



OPPERMAN MASTERGEAR Ltd

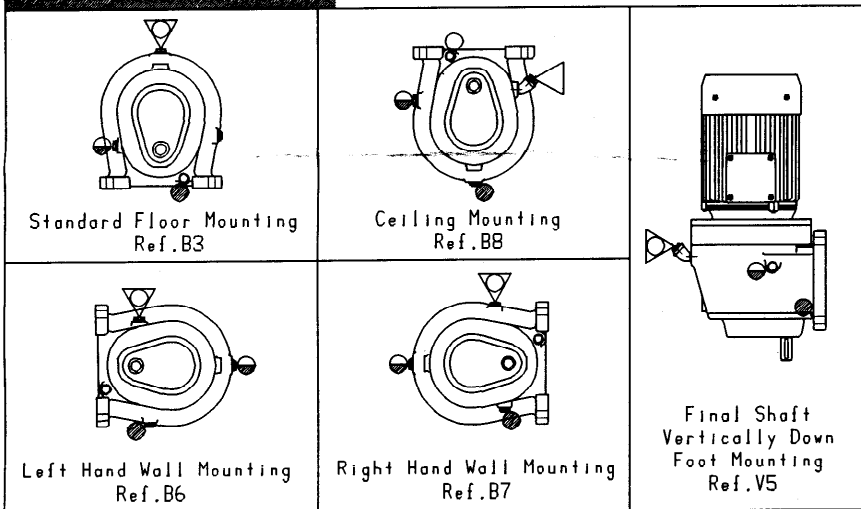
Hambridge Road, Newbury, Berkshire RG14 5TS, ENGLAND
 Telephone: 01635 811500 Telefax: 01635 811501

Operating Instructions No.175

TEMPO

OIL LUBRICATED

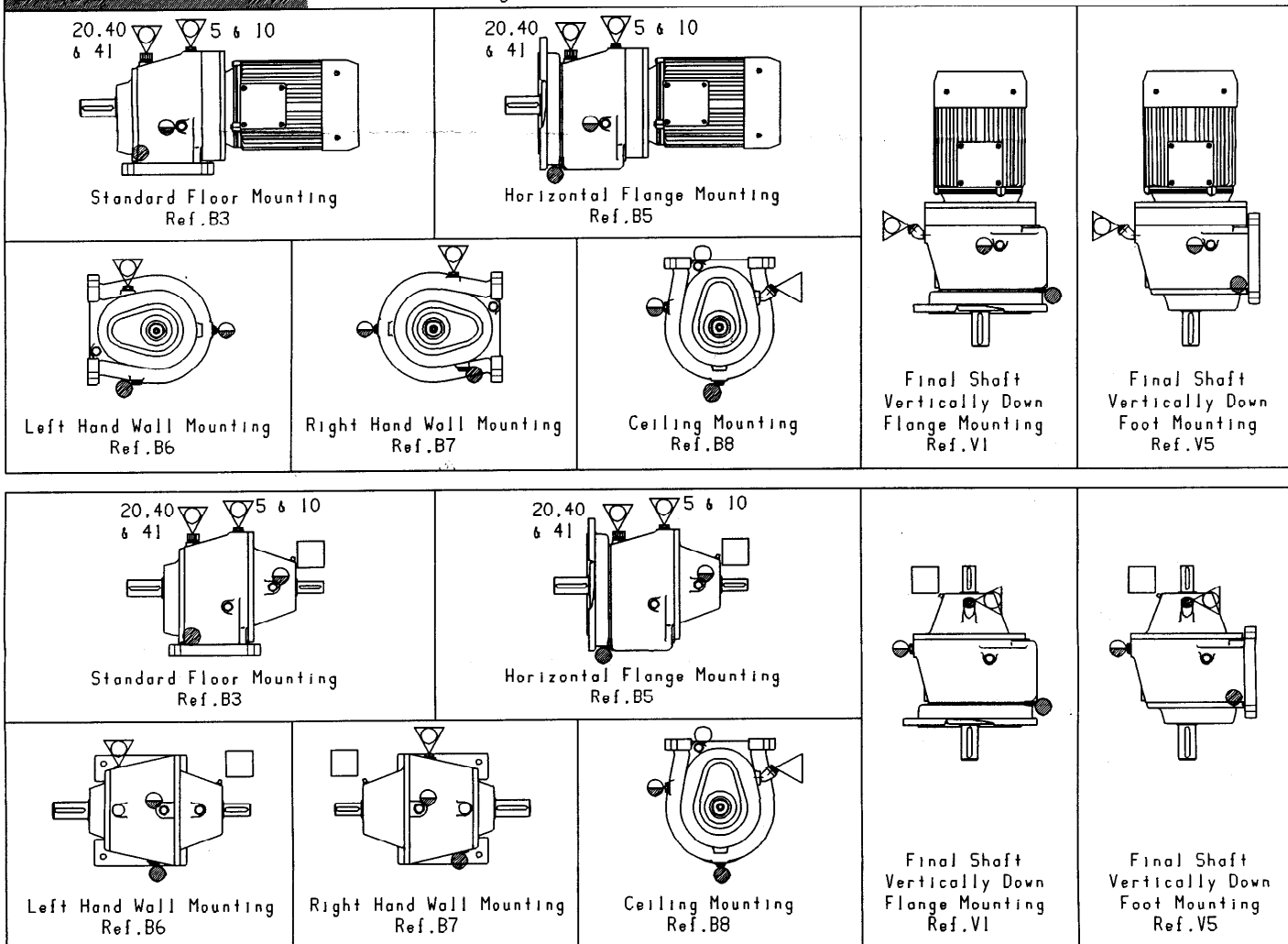
SINGLE REDUCTION (Foot Motorised Units.)



IMPORTANT: HEALTH AND SAFETY AT WORK

In the interest of Health and Safety at Work, it is essential that before installation such matters as the application, mounting position, maximum ratings, overhung loads and other similar matters should be thoroughly investigated. Technical details relating to Tempo units are available from our Head Office at Newbury. In the event that any further advice is required please do not hesitate to contact us.

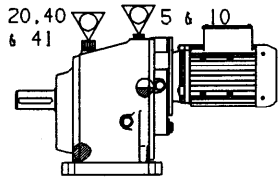
DOUBLE REDUCTION (Foot/Flange Motorised & Non-Motorised Units.)



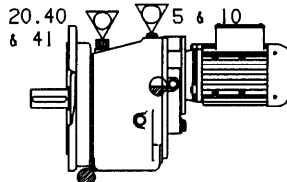
BREATHER ○ FILLER ▽ FILLER/BREATHER ▽ LEVEL ● DRAIN ● GREASE NIPPLE □

TRIPLE REDUCTION

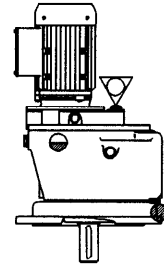
(Foot/Flange Motorised & Non-Motorised Units.)



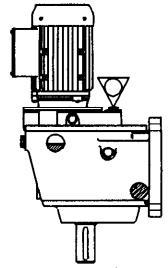
Standard Floor Mounting
Ref. B3



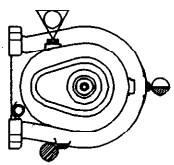
Horizontal Flange Mounting
Ref. B5



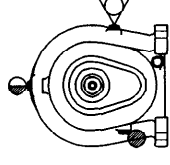
Final Shaft
Vertically Down
Flange Mounting
Ref. V1



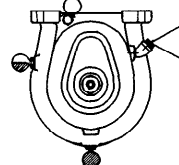
Final Shaft
Vertically Down
Foot Mounting
Ref. V5



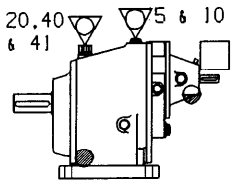
Left Hand Wall Mounting
Ref. B6



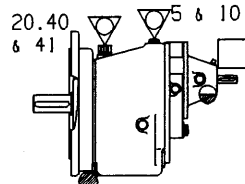
Right Hand Wall Mounting
Ref. B7



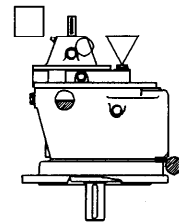
Ceiling Mounting
Ref. B8



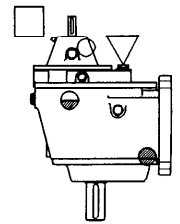
Standard Floor Mounting
Ref. B3



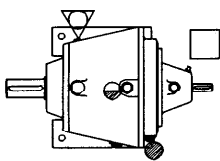
Horizontal Flange Mounting
Ref. B5



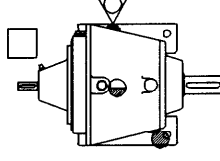
Final Shaft
Vertically Down
Flange Mounting
Ref. V1



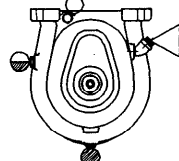
Final Shaft
Vertically Down
Foot Mounting
Ref. V5



Left Hand Wall Mounting
Ref. B6



Right Hand Wall Mounting
Ref. B7



Ceiling Mounting
Ref. B8

BREATHER FILLER FILLER/BREATHER

LEVEL DRAIN GREASE NIPPLE

1. Oil Lubrication

The units are, in general, dispatched from the factory without lubricant. Before starting up, remove the oil filler plug, and fill the box with the recommended grade of oil until the correct level is indicated in the level window. Allow to settle and then replace the oil filler plug. At all times keep the breather holes clear. If these become blocked pressure will be set up in the box due to the surging of oil, resulting in leakage through the seals. After the first month in service drain the oil from the gearbox, flush and refill with new oil. Tempo units utilize extreme pressure lubricants which protect the teeth in the event of the oil thinning out due to local temperature rise, or high pressure due to accidental overloads. These oils are liable to form sludge after continuous service. The oil should be changed after every 1500 hours of operation, or more often as conditions may dictate. The grease nipple supplied for input bearing lubrication on non-motorised units should also be charged after 1500 hours of operation. The grades of oil shown in the schedule are for normal conditions of duty and ambient temperature. High ambient temperatures cause the oil to thin out and reduce its protective qualities. In such cases it will be necessary to utilize heavier grades than shown. Conversely, low temperatures will necessitate a thinner grade, otherwise trouble may be experienced with burning out of motors at starting. In this connection, the pour point of the oil must be less than the lowest ambient temperature to be encountered. References given are for British Standard mounting positions.

2. Electric Motors

Check to ensure that the voltage range specified on the motor corresponds to the supply voltage. Wiring instructions are normally given on the motors, but if in doubt, reference should be made to the particular manufacturer's handbook.

3. Couplings

Use a flexible coupling with this gear unit. Do not use a solid coupling. Any coupling, pulley, gear wheel or sprocket fitted to the shaft of this unit, must be fitted by utilizing the tapped hole provided in the final shaft. It must NOT be driven on as it may cause internal damage to gears and bearings.

4. Mountings

Both foot and flange mounted units should be secured to a rigid support.

5. Alignment

When the gear units are used in conjunction with any ancillary equipment, care must be taken to ensure proper alignment is achieved.

Recommended Oil Grades.

Castrol Companies	Shell Group of Companies	Esso Marketers	Texaco & Associated Companies	Mobil Oil Companies	Alexander Duckham & Co. Ltd	BP Group of Companies	Gulf Oil Group of Companies	Century Oil Limited
Alpha SP 220	Omala Oil 220	Spartan EP 220	Meropa 220	Mobilgear 630 or Mobilube GX90	Fleetoid 90 or Hypoid 90	BP Energel GR XP 220	Gulf EP Lubricant HD 220	Centilube F76

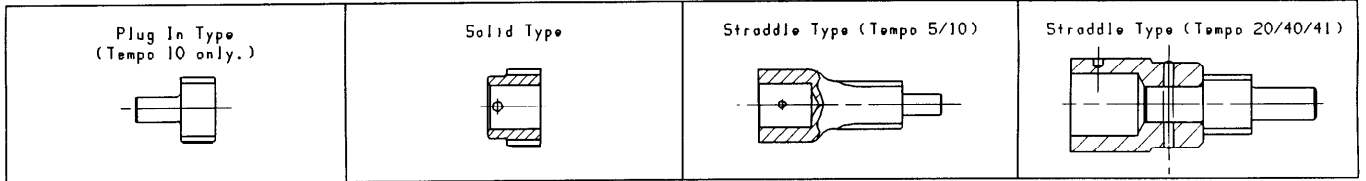
LUBRICATION - quantity (OIL Litres)

UNIT	FLOOR MOUNTED REF. B3 & B5	CEILING MOUNTED REF. B8	R.H & L.H WALL MOUNTED REF. B6 & B7	VERTICAL SHAFT DOWN REF. V1 & V5
TSM5	0.35	1.09	0.74	0.89
TD5 & TD5V	0.85	1.14	0.76	1.26
TDM5 & TDM5V	0.44	0.95	0.72	0.73
TT5 & TT5V	1.20	1.15	0.90	1.39
TTM5 & TTM5V	0.94	1.05	0.82	1.39
TSM10	0.62	1.82	1.25	1.62
TD10 & TD10V	1.38	1.58	1.14	1.75
TDM10 & TDM10V	0.71	1.25	1.00	1.14
TT10 & TT10V	2.27	2.15	1.50	2.25
TTM10 & TTM10V	1.90	2.08	1.45	2.25

UNIT	FLOOR MOUNTED REF. B3 & B5	CEILING MOUNTED REF. B8	R.H & L.H WALL MOUNTED REF. B6 & B7	VERTICAL SHAFT DOWN REF. V1 & V5
TD20 & TD20V	3.35	3.80	3.00	3.85
TDM20 & TDM20V	2.00	3.10	2.50	2.70
TT20 & TT20V	4.10	3.45	2.55	4.60
TTM20 & TTM20V	3.60	3.35	2.50	4.60
TD40 & TD40V	5.60	6.26	5.20	6.50
TDM40 & TDM40V	3.25	5.00	4.25	4.75
TT40 & TT40V	7.30	6.12	5.10	7.50
TTM40 & TTM40V	6.20	5.40	4.70	7.50
TDM41 & TDM41V	4.00	8.25	6.50	6.50

NOTE - These quantities are for reference purposes only. Quantities will vary with ratio (fill to level).

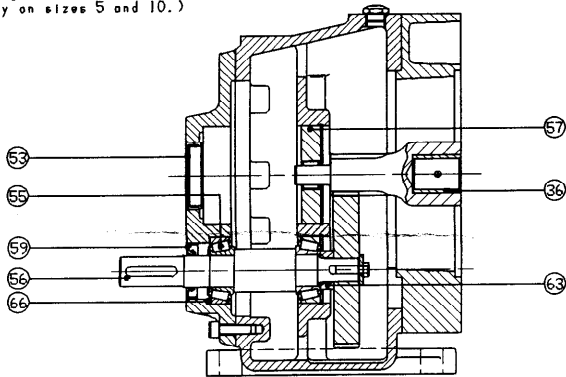
MOTOR PINIONS (Pinion type is dependant on unit size and ratio.)



ASSEMBLY OF PARTS (Illustrations not to scale.)

SINGLE REDUCTION

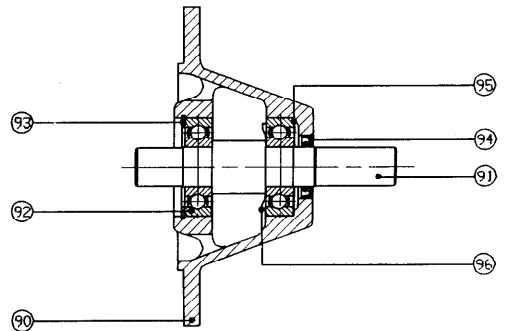
(Single reduction available only on sizes 5 and 10.)



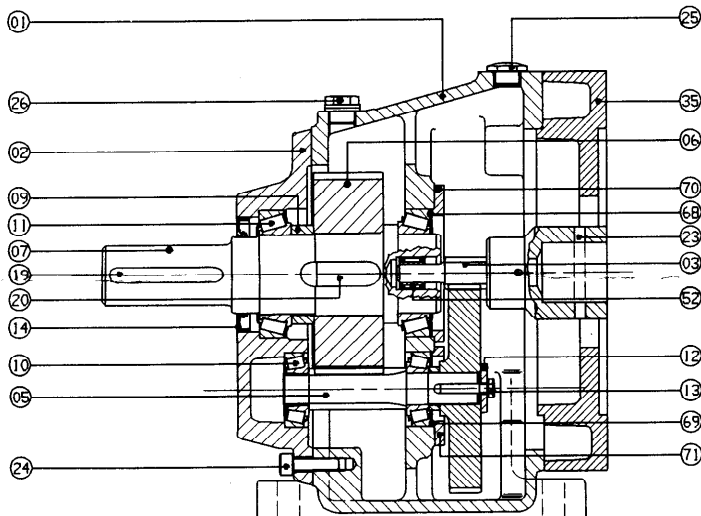
FOOT MOUNTED ONLY

NOSEPIECE ASSEMBLY

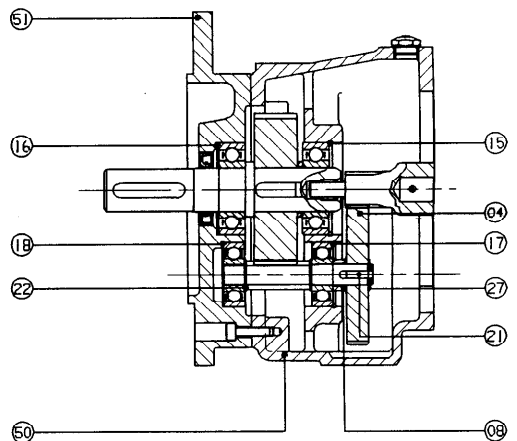
(TD and TT units only.)



DOUBLE REDUCTION



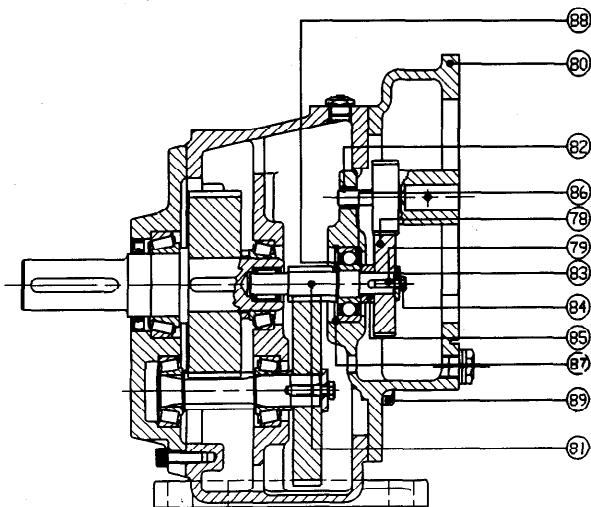
FOOT MOUNTED



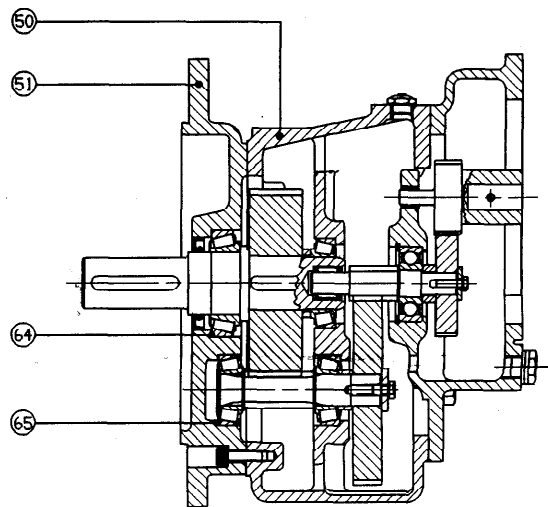
FLANGE MOUNTED

Taper roller bearings are fitted to size 10, 20, 40 and 41 only.

TRIPLE REDUCTION



FOOT MOUNTED



FLANGE MOUNTED

Item Description	Item Description
01. Gearcase (Foot Mounted)	+52. Motor Pinion Bearing or Layshaft Bearing T/R
02. Cover	53. Blanking Plug
+03. Motor Pinion	+55. Final Bearings S/R
+04. First Wheel (or T/R Second Wheel)	+56. Final Shaft S/R
+05. Final Pinion Shaft	57. Bearing Retaining Plug (Straddle pinions only)
+06. Final Wheel	58. Bearing Sleeve TEMPO 5 only (not shown)
+07. Final Shaft	+59. Final Oilseal
08. First Wheel Spacer (or T/R Second Wheel)	63. First Wheel Spacer
09. Final Wheel Spacer	64. Final Bearing Shims TEMPO 10
+10. Layshaft Bearings	65. Layshaft Bearing Shims TEMPO 10
+11. Final Bearings	66. Final Bearing Shims
12. First Wheel Retaining Washer (or T/R Second Wheel)	67. Cover Dowels (not shown)
13. First Wheel Retaining Screw (or T/R Second Wheel)	68. Final Bearing Shims TEMPO 20, 40 and 41 only
+14. Final Oilseal	69. Layshaft Bearing Shims TEMPO 20, 40 and 41 only
15. Final Bearing Circlip or S/R Blanking Plug Circlip	70. Final Bearing Endcap TEMPO 20, 40 and 41 only
16. Final Bearing Washer	71. Layshaft Bearing Endcap TEMPO 20, 40 and 41 only
17. Layshaft Circlip or S/R Final Bearing Circlip	72. Endcap Screws TEMPO 20, 40 and 41 only (not shown)
18. Layshaft Bearing Washer	78. First Wheel T/R
19. Final Shaft Key	79. First Wheel Key T/R
20. Final Wheel Key	80. Primary Housing T/R
21. First Wheel Key (or T/R Second Wheel)	+81. Layshaft T/R
22. Layshaft Circlip (10T Pinion TEMPO 5)	+82. Motor Pinion Bearing T/R
23. Motor Pinion Pin	83. First Wheel Retaining Washer T/R
24. Cover Screws	84. First Wheel Retaining Screw T/R
25. Filler/Breather Plug	85. First Wheel Spacer T/R
26. Oil Plugs	+86. Layshaft Ball Bearing T/R
27. First Wheel Retaining Circlip (T/R Second Wheel)	87. Layshaft Bearing Circlip T/R
35. Motor Adaptor (Straddle)	88. Layshaft Circlip T/R
36. Motor Shaft Adaptor	89. Primary Housing Screws T/R
42. Motor Studs, Nuts and Washers (not shown)	90. Nosepiece Housing
43. Motor Screws and Washers (not shown)	+91. Primary Shaft
44. Motor Pinion Key TEMPO 40 and 41 only (not shown)	+92. Primary Bearings
45. Lifting Eyebolt TEMPO 40 and 41 only (not shown)	93. Primary Bearing Circlip
50. Gearcase (Flange Mounted)	+94. Primary Oilseal
51. Vertical Mounting Flange	95. Primary Bearing Washer
	+96. Primary Bearing Grease Retainer

Recommended Spare Parts are shown thus:- +03. Motor Pinion

Note:-

Please quote unit serial number when ordering spares. All goods sold subject to our standard conditions of sale, a copy of which is available on request.



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Telephone: 01635 811500 Telefax: 01635 811501