contact between both parts. This serie is adequate for standard applications where no special requirements due to environment are needed.

MAIN FEATURES

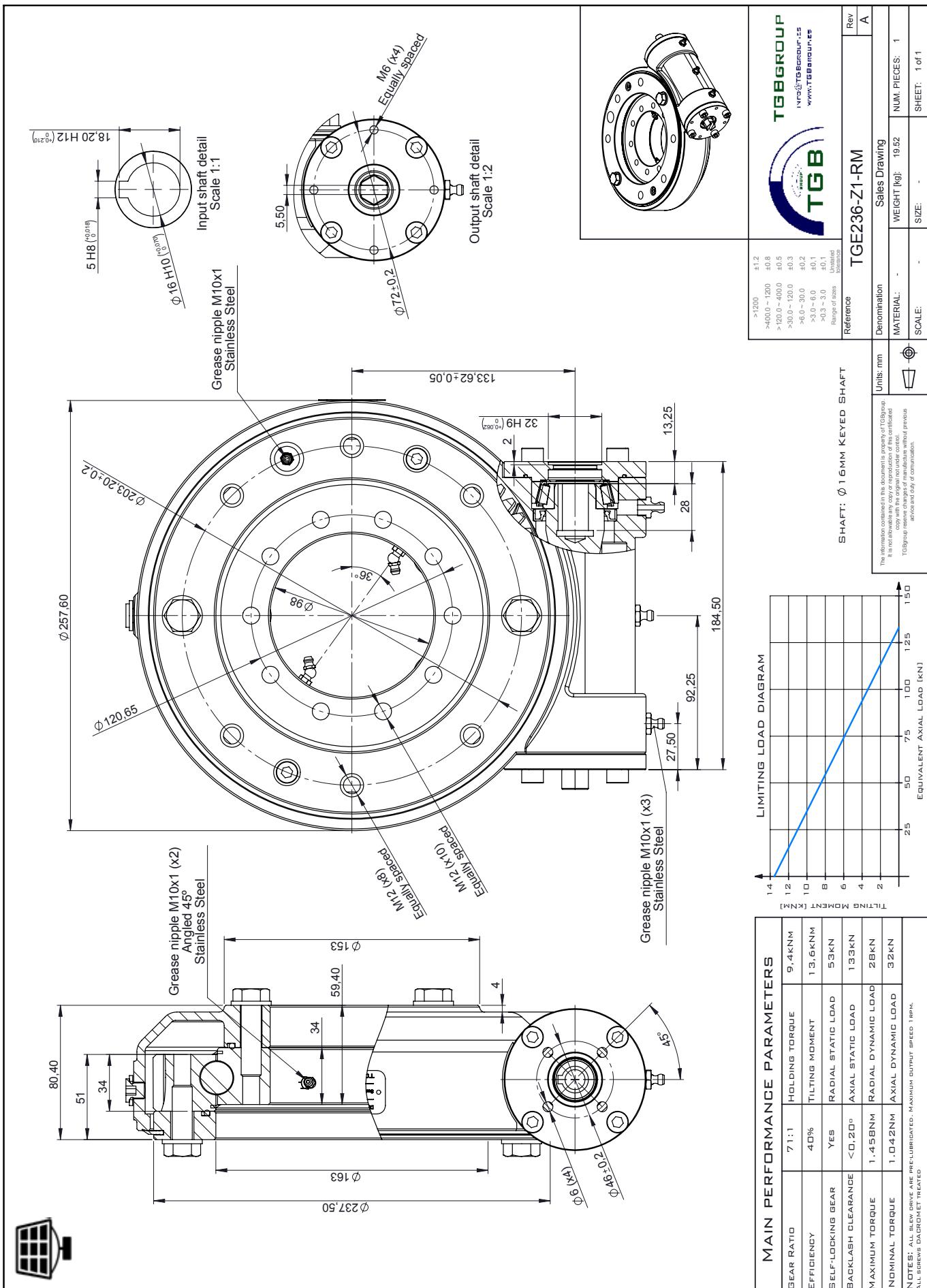
- Can be supplied with different colors or with special paint for extra corrosion protection
- Sizes in Metric and Imperial; Shaft types: Keyed shaft or Splined shaft

MAIN APPLICATIONS

- Construction machinery, indoor applications, etc.

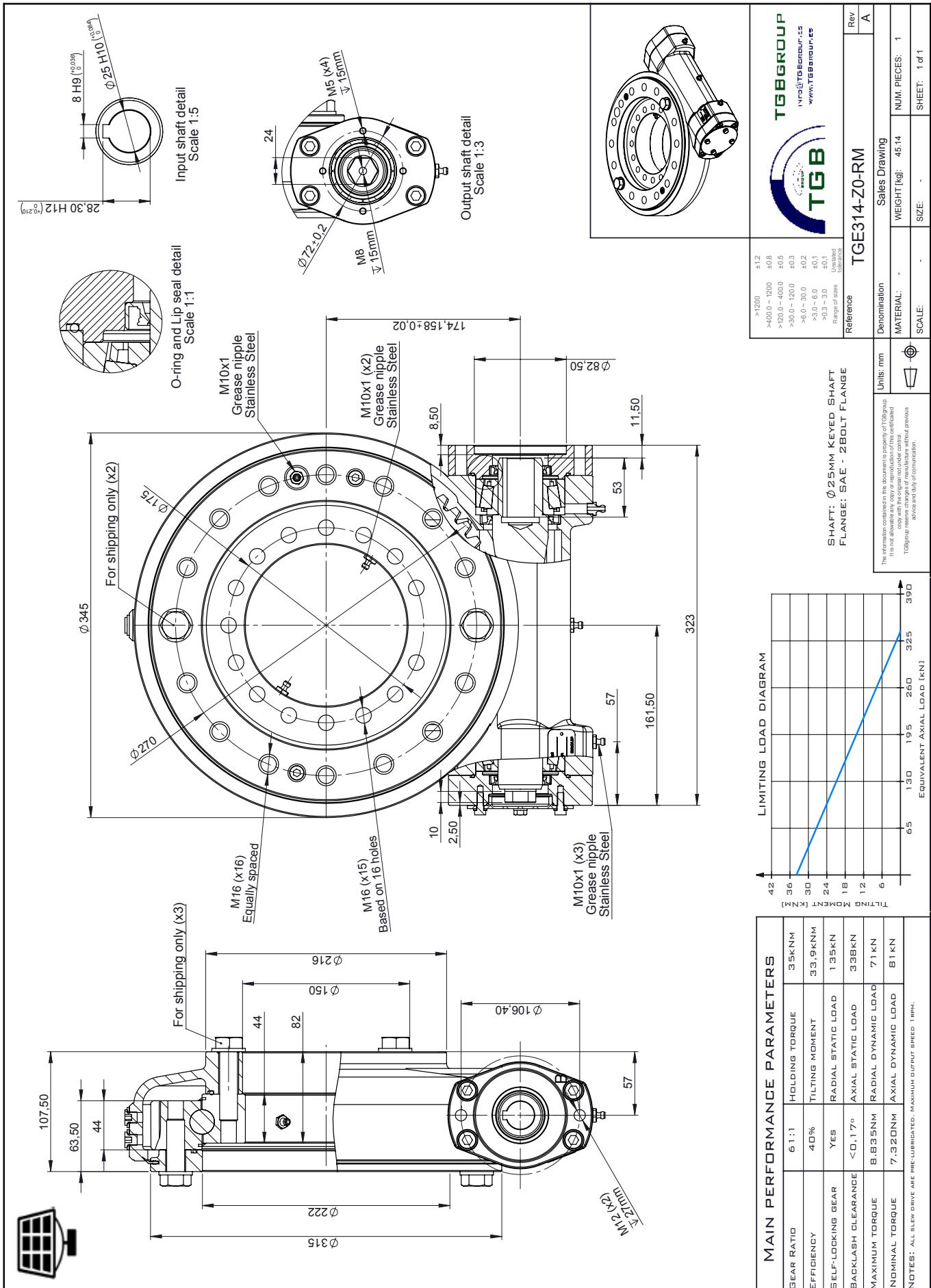
TGE SERIES

METRIC



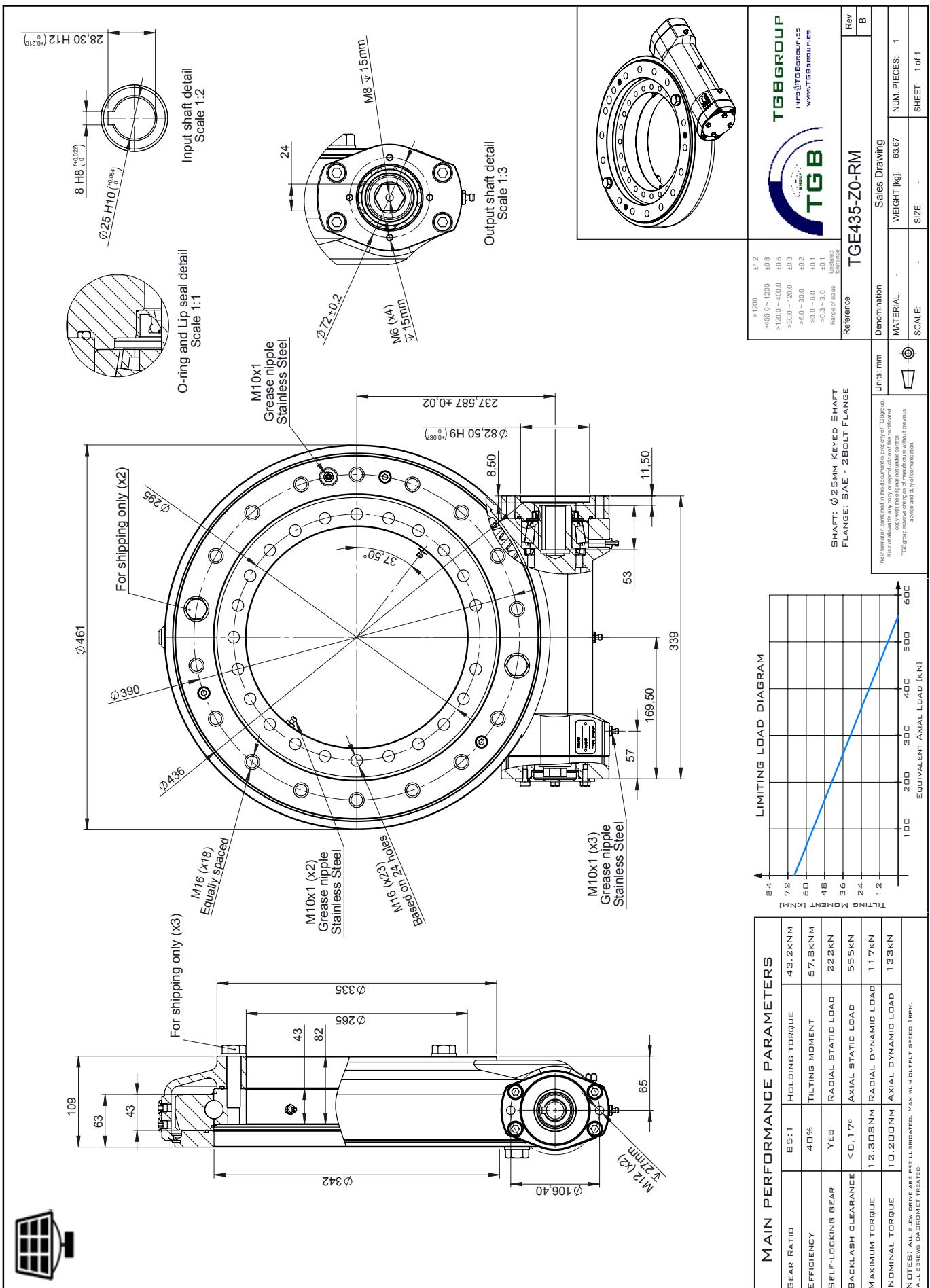
TGE SERIES

METRIC



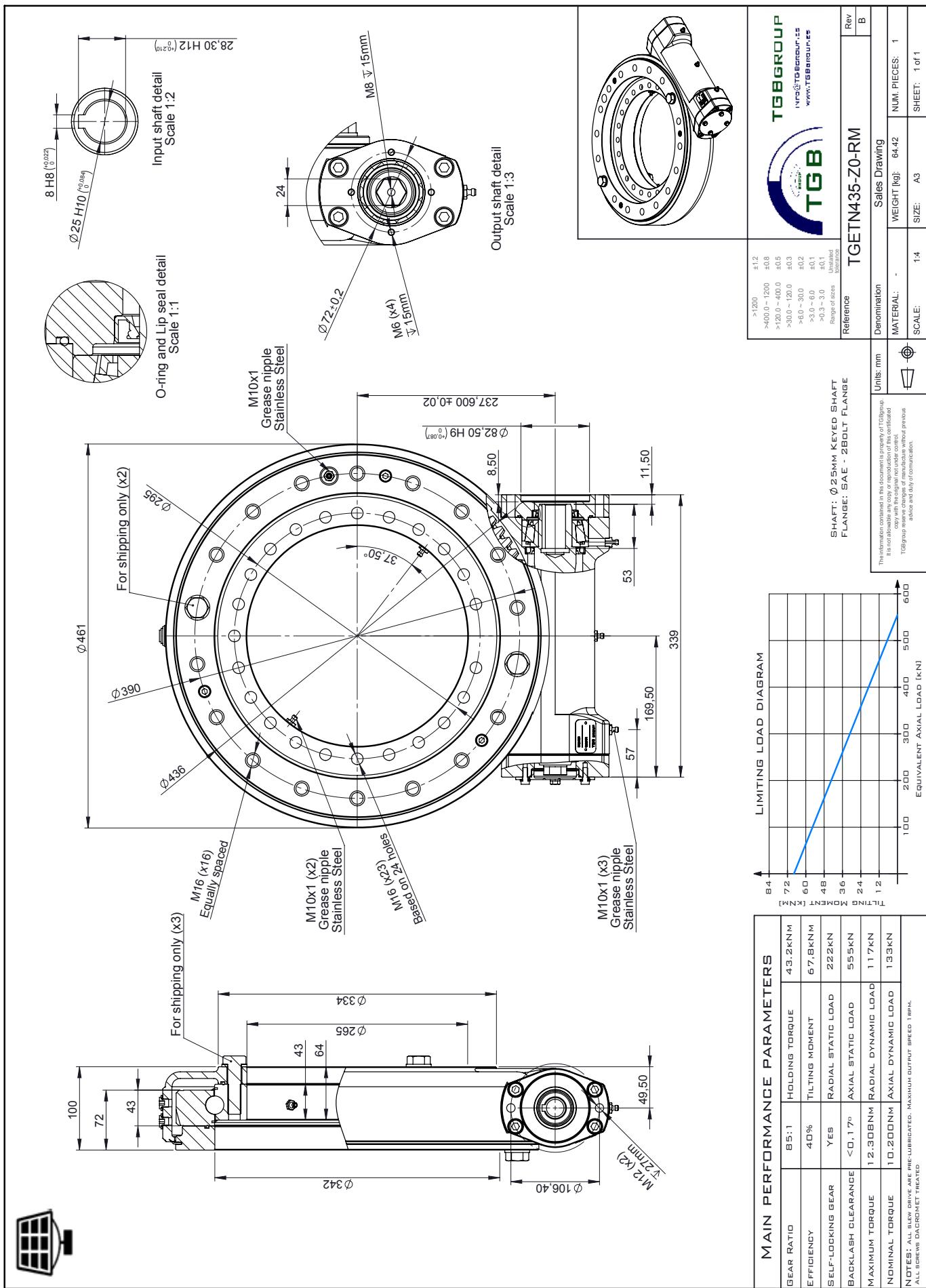
TGE SERIES

METRIC



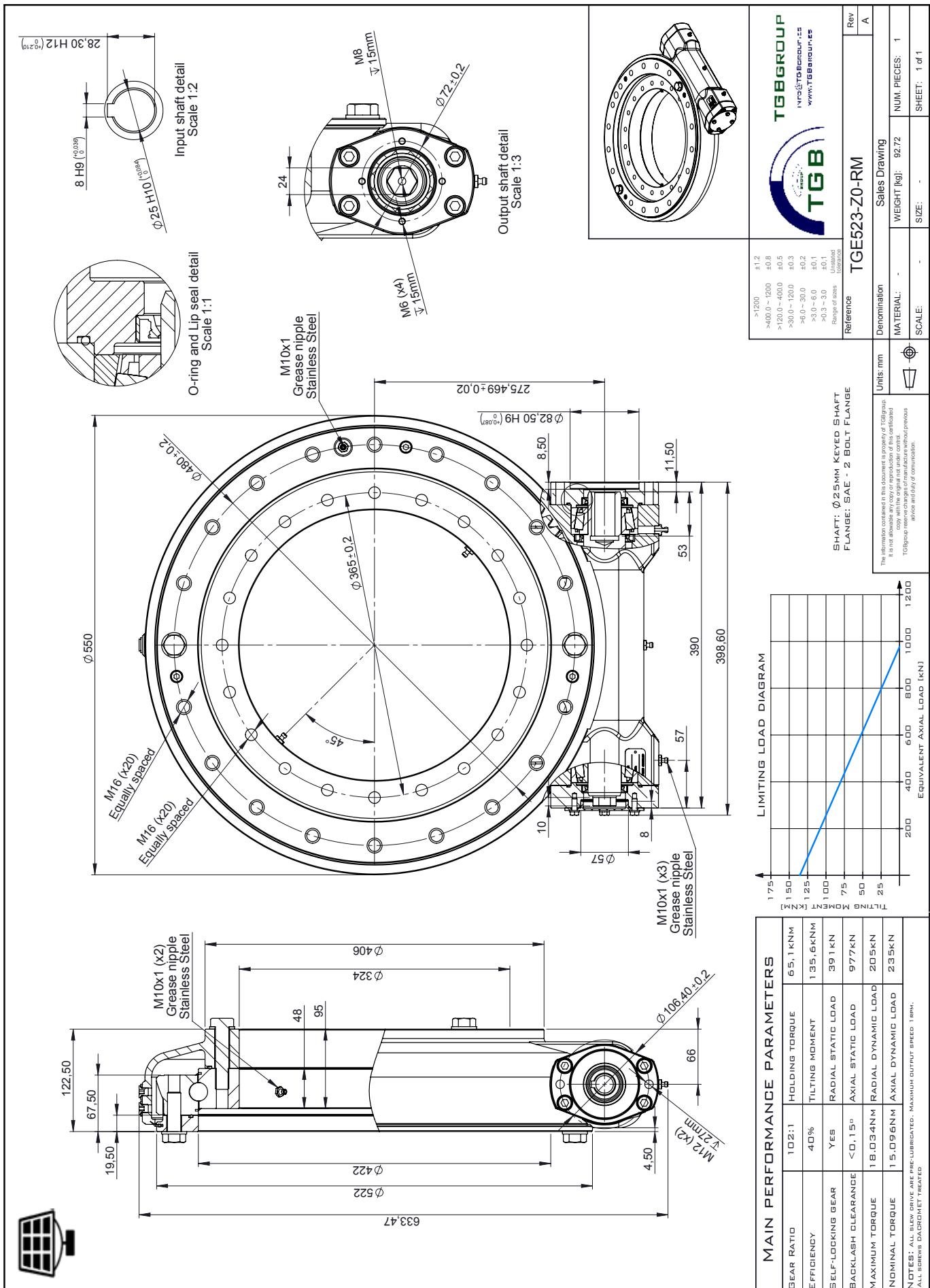
TGE SERIES

METRIC



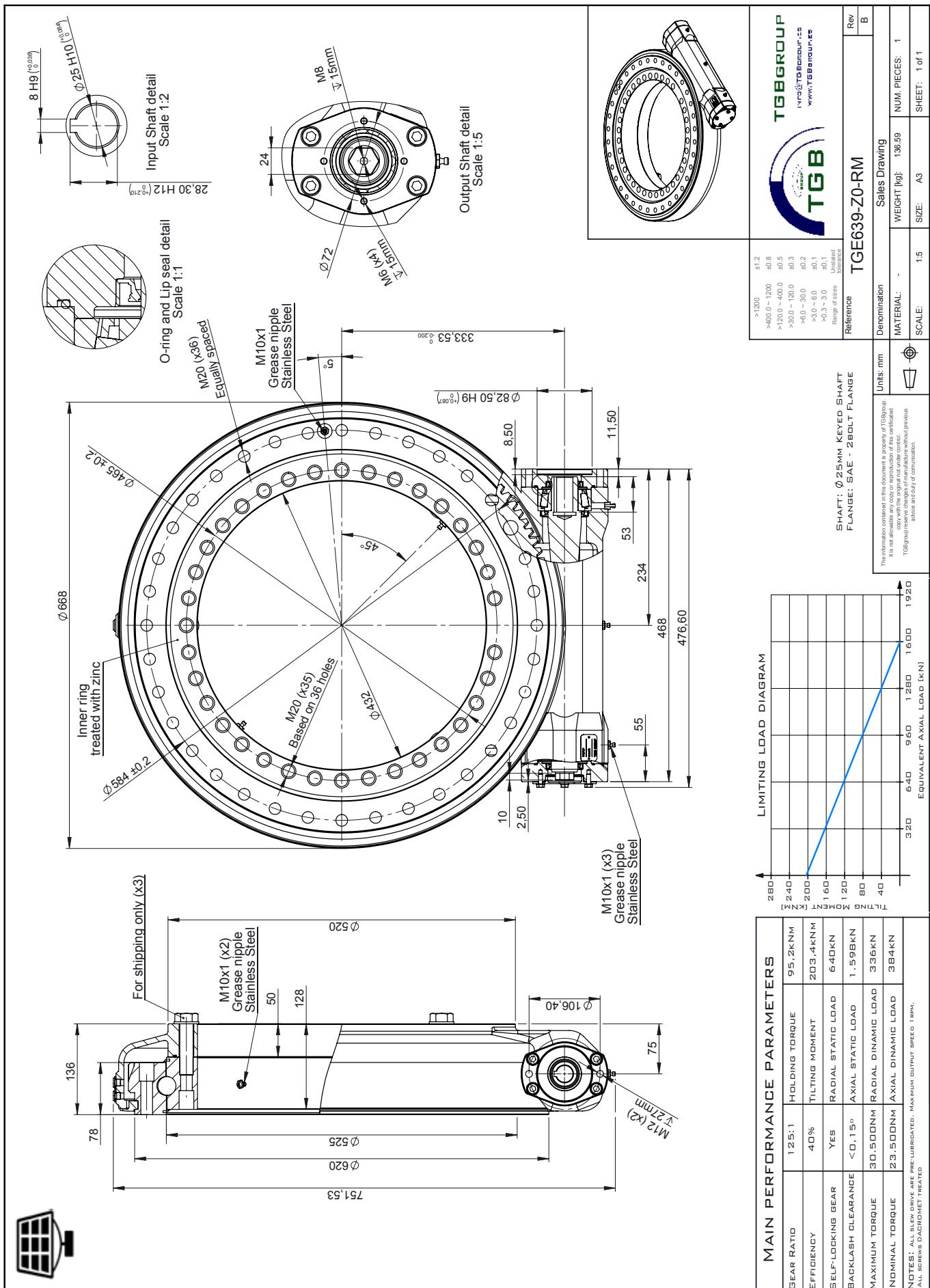
TGE SERIES

METRIC



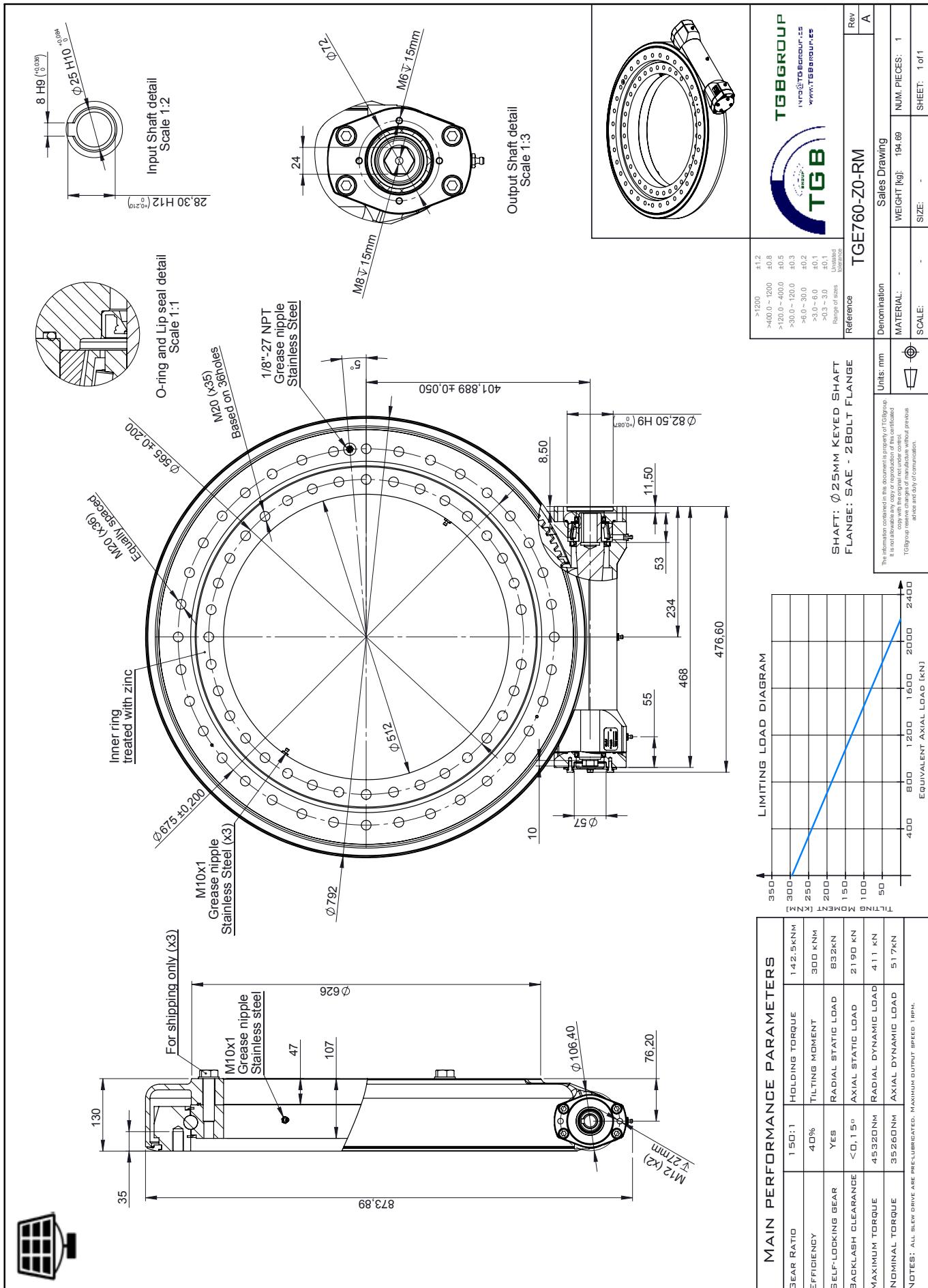
TGE SERIES

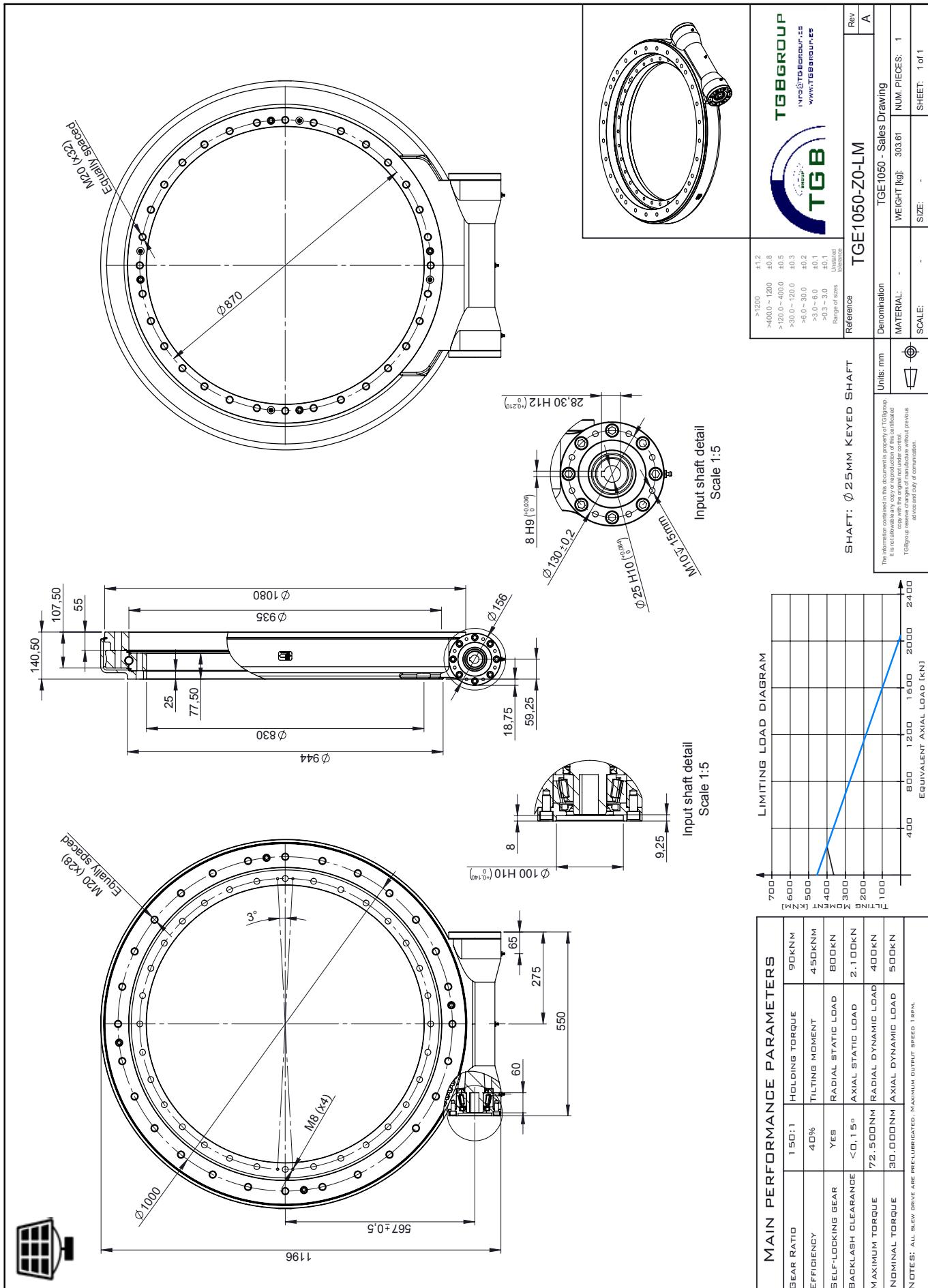
METRIC



TGE SERIES

METRIC





DADA SERIES



DESCRIPTION

The DADA series are our bigger size slew drives which are able to withstand high loads on torque and tilting moment due to its hardy geometry. With a cylindrical screw worm and globoid slewing ring, this serie of drives guarantees a low backlash and smooth operation when heavy loads are applied.

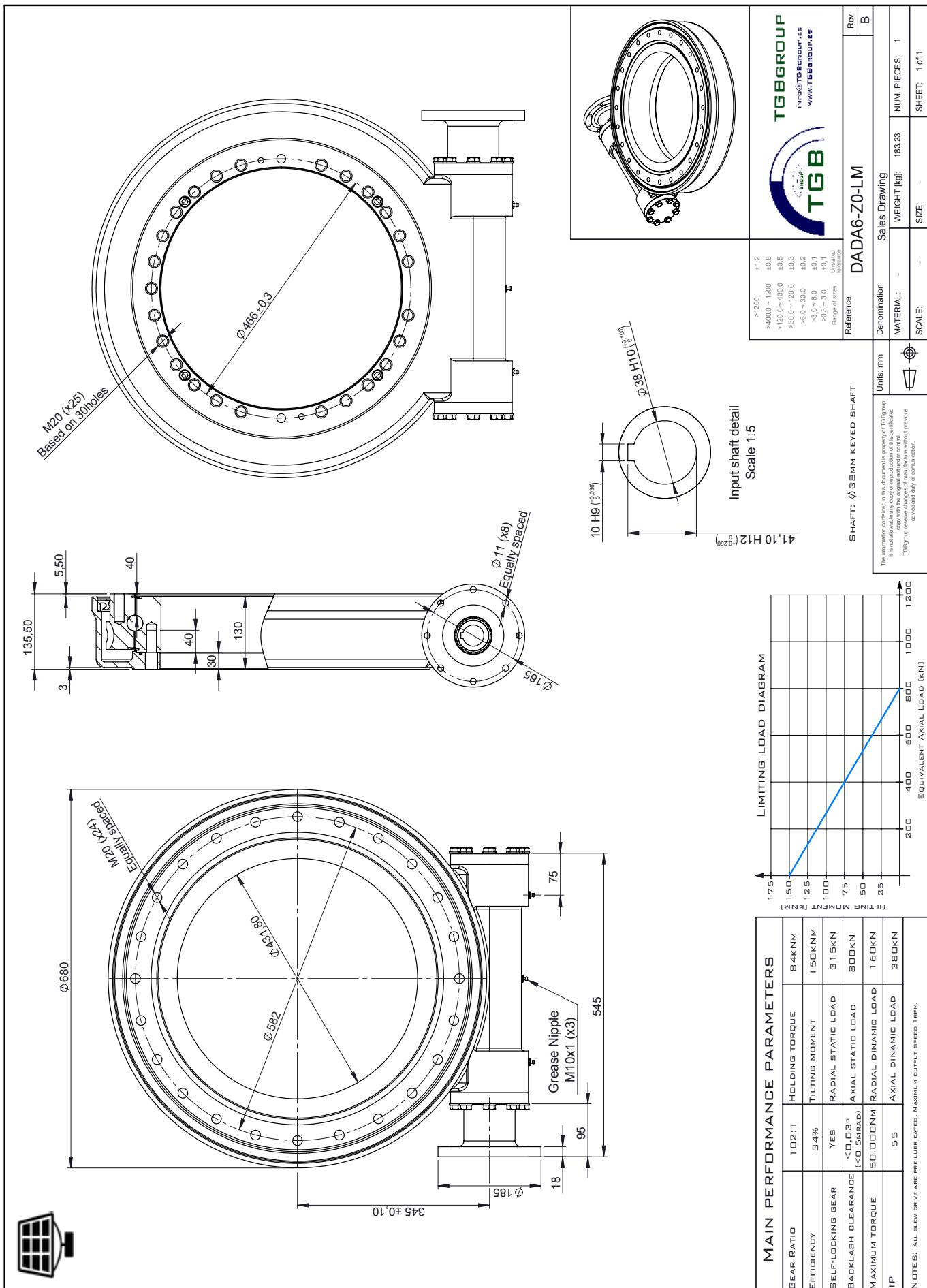
This kind of slew drive includes an external lip seal that provides a higher protection against dust and water.

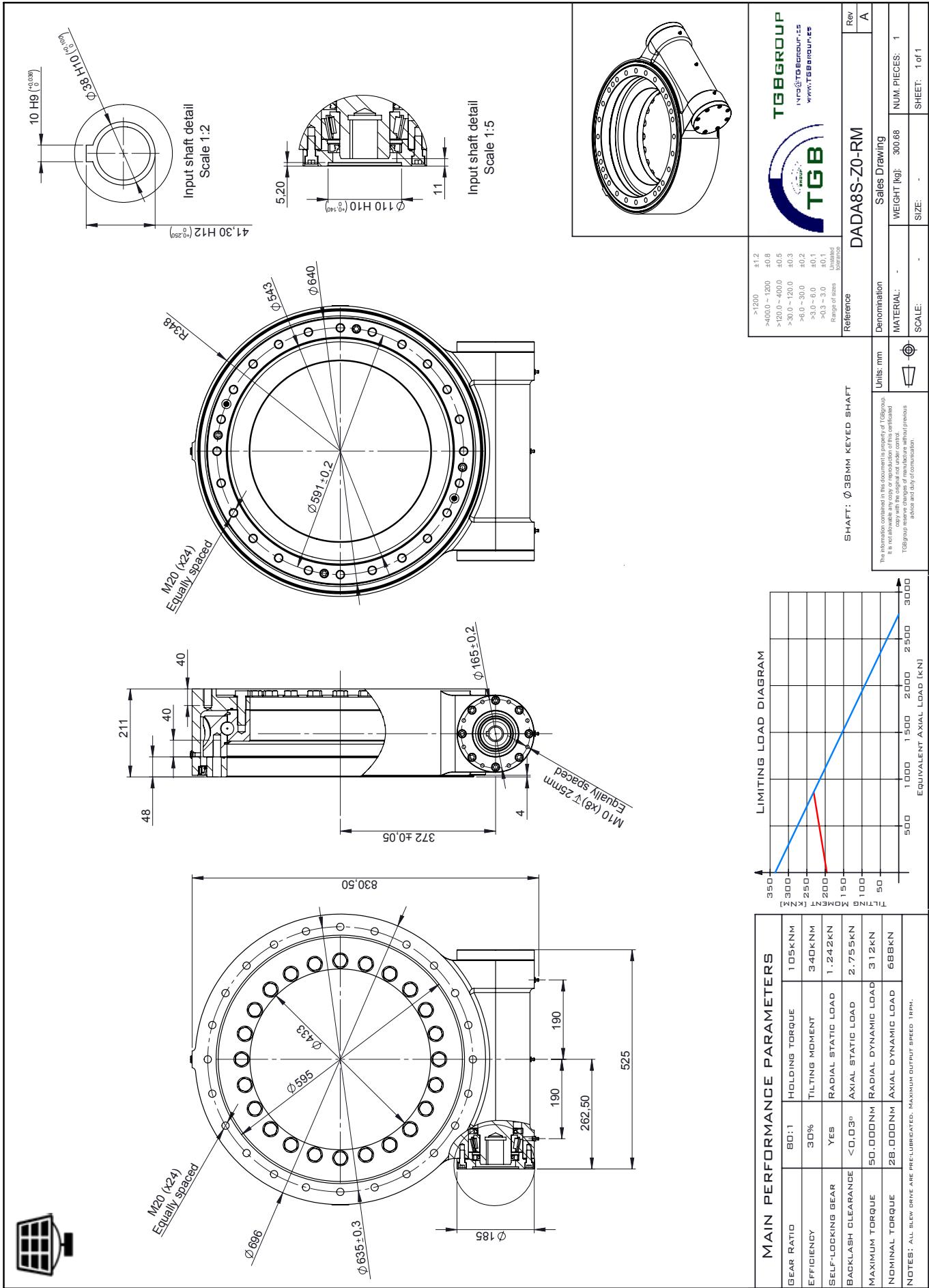
MAIN FEATURES

- HNBR Lip seal - resistant to UV light
- Ingress protection: IP 65
- Can be supplied with different colors or with special paint for extra corrosion protection
- Sizes in Metric; Shaft types: Keyed shaft

MAIN APPLICATIONS

- Solar trackers, Shipyard cranes, etc.





VERTICAL SERIES



DESCRIPTION

The Vertical series are slew drives provided by a foot which allows a direct assembly on a structure where the slew drive will work in vertical position. Instead of a slewing ring, this kind of slew drive consists in a geared ring assembled on the housing by bearings or bushings.

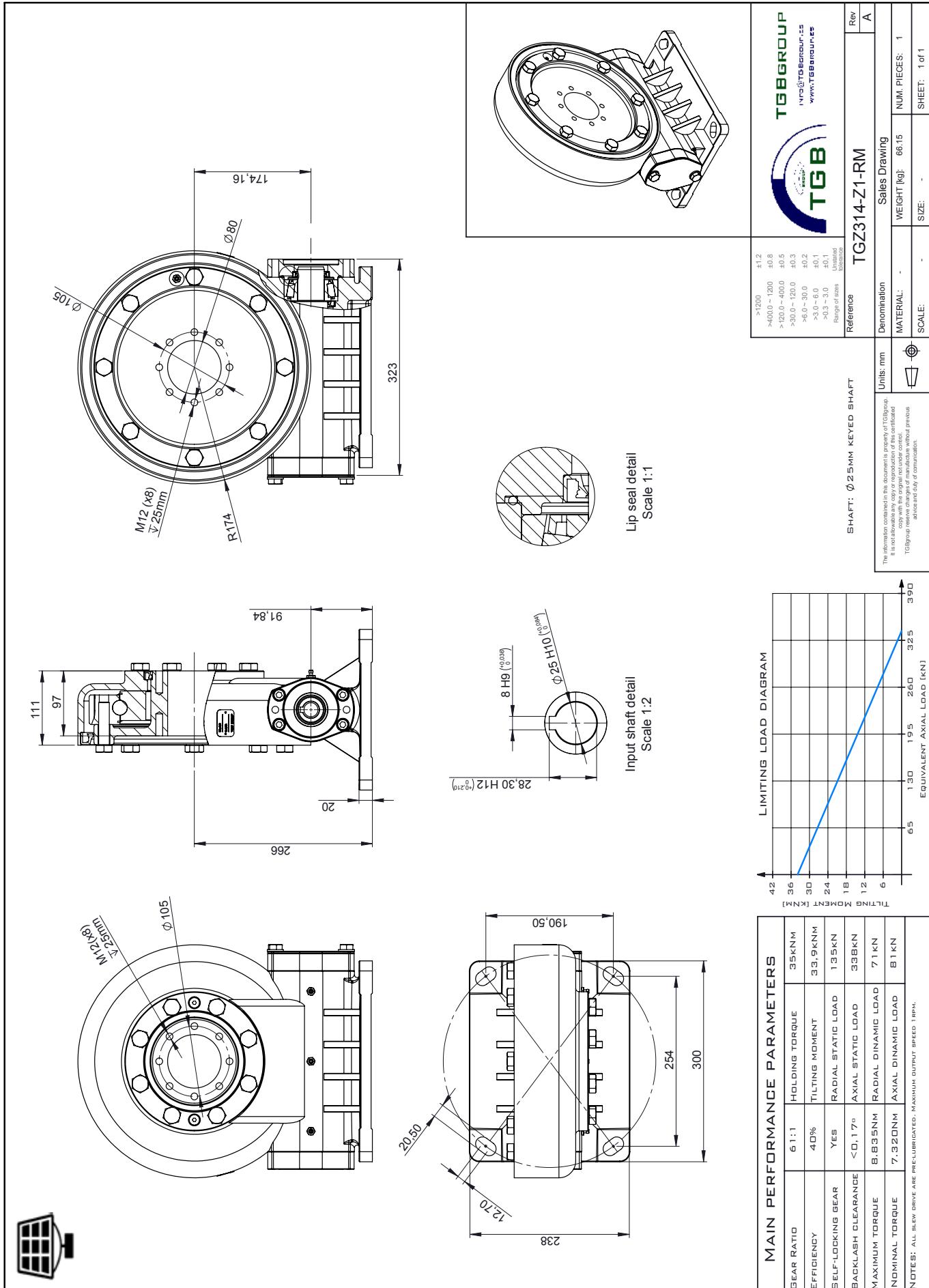
This kind of slew drive includes an external lip seal that provides a higher protection against dust and water.

MAIN FEATURES

- HNBR Lip seal - resistant to UV light
- Ingress protection: IP 65
- Can be supplied with different colors or with special paint for extra corrosion protection
- Sizes in Metric and Imperial; Shaft types: Keyed shaft or Splined shaft

MAIN APPLICATIONS

- Solar trackers (1 axis - horizontal axis of rotation)



VERTICAL SERIES

Technical Drawing of Vertical Series Gearbox

Front View Dimensions:

- Overall width: 153.70 ± 0.5 mm
- Shaft height: 95 ± 1.5 mm
- Shaft diameter: $\Phi 188$ mm
- Shaft shoulder height: 80 mm
- Shaft shoulder width: 4 mm
- Shaft shoulder angle: 50°
- Shaft shoulder lip seal: $M4 \times 12 \text{mm}$
- Shaft shoulder thickness: 12 mm
- Shaft shoulder shoulder: 6 mm
- Shaft shoulder shoulder angle: 40°
- Shaft shoulder shoulder thickness: 12 mm
- Shaft shoulder shoulder shoulder: 3 mm
- Shaft shoulder shoulder shoulder angle: 45°
- Shaft shoulder shoulder shoulder thickness: 55 mm
- Shaft shoulder shoulder shoulder shoulder: 50 mm
- Shaft shoulder shoulder shoulder shoulder angle: 45°
- Shaft shoulder shoulder shoulder shoulder thickness: 55 mm
- Shaft shoulder shoulder shoulder shoulder shoulder: 128 mm
- Shaft shoulder shoulder shoulder shoulder shoulder angle: 45°
- Shaft shoulder shoulder shoulder shoulder shoulder thickness: 155 ± 0.2 mm
- Shaft shoulder shoulder shoulder shoulder shoulder shoulder: 178 ± 0.5 mm
- Shaft shoulder shoulder shoulder shoulder shoulder shoulder angle: 45°
- Shaft shoulder shoulder shoulder shoulder shoulder shoulder thickness: 50 mm
- Shaft shoulder shoulder shoulder shoulder shoulder shoulder shoulder: 259.70 mm
- Shaft shoulder shoulder shoulder shoulder shoulder shoulder shoulder angle: 45°
- Shaft shoulder shoulder shoulder shoulder shoulder shoulder shoulder thickness: 50 mm
- Shaft shoulder shoulder shoulder shoulder shoulder shoulder shoulder shoulder: 10 mm

Side View Dimensions:

- Shaft shoulder shoulder shoulder shoulder shoulder shoulder shoulder shoulder shoulder: 32.75 mm
- Shaft shoulder shoulder shoulder shoulder shoulder shoulder shoulder shoulder shoulder shoulder: 27 mm
- Shaft shoulder shoulder: 32.75 mm
- Shaft shoulder shoulder: 2.75 mm
- Shaft shoulder shoulder: 55 ± 0.15 mm
- Shaft shoulder shoulder: 3 mm

Assembly Details:

- Input shaft detail:** Scale 1:1. Dimensions: $13.80 \text{ H12} (\text{+0.080}, \text{-0.060})$, $4 \text{ H9} (\text{+0.030}, \text{-0.020})$, $\Phi 12 \text{ H10} (\text{+0.070}, \text{-0.030})$.
- O-ring and Lip seal detail:** Scale 1:1.

Performance Parameters:

Parameter	Value
GEAR RATIO	6:2:1
HOLDING TORQUE	4kNm
EFFICIENCY	30%
TIPTING MOMENT	852Nm
SELF-LOCKING GEAR	YES
RADIAL STATIC LOAD	32kN
BACKLASH CLEARANCE	<0.20°
MAXIMUM TORQUE	1.200Nm
RADIAL DYNAMIC LOAD	30kN
NOMINAL TORQUE	600Nm
AXIAL DYNAMIC LOAD	12kN

Load Capacity Diagrams:

- LIMITING LOAD DIAGRAM:** A graph showing axial load capacity versus radial load capacity. The x-axis is Radial Load (kN) from 0 to 120. The y-axis is Axial Load (kN) from 0 to 140. A blue curve shows the limiting load capacity.
- TILTING MOMENT [KNM]:** A graph showing the relationship between axial load and tilting moment. The x-axis is Radial Load (kN) from 0 to 120. The y-axis is Tilting Moment (kNm) from 0 to 7. A blue curve shows the relationship.

MAIN PERFORMANCE PARAMETERS

Parameter	Value
GEAR RATIO	6:2:1
HOLDING TORQUE	4kNm
EFFICIENCY	30%
TIPTING MOMENT	852Nm
SELF-LOCKING GEAR	YES
RADIAL STATIC LOAD	32kN
BACKLASH CLEARANCE	<0.20°
MAXIMUM TORQUE	1.200Nm
RADIAL DYNAMIC LOAD	30kN
NOMINAL TORQUE	600Nm
AXIAL DYNAMIC LOAD	12kN

NOTES:

- All below drawings are free-lubricated. Maximum output speed 1 RPM.
- All screws/driveline treated.

Reference: TVR160-20-RM

Rev: A

Sales Drawing:

Denomination:

MATERIAL:

SCALE:

SIZE:

WEIGHT [kg]: 18.27

NUM. PIECES: 1

SHEET: 1 of 1

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VERTICAL SERIES

Input shaft detail Scale 1:1

O-ring and Lip seal detail Scale 1:1

O-ring on Top Plate detail Scale 1:1

Mechanical stop

LIMITING LOAD DIAGRAM

MAIN PERFORMANCE PARAMETERS

GEAR RATIO	40:1	HOLDING TORQUE	3.4kNm
EFFICIENCY	40% ± 5%	TLITNG MOMENT	7kNm
SELF-LOCKING GEAR	YES	RADIAL STATIC LOAD	54kN
BACKLASH CLEARANCE	<0.120°	AXIAL STATIC LOAD	108kN
MAXIMUM TORQUE	9.000Nm	RADIAL DYNAMIC LOAD	49kN
NOMINAL TORQUE	7.000Nm	AXIAL DYNAMIC LOAD	98kN

NOTE: THIS SLEWING DRIVE IS ONLY ABLE TO TURN 120° DUE TO THE MECHANICAL STOP ON THE UPPER PART OF THE DRIVE

NOTES: ALL SLEW DRIVE ARE PRELUBRICATED. MAXIMUM OUTPUT SPEED 1RPM.
ALL SCREWS DACROMET TREATED. STANDARD PAINT FOR CORROSION CATEGORY C3M - GREY RAL 7040.

TVR200-Z17-RM Rev A

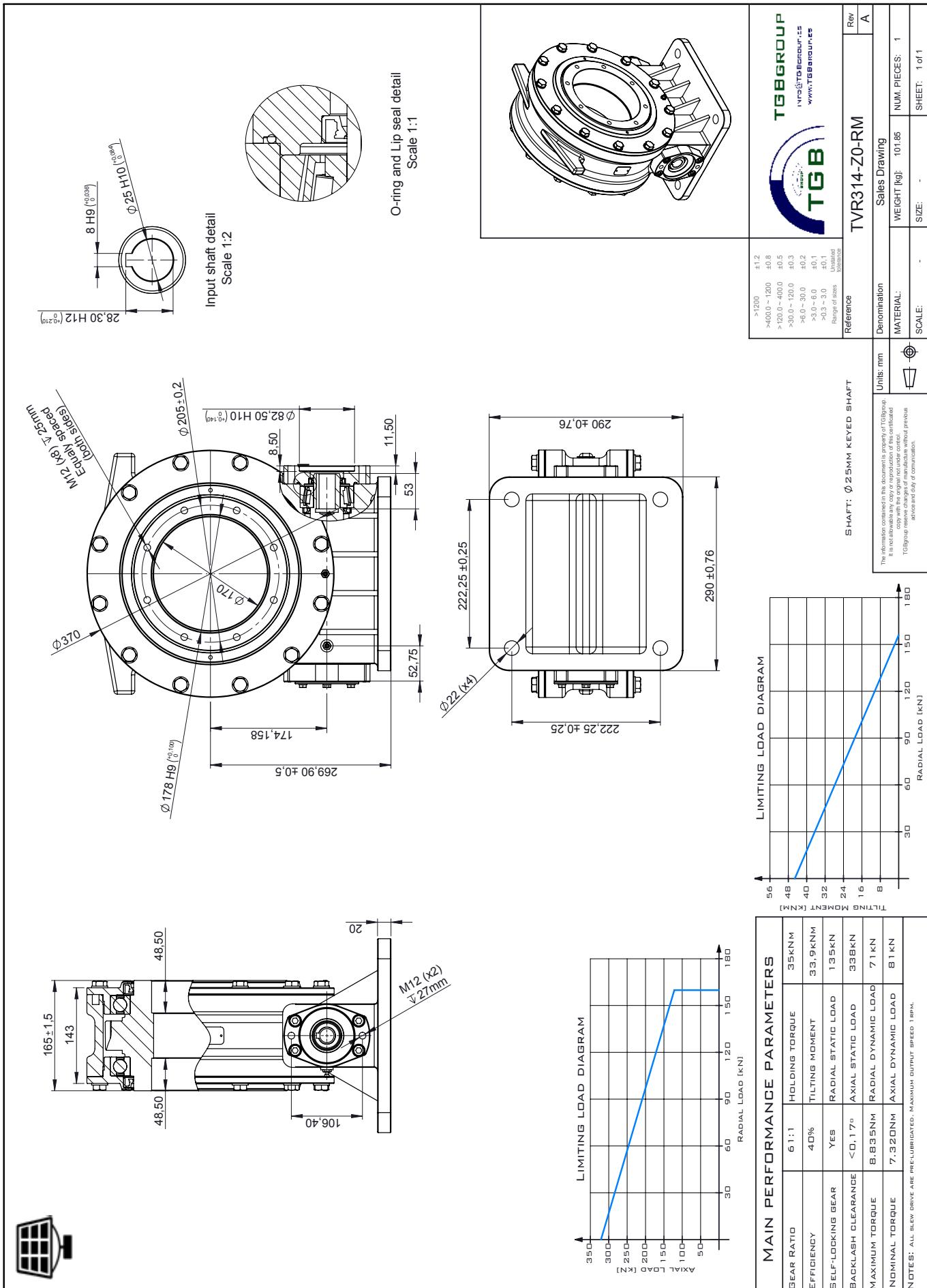
Sales Drawing

Reference	Denomination	Material:	Weight [kg]:	Num. pieces:
		-	38.80	1
	SHAFT: Ø 25MM KEYED SHAFT	Steel	38.80	1
	Range of sizes			
	Unstated dimensions			

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VERTICAL SERIES



DAD SERIES



DESCRIPTION

The Dual Axis Drive series consists on a combination of a vertical and a horizontal slew drive that allows the movement on both axis in order to use one complete part to perform all the movements required on a solar tracker.

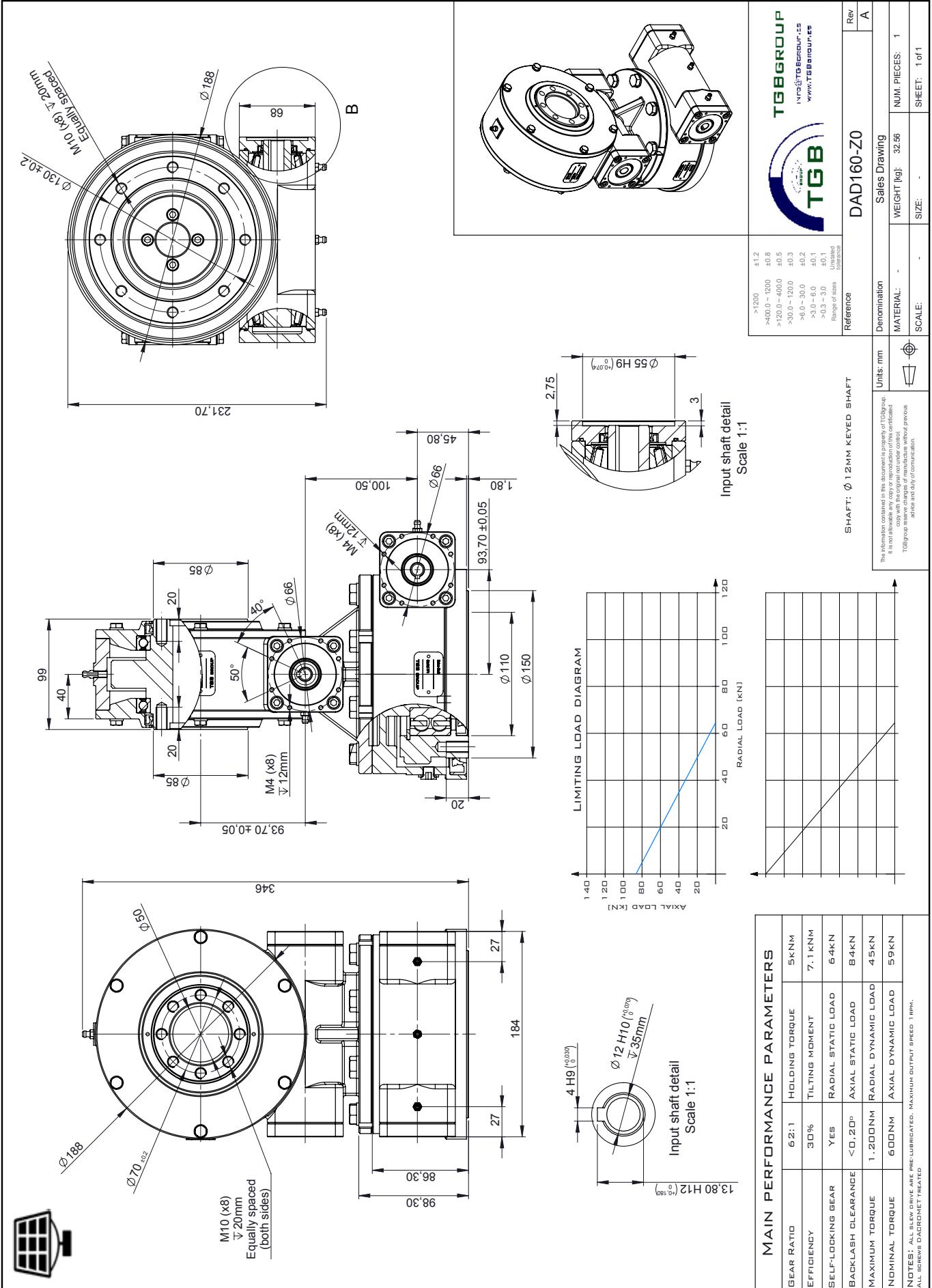
This kind of slew drive includes an external lip seal that provides a higher protection against dust and water.

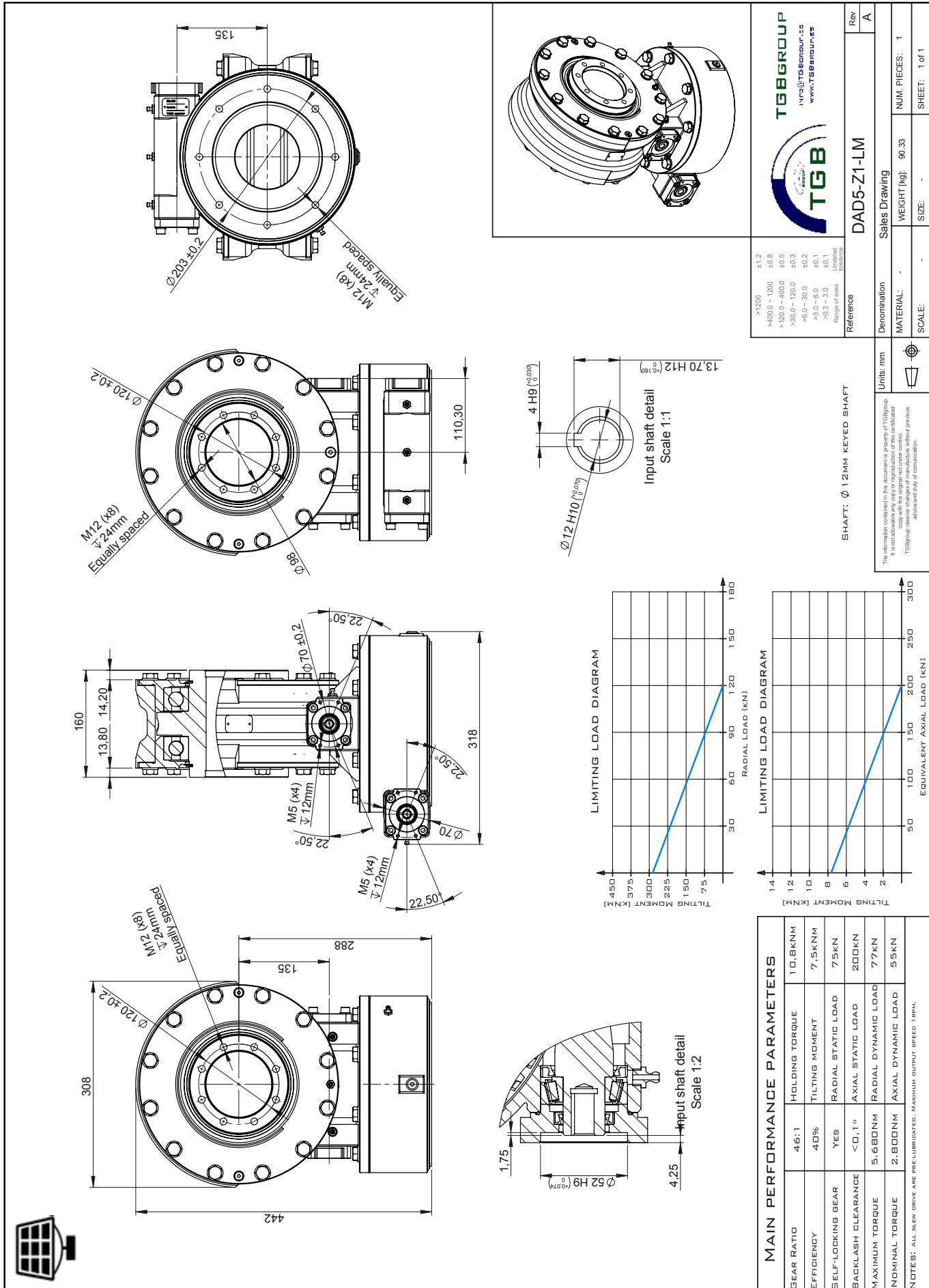
MAIN FEATURES

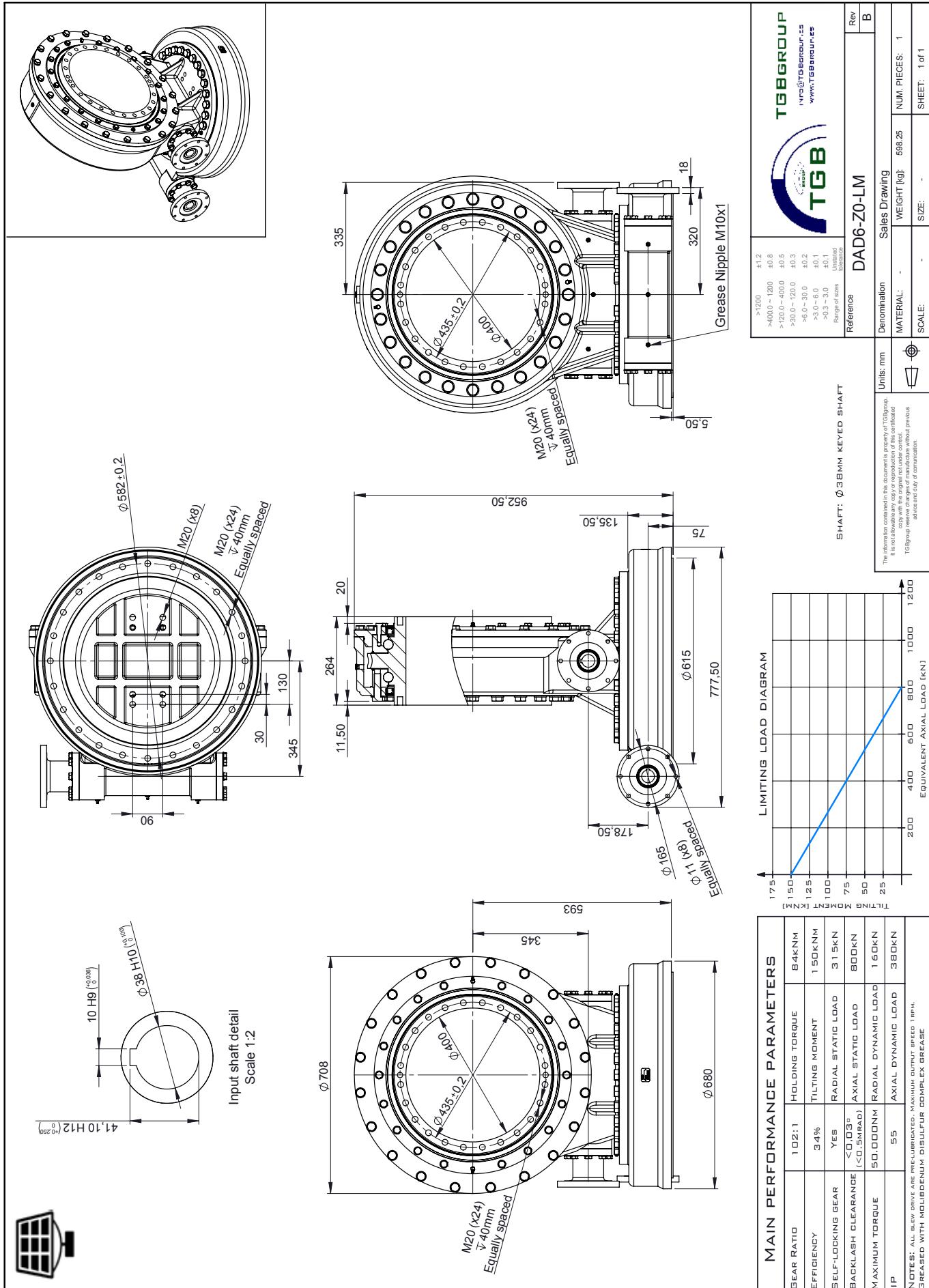
- HNBR Lip seal - resistant to UV light
- Ingress protection: IP 65
- Can be supplied with different colors or with special paint for extra corrosion protection
- Sizes in Metric; Shaft types: Keyed shaft

MAIN APPLICATIONS

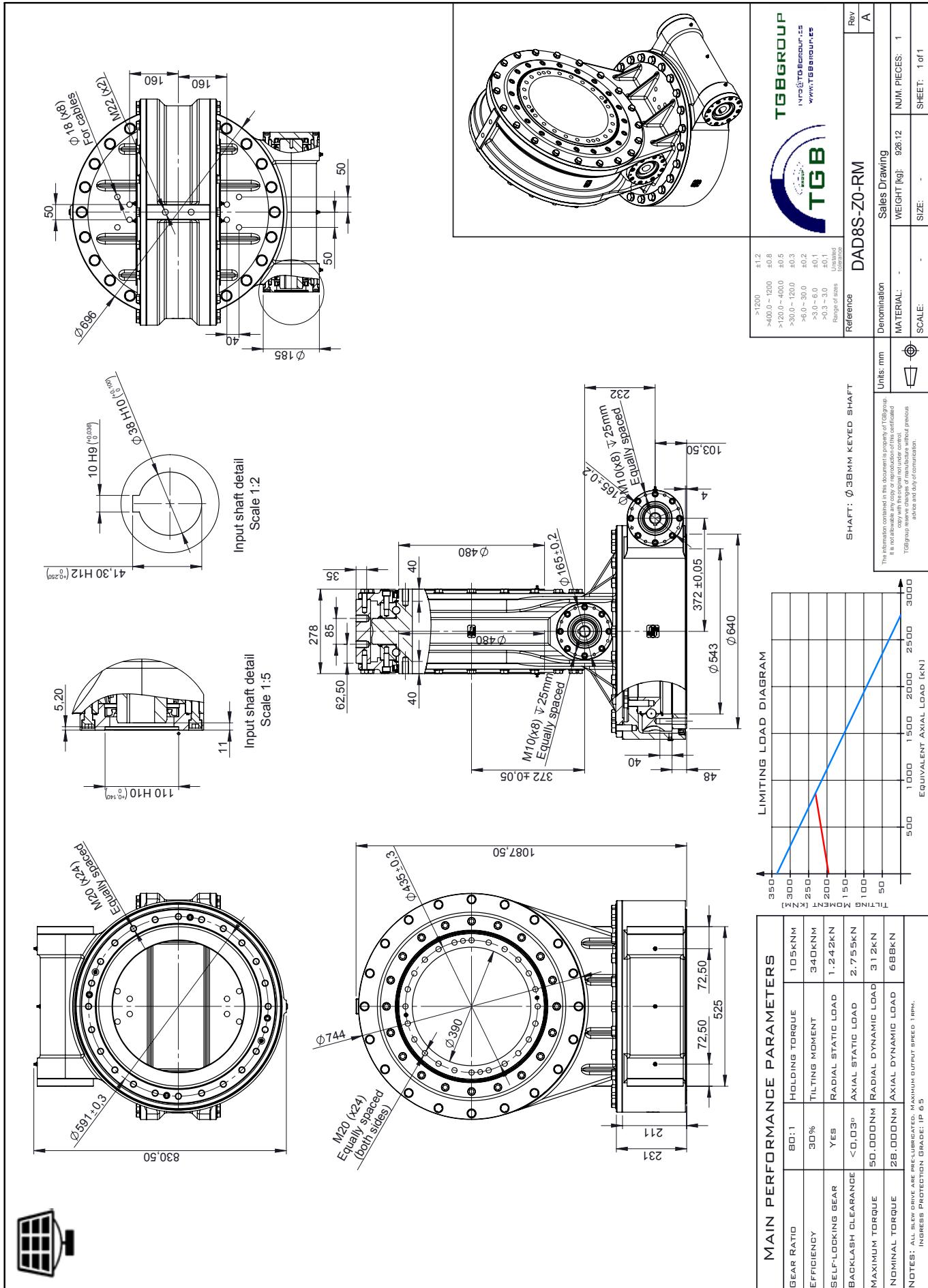
- Solar trackers (2 axis)



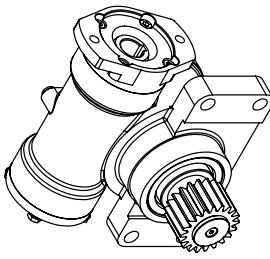
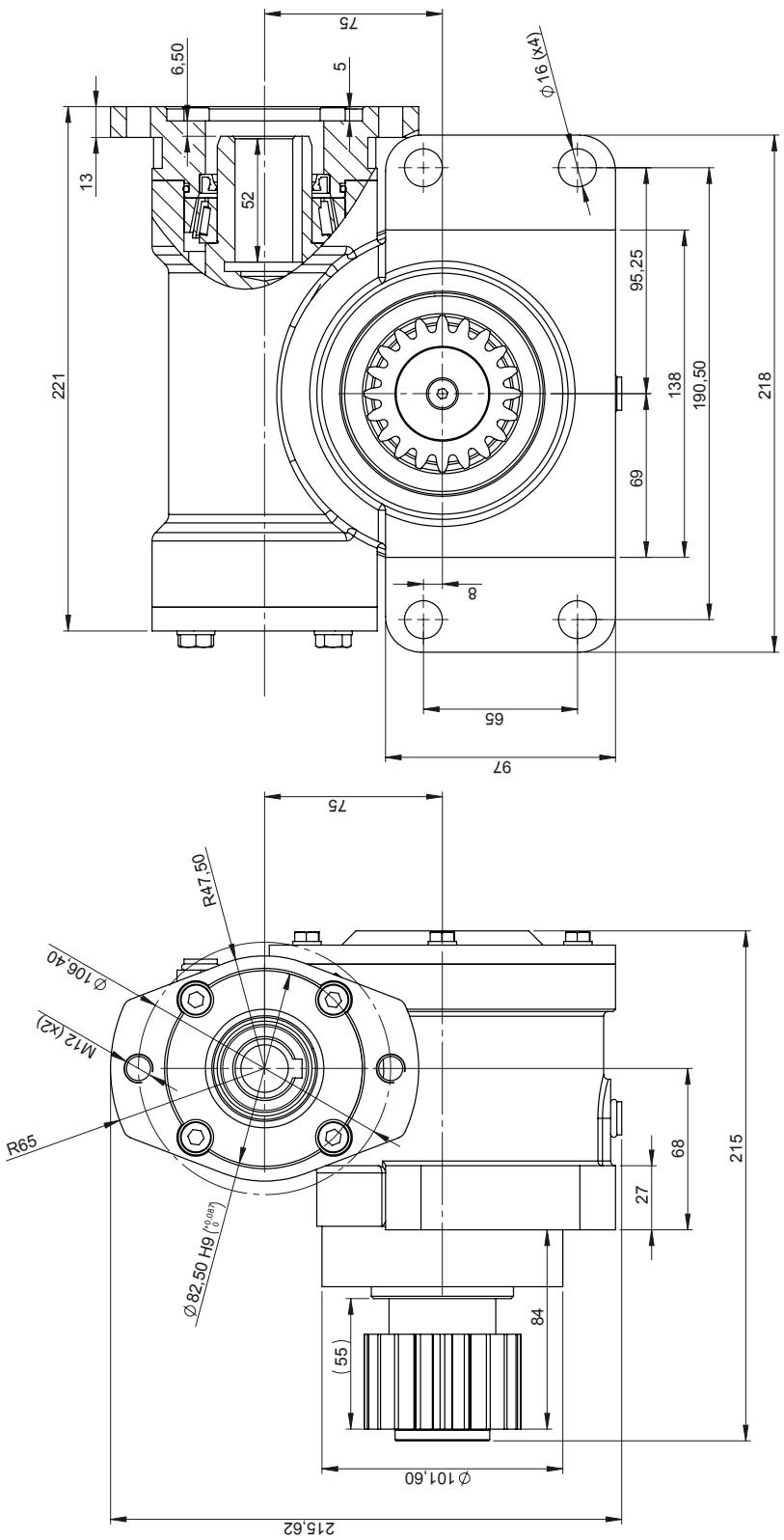




DAD SERIES



ACCESSORIES - PINION DRIVE



MAIN PERFORMANCE PARAMETERS

GEAR RATIO	30:1	NOMINAL TORQUE	900 Nm
PINION REQUIREMENTS	CUSTOMER REQUIREMENTS	EFFICIENCY	40%
NOTES: ALL SLEEVES ARE PRE-LUBRICATED.			

Input shaft detail
Scale 1:1

Reference	TRP30-Z0-RM	Rev
Sales Drawing		A
Denomination		
MATERIAL:	-	
SCALE:	1:1	
WEIGHT [kg]:	20.77	NUM. PIECES: 1
SIZE:	-	SHEET: 1 of 1

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Range of sizes
Unquoted dimensions

mm

Range of

ACCESSORIES

AC / DC / HYDRAULIC MOTORS



WORM GEARBOXES



BRAKE

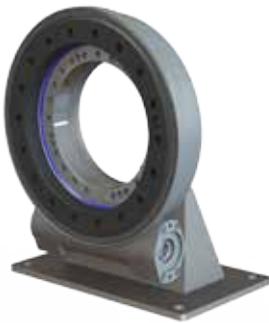


TGBgroup is able to provide complete solutions for different applications by supplying the drives with customized motorization or with brake.

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



INQUIRY FORM

Comercial	Date	Client			
Target slew ring	Ref.	E <input type="checkbox"/> I <input type="checkbox"/> SD <input type="checkbox"/>			
Target slew drive					
Working position	Horizontal <input type="checkbox"/>	Vertical <input type="checkbox"/>			
Output torque	Nominal	[kNm]			
	Maximum	[kNm]			
	Holding	[kNm]			
Output speed	Nominal (continous)	[rpm]			
	Maximum (intermittent)	[rpm]			
Combined nominal loads	Axial	[kN]			
	Radial	[kN]			
	Tilting moment	[kNm]			
Combined maximum loads	Axial	[kN]			
	Radial	[kN]			
	Tilting moment	[kNm]			
Desired lifetime [hours]					
Working conditions	Minimum temperature	[°C]			
	Maximum temperature	[°C]			
	Site / Location				
Load case 1	Load	[kN o kNm]	Time working or rotated degrees	Standby time between cycles	Number of cycles per hour
	Output torque				
	Axial				
	Radial				
	Tilting moment				
Load case 2 (if necessary)	Load	[kN o kNm]	Time working or rotated degrees	Standby time between cycles	Number of cycles per hour
	Output torque				
	Axial				
	Radial				
	Tilting moment				
Load case 3 (if necessary)	Load	[kN o kNm]	Time working or rotated degrees	Standby time between cycles	Number of cycles per hour
	Output torque				
	Axial				
	Radial				
	Tilting moment				
Motorization	AC <input type="checkbox"/> DC <input type="checkbox"/> Hydraulic <input type="checkbox"/>	Comments:			
Pinion					
		Width	Length	Height	
Limit dimensions					
Comments					

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