

**OPERATING AND
MAINTENANCE
MANUAL**

TAPER GRID COUPLING

ROTOGRID

ROTOGRID MANUAL ENGLISH ED. .04.2004 COD.13547IN



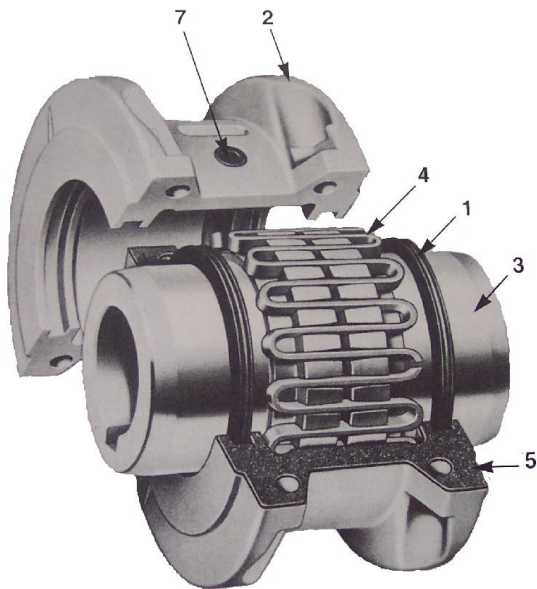
WESTCAR s.r.l

SEDE LEGALE

Uffici Commerciali
Via M. Rosa 14
20149 Milano – ITALY
Tel. 02-76110319

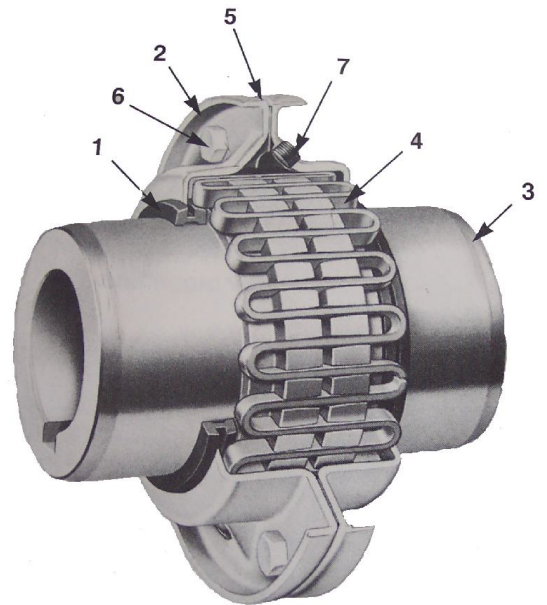
STABILIMENTO

Via Venezia
21058 Solbiate Olona
Varese – ITALY
Tel .0331-641294



TH

- 1 – Oil Seal
- 2 – Cover
- 3 – Hub
- 4 – Grid
- 5 – Gasket
- 6 – Bolts
- 7 – Lube Plug



TV

INTRODUCTION

TH and TV Taper Grid Coupling is designed to operate either in the horizontal or vertical position without modification. The performance and the life of the coupling depend on how it is installed and by the maintenance. These pages help you to assemble the coupling for the best performance and for the trouble free operation.

LUBRICATION

A good lubrication with high quality lubricant is necessary for a good performance and long life. It is recommended to check the coupling each 3-4 months and to add lubricant if any. For heavier service please check more frequently. It is recommended the replacement after 4000 operating hours. For the recommended lubricants refer to the Tab.3 and for the quality refer to the Tab.2.

CONNECTIONS FOR LUBRIFICATION

It depends by the type of coupling: every cover has connections of 1/8" or 3/8". Use a pressure greaser and proceed as shown to the point 6.

PARTS IDENTIFICATION

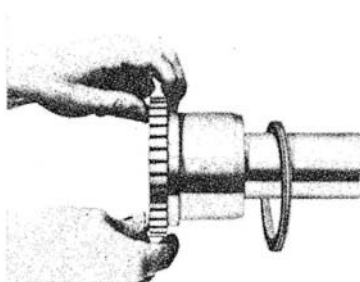
All the items of the couplings are identified by the numbers as above mentioned. The items 3 and 4 (hubs and grid) are the same for both the types TV and TH, all the others **are not interchangeable**. Therefore at the order it is necessary to specify always the **size** and the **type** of coupling as shown on the cover.

INSTALLATION

Simple standard mechanical tools such as wrenches, a straight edge and feeler gauge or dial gauge are required to install the Taper Grid Coupling. The types of 1020 to 1090 are generally supplied for mounting without interference with fixing grains. The type 1100 and those superiors for mounting with interference without fixing grains.

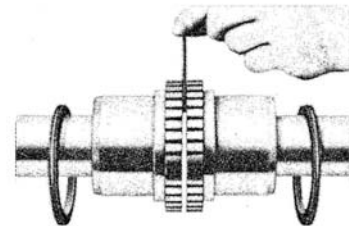
In these cases, to the assembly, heat the hubs in oil bath to a max temperature of 135 °. To obtain better results, clean all the parts carefully and align the coupling both angular and parallel: fix the gap between the hubs as recommended; definitively close the fixing bolts to the foundations and check again the alignment. For the detailed instructions refer to the page 2

INSTALLATION COUPLING ROTOGRID TYPE TH AND TV



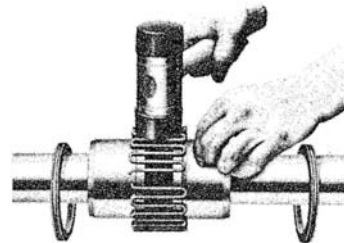
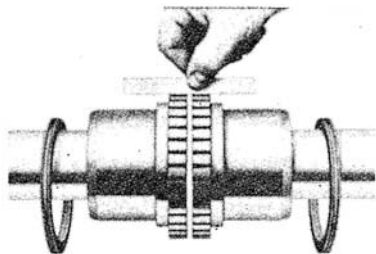
1. MOUNTING COVER SEALS AND HUBS

Before mounting the hub put on the shaft only the seal for the type TH, the cover and the seal for the type TV. Install the hubs on the respectively shafts, in order that the corresponding sides are perpendicular with the shaft extremity.



2. GAP AND ANGULAR ALIGNMENT

To get the best results, use a bar of the thickness similar to the one indicated in the table 1. Check the alignment placing the bar between the hubs, as shown, and repeat the operation at intervals of 90°

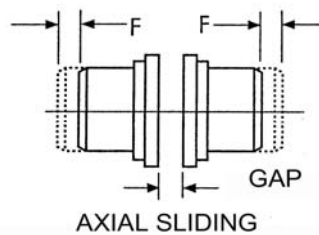
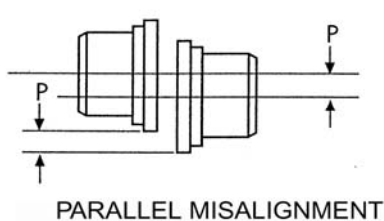
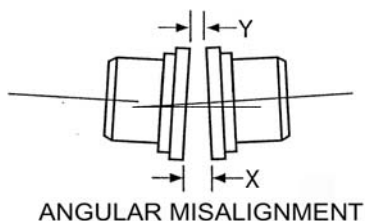
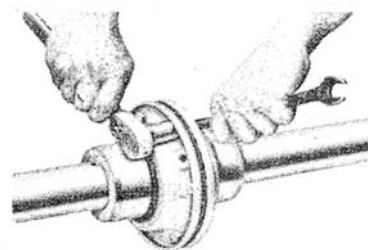
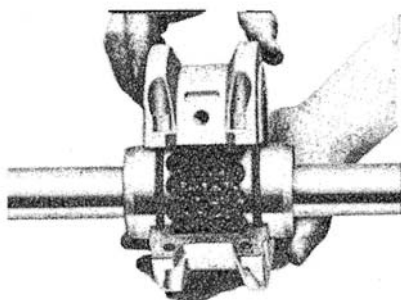


3. PARALLEL ALIGNMENT CONTROL

Align the shafts so that an alignment on the hubs results as indicated in the Tab.1 and check every 90°. Lock the bolts of the machine and check again the alignment and the gap.

4. INSERTION OF THE GRID

Once the hubs are aligned, insert across the gap (for the TV type only) the gasket and put it on one of the hubs. Fill with lubricant the gap and the seat before inserting the grid. If the grid is composed by two or more sector, put the same in order that the cuted extremities coincide. This will assure a corrected contact and it will allow an easy mounting of the covers (in particular for the TH type). Once the segments of the grid are placed, insert them in the teeth practising a light pressure. **Do not force the mounting.**



Tab.1 dimension mm

Type	Gap ±10%	Misalignment				Axial Sliding 2xF (min)	
		Installation		Operating			
		Parallel P(max)	Angular x-y(max)	Parallel P(max)	Angular x-y(max)		
1020	3	0,15	0,06	0,3	0,24	5,33	
1030			0,07		0,29	5,03	
1040			0,08		0,32	5,36	
1050		0,20	0,40	0,1	0,39	5,38	
1060				0,11	0,45	6,55	
1070				0,12	0,50	6,58	
1080				0,15	0,61	7,32	
1090				0,17	0,70	7,26	
1100		4,5	0,25	0,20	0,50	0,82	10,9
1110				0,22		0,90	
1120	6	0,28	0,25	0,56	1,01	14,2	
1130			0,30		1,19	14	
1140			0,33		1,34	15,5	

Tab.2

Couple locking cover screws Nm	r.p.m. (max)		Lubrication Kg.	Type
	TH	TV		
13,3	4500	6000	0,027	1020
			0,04	1030
			0,054	1040
26,6	4350	5500	0,073	1050
			0,09	1060
	3600	4750	0,11	1070
		4000	0,17	1080
35	2440	3250	0,25	1090
	2250	3000	0,43	1100
				0,51
73	2025	2700	0,74	1120
	1800	2400	0,91	1130
	1650	2220	1,14	1140

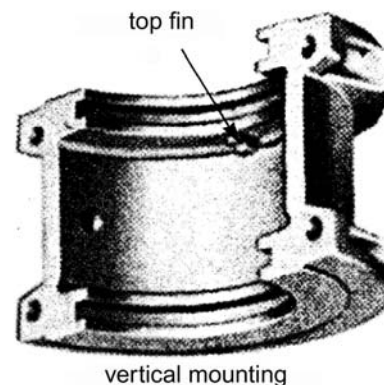
• The axial sliding (with angular and parallel error = zero, gap as table 1), is the maximum movement allowed to the hubs with the coupling installed.

5. COVERS POSITION

Fill the spaces around the grid with more lubricant and smear the additional ones on the surface of the grid.

- **TH cover**, place the half cover with the fin on the top, so the cover will be correctly installed. Let the seals slide in position on the hubs. Fix the two halves in one only point; the position is correct with the lubrication holes at 180°. Insert the seals in the seats and fix the covers with the bolts and the corresponding elastic washers (see looking couple ref. tab.2).

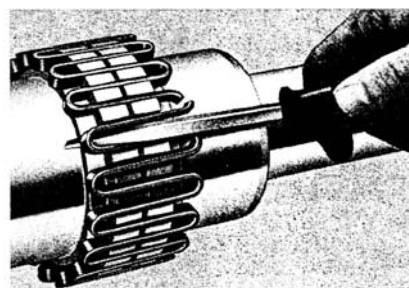
. **TV cover**, insert the seals in the half covers and let them slide on the hub. Place the half covers with the lubrication holes at 180°. Insert the gaskets and fix the covers with the bolts and the corresponding washers. (see looking couple ref. tab.2).



6. LUBRIFICATION

Remove the plugs, put the grease till it goes out from the other hole, install again the plugs.

Attention: be sure that there are not looses



grid replacement

Tab. 3 – Recommended Lubricants

Brands	TYPE	
	-18°C + 66°C	-34°C +38°C
Oleotecnica	LT EP2	-
Amoco Oil Co	Amolith Grease EP2	Amolith Grease EP2
Chevron USA Inc.	Chevron Dura – Lith EP2	Chevron Dura – Lith EP2
Gulf O.I Corp.	Gulf crown Grease EP2	Gulf crown Grease EP2
Esso Italia	Bercom EP2	-
Mobil	Mobilux EP 111	Mobilux # 1
Agip	GRMU EP2	-
Texaco Lubrificants	Starplex HD 2	Multifak EP2
Valvoline Oil Corp.	Val – Lith EP EP2	Val – Lith EP EP2
Shell Oil Co	Alvania Grease EP2	Alvania Grease EP2
Conoco Inc	EP Conolith EP2	EP Conolith EP2

7. CONSERVATION PRESCRIPTION

7.1 Prescription according to the conservation foreseen by the Supplier before the delivery of the components for a period of 6 months.

The component must be protected in its steel parts with protective fluid CRC 3.36 or equivalent.

It is not necessary foresee any protection for the alloy (TH) parts. The rubber parts must be protected with grease AGIP 3FD or equivalent.

7.2 Operations and checks to carry out
a) to Customer wearhouse

It is not foreseen any operation of conservation, since the procedures carried out by the supplier assure a component conservation for the required period.

The components have to be stocked in the original package, in rooms dry and cleaned, repaired from the sun light and from the dust.

b) at equipment installed but not operative for 6 months.

Apply on the steel parts of the component protective fluid CRC 6.66 Marine or equivalent, which assure a protection, in marine environment of 6 months.

Alternatively use product CRC protective marine which guaranty a 6 month of protection. This product is removable with diluent CRC marine Elmec Clean.

The seals have to be greased.

c) at equipment which already worked but not operating for 6 months

In this case it is necessary that at stop of activity the procedures of point b have to be carried out.