



TEREX | COMEDIL

TAD 2RG 4M3

TAD 2RG 4M4

Travelling Drive Unit

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Chapter 12


1

GENERAL INFORMATION

1.1




DIMENSIONS AND WEIGHTS

|  | DESCRIPTION | LENGTH | QUANTITY | WEIGHT |
|---|--|-------------------|----------|-------------------------------|
| | <i>TRAVELLING UNIT (inclusive of adaptors)</i> | 1.60 m (5' 3") | 4 | 1050 kg each (2315 lbs) |
| | | WIDTH | | |
| | | 1 m (3' 3") | | |
| | | HEIGHT | | |
| | | 0.65 m (2' 2") | | |

|  | DESCRIPTION | LENGTH | QUANTITY | WEIGHT |
|--|---------------------------------|------------------|----------|-------------------|
| | <i>QET ELECTRICAL PANEL</i> | 0.5 m (1' 8") | 1 | 35 kg (77 lbs) |
| | | WIDTH | | |
| | | 0.5 m (1' 8") | | |
| | | HEIGHT | | |
| | | 0.2 m (8") | | |




1.2

PERFORMANCES

| | | | |
|---|--|-----------------|----------|
|  | TAD 2RG 4M3 | 0 - 24 m / m in | 4 × 3 kW |
| | TAD 2RG 4M4 | | 4 × 4 kW |
|  |  | | |



U.S. Customery units

| | | | |
|---|--|--------------|----------|
|  | TAD 2RG 4M3 | 0-79 ft/m in | 4 × 3 kW |
| | TAD 2RG 4M4 | | 4 × 4 kW |
|  |  | | |



1.3 TECHNICAL SPECIFICATIONS

The unit consists of four travelling bogies. Each travelling bogie rests on two wheels: one idle wheel and one driving wheel.

The unit is controlled by four groups of 3 kW (TAD 2RG 4M3) and 4 kW (TAD 2RG 4M4) of power each, driven by alternate current motors.

Acceleration and deceleration are made progressive by the interposition between the reduction gear and the motor of a hydraulic coupling, thus limiting possible load oscillation.

Maximum travelling speed is 24 m/min (79 ft/min) -50 Hz.

Motor

Feeding: *Three-phase A.C. 400 V 50 Hz*
 Tipo: *LS 100L T 4 poles (TAD 2RG 4M3)*
LS 112M T4 poles (TAD 2RG 4M4)

Power: *4×3 kW (TAD 2RG 4M3)*
4×4 kW (TAD 2RG 4M4)

Cooling: *Autoventilated*

Reduction gear

Type: *BV EM1045 110*
 Rated output torque: *3700 Nm (2729 lbs.ft)*
 Reduction: *1:78*
 Lubrication: *Oil bath*

Hydraulic coupling

Type: *D28 S-D28 190L/MU*

Wheels

Diameter: *455 mm*
 Number of idle wheels: *4*
 Number of driving wheels: *4*

Service brake

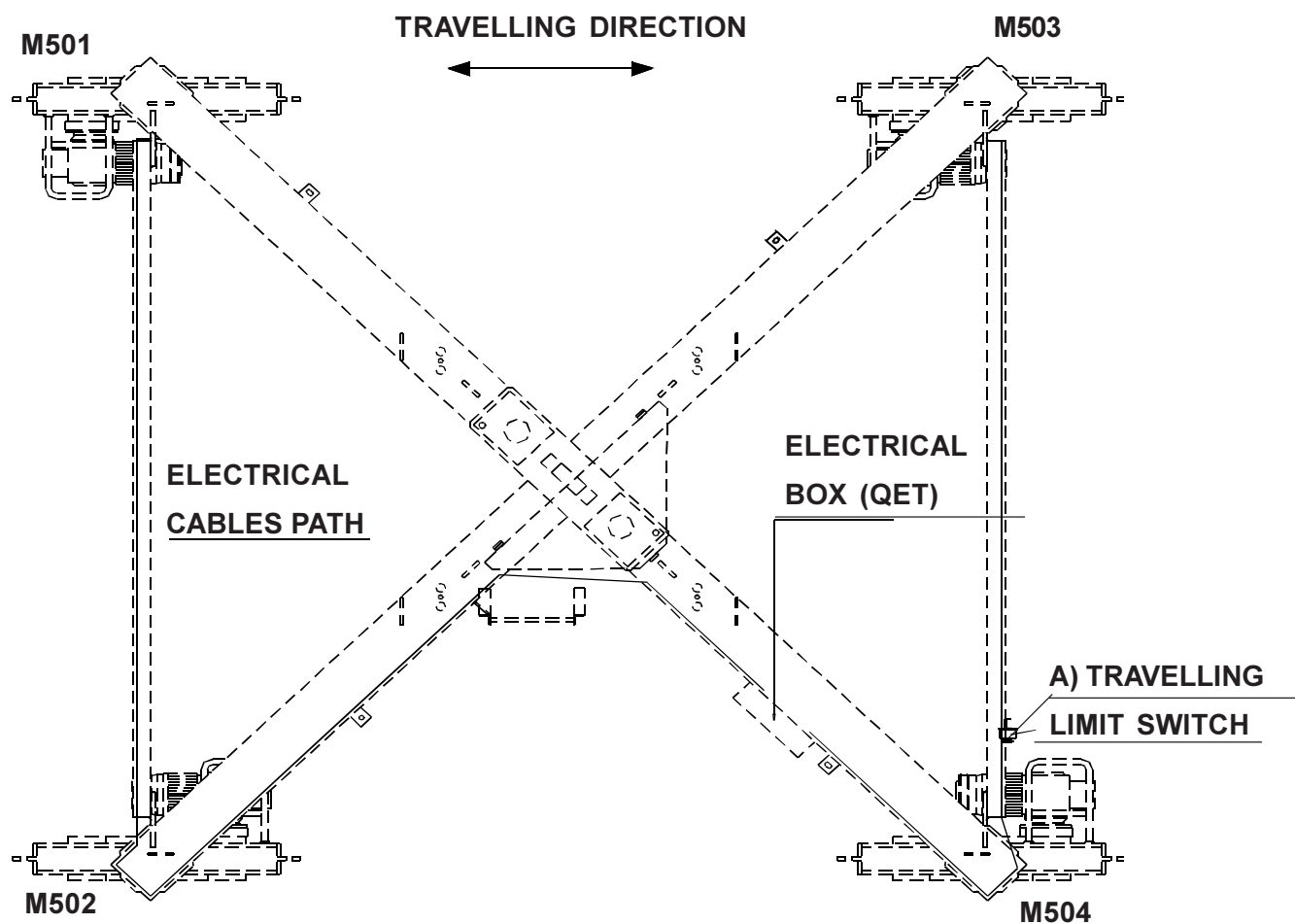
Type: *TLC 145*
 Feeding: *40 Vdc*

1.3.1 Limit switch

The unit has a travelling limit switch (A) which limits the travelling of the crane on the rail track (picture 1.3.1).



For the operation, adjustment and maintenance of this component, refer to the main chapters of the crane's operation manual.



Picture 1.3.1

1.4 BRAKE SETTING

1.4.1 General information

The brake, assembled on the travelling reduction gear, is spring-pressure type. It stops the worm reduction gear when power is lost.

The braking power can be adjusted through the ring nut (4).

For a correct setting, the value (P) shall be as follows:

$P = 6 \text{ mm max.}$

After adjusting the spring tension through the ring nut (4), check again the gap (S) and make sure the brake is released.



Disconnect the brake before carrying out the inspections.

1.4.2 Air gap registration

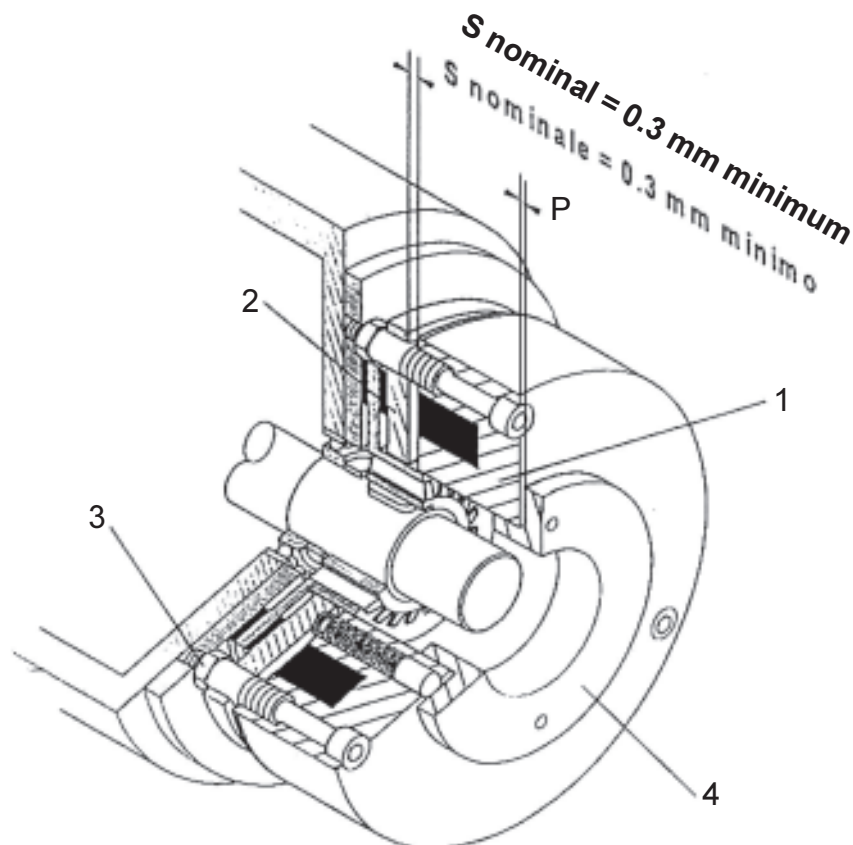
This brake does not need adjustments or maintenance during the first installation. Only after one year it is advisable to check the gap (S) [distance between magnet (1) and mobile disc (2)] (picture 1.4.1).



The maximum gap clearance (S) allowed is 2 ÷ 3 times greater than the nominal value.

To reset nominal value adjust spacers (3).

The gap value must be checked with the thickness gauge in at least three points because it must be the same for the whole circumference area.



Picture 1.4.1



SPARE PARTS

Indice - Index - Sommaire - Inhaltsangabe

| PARTI DI RICAMBIO - SPARE PARTS - PIECES DE RECHANGE - ERSATZTEILE | | | | |
|--|---|---|-------------|-------------|
| CODICE DI GRUPPO | DESCRIZIONE | DESCRIPTION | DESIGNATION | BEZEICHNUNG |
| 143502050 | Traslazione completa TAD 2RG 4M3 | <i>Complete travelling</i> | | |
| 845258002 | Riduttore traslazione (completo di freno) | <i>Reduction gear (complete with brake)</i> | | |
| 841020026 | Motore traslazione 3kw | <i>Motor 3 kw</i> | | |
| 243502030 | Varianti per traslazione TAD 2RG 4M4 | <i>Differences for travelling TAD 2RG 4M4</i> | | |
| 841020028 | Motore traslazione 4kw | <i>Motor 4 kw</i> | | |

**RICAMBI
SPARE PARTS
PIECES DE RECHANGE
ERSATZTEILE**

**Istruzioni per l'uso
Instructions for use
Mode d'emploi
Gebrauchsanleitung**

| A | B | C | D | E | F | G |
|----------|----------|----------|----------|----------|----------|----------|
|----------|----------|----------|----------|----------|----------|----------|

| POS. | CODICE | Q.TA' | DESCRIZIONE | DESCRIPTION | DESIGNATION | BEZEICHNUNG |
|------------------|---------------|--------------|--|---------------------------------|--------------------|--------------------|
| 243501010 | | | TRASLAZIONE MOTRICE TAD 1RP 2M3 | DRIVE TRAVELLING BOX | | |
| 1 | 346202001 | 1 | Chiusura per scatola motrice | Cover | | |
| 2 | 840206005 | 2 | Cusc. 22219 E TVPB (95 × 170 × 43) | Bearing | | |
| 3 | 346903040 | 1 | Perno mot. 110 × 293 | Motor pin | | |
| 4 | 347201010 | 1 | Flangia attacco riduttore | Reduction gear | | |
| 5 | 845257001 | 1 | Riduttore 1/51,7 | Reduction gear | | |

Colonna A: posizione di riferimento su disegno d'insieme

Colonna B: codice particolare

Colonna C: quantità particolare

Colonna D: descrizione in lingua italiana

Colonna E - F - G: descrizione nelle varie lingue

Column A: part reference number on the assembly drawing

Column B: part code

Column C: part quantity

Column D: Italian designation

Column E - F - G: designations for the various languages

Colonne A: repère sur dessin d'ensemble

Colonne B: référence particulière

Colonne C: quantité particulière

Colonne D: description en italien

Colonne E - F - G: description dans les autres langues

Kolonne A: Referenznummer auf der Gesamtzeichnung

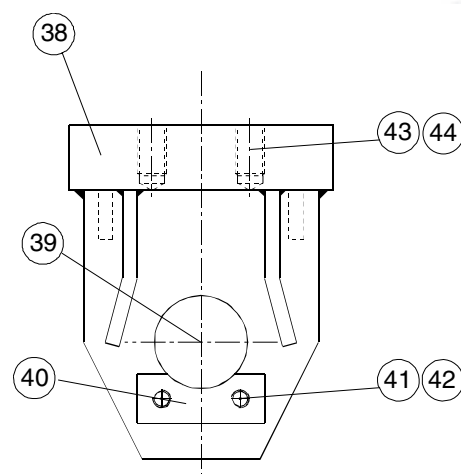
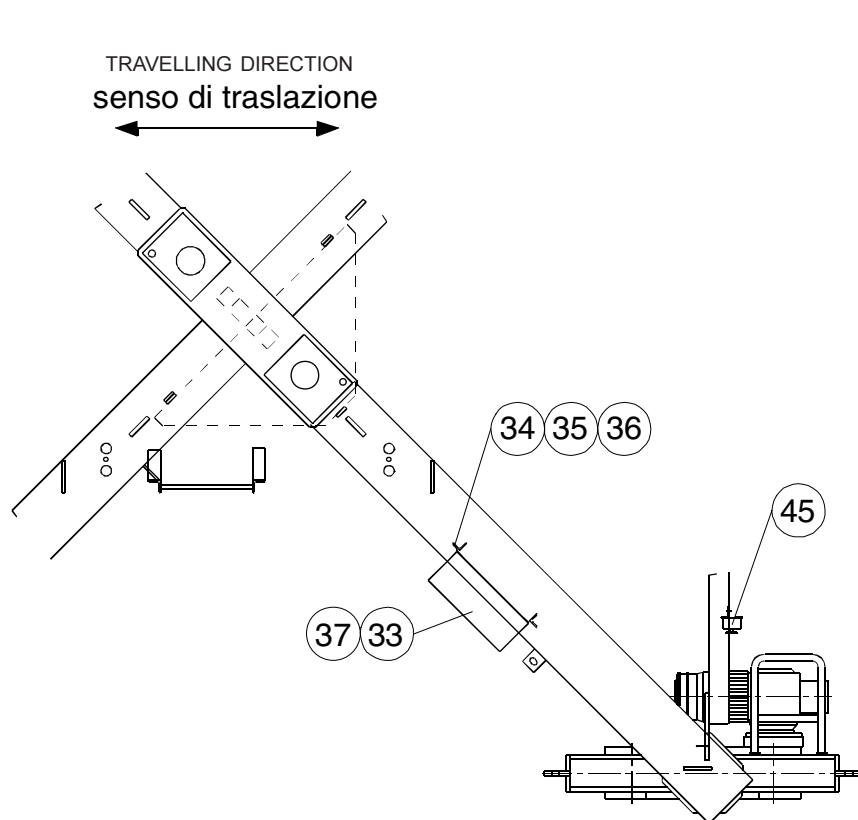
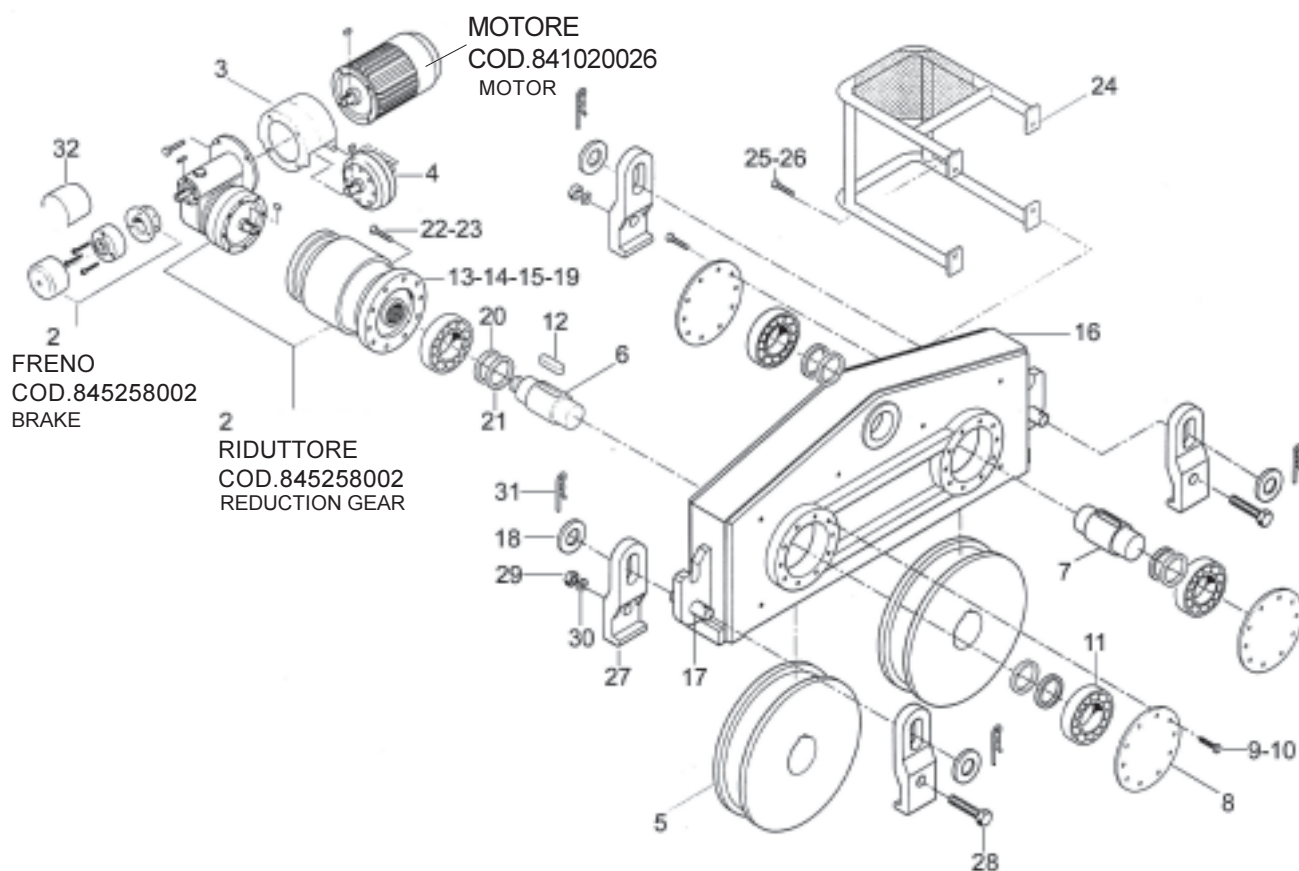
Kolonne B: Einzelheiten - Code

Kolonne C: Anzahl Einzelheiten

Kolonne D: Beschreibung in italienisch

Kolonne E - F - G: Beschreibung in verschiedenen Sprachen

TRASLAZIONE COMPLETA TAD 2RG 4M3
COMPLETE TRAVELLING TAD 2RG 4M3



| POS. | CODICE | Q.TA' | DESCRIZIONE | DESCRIPTION | DESIGNATION | BEZEICHNUNG |
|-----------|-------------|-------|---|--|-------------|-------------|
| 143502050 | | | TRASLAZIONE COMPLETA TAD 2RG 4M3 | COMPLETE TRAVELLING | | |
| 1 | 841020026 | 1(*) | MOTORE | MOTOR | | |
| 2 | 845258002 | 1(*) | RIDUTTORE + FRENO | REDUCTION GEAR + BRAKE | | |
| 3 | 346300004-1 | 1(*) | CAMPANA GIUNTO | JOINT SUPPORT- BELL | | |
| 4 | 347128001 | 1(*) | GIUNTO | JOINT | | |
| 5 | 346800003 | 2(*) | RUOTA TRASLAZIONE | TRAVELLING WHEEL | | |
| 6 | 346903060 | 1(*) | PERNO MOTORE | MOTOR PIN | | |
| 7 | 346902010 | 1(*) | PERNO FOLLE | IDLE PIN | | |
| 8 | 347202020 | 3(*) | FLANGIA CHIUSURA CON INGRASSATORE | FLANGE | | |
| 9 | 880133101 | 30(*) | VITE TE M12 x 30 Z - 8.8 | SCREW | | |
| 10 | 881732005 | 30(*) | RONDELLA PIANA M12 - 6.8 | PLANE WASHER | | |
| 11 | 840206007 | 4(*) | CUSCINETTO | BEARING | | |
| 12 | 883440018 | 2(*) | LINGUETTA | TONGUE JOINT | | |
| 13 | 347201370 | 1(*) | FLANGIA ATTACCO RIDUTTORE | FLANGE | | |
| 14 | 880133101 | 10(*) | VITE TE M12 x 30 Z - 8.8 | SCREW | | |
| 15 | 881732005 | 10(*) | RONDELLA PIANA M12 - 6.8 | PLANE WASHER | | |
| 16 | 343502100 | 1(*) | SCATOLA PER TRASLAZIONE | BOGIE | | |
| 17 | 380143030 | 2(*) | SPINA CS 40 x 145 | PIN | | |
| 18 | 882200002 | 4(*) | RONDELLA 41 x 58 x 5 | WASHER | | |
| 19 | 859900010 | 4(*) | INGRASSATORE DIRITTO | LUBRICATOR | | |
| 20 | 883700034 | 4(*) | ANELLO NILOS | RING NILOS | | |
| 21 | 382617010 | 4(*) | DISTANZIALE 130 x 110 x 5 | SPACER | | |
| 22 | 880233013 | 10(*) | VITE TC M12 x 20 N - 8.8 | SCREW | | |
| 23 | 881837004 | 10(*) | RONDELLA GROW M12 N | WASHER | | |
| 24 | 325300050 | 1(*) | PROTEZIONE PER MOTORE | PROTECTION | | |
| 25 | 880133101 | 4(*) | VITE TE M12 x 30 Z - 8.8 | SCREW | | |
| 26 | 881732005 | 4(*) | RONDELLA PIANA M12 - 6.8 | PLANE WASHER | | |
| 27 | 350553010 | 4(*) | TENAGLIA ANCORAGGIO | ANCHORING CLAMP | | |
| 28 | 880133073 | 2(*) | VITE TE M27 x 180 Z - 8.8 | SCREW | | |
| 29 | 881224022 | 2(*) | DADO ALTO M27 Z - 10 | TALL NUT | | |
| 30 | 881732011 | 4(*) | RONDELLA PIANA M27 Z - 6.8 | PLANE WASHER | | |
| 31 | 883200004 | 4(*) | CHIAVISTELLO R D.8 Z | SPRING SPLIT PIN | | |
| 32 | 346200012 | 1(*) | CARTER FRENO | BRAKE COVER | | |
| 33 | 330202005 | 1 | QUADRO ELETTRICO TRASLAZIONE (QET) | (QET) TRAVELLING ELECTRICAL BOX | | |
| 34 | 880133085 | 4 | VITE TE M8 x 25 Z - 8.8 | SCREW | | |
| 35 | 881323001 | 4 | DADO AUTOBLOCCANTE M8 N - 8 | SELF LOCKING NUT | | |
| 36 | 881732003 | 4 | RONDELLA PIANA M8 Z - 6.8 | PLANE WASHER | | |
| 37 | 338101009 | 1 | KIT COLLEGAMENTO A QUADRO EL. GENERALE | KIT FOR CONNECTION TO (QEG) EL. BOX | | |
| 38 | 343500020 | 1(*) | ADATTATORE PER COLLEGAMENTO AL CARRO | TRAVELLING ADAPTER FOR UNDERCARRIAGE CONNECTION | | |
| 39 | 380343002 | 1(*) | SPINA PS 95 x 280 | PIN | | |
| 40 | 383400008 | 1(*) | PIASTRINA FERMO SPINA | PIN LOCK PLATE | | |
| 41 | 880133133 | 2(*) | VITE TE M18 x 40 Z - 8.8 | SCREW | | |
| 42 | 881732008 | 2(*) | RONDELLA PIANA M18 Z - 6.8 | PLANE WASHER | | |
| 43 | 880133159 | 4(*) | VITE TE M30 x 100 Z - 8.8 | SCREW | | |
| 44 | 881732012 | 4(*) | RONDELLA PIANA M30 Z - 6.8 | PLANE WASHER | | |
| 45 | 832101006 | 1(*) | FINECORSO TRASLAZIONE | TRAVELLING LIMIT SWITCH | | |

(*) QUANTITA' VALIDA PER UNA SCATOLA DI TRASLAZIONE
 QUANTITY VALID FOR ONE TRAVELLING BOGIE

RIDUTTORE TRASLAZIONE

(COMPLETO DI FRENO)

TRAVELLING REDUCTION GEAR

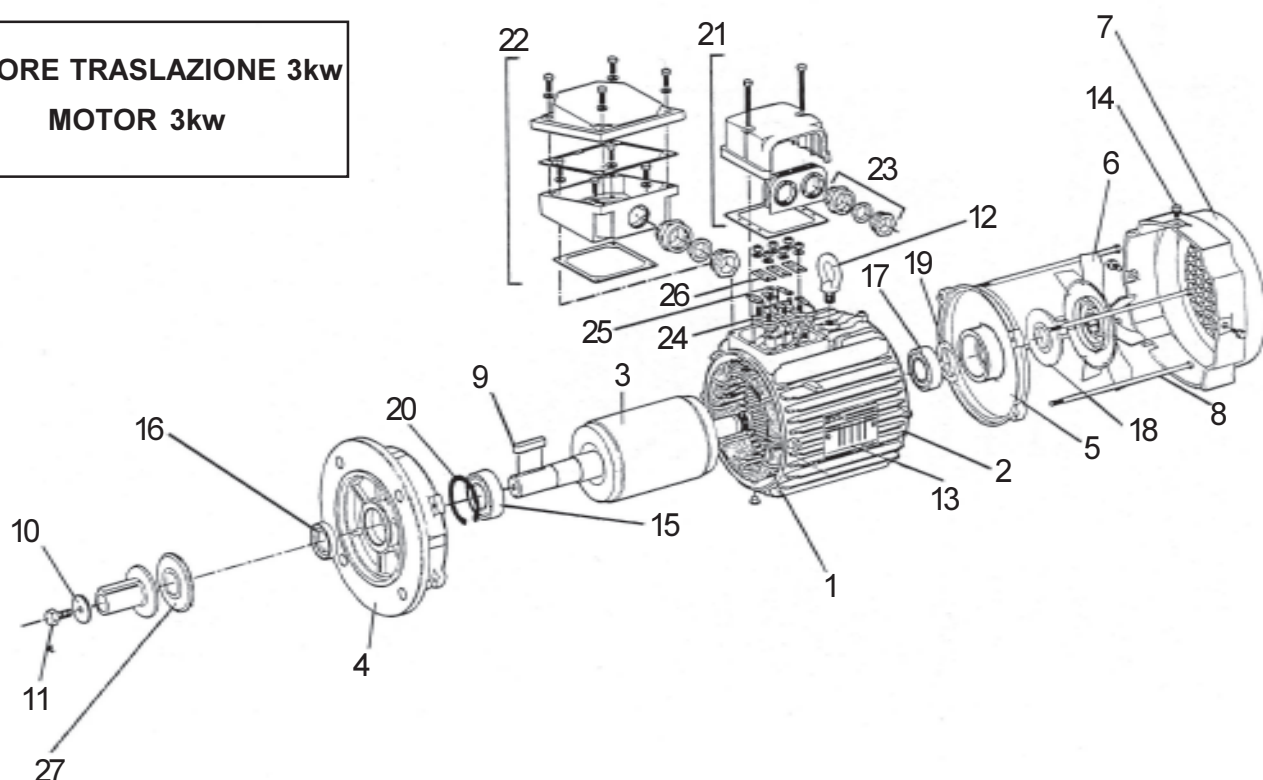
(COMPLETE WITH BRAKE)



Per informazioni, contattare Ufficio Tecnico GRU COMEDIL.

For detailed information, contact GRU COMEDIL's technical department.

MOTORE TRASLAZIONE 3kw
MOTOR 3kw

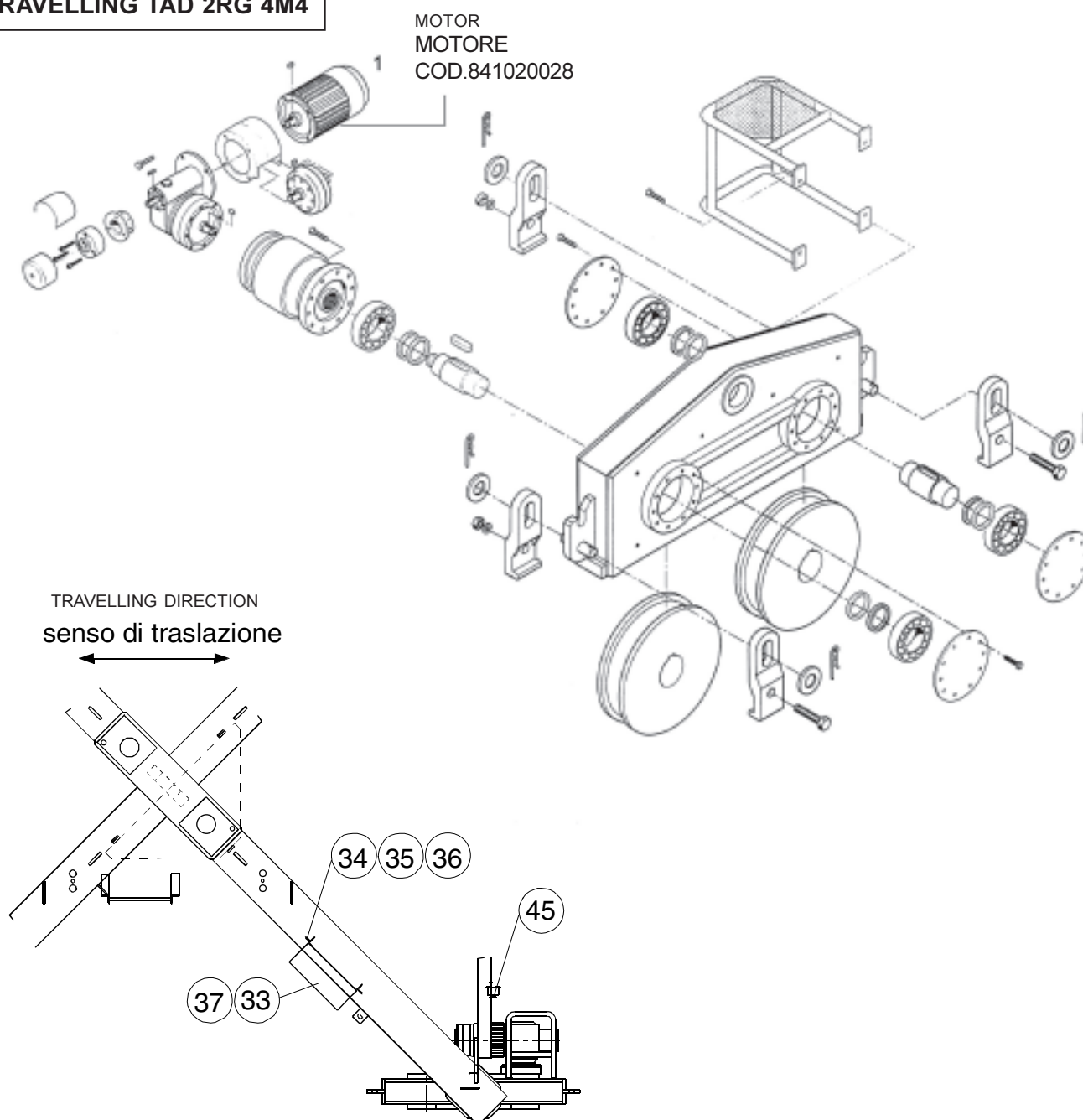


| POS. | CODICE | Q.TA' | DESCRIZIONE | DESCRIPTION | DESIGNATION | BEZEICHNUNG |
|-----------|--------|-------|------------------------------------|-----------------------|-------------|-------------|
| 841020026 | | | MOTORE TRASLAZIONE 3 kw | MOTOR 3 kw | | |
| 1 | | 1(*) | STATORE DI ESTREMITA' D'ALBERO | SHAFT END STATOR | | |
| 2 | | 1(*) | CARCASSA | CASING | | |
| 3 | | 1(*) | ROTORE | ROTOR | | |
| 4 | | 1(*) | SCUDO LATO ACCOPPIAMENTO | CAGE COUPLING SIDE | | |
| 5 | | 1(*) | SCUDO POSTERIORE | REAR CAGE | | |
| 6 | | 1(*) | VENTILATORE | FAN | | |
| 7 | | 1(*) | CUFFIA COPRIVENTOLA | FAN CASING | | |
| 8 | | 4(*) | ASTE DI MONTAGGIO | ASSEMBLY RODS | | |
| 9 | | 1(*) | CHIAVETTA DELL'ESTREMITA' D'ALBERO | SHAFT END KEY | | |
| 10 | | 1(*) | RONDELLA DI ESTREMITA' D'ALBERO | SHAFT END WASHER | | |
| 11 | | 1(*) | VITE DI ESTREMITA' D'ALBERO | SHAFT END SCREW | | |
| 12 | | 1(*) | ANELLO DI SOLLEVAMENTO | HOISTING RING | | |
| 13 | | 1(*) | TARGA DATI | NAMEPLATE | | |
| 14 | | 4(*) | VITI DI FISSAGGIO CUFFIA | CASING FIXING SCREW | | |
| 15 | | 1(*) | CUSCINETTO LATO ACCOPPIAMENTO | BEARING COUPLING SIDE | | |
| 16 | | 1(*) | GUARNIZIONE LATO ACCOPPIAMENTO | GASKET COUPLING SIDE | | |
| 17 | | 1(*) | CUSCINETTO POSTERIORE | REAR BEARING | | |
| 18 | | 1(*) | GUARNIZIONE POSTERIORE | REAR GASKET | | |
| 19 | | 1(*) | RONDELLA PRECARICO | PRE-LOAD WASHER | | |
| 20 | | 1(*) | ANELLO SEEGER | SEEGER RING | | |
| 21 | | 1(*) | SCATOLA MORSETTIERA | TERMINAL BOX | | |
| 22 | | 1(*) | SCATOLA MORSETTIERA | TERMINAL BOX | | |
| 23 | | 2(*) | PRESSACAVO | CABLE GLAND | | |
| 24 | | 1(*) | MORSETTIERA | TERMINAL BLOCK | | |
| 25 | | 1(*) | VITE MORSETTIERA | TERMINAL SCREW | | |
| 26 | | 3(*) | BARRETTE DI COLLEGAMENTO | CONNECTING BARS | | |
| 27 | | 1(*) | GUARNIZIONE LATO ACCOPPIAMENTO | GASKET COUPLING SIDE | | |

(*) QUANTITA' VALIDE PER UNA SCATOLA DI TRASLAZIONE / QUANTITY VALID FOR ONE TRAVELLING BOGIE

**VARIANTI PER TRASLAZIONE
TAD 2RG 4M4**

**DIFFERENCES FOR
TRAVELLING TAD 2RG 4M4**



| POS. | CODICE | Q.TA' | DESCRIZIONE | DESCRIPTION | DESIGNATION | BEZEICHNUNG |
|-----------|-----------|-------|--|--|-------------|-------------|
| 243502030 | | | TRASLAZIONE COMPLETA TAD 2RG 4M4 | COMPLETE TRAVELLING | | |
| 1 | 841020028 | 1(*) | MOTORE | MOTOR | | |
| 33 | 330202001 | 1 | QUADRO ELETTRICO TRASLAZIONE | ELECTRICAL BOX | | |
| 34 | 880133085 | 4 | VITE TE M8 x 25 Z - 8.8 | SCREW | | |
| 35 | 881323001 | 4 | DADO AUTOBLOCCANTE M8 N - 8 | SELF LOCKING NUT | | |
| 36 | 881732003 | 4 | RONDELLA PIANA M8 Z - 6.8 | PLANE WASHER | | |
| 37 | 338101001 | 1 | KIT COLLEGAMENTO A QUADRO ELT. GENERALE | KIT FOR CONNECTION TO (QEG) EL BOX | | |

(*) QUANTITA' VALIDE PER UNA SCATOLA DI TRASLAZIONE / QUANTITY VALID FOR ONE TRAVELLING BOGIE

MOTORE TRASLAZIONE 4 kw
MOTOR 4 kw

 **Per informazioni, contattare Ufficio Tecnico GRU COMEDIL.**

For detailed information, contact GRU COMEDIL's technical department.

| POS. | CODICE | Q.TA' | DESCRIZIONE | DESCRIPTION | DESIGNATION | BEZEICHNUNG |
|------|-----------|-------|-------------------------|------------------|-------------|-------------|
| | 841020028 | | MOTORE TRASLAZIONE 4 kw | TRAVELLING MOTOR | | |
| | | | | | | |
| | | | | | | |

3

3.1

Repair is directly related to the inspection carried out and, resolving each detected deficiency, restores the unit to its original configuration and state of operation.



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- 1) ***Travel tracks***
- 2) ***Travelling unit (bogies, reduction gears and wheels)***
- 3) ***Connectors and electrical cables***
- 4) ***Travelling limit switches***
- 5) ***Cooling fans***

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Defects which cannot be solved during this phase will become part of the "SPECIAL MAINTENANCE".





3.3.1 Daily inspections

- A) The operator, a qualified and trained person, is the appointed person to examine deficiencies and to determine whether they constitute a hazard.

The daily inspection of the crane gives a good evaluation of the general condition of the unit itself.

- B) Check that the protections (protective cover, etc.) and the security devices for the operator's safety are well secured.
- C) Inspect the travel tracks.

3.3.2 Weekly inspections

- A) Make sure that all bolts connecting the travelling bogies to the undercarriage are placed in their housings, secured with their relative nuts and tightened correctly.
- B) Inspect all security devices and protections.
- C) Visually inspect the integrity of the electric and electronic equipment.
- D) Check the integrity and the correct connection of the power supply cable (make sure that the phases are connected correctly).

3.3.3 Monthly inspections

- A) With great accuracy examine all the welding of the bogies.
- B) Carefully check all oxidized welding because some might be cracked.
- C) Check reduction gears for proper oil level as specified in the lubrication charts (P par. 3.5).
- D) With the power off, remove access covers on electrical motors to inspect the commutators for wear. If necessary clean the commutators. Replace any electrical part which looks seriously worn out.
- E) Using low pressure compressed air remove the dust from inside the electrical boxes and panels.
- F) Clean the filters of the electric motor cooling fans using compressed air or washing them with soap and water.
- G) Open the electric box and visually inspect the relays, fuses, connections and other electrical devices to eliminate any dampness, short circuit, burns or other damages that might arise. Check that all components are properly installed. When the inspection is finished close the electric panel.
- H) Inspect the integrity and efficiency of motors and cooling fans.
- I) Inspect the motors for obvious damage or short circuit, the electric wires for right connections or visible signs of damage.

3.3.4 Quarterly inspections

Made up for by monthly inspections.

3.3.5 Six-monthly inspections

Made up for by monthly inspections.



3.3.4 Annual inspections

- A) Perform non-destructive tests on structural welds located on the bogies.
- B) Carry out anti-corrosion treatment and repaint any oxidized parts.
- C) Check the conditions of all the bogie's connecting systems: any corroded, worn out or damaged screws and nuts shall be replaced by Comedil's technicians.
- D) Adjust the travelling brakes.
- E) Inspect the wear and tear of the bogies and of the travelling wheels.
- F) Lubricate the travelling wheels as specified in paragraph 3.5.
- G) Inspect all the gaskets of the motors for wear.



NOTE: after three years at the latest, even if the equipment is out of operation, replace the oil of the reduction gear as specified in the lubrication chart (P par. 3.5).



Important notice:

Should extraordinary events happen, such as long periods of driving rain with lightening striking near the crane, protracted work in a corroding ambient or in particularly foul areas, etc. MORE FREQUENTLY AND CAREFULLY INSPECT the electrical equipment for evident signs of wear. In particular, check the cables running up the tower and possible leakages of water into the electrical boxes.

3.4 SPECIAL MAINTENANCE

Special maintenance tasks shall be accomplished by skilled technicians who have been properly trained and have the experience to accomplish these tasks.



Specialists only shall be appointed to carry out the following operations:

- A) Adjustment of the limit switches.
- B) Repair of the electrical components and adjustment of the electronic systems which carry out the moving and functioning of the mechanisms
- C) Brake adjustment;
- D) Overhaul of the electrical motors and of the reduction gears;
- E) Repair of the electrical motor;
- F) Non-destructive testing for structural damage.

3.5 LUBRICATION AND OILS

| PARTS TO BE SERVICED | LUBRICANT |
|---------------------------|-------------------------|
| Travelling reduction gear | MOBIL Mobilgear SHC 630 |
| Travelling wheels | Shield Fluid 3K |



Check for proper oil level after any repairs inside the travelling unit.