

**ADAPTABLE SPEED REDUCERS**

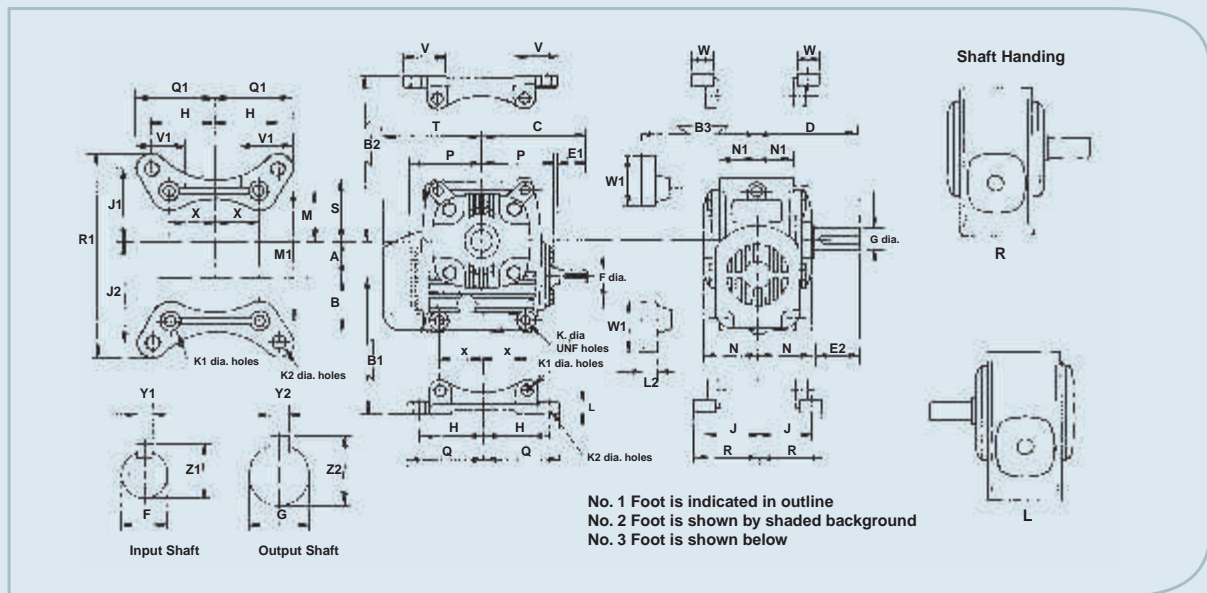


## PREMIUM ADAPTABLE SPEED REDUCERS

Premium Adaptable Speed Reducers are available in a range of six sizes from size 112 to 337 (28.6 to 85.7 mm centres) and meets the requirement of all drives upto 7.5 kw. A range of standard ratios gives a wide choice of output speeds.

The number of mounting arrangements of adaptable units is almost unlimited, giving the widest possible field of application. The same basic case is used for each size and can be mounted using detachable feet or, where desired, can be located without feet. The drawing of dimensions gives case details together with sizes for Nos. 1, 2 and 3 feet.

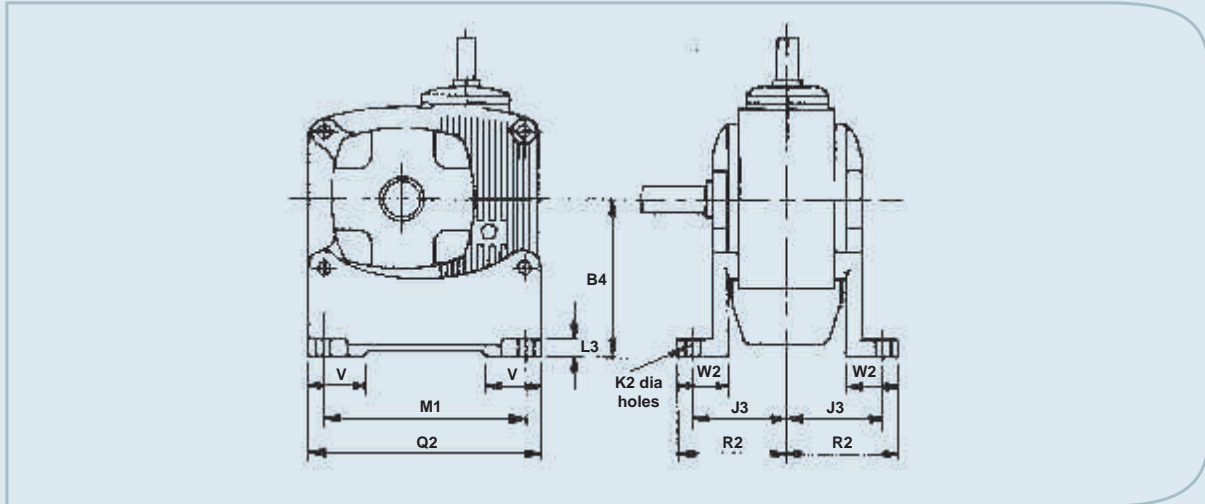
Alternative basic shaft handing arrangements are available, R and L. These references should always be quoted, together with feet details.



### Principal Dimensions (mm)

SIZE	A	B	C	D	E1	E2	E3	E4	F	G	K	M
112	28.6	44.5	90	79	29	35	25.4	32	11.113 11.102	15.875 15.865	6.4	41.3
162	41.3	50.8	110	98	41	48	38	44	15.875 15.865	19.050 19.037	6.4	47.6
200	50.8	58.7	133	117	48	57	44	54	5.875 15.865	25.400 25.387	7.9	60.3
237	60.3	68.3	159	140	57	70	54	67	19.050 19.037	28.575 28.562	9.5	71.4
287	73.0	77.8	191	168	70	83	67	79	22.225 22.212	31.750 31.735	11.1	88.9
337	85.7	90.6	219	200	83	98	79	95	25.400 25.387	38.100 38.085	12.7	100.0

SIZE	M1	N	N1	P	S	T	X	Y1	Y2	Z1	Z2
112	104.8	41	30	62	51	81	34.9	3.226 3.175	4.826 4.775	12.50 12.29	17.98 17.78
162	130.2	49	37	71	57	89	39.7	4.826 4.775	4.826 4.775	17.98 17.78	21.16 20.96
200	158.8	59	43	86	71	111	50.8	4.826 4.775	6.408 6.350	17.98 17.78	28.19 27.99
237	187.3	68	51	98	84	130	60.3	4.826 4.775	7.976 7.925	21.16 20.96	32.05 31.85
287	225.4	81	64	119	103	154	76.2	6.401 6.350	7.976 7.925	25.02 24.82	35.23 35.03
337	260.4	98	76	133	116	175	85.7	6.401 6.350	9.576 9.525	28.19 27.99	42.27 42.06



### No. 1 Foot

SIZE	B1	B2	H	J	K1	K2	L	N1	Q	R	V	W	X
112	52.4	58.7	52.4	41.3	7.1	8.7	13	30	62	51	35	19	34.9
162	60.3	66.7	58.7	49.2	7.1	10.3	14	37	70	60	38	22	39.7
200	69.9	82.6	76.2	57.2	8.7	10.3	14	43	91	73	49	29	50.8
237	84.1	100.0	87.3	68.3	10.3	11.9	17	51	103	84	54	32	60.3
287	95.3	120.7	106.4	82.6	11.9	13.5	21	64	124	100	60	35	76.2
337	109.5	134.9	119.1	96.8	13.5	15.1	22	76	138	116	67	38	85.7

### No. 2 Foot

B3	H	J1	J2	K1	K2	L	M	M1	Q1	R1	V1	W1	X
54.0	52.4	57.2	79.4	7.1	8.7	13	41.3	104.8	64	159	37	41	34.9
63.5	58.7	65.1	100.0	7.1	10.3	14	47.6	130.2	71	191	40	46	39.7
69.9	76.2	82.6	120.7	8.7	10.3	14	60.3	158.8	89	229	51	52	50.8
82.6	87.3	95.3	139.7	10.3	11.9	17	71.4	187.3	103	267	57	59	60.3
98.4	106.4	114.3	161.9	11.9	13.5	21	88.9	225.4	124	311	65	65	76.2
114.3	119.1	128.6	188.9	13.5	15.1	22	100.0	260.4	138	356	73	73	85.7

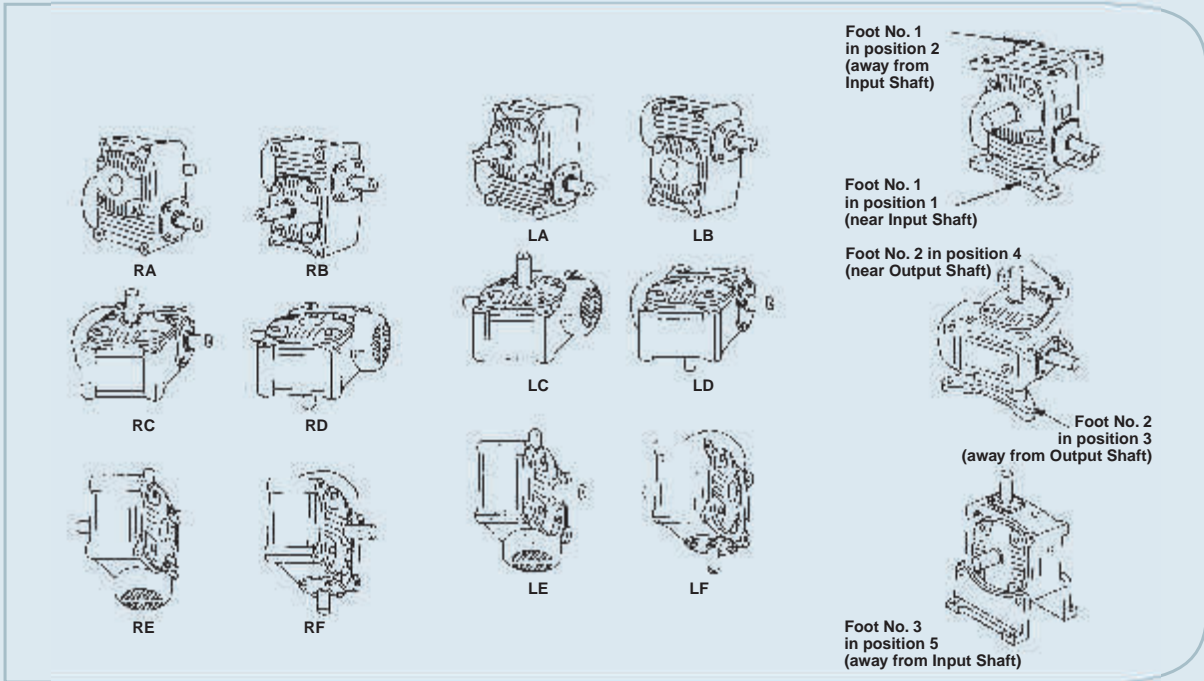
### No. 3 Foot

SIZE	B4	J3	L	M1	02	R2	V	W2
112	93.7	55.6	10	104.8	124	65	35	29
162	101.6	65.1	11	130.2	152	76	38	32
200	127.0	71.4	14	158.8	191	89	49	38
237	146.1	84.1	17	187.3	219	100	54	41
287	173.0	101.6	19	225.4	260	119	60	48
337	193.7	115.9	21	260.4	298	133	67	49

As improvements in design are continually being made, this specification is not to be regarded as binding in detail, and dimensions are subject to alteration without notice.



**Mounting Arrangement**



**Handling & Mounting**

Adaptable Premium Speed Reducers can be mounted in an almost unlimited number of different positions. The diagrams above indicate typical commonly used "space" dispositions of Adaptables showing the numerous shaft arrangements. The three types of feet, as shown on page 2, can be used in all these positions.

The two basic unit positions are shown under the headings "right handing - R" and "left handing - L" where the unit is arranged in the upright position, with shafts in the horizontal plane and the high speed shaft located under the slow speed shaft.

A right hand unit is one where, when looking on the end of the high speed shaft, the slow speed shaft extensions is to the right. Similarly, a left hand unit has the slow speed shaft extensions to the left.

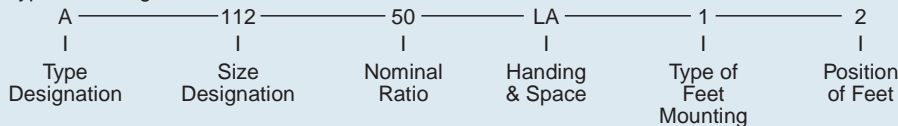
Oil level, breather and drain plugs are arranged to suit these basic positions. Where units are mounted in other positions it is necessary to change the positions of the breather. The diagrams on page 8 show plug positions for the different mounting arrangements.

**Enquires**

It is recommended that as much as possible of the following information be given on enquiry or order so that a check can be made, and advice given on the most suitable size of Greaves for any particular application.

1. Quantity
2. Prime mover
3. Horse-power of prime mover
4. Output torque required from driven member
5. Input speed of gear unit
6. Output speed of gear unit
7. Application of drive

Typical Catalogue Number



Full details from the nameplate should be specified for spare parts.

**Oil capacity and shipping specification**

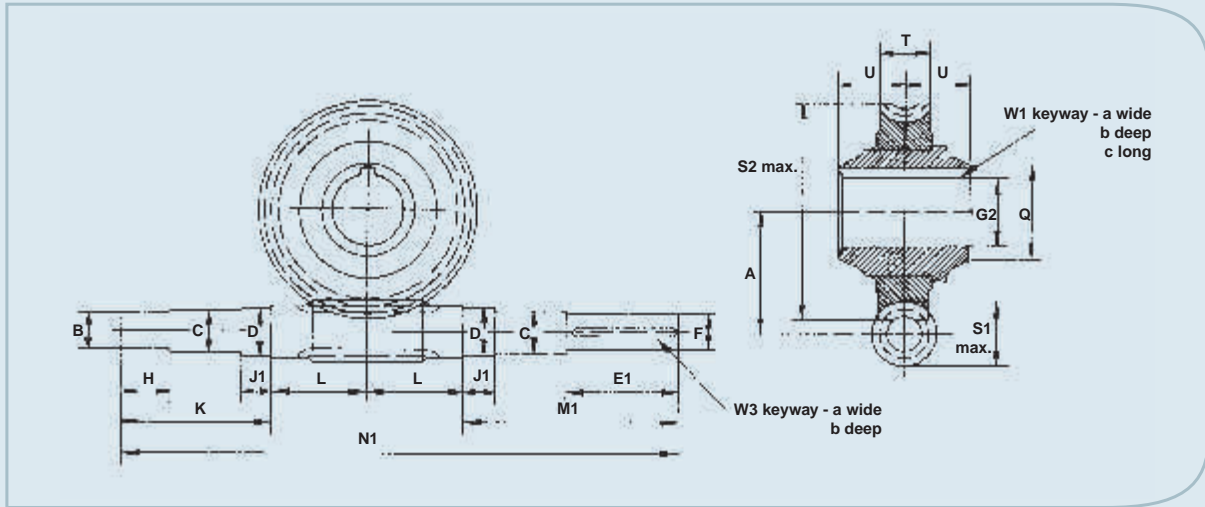
	Size of unit					
	112	162	200	237	287	337
Net Weight (kg.)	5	7	13	20	31	49
Gross Weight (kg.)	5	8	14	21	34	50
Volume Packed (cu.m.)	0.004	0.007	0.013	0.022	0.034	0.048
Oil Required at 1st filling (lit.)	0.14	0.28	0.28	0.57	0.85	1.42

A supply of oil is not included in any unit



**Worms and Wormwheels**

Standard Adaptable Premium Worms and Wheels can be supplied loose to meet customer requirements where it is found impossible to install complete units. Ratios from 5/1 to 70/1 are available for sizes shown below.



**Principal Dimensions (mm)**

SIZE	A	B	C	D	E1	E3	F	G2	H	J1	K	L	M1	N1	Q	S1	S2	T	U	W1			W3	
																				a	b	c	a	b
112	28.6	11.1	11.9	12.009 11.994	29	25.4	11.113 11.102	17.475 17.450	13	13	45	30	60	165	26	21	48	13	17	3.175	2.0	25.4	4.763	2.4
162	41.3	15.9	19.8	20.013 19.997	41	38	15.875 15.865	25.415 25.385	16	14	51	33	76	193	33	25	72	16	18	4.763	2.8	38.1	4.763	2.4
200	50.8	15.9	19.8	20.013 19.997	48	44	15.875 15.865	30.973 30.942	21	14	64	42	91	239	40	33	89	22	29	4.763	2.8	44.5	6.350	2.8
237	60.3	19.1	19.8	20.013 19.997	57	54	19.050 19.037	35.728 35.697	23	14	75	49	110	283	46	37	106	25	33	4.763	2.8	54.0	7.938	3.6
287	73.0	22.2	23.8	25.014 24.999	70	67	22.225 22.212	35.728 35.697	28	17	87	62	129	340	46	41	129	29	48	6.350	3.6	66.7	7.938	3.6
337	85.7	25.4	28.6	30.013 29.997	83	69	25.400 25.387	46.055 46.020	32	21	95	73	146	387	58	48	151	32	60	6.350	3.6	79.4	9.252	4.4

Shaft tolerances confirm to B.S. 1916 : 1962, h6 Keyways are to B.S. 46 : 1958

**Standard Gear Ratios**

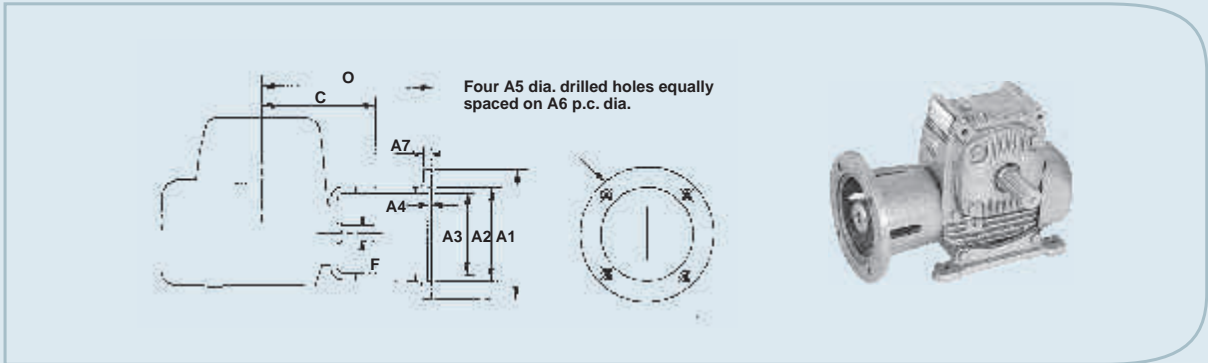
SIZE	RATIOS										
	5	-	10	15	20	25	30	40	50	60	70
112	5	-	10	15	20	25	30	40	50	60	70
162	5	7.5	10	15	20	25	30	40	50	60	70
200	5	7.5	10	15	20	25	30	40	50	60	70
237	5	7.5	10	15	20	25	30	40	50	60	70
287	5	7.5	10	15	20	25	30	40	50	60	70
337	5	7.5	10	15	20	25	30	40	50	60	70





## Motorised units

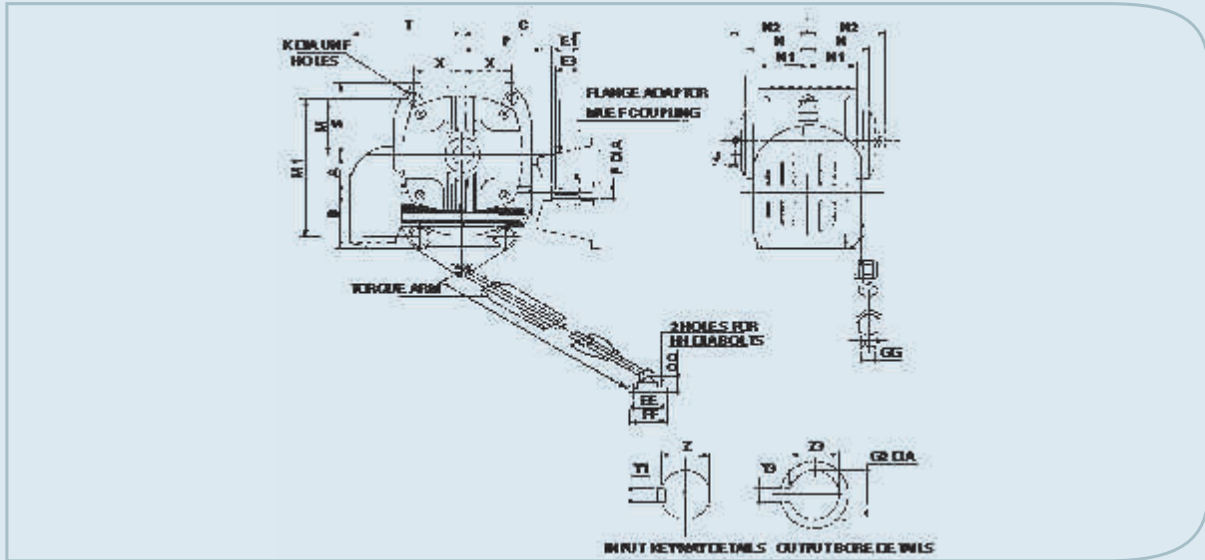
Adaptable Premium speed reducers can be supplied with integral flange mounted motors. Depending on size, units may carry or be carried by the motors. A range of standard flange adaptors is available for all sizes. Motor flange details should be supplied where customers' motors are fitted. Motorised units can be mounted in any position.



## Input shaft and adaptor flange details (mm)

UNIT SIZE	MOTOR FRAME SIZE	A1	A2	A3	A4	A5	A6	A7	C	F	0
112	B.S. 56 D	165	120.700 120.650	105	3.9	8.7	139.7	11	90	11.113 11.102	147.6
	63	140	95.047 95.012	81		11.1	115.0				127.0
	71	160	110.047 110.012	86			130.0				127.0
162	B.S. 56 D	165	120.700 120.650	105	3.9	8.7	139.7	11	110	15.875 15.865	166.7
	63	140	95.047 95.012	95	6.4	*	115.0				149.2
	71	160	110.047 110.012	97	4.7	11.1	130.0				155.6
	80, 90	200	130.054 130.014	121		11.9	165.0				175.4
200	B.S. 56 D	165	120.700 120.650	105	3.9	8.7	139.7	11	133	15.875 15.865	190.5
	63	140	95.047 95.012	95	6.4	*	115.0				163.5
	71	160	110.047 110.012	97	4.7	11.1	130.0				169.9
	80, 90	200	130.054 130.014	121		11.9	165.0				189.7
237	B.S. 56 D	165	120.700 120.650	105	3.9	8.7	139.7	11	159	19.050 19.037	215.9
	63	140	95.047 95.012	94		*	115.0	13			187.3
	71	160	110.047 110.012	102	5.5	*	130.0	11			193.7
	80, 90	200	130.054 130.014	121		11.9	165.0	11			215.1
287	71	160	110.047 110.012	86	9.5	*	130.0	10	191	22.225 22.212	227.0
	80, 90	200	130.054 130.014	121	5.5	11.9	165.0	11			246.9
	100, 112	250	180.054 180.014	170	4.7	14.3	215.0	13			256.8
337	80, 90	200	130.054 130.014	130	11.1	*	165.0	11	219	25.400 25.387	275.4
	100, 112	250	180.054	170	4.7	14.3	215.0	13			285.8

### Adaptable Shaft Mounted Gear Boxes



### Torque-arm Dimensions (mm)

SIZE OF UNIT	AA	CC	EE	FF	GG	HH
162	356 - 508	20.6	51	70	25	8
200	483 - 835	25.4	57	83	32	10
237	483 - 835	25.4	57	83	32	10
287	483 - 835	25.4	57	83	32	10
337	610 - 762	30.2	70	102	38	13

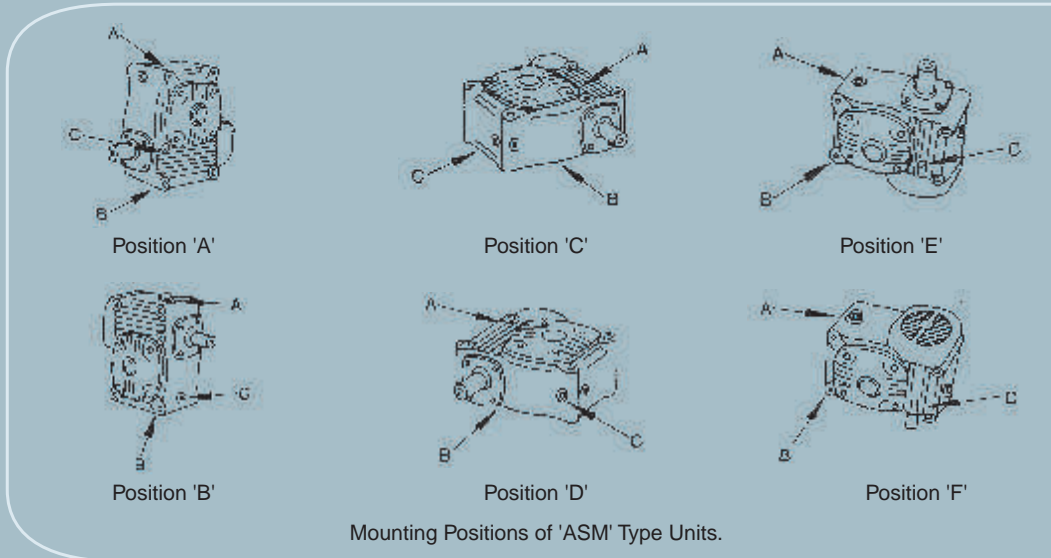
### Principal Dimensions (mm)

UNIT SIZE	A	B	C	E1	E3	F	G2	J	K	M	M1	N	N1	N2	P	S	T	X	Y	Z	Y3	Z3
162	41.3	50.8	110	41	38	15.875	20.021	4	6.4	47.6	130.2	49	37	56	71	57	89	39.7	4.826	17.96	6.015	23.0
						15.865	20.000												4.775	17.78	5.985	22.8
200	50.8	58.8	133	48	44	15.875	25.021	5	7.9	60.3	158.8	59	43	65	86	71	111	50.8	4.826	17.96	6.018	28.5
						15.865	25.000												4.775	17.78	7.962	28.3
237	60.3	68.3	159	57	54	19.050	30.021	5	9.5	71.4	187.3	68	51	73	98	84	130	60.3	4.826	21.16	8.018	33.5
						19.037	30.000												4.775	20.98	7.982	33.3
287	73.0	77.8	191	70	67	22.225	40.025	6	11.1	88.9	225.4	81	64	89	119	103	154	76.2	6.401	25.02	12.022	43.5
						22.212	40.000												6.350	24.82	11.979	43.3
337	85.7	90.8	219	83	79	25.400	50.030	6	12.7	100.0	260.4	96	76	105	133	116	175	85.7	6.401	28.19	14.022	54.0
						25.387	50.000												6.350	27.99	13.978	53.8

Note:- Torque - Arm, Muff Coupling And Flange Adaptor are Optional

## Lubrication

The diagrams illustrate typical arrangements of mounting and gives details of the respective positions of Breather, Oil Level and Drain Plugs. Normally units are despatched with plugs fitted as shown in the first diagram, which shows the basic "space" mounting. Where units are required to operate in other positions, it is necessary to reposition the Breather Plug as indicated. The Breather Plug should always be kept clean and free from blockage.



Recommended Lubricant  
**GREAVES TRAXOL - G32**



## PREMIUM

### Premium Energy Transmission Limited

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Website : [www.premiumtransmission.com](http://www.premiumtransmission.com)

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- **Unit-II :** West Bengal. Tel.: (91-3174) 222231 / 32 / 33 / 37, Fax : (91-3174) 222234.
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