

TRANSMATIX

Installation, Operation And Maintenance Manual

TRANSMATIX

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BEST FOR EFFICIENT POWER TRANSMISSION

Respected Sir,

We congratulate and thank you for wisely purchasing Planetary Drive manufactured by the **TRANSMATIX (TRX)**. We are confident that this planetary drive will provide you years of trouble free service and, for all your future requirements, you will call us for TRX Planetary drives only.

We request you to go through this manual thoroughly before installation, commissioning and for maintenance of this drive. This manual will give you important precautions to be taken by you or the people responsible for installing and maintaining this drive for getting best performance. Kindly read this manual carefully and preserve it for your future reference.

SPECIFICATIONS OF YOUR DRIVE

Model:

Sr.No.:

Ratio:

Rated Torque:

Kg-m.

Code No:

Date of Supply:

WARRANTY

We warrant this Drive to be of good material and workmanship and free from defects. Any part or parts which after normal use and service are upon examination proved to be defective within one year from the date of supply, will be replaced free FOR Satara, provided the unit is installed for use within the rated torque capacity of the drive and for the application for which it is supplied. The defective parts should be promptly returned to us at customer's cost. If so required, the Drive will have to be sent back to us for necessary repairs at buyer's cost. **THIS WARRANTY DOES NOT COVER BOUGHT OUT COMPONENTS.** This warranty is limited to the cost of this Drive only. Under no circumstances do we undertake the liability for indirect or consequential loss or damage of any nature.

IF THE DRIVE IS FOUND TO BE OPENED DURING WARRANTY PERIOD, AUTOMATICALLY, THIS WARRANTY STANDS CANCELLED AND YOUR CLAIM FOR DAMAGE WILL NOT BE ENTERTAINED.

For **TRANSMATIX**

Authorised Signatory

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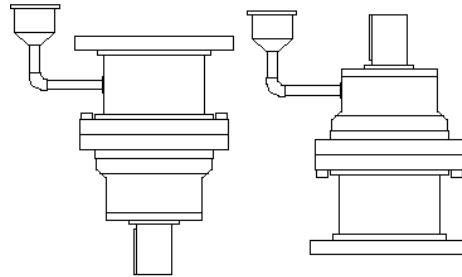
➤ **Delivery Conditions**

TRX Planetary drives are supplied with anti-rust coating on input shaft as well as output shaft, which is resistant to corrosion for at least six months. TRX drives with male shaft are supplied along with a key. In case of hollow shaft, the hollow shaft is without key. For installation with output shaft vertically downward, an oil cup with Elbow & a Breather Plug is also provided with the unit. The Drives are not pre-filled with oil. However, they are tested with oil filled up to correct level, approved and then oil is drained before dispatch. Routine Test Certificate is also provided with the unit.

➤ **Installation guidelines**

The TRX Drive supplied to you should be installed carefully. The following precautions should be taken.

- 1) The antirust coating on Input & Output Shafts should be removed by appropriate thinner before mounting any pulleys, couplings or sprockets etc. These mounting parts viz. Pulleys, couplings etc. should be slide fit on the shafts. In any case these should not be hammered on the input or output shafts. Hammering can damage the internal components of the gear box. In case of hollow input, it should be ensured that motor shaft slides in the hollow input shaft of the gear box. The anti-rust coating on motor shaft should be removed first. In any case, the motor shaft should not be hammered. Grease should be applied on both the mating components in order to avoid corrosion due to moisture.
- 2) The gear box should be mounted (Foot or Flange) rigidly on the base as the total reaction torque is taken by the foot/flange. If the mounting is not rigid, it can damage the bearings, oil seals and internal gears. If shocks or overloads are expected, installation of hydraulic couplings, clutches, torque limiters etc. is recommended.
- 3) In case input/output shafts are coupled by means of coupling, the proper alignment of the shafts should be checked and it should be within allowable misalignment range of the couplings, otherwise it will damage the bearings, oil seals and internal components. In case of sprockets, pulleys or gears to be mounted on the shafts, these should be mounted as close to the bearings (or body of the gearbox) as possible to minimize the overhang load. This will increase the life of the bearings.
- 4) For the drive mounted with Output Shaft vertically downward or upward, we have provided a separate oil cup with elbow. This must be fitted on the gear box as shown in the figure. Please note that this is absolutely essential for such type of mounting. Do not install the unit in vertically downward or upward position without an oil cup. This can damage the input bearing.



- 5) Before starting the gear box, make sure that it is filled with the correct grade of oil upto the correct level. The oil grades are mentioned separately in this manual.
- 6) For outdoor installations, protect the gear box with a suitable guard / cover from rainfall / direct sunlight, dust etc.
- 7) Finally, during installation, care should be taken to check that the unit is having good access for its inspection and lubrication. Care should also be taken to see that the unit is installed in a properly ventilated place to limit the temperature of the gearbox.

➤ **Commissioning**

The drives supplied by us are not pre-filled with oil. You need to fill up the correct grade of oil or grease (depending upon Model) before commissioning. Models 1019, 2019 & 3019 are grease lubricated & are pre-filled with grease before despatch. You need not fill up grease in these units. All other drives are oil-lubricated and oil must be filled in these units before commissioning. All the drives have oil filling / breather plug, oil level plug and oil drain plug. The drain plug is supplied with a rubber or a copper washer. The drain plug may be loose and it should be tightened first before filling the oil, to prevent leakage. The oil should be filled from the oil-filling plug till it fills upto the oil level plug, indicating oil level. In case of drives mounted with output shaft vertically downward or upward, an elbow with a separate oil cup is provided in place of breather plug and the breather plug is positioned at top of the oil cup. Oil should be filled in from this plug till it shows in the oil level plug.

Before commissioning the drive, check that sprockets or pulleys etc. are aligned properly and that the tension in belts or chains is not excessive. Please also check that the drain and level plugs are tightened properly, otherwise the oil may start leaking from these points. Do not start the drive directly on full load during the first commissioning. Initially, let the drive run freely on no load & then gradually increase the load upto the recommended level.

➤ **Lubrication**

Lubrication plays a great role in the performance and life of any power transmission element. Care should be taken to ensure the proper lubrication of TRX Planetary drives. Standard Planetary Gear Boxes are lubricated by Grease or oil depending on the temperature as under:

Grease – Models 1019, 2019, 3019 etc. are grease lubricated

Oil – Models 028, 038, 050, 060, 070, 080, 095, 110, 120 in single, double, triple & four stages are oil lubricated.

Grease Lubrication

Grease lubricated Planetary Gear Boxes are filled with Lithium base Grease, before despatch from our factory.

Oil Lubrication

In case of oil lubricated gear boxes, the gear boxes are tested with proper grade of oil in the factory. Subsequently, the oil is drained from the gear box before despatch. Hence **the oil must be filled in these gear boxes before taking any trial**. The grade of oil to be used depends on the ambient temperature. The viscosity of the oil to be used for different ambient temperatures is as under:

Ambient Temp.	- 10 to + 10° C	5 to 40° C	30 to 65° C	40 to 75° C
Viscosity ISO-VG	100	150	220	320

The following grades of oil / grease are recommended.

Lubricants

Brand	Oil		Grease
	Ambient 30 to 65° C	Ambient 40 to 75° C	
Indian Oil	SERVOMESH 220	SERVOMESH 320	Servo Gem-2
Hindustan Petroleum	GERVIL EP 220	GERVIL EP 320	Beacon-2
Bharat Petroleum	ENERGOL GRHP220	ENERGOL GRHP320	Alvania No.2
ESSO	SPARTAN EP 220	SPARTAN EP 320	Multifax-EP-2
SHELL	OMALA EP 220	OMALA EP 320	Alitho-30

The units are designed to work upto a maximum surface temperature of 85° C. If the temperature of the unit during running exceeds 85° C, please contact us.

➤ **Maintenance**

The oil level in the gear box should be checked regularly to make sure that the oil is filled in the gear box upto the indicated oil level. The first oil change is recommended after 500 working hours. Subsequently, the oil change interval should be about 10000 working hours. In case the gear box is being painted, please make sure that the oil seals are protected from the paint film. Periodically, check that all the clamping bolts, foundation bolts and plugs for proper tightness. No other maintenance is required for these gear boxes.

➤ **Ordering Spares**

The cross-sectional drawing and the part list of the unit supplied to you will be furnished to you against specific request. Your drive will have nameplate, showing its specifications as under:

TRANSMATIX		DADAR, MUMBAI - 28 TEL : 24376004	
MODEL		RATIO	
CODE NO.			
SR. NO.			

While ordering spares you have to mention the Unit Code No. and its Serial No. and the exact name and part number of the spares required so that we can supply you appropriate spares.

We thank you once again for purchasing our drive. We are sure that with all the above precautions, our drive will give you trouble free service for years to come.
