

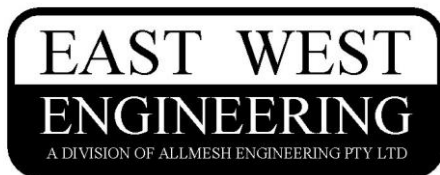
EAST WEST ENGINEERING
INSTRUCTION MANUAL

Type DER DRUM ROTATOR
(Includes Models DER40C & DER40H)

Table of contents

	Page
1) Quality Policy Statement_____	2
2) General Description of Product_____	2
3) Method of Attachment to Forks_____	3
4) Operational and Safety Procedures_____	3
5) Risk Control Measures – Summary_____	5
6) Parts List_____	7
7) Maintenance_____	8
8) Compliance Plate Information_____	9
9) Certification Information_____	10
10) Terms and Conditions_____	11
Appendix A_____	Attached

**ALL EAST WEST DRUM ROTATORS CONFORM TO
AS/NZS 1554.1:2014, AS 2359.1 – 1995 & AS 2359.2 – 2013**



22 Clearview Place,
Brookvale NSW Australia 2100
Ph: (02) 9938 0644 Fax: (02) 9938 0655
Toll Free: 1800 061 998
Email: sales@eastwesteng.com.au

1) QUALITY POLICY STATEMENT

East West Engineering is an Australian Owned company in the Sydney suburb of Brookvale. We are Australia's leading manufacturer of forklift attachments, storage, waste containers and environmental protection equipment.

East West Engineering's products are a result of extensive market research into our customer's needs. From the first concept to engineering certification and finally, CAD/CAM manufacturing, all our designs have been rigorously researched and developed.

2) GENERAL DESCRIPTION of PRODUCT

The type DER Drum Rotator is a slip-on forklift attachment specially designed to handle 205-litre drums. A pivoting Belly Strap holds the Drum in position, allowing for transport or rotation by the attachment. The belly strap is attached to a manually driven gearbox. There are two basic options; the type DER40C Drum Rotator has a gearbox driven by a hand chain wheel while the type DER40H Drum Rotator features a handle driven gearbox. The Working Load Limit (WLL) for all type DER Drum Rotators is as specified on the Compliance plate – refer *Fig. 8.1* and *Table 8.2* for all details.

There is also a number of Belly Strap options for the DER Drum Rotator. They range from units suiting all standard sized steel drums to drum cradles for plastic drums. Refer to the separate **DER Drum Rotator Attachment Option** Instructions for further information on the different Belly Strap assemblies.

The type DER Drum Rotator revolves the drum continually through a 360⁰ rotation. A locking safety chain holds the attachment to the fork arms. A Zinc Plated finish is standard on all type DER Drum Rotator models.

The type DER Drum Rotator is manufactured strictly in accordance with AS 2359.1. Use of the forklift attachment should be in conformance with relevant statutory authorities. Use of the type DER Drum Rotator is restricted to the purpose for which it is designed. EAST WEST ENGINEERING is not liable if this restriction is breached.

Some attachments are manufactured as “Specials” from this standard product. In this situation, design changes may alter the operating procedures for the Special attachment.

If your product type begins with the prefix “J”, it will be a Special. Please check with East West Engineering for non-standard instructions specific for your attachment.

Note: The use of the words ‘Forklift’ & ‘Industrial Truck’ throughout these instructions both refer to ‘Powered Industrial Truck’ as defined in AS 2359.1.

Type Data

To accurately identify the Drum Rotator and when ordering parts, please quote the **Type** and **Serial Number**. This information can be found on the compliance plate situated on the slipper. Please refer *Fig. 8.1* and *Table 8.2*, codes “A” and “B” for more information.



WARNING: These Instructions **MUST be READ in FULL by the Operator** and all Operational & Safety Procedures and Risk Control Measures complied with before the use of this attachment.

3) METHOD of ATTACHMENT to FORKLIFT

Before installation of the Drum Rotator onto a Forklift, ensure that the fork arms are suited and set to the correct width.

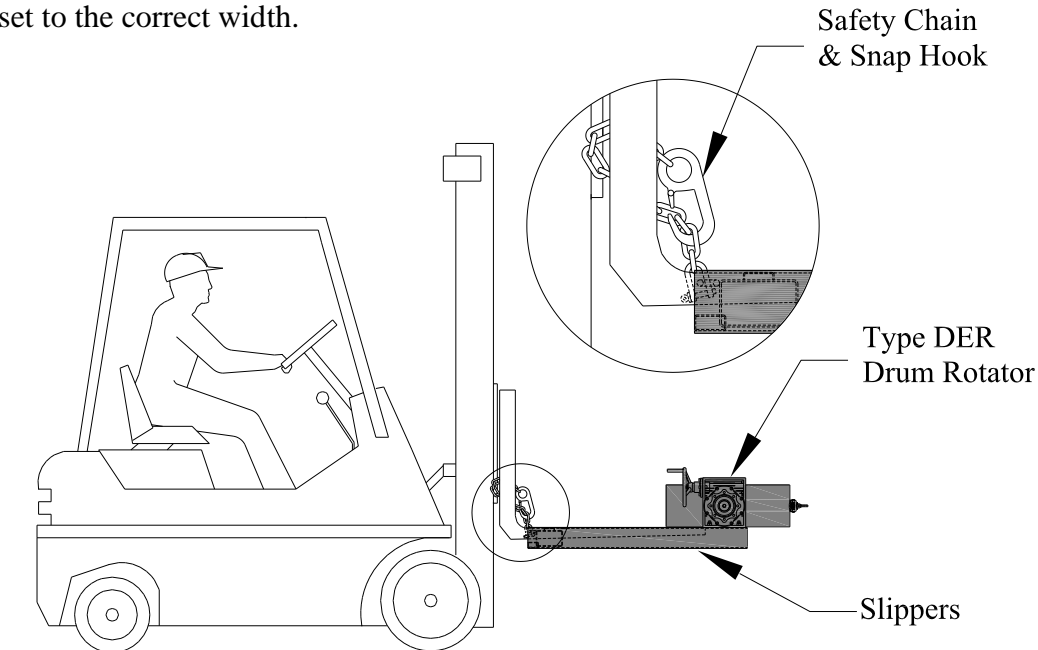


Fig. 3.1

To install the DER Drum Rotator, engage the Forklift arm into the slippers as shown in *Fig 3.1*. With the fork arm positioned as far as possible into the slipper, run the safety chain provided around the carriage or tower. Re-attach the chain to itself with the snap hook.

4) OPERATIONAL and SAFETY PROCEDURES

Preliminary Safety Checks

A “Competent Person” shall inspect all components on the Drum Rotator to ensure they are in safe working order. Do not use the Drum Rotator if any of the components are damaged or not in safe working condition. A “Competent Person” shall inspect the safety chain, belly strap and locking pins daily to ensure that they are in safe working order. Any Drum handled by the Drum Rotator must be in a suitable condition for clamping, lifting and rotation by the belly strap.

The Operator shall check that the Drum Rotator has been correctly fitted in accordance with these Instructions (refer Section 3), and/or the relevant Industrial Truck Operator’s Manual.

All signage must be strictly adhered to and ensure that the compliance plate is not damaged and is clearly legible.

General Safety Procedures

To provide a safe and effective clamping force, the drums to be handled must be in good condition and concentric at the clamping area. An “out of shape” drum will exert excessive force on the clamping mechanism resulting in permanent damage to the Belly Strap being used. Refer to the **DER Drum Rotator Attachment Option** Instructions for the correct use of the Belly Strap under these conditions.



DRUM WARNING: The weight of any Drum to be lifted and its contents **MUST NOT** exceed the WLL of the Belly Strap/Drum Rotator. **DO NOT** lift Drums unless they are in good condition and **AVOID** lifting Drums that are “Out of Shape”.

Handling suspended loads by an attachment can introduce dynamic loads affecting stability. Sudden stops, starts and turns can cause the load to swing and create a hazard.

Forklift attachments can alter load centres and reduce the load capacity. The type of load to be handled in addition to the operating conditions must be considered when determining the actual working capacity for each application. Do not exceed the recommended forklift or attachment rating.



WARNING: Any WLL noted on the attachment is a structural rating of the attachment only and makes no claim to the suitability of the forklift. Actual load may be restricted to the suitability of the forklift. Actual lift truck capacities must be obtained from the lift truck manufacturer.

East West Engineering attachments shall not be modified in any way which affects the operation or performance except with the prior approval of East West Engineering. After any changes have been effected, appropriate alterations shall be made on the relevant nameplate and markings prior to placing the attachment back into service. East West Engineering must be notified of the changes to nameplates and markings with reference to the attachment serial number.

Operating Procedures

Attach the Drum Rotator securely to the Forklift in accordance with Section (3) above. Raise the Drum Rotator to the correct height for the belly strap to clamp the centre of the drum. Refer to the **DER Drum Rotator Attachment Option** Instructions for the correct use of the belly strap.

Once the drum has been secured to the Drum Rotator, it may be safely raised and transported with the forklift and safely rotated via the attachment gearbox.

Rotate the drum as required using either the hand chain wheel or handle. Because a gearbox is used, ease of rotation is assured and the tilt of the drum may be fixed anywhere in the 360° rotation.

If using the hand chain wheel DER40C Drum Rotator, remove all of the chain from the chain bucket before rotating the drum.

Always lift and transport the drum in an upright position. Rest the drum on the “ground” before releasing the drum from the Drum Rotator belly strap. Refer to the **DER Drum Rotator Attachment Option** Instructions for directions for releasing the drum from the belly strap. Disengage the Drum Rotator by reversing the forklift from the drum.

5) RISK CONTROL MEASURES – SUMMARY

When handling loads, the following Risk Control Measures are to be observed by the operator to ensure all identified hazards relative to using this equipment are eliminated or controlled – refer **Appendix A for a detailed analysis**;

- A) The Industrial Truck Operator requires a suitable forklift licence to cover both the Industrial Truck being operated and the attachment that has been fitted. Training in the safe use of the Drum Rotator and transport of drums about the workplace shall be undertaken before usage.
- B) Authorised personnel must perform the following pre-checks immediately prior to the use of the Industrial Truck in accordance with AS 2359.2 Clause 3.1 and 6.4 and corrective action initiated where applicable;
 - Nameplate and markings regarding the Industrial Truck and Attachment capacities are to be read and acknowledged,
 - Condition of lift and tilt systems on the Industrial Truck to be checked,
 - Inspect all tyres for wear, condition and pressure if applicable,
 - Liquid levels of battery cell electrolyte, oils (hydraulic, engine, transmission and brake), cooling water and fuel to be checked,
 - All steering and brake controls, warning devices and lights to be checked for effective operation.
- C) Gain assurance from a responsible person that the load may be handled safely with the Drum Rotator and that person has provided all information necessary to ensure that risks are eliminated or controlled.
- D) **Do NOT** exceed the rated capacity of the Industrial Truck to handle the load.
- E) Gain assurance from a responsible person that the drum and its contents do not exceed the Working Load Limit of the Drum Rotator.
- F) **Do NOT** lift drums unless they are in good condition and **AVOID** lifting drums that are “Out of Shape”.
- G) The Operator shall check that the Drum Rotator is securely attached, refer *Fig. 3.1*.
- H) The Industrial Trucks shall be used on a hard level surface. The area in which the Drum Rotator is to be used has been accessed as suitable for the task to be undertaken. There should be suitable clear space to safely use the Drum Rotator and a system developed for handling the load.
- I) While lifting in an area subject to passing traffic, barriers or warning signs shall be used to prevent any interference.
- J) Manoeuvre slowly and cautiously when the load is elevated.
- K) Transport the drum with the Drum Rotator positioned as low as practicable and the drum in its upright position.
- L) The mast, if adjustable shall be set at vertical or back tilted.
- M) Never drag or push a drum along the ground with the Drum Rotator.

- N) Never release the clamping Belly Strap unless the drum is firmly resting on the ground or on solid supports.
- O) Keep hands away from the Hand Chain Wheel & Guide during operation.
- P) Keep the Gearbox Chain or Handle under control while rotating the drum to prevent possible over-runs. To prevent damage, replace the chain in the chain bucket after rotation and before transportation.
- Q) The Operator shall stay with the Industrial Truck controls at all times.
- R) The Operator shall keep hands and feet clear of controls other than controls in use.
- S) The Operator shall keep clear of overhead obstructions and in particular **MAINTAIN RELEVANT CLEARANCE OF ELECTRICAL CONDUCTORS.**
- T) Before any load is hoisted by the Drum Rotator, the Operator shall lift the attachment unladen to the required working height to confirm that all systems are functioning correctly.
- U) Ensure safety features are provided, visible and working effectively.
- V) Ensure there has been no unauthorised interference or alteration to the equipment that may cause risk.
- W) Ensure regular maintenance, testing and inspections are carried out and recorded in accordance with the relevant Industrial Truck Manuals and these instructions (refer Section (7), and corrective action initiated where applicable.
- X) Ensure the instructions of East West Engineering are followed.
- Y) If any of the equipment becomes unsafe, stop all usage until the risk is eliminated or controlled.



WARNING: Failure to observe the above **Risk Control Measures** and those outlined in **Appendix A** could result in **SERIOUS INJURY or DEATH.**

6) PARTS LIST

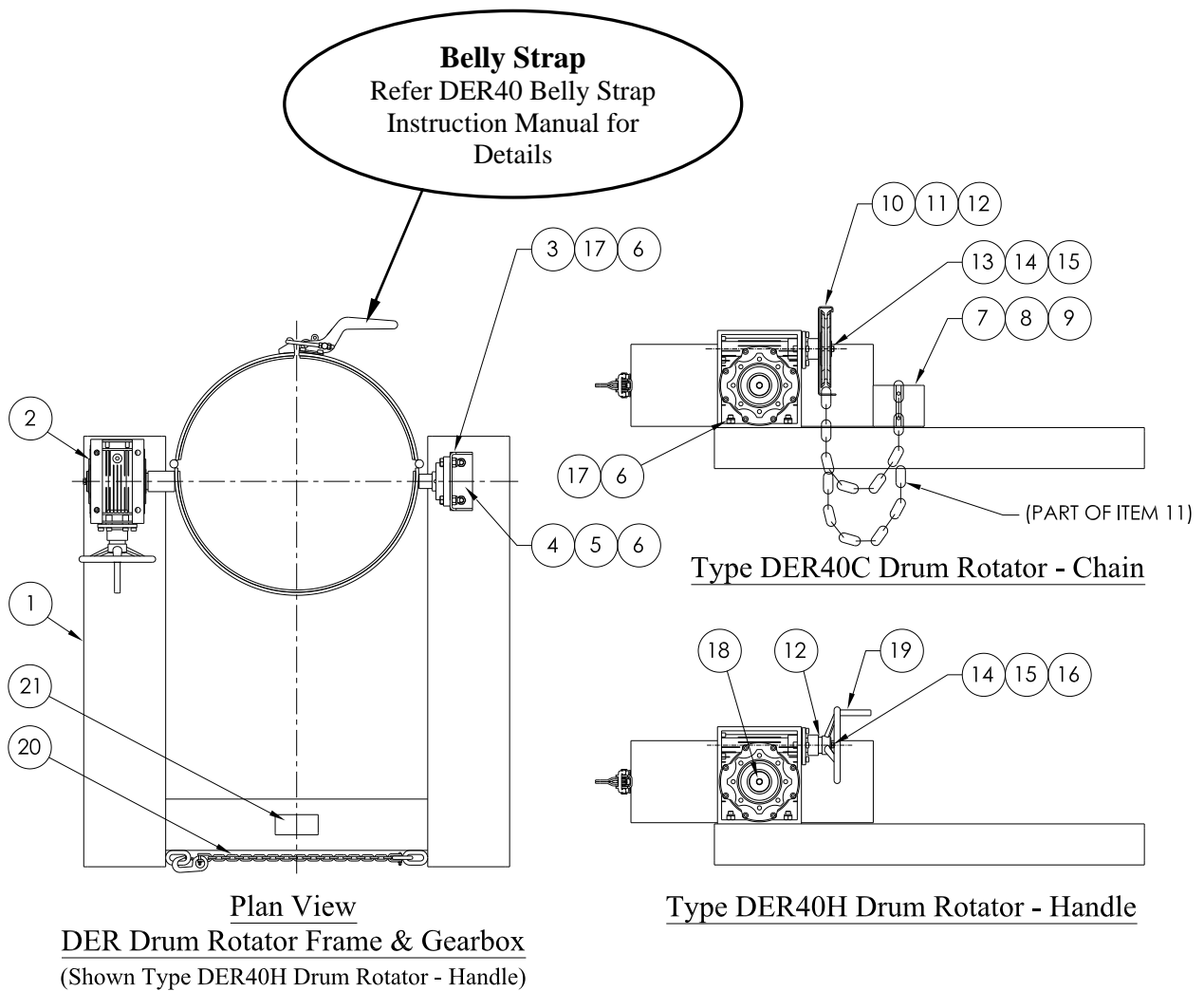


Fig. 6.1

Item	Description	Part No	Item	Description	Part No
1	Rotator Frame	DER40-03	12	Hand Wheel Spacer	DER40-14
2	Rotator Gearbox (50:1)	SP-0287	13	Washer – Spring	M24
3	Bearing Post	DER40-07	14	Washer – Mudguard	M10
4	Flange Bearing Ass’y	(F+UC) 207	15	Bolt – Hex. Head	M8 x 20 Long
5	Bolt – Hex. Head	M12 x 40 Long	16	Washer – Spring	M8
6	Nut – Nyloc	M12	17	Button Head Cap Screw	M12 x 35 Long
7	Chain Bucket	DER40-15	18	External Circlip	Ø35mm
8	Button Head Cap Screw	M8 x 20 Long	19	Gearbox Handle	SP-0289
9	Nut – Nyloc	M8	20	Safety Chain Ass’y	SP-0105A
10	Hand Chain Guide	DER40-13	21	Compliance Plate	Refer Fig. 8.1
11	Hand Chain Wheel	SP-0275	22		

Table 6.2

7) MAINTENANCE

Regular maintenance including Testing, Inspection and Cleaning should be carried out on the Drum Rotator to reduce the risk of potential hazards arising. The Drum Rotator should be cleaned and visually inspected by a “Competent Person” under adequate lighting conditions, before each shift, to ensure all components are functioning correctly and are free from any noticeable wear or damage, particularly at any load-bearing or highly stressed points. If components are considered worn or damaged, or if safety charts or labels are damaged or illegible, the Drum Rotator should be taken out of service and East West Engineering or an “Authorised Person” contacted for advice. Periodic testing may be required if any damage is noted as this could be an indication of abuse or overloading. Regular cleaning makes identification of damage easier. Keep maintenance records to ensure safety checks are carried out.

Maintenance Schedule

Item	Item Description	Maintenance Period					
		Daily or 8 Hrs	Weekly or 40 Hrs	Monthly or 160 Hrs	3 Months or 500 Hrs	Annually or 2000 Hrs	Other
6	Safety Chain	CI					
10	Hand Chain Guide	CI					
	Chain	CI					
11	Hand Chain Wheel	CI					
19	Gearbox Handle	CI					
3	Flange Bearings		GN				
2	Gearbox						N1
	Belly Strap						N2

Table 7.1

Maintenance to be carried out		
Maintenance Codes		Lubricant to be used
GS = Grease smear	D = Drain	G = Grease, Shell Alvania R2 or equivalent
GN = Grease at nipple	R = Replace	H = Hydraulic Oil Shell Tellus
CI = Clean and inspect	T = Tighten	Ot = Oil, Shell 20W/40W or equivalent
C = Check & fill oil to level	N = Note below	Oa = Oil, Shell Turbo T32 or equivalent

Table 7.2

Notes:

- N1 Gearbox is lubricated for life with synthetic Oil, Type ISO 320
- N2 Refer **DER Drum Rotator Attachment Option** Instructions for all Belly Strap maintenance information.

8) COMPLIANCE PLATE INFORMATION

EAST WEST ENGINEERING			
22 CLEARVIEW PLACE, BROOKVALE NSW AUSTRALIA			
PHONE: (02) 9938 0644 FAX: (02) 9938 0655			
TYPE	‘A’	WEIGHT	‘E’ kg
YM	‘B’	SERIAL No.	‘F’
WLL	‘C’ kg	LOAD CT.	‘G’ mm
HCG	‘D’ mm		
THE CAPACITY OF THE TRUCK AND ATTACHMENT COMBINATION SHALL BE COMPLIED WITH.			

Fig. 8.1

A	Product Type	Refer ‘A’, Table 8.2
B	Year of Manufacture	Individually stamped
C	Working Load Limit	Refer ‘C’, Table 8.2
D	Horizontal C of G	Refer ‘D’, Table 8.2
E	Dry Weight of the unit	Refer ‘E’, Table 8.2
F	Serial Number	Individually stamped
G	Load Centre	Refer ‘G’, Table 8.2

COMPLIANCE PLATE MARKING							
Type	‘A’	‘B’	‘C’	‘D’	‘E’	‘F’	‘G’
DER40C	DER40C	YM	400	705	90	Serial No	940
DER40H	DER40H	YM	400	705	92	Serial No	940

Table 8.2

9) CERTIFICATION INFORMATION

Certificate

Type DER Drum Rotators

We certify that the type DER Drum Rotators are rated to the Working Load Limit (WLL) shown on their Compliance Plate and are designed and fabricated strictly in accordance with relevant Australian Standards including those listed below –

AS/NZS 1554.1: 2014	Structural Steel Welding – Welding of Steel Structures
AS 2359.1 – 1995	Powered Industrial Trucks – General Requirements
AS 2359.2 – 2013	SAA Industrial Truck Code – Operation
AS 3990 – 1993	Mechanical Equipment – Steelwork
AS/NZS 4680: 2006	Hot Dip Galvanised (Zinc) Coatings on Fabricated Ferrous Articles

Signed on behalf of **EAST WEST ENGINEERING,**



Ron King
MANAGING DIRECTOR

10) TERMS of TRADE, CONDITIONS of SALE and WARRANTY STATEMENT

1. East West Engineering (EWE) products are to be used only as indicated. Misuse or misapplication may cause failure resulting in possible property damage or bodily injury.
2. It is the obligation of the user to ensure EWE products are used in accordance with appropriate Codes and System requirements.
3. All liability for EWE products performance is disclaimed and the warranty will be voided if any of the following conditions exist:
 - 3.1) the product is used beyond the published or stated Working Load Limit (WLL) or Rated Capacity (RC). Note: **ALL** ratings are for static conditions and do not account for dynamic loading such as wind, water or seismic loads,
 - 3.2) the product is not properly installed per published or stated instructions,
 - 3.3) the loading to the product is not vertical,
 - 3.4) the product is deformed or stressed in any way during fitting or installation,
 - 3.5) the product is used in a corrosive environment.
4. All safety regulations required by the user must be observed.
5. Custom builds cannot be cancelled after order placement.
6. EWE products at the time of dispatch are warranted to be free of defects in material or workmanship. **NO OTHER WARRANTY EXPRESSED OR IMPLIED SHALL EXIST IN CONNECTION WITH THE SALE OR USE OF EWE PRODUCTS.** Claims for errors, shortages, defects or non-conformities ascertainable upon inspection must be made in writing within 15 days after buyer's receipt of products. All other claims must be made to EWE within 12 months. Products claimed nonconforming or defective must upon EWE's request promptly be returned for inspection. Claims not made as provided above and within the applicable time period will be barred. EWE shall in no event be responsible if the products have not been used in accordance with the specifications and/or recommended procedures. EWE will, at its option either repair or replace nonconforming or defective products for which it is responsible or return to buyer their purchase price. The foregoing states buyer's exclusive remedy for any breach of EWE warranty and for any claim, whether sounding in contracts, tort or negligence for loss or injury caused by the sale or use of any product. Without limiting the generality of the foregoing EWE shall in no way be responsible for any loss of business or profits, downtime or delay, labour, repair or material cost or any similar or dissimilar consequential loss or damage incurred by the Buyer.
7. Examine goods immediately upon receipt and advise any damage or shortage to carriers and ourselves within 15 days, otherwise no claim whatever will be considered. Provided advice is given within the prescribed time, we will make good any shortage and will repair or replace free of charge goods damaged in transit where we are responsible for delivery of the goods.
8. Returning of goods within 2 months of the EWE dispatch date, will be accepted only upon issue of a Return Goods Form (RGF). Goods must be unused and undamaged, restocking fees may apply. Special builds and freight charges are non-refundable. Return freight arrangements, including costs, cannot be reclaimed on EWE. Goods outside this period will not be considered for return.
9. If goods are not received within 14 days from receipt of invoice please advise us in writing.
10. If any errors are discovered in the invoicing please notify supplying branch at once for correction.
11. **Property and Payment:** – By acceptance of delivery and retention of the goods it is acknowledged that the property of the goods remains with EWE and that legal title thereto will not pass until payment is made but that nevertheless the goods are at your risk after delivery. In the event that payment is not made within 30 days of delivery, or other agreed terms, full licence and authority is given to EWE to enter any premises where the goods are stored and to recover possession of them. In the event of the sale of the goods prior to payment, the proceeds of sale belong to EWE.
12. **Terms of Payment:** – Unless credit has been arranged strictly net cash; if credit has been arranged, payment must be made by the 25th day of the month, following the month appearing in the date on the front of the invoice.
13. **East West Engineering reserves the right to alter specifications, designs and prices without notification.**