



ELECON STIRRER DUTY WORM GEAR



ELECON



Always step ahead in technology

INTRODUCTION

ELECON Stirrer duty gear units are with standard V type, including gear case and major components are common, gives complete interchangeability.

Compare with standard V type, the medium duty gear units are with additional roller bearing and high tensile steel shaft, withstand high loads imposed during mixing.

Heavy duty gear units are with large capacity of taper and spherical roller bearings, more bearing spans, higher output shaft diameter and extension length compared with standard and medium duty with high tensile steel shaft gives ample strength to withstand heavy loads during mixing.

This gear unit is compact with a facility of top mounted pivoted motor plate, the motor can be directly mounted above the gear unit using belt tensioning device, results in eliminating the alignment errors at site, also space saving and minimize the cost of foundation.

LOAD CHARACTERISTICS

Medium to stirred	Nature of load on gear unit	
Liquid of semi-liquid	Uniform	U*
Variable density	Moderate shock	M*

SERVICE FACTORS

PRIME MOVER	DURATION OF SERVICE	UNIFORM	MODERATE SHOCK
		U	M
Electric motor	2 Hour/day	0.75	0.90
	8 Hours/day	0.90	1.10
	12 Hours/day	1.00	1.25
	24 HOURS/day	1.25	1.50

ENQUIRY

It is recommended that as much as possible of the following information should be given on enquiry to enable us to check and advice on most suitable size and type of ELECON stirrer gear unit.

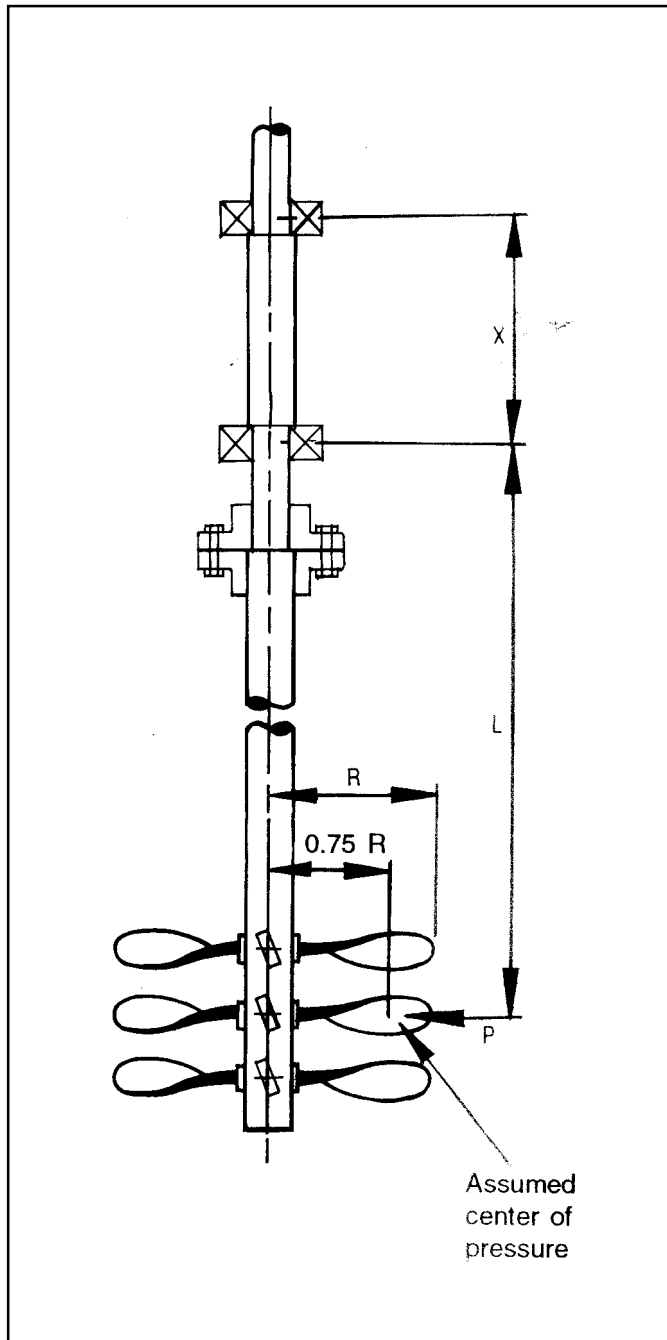
- 1 : Type of prime mover, power rating and speed.
- 2 : Reduction ratio required or speed of stirrer shaft
- 3 : Nature of medium to be stirred i.e. constant or variable density
- 4 : No. of hours/day the gear unit will be in operation.
- 5 : Ambient condition i.e. temperature, humidity.
- 6 : Power or torque required at the stirrer shaft.
- 7 : Dimension of the stirrer shaft and blade i.e. diameter, total length, blade dia., no. of blades, weight & thrust from blades and its direction.
- 8 : Detail of bearing support at top of the stirrer shaft and at the end of shaft (if provided).

SHIPPING SPECIFICATION AND OIL CAPACITY

SIZE	NU-CVM			NU-CVDM		
	Net Weight (kg)	Gross Weight (kg)	Oil Capacity (Approx) Lts.	Net Weight (kg)	Gross Weight (kg)	Oil Capacity (Approx) Lts.
4	73	103	3	80	100	4
5	105	135	6	110	150	6
6	166	205	8.5	180	220	8.5
		CVM			CVDM	
7	200	245	11	220	280	12
8	260	350	14	275	360	15
9	310	400	16	350	410	17
10.5	460	540	22	500	620	25
12	710	820	29	800	920	30
14	800	925	43	1050	1400	45

Shipping specifications and oil capacities of NU-V refer catalogue No. 147/G and for FVM/FSV refer catalogue No. 152/G

**FOR SELECTION OF TYPE/SIZE OF STIRRER GEAR UNIT
FOLLOWING STEPS TO BE FOLLOWED**



STEP 1 : Selection of stirrer gear unit on Output torque capacity

$$\text{Output torque } M_t = \frac{716.2 \times \text{HP}}{\text{output speed}} = \frac{9550 \times \text{KW}}{\text{outspeed}} \text{ Nm}$$

$$\text{Equivalent output torque } M_{te} = (M_t \times \text{Service factor}) \text{ Nm}$$

Reference to the capacity given w.r. to ratio, output speed and equivalent output torque (M_{te}), select the size of gear unit. from page No. 7 & 8.

STEP 2 : Checking of shaft for bending moment

- calculate journal load (P) on stirrer shaft (assuming centre of pressure on blade = $0.75 R$ where R is radius of blade in meter)

$$\text{i.e. } P = \frac{M_t / 9.81}{0.75 R} \text{ kg}$$

- Calculate bending moment (M) on stirrer shaft assuming stirrer shaft is entirely supported by gear unit bearing i.e. $M = PL$ where L is the distance between centre line of bottom bearing of gear unit to centre of pressure (p) on blade in meter. Refer table on Page No. 9 for allowable bending moment and select the type of the gear unit on bending moment.

STEP 3 Checking on bearing capacity.

(A) For STD stirrer gear unit (NU-V, FVM, FSV) and Medium duty stirrer gear units (NU-CVM, CVM)

Journal load on bearing

$$(P_B) = \frac{P(L+X)}{X} \times \text{Service factor} \text{ kg}$$

_____ (a)

where X = Bearing span of gear unit

$$\text{Trust Load (T)} = (\text{Blade weight} + \text{Blade Thrust}) - \text{kg}$$

_____ (b)

+ when Blade Thrust down ward

- when blade Thrust up ward

From equation (a) and (b) decide the type of gear unit comparing with table on Page No. 10

(B) For Heavy Duty Stirrer gear units (NU-CVDM, CVDM)

$$\text{Journal load on bearing } (P_B) = \frac{P \times L}{X} \times \text{Service factor} \text{ kg} \text{ _____ (c)}$$

$$\text{Thrust load (upward)} = \text{Paddle Thrust (up)} - \text{Paddle weight} \text{ kg}$$

$$\text{Thrust load (downward)} = \text{Paddle Thrust (down)} + \text{Paddle weight} \text{ kg} \text{ _____ (d)}$$

From equation (c) and (d) decide the type of gear unit comparing with table on Page No. 11

EXAMPLE : Select Elecon Gear Unit for the following Stirrer duty application.

Motor Power : 5 HP at 1440 RPM
 Stirrer shaft Speed : 60 RPM
 Stirrer Shaft length/diameter (L1) : 2000 mm/60 mm
 No of Blade and diam. : One and 720 mm = $R = \frac{720}{2} = 360$
 Nature of medium to be stirrer : Variable density
 Stirrer Shaft is supported entirely by the Gear unit bearing.
 No of Hours/Day operation : Continuous throughout the completion of batch
 12-14 Hrs. in a day.

SOLUTION :

STEP 1 : Output Torque $M_t = \frac{716 \times 5}{60} = 59.683 \text{ kgm}$
 Service Factor for variable density under moderate Shock load = 1.25
 Equivalent output Torque $M_{te} = M_t \times \text{S.F.} = 59.683 \times 1.25 = 74.6 \text{ kgm}$
 Gear Unit size 5" CRS, Ratio 25/1 based on equivalent Out Torque capacity from capacity table on page No. 7&8

STEP 2 : On 5" CRS
 Journal load $P = \frac{M_t}{0.75 \times R} = \frac{59.683}{0.75 \times 0.360} = 221 \text{ kg}$
 Bending moment (M) = $P \times L = P \times (L1 + Y) = 221 \times (2 + 0.14) = 472.94 \text{ kgm} \times 9.81 = 4641.71 \text{ Nm}$
 where $L = L1$
 $Y =$ Distance from bottom bearing to the end of output shaft of gear unit from table No. 1

Refer the tables for allowable bending moments. The type of gear unit falls in Heavy Duty Stirrer gear unit i.e. 5 NU-CVDM Ratio 25/1.

STEP 3 : Journal load on Bearing (P_B) = $\frac{P \times L}{X}$
 $X =$ Bearing span of gear unit size 5 NU-CVDM = 240 mm
 $L = (L1+Y) = 2 + 0.210 = 2.210 \text{ meters.}$
 $P_B = \frac{221 \times 2.210}{0.240} = 2035 \text{ kg.}$ (X and Y from table No. 1)

Thrust load (up/down) to be decided by knowing the value of weight of blade, thrust due to stirring action, compare this thrust load with our thrust load values given in table on page No. 11

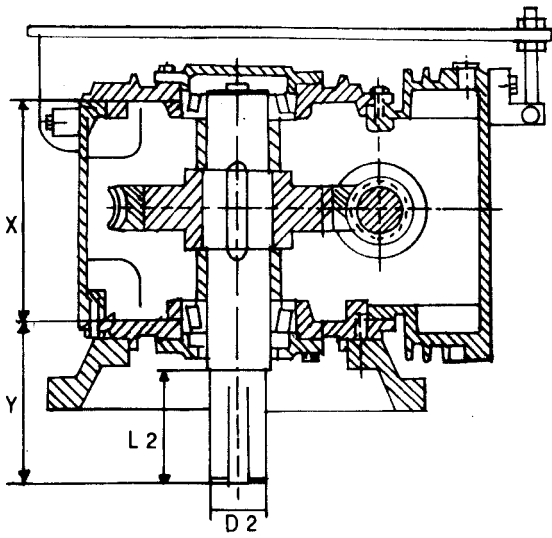
Table No. 1 **BEARING SPAN AND OUTPUT SHAFT DETAILS**

SIZE	NU-V				NU-CVM				NU-CVDM			
	D2	L2	X	Y	D2	L2	X	Y	D2	L2	X	Y
4	45	90	160	135	45	90	160	135	65	125	220	185
5	50	100	188	140	45	90	188	140	70	140	240	210*
6	58	114	217	165	58	114	217	165	85	155	275	225

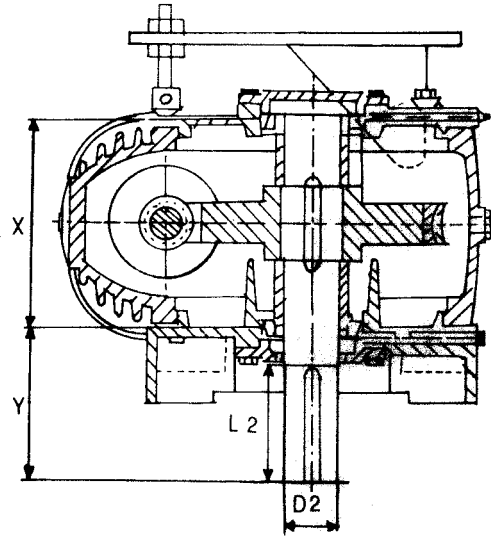
SIZE	FVM/FSV				CVM				CVDM			
	D2	L2	X	Y	D2	L2	X	Y	D2	L2	X	Y
7	65	130	230	172	65	130	565	172	95	170	285	255
8	70	140	245	190	70	140	580	190	100	190	320	270
9	75	125	250	180	75	125	705	180	110	235	345	330
10.5	80	150	292	215	80	150	715	215	115	280	360	350
12	85	165	298	235	85	165	800	235	120	345	405	440
14	110	200	390	275	110	200	830	275	130	400	425	450

STANDARD V TYPE GEAR UNIT

NU-V

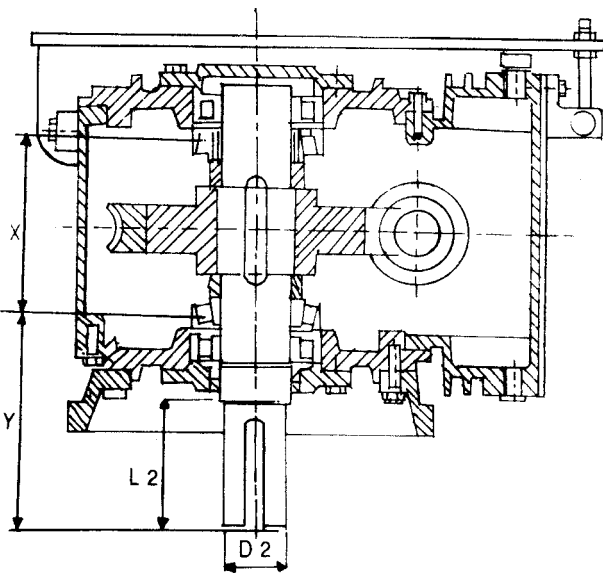


FVM/FSV

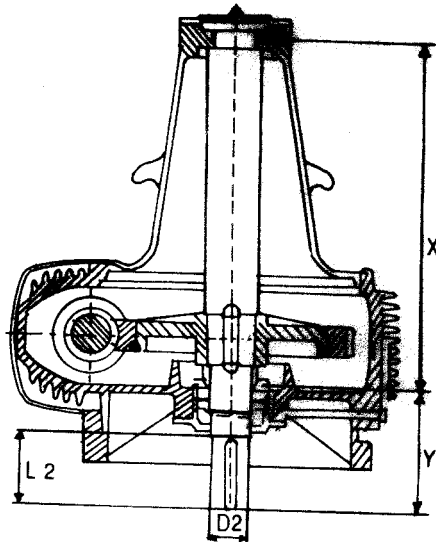


MEDIUM DUTY GEAR UNIT

NU-CVM

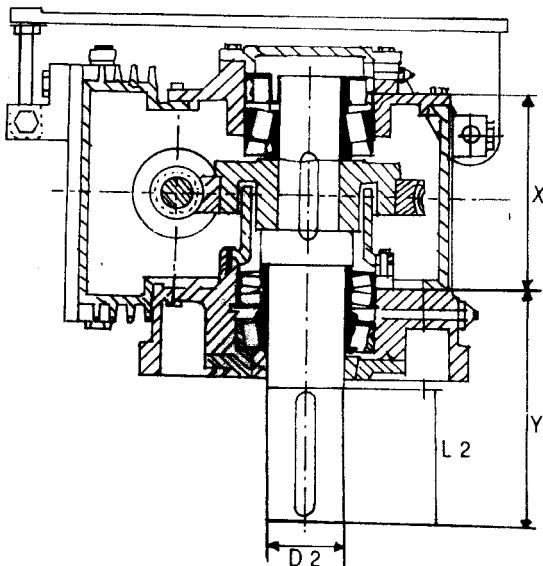


CVM

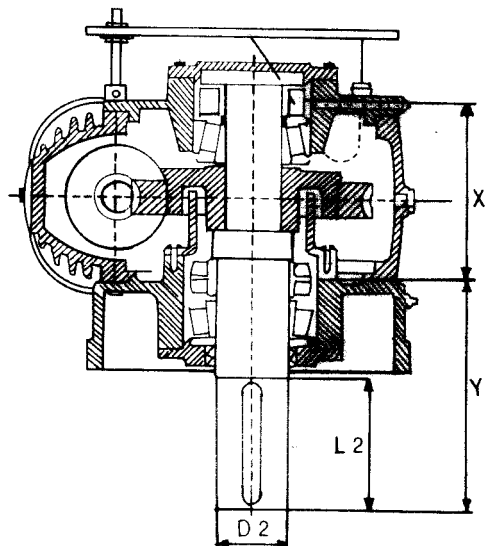


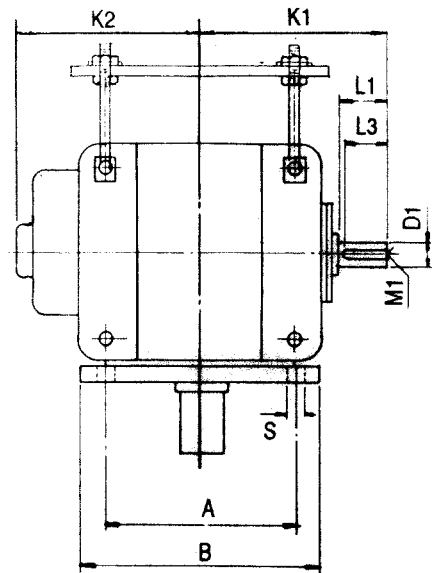
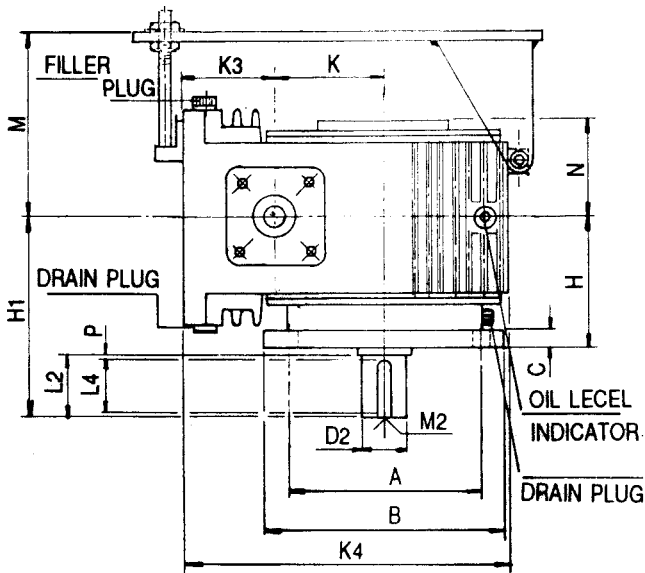
HEAVY DUTY GEAR UNIT

NU-CVDM

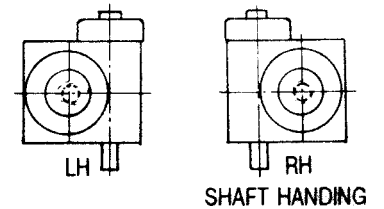
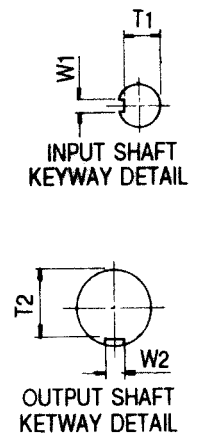
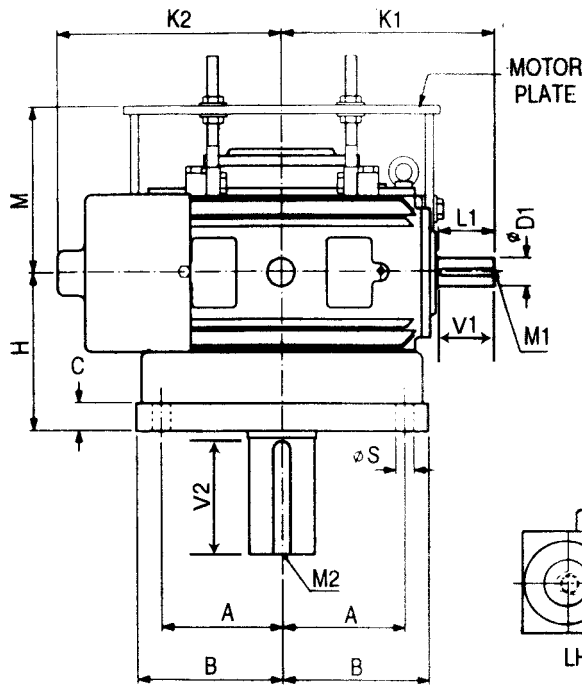
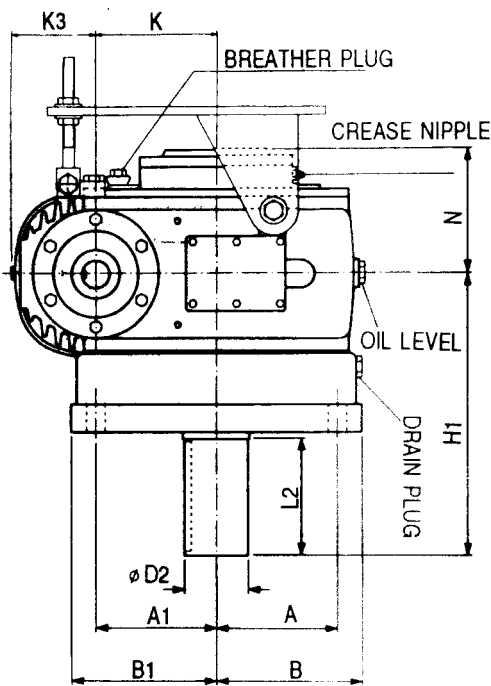


CVDM





SIZE	A	B	C	S	H	H1	K	K1	K2	K3	K4	M	N	D1	L1	M1	T1	W1	D2	L2	M2	T2	W2	L3	L4	P
4 NU-CVDM	228	280	35	23	175	305	101.6	215	225	108	324.6	185	145	32	65	M12	27	10	65	125	M20	58	18	60	120	5
5NU-CVDM	280	330	35	23	190	340	127	242	250	118	385	190	154	35	70	M12	30	10	70	140	M20	62.5	20	65	135	5
6 NU-CVDM	304	380	45	23	210	375	152.4	279	301	127	449.4	210	185	38	75	M12	33	10	85	155	M20	76	22	70	150	5



SIZE	A	B	A1	B1	C	S	H	H1	K	K1	K2	K3	N	M	D1	L1	T1	W1	M1	D2	L2	T2	W2	M2	V1	V2
7 CVDM	178	205	178	205	40	27	230	410	177.8	311	325	132	180	225	40	82	35	12	M16	95	170	86	25	M24	79	165
8 CVDM	203	245	203	245	45	27	250	440	203.2	342	362	145	200	255	45	88	39.5	14	M16	100	190	90	28	M24	85	185
9 CVDM	225	270	225	270	50	27	265	505	228.6	375	395	160	210	260	50	95	44.5	14	M16	110	235	100	28	M28	92	230
10.5 CVDM	260	300	235	275	50	33	280	570	266.7	450	470	180	220	285	60	115	53	18	M20	115	280	104	32	M24	110	270
12 CVDM	318	370	267	320	55	33	300	655	304.8	485	505	185	248	325	60	125	53	18	M20	120	345	109	32	M24	120	340
14 CVDM	355	425	305	375	65	42	330	674	355.6	590	545	210	300	350	80	140	71	22	M20	130	350	119	32	M24	135	3 4 5

SHAFT LIMITS UP TO 58 MM k6 OVER 58mm m6

KEYS AND KEYWAY AS PER I.S. - 2048

THESE DIMENSIONS ARE FOR PRELIMINARY USE ONLY AND ARE SUBJECT TO OUR CONFIRMATION.

INPUT HORSE-POWER / OUTPUT TORQUE CAPACITIES

WORM SHAFT R.P.M.	GEAR RATIO	WORM WHEEL R.P.M.	CAPACITY	Size of Unit								
				4	5	6	7	8	9	10.5	12	14
1500	5	300	H.P.	18.5	31	49	67	90	96	126	144	182
			Torque daNm	42	71.5	115	153	209	224	291	339	430
	7.5	200	H.P.	13	24	35	54	74	85	113	134	169
			Torque daNm	44	83.5	120	188	258	299	397	472	596
	10	150	H.P.	11.1	21	31	44	61	74	106	127	161
			Torque daNm	50	95	142	199	286	348	484	590	755
	15	100	H.P.	7.5	14.5	23	29	42	55	81	106	138
			Torque daNm	50	95	156	193	291	380	556	728	956
	20	75	H.P.	6.8	12	19	25	33	43	59	80	113
			Torque daNm	59	105	166	222	292	384	530	697	1037
	25	60	H.P.	5.3	9.9	16.2	23	30	39	55	70	96
			Torque daNm	56	106	174	245	338	430	596	738	1089
30	50	H.P.	4.7	8.4	13.7	19.9	27	32	43	64	82	
		Torque daNm	59.5	106	173	251	357	417	595	841	1100	
40	37.5	H.P.	3.9	6.7	11.1	16	20	27	36	50	64	
		Torque daNm	63.5	107	178	258	345	464	610	648	1119	
50	30	H.P.	3.3	5.7	8.9	14.5	18.1	22	28	42	53	
		Torque daNm	65	110	173	279	371	443	583	861	1127	
60	25	H.P.	3	5.1	8.3	12.3	16.3	19.3	25	35	45	
		Torque daNm	66	114	183	272	357	435	610	835	1129	
70	21.4	H.P.	2.5	4.5	6.7	9.9	13.2	14.7	19.1	27	38	
		Torque daNm	62	111	166	245	345	397	518	728	1085	
1000	5	200	H.P.	14.6	25	36	50	66	69	87	110	132
			Torque daNm	50	87	124	171	231	242	304	384	463
	7.5	133	H.P.	10.1	18.9	28	40	53	58	81	101	123
			Torque daNm	52	97	143	205	276	304	422	524	650
	10	100	H.P.	8.7	16.3	25	34	43	52	73	93	120
			Torque daNm	59	110	169	227	299	363	503	643	835
	15	66.7	H.P.	6	10.3	18	27	33	40	58	73	97
			Torque daNm	59	102	176	272	337	417	597	756	1008
	20	50	H.P.	5.2	9.1	14.4	19.6	27	33	46	60	83
			Torque daNm	67	116	185	251	330	443	616	795	1187
	25	40	H.P.	4	7.9	11.1	17.3	23	29	40	52	70
			Torque daNm	63	122	175	273	371	478	662	864	1176
30	33.3	H.P.	3.8	6.5	10	15.9	21	27	36	48		
		Torque daNm	70	120	184	291	397	489	691	876	1164	
40	25	H.P.	3.2	5.5	8.5	12.2	16.1	21	27	36	48	
		Torque daNm	74	130	198	288	384	511	677	901	1245	
50	20	H.P.	2.7	4.7	7.1	10.2	14.1	16.5	24	32	39	
		Torque daNm	75	132	199	285	405	490	728	956	1210	
60	16.7	H.P.	2.5	4	6	9.2	12.1	14.1	18.3	26	33	
		Torque daNm	81	126	192	291	391	489	636	916	1199	
70	14.3	H.P.	1.9	3.5	5.2	7.7	9.9	10.8	15.2	19	29	
		Torque daNm	66	124	182	272	358	424	595	768	1209	

The tables show the maximum uniform power and torque that may be transmitted continuously for 12 hours per day, with normal overloads of 100 per cent momentarity, 40 cent for 30 minutes and 25 per cent for 2 hours. The ratings given are based on a service factor of 1.0. Apply appropriate service factor considering type of loading.

1da NM = 1.02 kpm

INPUT HORSE-POWER / OUTPUT TORQUE CAPACITIES

WORM SHAFT R.P.M.	GEAR RATIO	WORM WHEEL R.P.M.	CAPACITY	Size of Unit								
				4	5	6	7	8	9	10.5	12	14
750	5	150	H.P.	12.2	19.8	28	38	50	53	67	83	102
			Torque daNm	55	90	125	173	231	245	311	335	476
	7.5	100	H.P.	93	176	25	34	46	50	68	81	98
			Torque daNm	59	111	158	214	299	325	438	524	642
	10	75	H.P.	73	135	197	27	35	42	58	70	93
			Torque daNm	65	120	175	238	318	384	530	643	862
	15	50	H.P.	49	93	153	21	28	33	44	57	73
			Torque daNm	64	121	199	238	371	437	596	770	1008
	20	37.5	H.P.	43	75	117	157	21	27	36	46	63
			Torque daNm	72	127	198	265	363	478	622	810	1127
	25	30	H.P.	36	64	91	141	19	23	31	46	53
			Torque daNm	73	132	189	291	410	503	662	810	1127
	30	25	H.P.	32	56	86	13.2	16.4	19.7	26	34	44
			Torque daNm	77	135	206	318	417	502	662	876	1164
	40	18.8	H.P.	25	43	67	9.7	12.3	15.5	20	30	35
			Torque daNm	78	132	205	299	397	502	662	966	1175
	50	15	H.P.	21	37	6	9.3	11	12.7	17.9	23	27
			Torque daNm	79	134	219	338	411	490	691	887	1127
	60	12.5	H.P.	2.0	34	49	79	10.1	11.6	15.3	19.4	24
			Torque daNm	82	139	201	326	437	524	703	876	1152
70	10.7	H.P.	1.7	3	42	6.4	8.1	9	11.9	164	21	
		Torque daNm	76	136	192	291	391	456	596	783	1129	
500	5	100	H.P.	9.3	14.4	19.6	27	35	37	44	55	70
			Torque daNm	63	98	132	186	238	258	305	394	488
	7.5	66.7	H.P.	6.4	12.1	17	24	32	35	41	53	65
			Torque daNm	64	121	169	237	327	341	424	543	677
	10	50	H.P.	5.4	10.1	14.6	19.5	26	29	37	48	66
			Torque daNm	70	132	192	255	350	397	502	650	915
	15	33.3	H.P.	3.8	6.9	11.5	15	19.4	23	30	39	50
			Torque daNm	72	132	220	288	384	466	594	767	1020
	20	25	H.P.	3.4	5.6	8.8	11.6	15.5	19.1	26	32	43
			Torque daNm	84	139	219	288	397	489	662	823	1152
	25	20	H.P.	2.8	4.5	6.5	10.4	14	17	21	27	36
			Torque daNm	84	137	198	318	443	535	675	847	1187
	30	16.6	H.P.	2.3	4.1	6.7	8.8	12.4	13.7	18.6	23	31
			Torque daNm	82	145	233	307	457	510	691	864	1187
	40	12.5	H.P.	1.9	3.4	5.5	7.6	10.1	11.2	14.4	18.3	25
			Torque daNm	86	151	244	338	449	529	662	862	1245
	50	10	H.P.	1.5	2.7	4.6	6.9	8.6	10	11.7	16.5	19.6
			Torque daNm	80	139	242	363	470	556	649	862	1152
	60	8.33	H.P.	1.3	2.3	37	5.8	7.6	8.5	10.6	13.	17.5
			Torque daNm	76	139	225	351	464	556	690	876	1199
70	7.14	H.P.	1.3	2	3.2	4.9	6.3	6.8	8.4	10.9	15.2	
		Torque daNm	88	132	212	324	430	496	610	794	1163	

The tables show the maximum uniform power and torque that may be transmitted continuously for 12 hours per day, with normal overloads of 100 per cent momentarily, 40 per cent for 30 minutes and 25 per cent for 2 hours. The ratings given are based on a service factor of 1.0. Apply appropriate service factor considering type of loading.

1 da NM = 1.02

**ALLOWABLE BENDING MOMENT AT BOTTOM BEARING
FOR NU-V, FVM, FSV ST GEAR UNITS**

OUT-PUT R.P.M.	SIZE OF GEAR UNIT								
	4	5	6	7	8	9	10.5	12	14
300	950	1330	1900	2600	3500	4800	6200	9550	16800
200	935	1290	1875	2500	3350	4600	5800	8900	16500
150	925	1260	1800	2450	3250	4200	5500	8500	1600
100	910	1250	1750	2300	3100	4000	5000	8200	15800
75	890	1220	1650	2200	2900	3850	4750	800	15300
60	875	1210	1600	2125	2800	3650	4600	7850	15000
50	850	1190	1525	2000	2650	3500	4525	7600	14700
37.5	830	1175	1450	1900	2400	3400	4475	7400	14500
25	815	1150	1420	1850	2300	3325	4425	7300	14425
21	800	1120	1380	1450	2100	3250	4400	7200	14400

**ALLOWABLE BENDING MOMENT AT BOTTOM BEARING (Nm)
FOR NU-CVM, CVM MD STIRRER GEAR UNITS**

OUT-PUT R.P.M.	SIZE OF GEAR UNIT								
	4	5	6	7	8	9	10.5	12	14
300	1500	2200	3100	4250	5600	7800	9550	14750	25570
200	1470	2175	3080	4150	5465	7650	9325	14450	25350
150	1450	2120	3040	4125	5440	7540	9200	14200	25000
100	1440	2100	2950	4015	5370	7400	9100	14000	24750
75	1430	2090	2920	4000	5340	7300	9050	13750	24600
60	1420	2075	2900	3985	5300	7250	8950	13665	24425
50	1415	2060	2880	3900	5200	7200	8800	13550	24300
37.5	1410	2050	2850	3850	5050	7140	8575	13410	24120
25	1400	2040	2800	3765	4965	7050	8450	13350	23980
21	1390	2035	2785	3625	4850	6850	8350	13300	23925

**ALLOWABLE BENDING MOMENT AT BOTTOM BEARING (Nm)
FOR NU-CVDM, CVDM HD STIRRER GEAR UNITS**

OUT-PUT R.P.M.	SIZE OF GEAR UNIT								
	4	5	6	7	8	9	10.5	12	14
300	3500	5700	6450	9820	12530	1348	15525	19200	32000
200	3550	5715	6610	9795	12350	13540	15840	19550	32500
150	3520	5650	6500	9770	12600	13900	16500	20500	34200
100	3500	5700	6400	9700	12400	14120	16900	20620	35500
75	3490	5715	6375	9645	12350	14140	17090	21025	34800
60	3475	5610	6365	9790	12430	14150	17070	21600	34000
50	3450	5600	6340	9600	12300	14200	17250	21720	36000
37.5	3425	5615	6340	9410	12050	14125	17380	21950	37000
25	3400	5605	6325	9420	12100	14025	18320	22400	37500
21	3475	5600	6345	9060	11950	14690	18690	23000	38000

ALLOWABLE LOAD ON BEARING (Kgs) NU-V, FVM, FSV STANDARD GEAR UNITS

OUTPUT R.P.M.		SIZE OF UNIT								
		4	5	6	7	8	9	10.5	12	14
300	J	320	485	590	610	735	780	1150	1325	2890
	T	250	335	415	425	500	560	820	925	2040
200	J	700	890	1250	1200	1280	1350	1330	1780	3200
	T	525	620	875	810	870	945	960	1250	2170
150	J	910	1150	1320	1400	1600	1675	1900	2380	3830
	T	630	875	900	1000	1125	1140	1290	1715	2800
100	J	1285	1660	1700	1820	2250	2350	2450	2700	4600
	T	870	1100	1150	1220	1525	1600	1700	1800	3130
75	J	1400	1750	2150	2350	2700	2750	3430	3600	6200
	T	1000	1100	1425	1620	1825	1950	2330	2440	4225
60	J	1545	2000	2450	2525	3180	3300	3800	4050	7725
	T	1050	1350	1640	1675	2160	2300	2625	2750	5350
50	J	1650	2250	2780	2910	3520	3682	4200	4360	8500
	T	1150	1600	1890	2010	2460	2600	2825	3100	6120
37.5	J	2180	3100	3570	3980	4800	500	5450	6400	9800
	T	1500	2145	2460	2785	3400	3550	3815	4450	7050
25	J	2180	3100	3570	3980	4800	5000	5450	6400	9800
	T	1500	2145	2460	2785	3400	3550	3815	4450	7050
21	J	2570	3530	4200	4250	5260	5520	6100	7200	10600
	T	1800	2450	2900	2900	3630	3750	4400	4900	7250

ALLOWABLE LOAD ON BEARING (Kgs) NU-CVM, CVM MEDIUM DUTY STIRRER UNITS

OUTPUT R.P.M.		SIZE OF UNIT								
		4	5	6	7	8	9	10.5	12	14
300	J	1180	1560	1770	1980	2260	2400	3250	4150	6360
	T	730	920	1160	1230	1510	1650	2170	2625	4130
200	J	1470	1980	2340	2310	2740	2630	3040	4400	7060
	T	1050	1360	1780	1700	2000	2200	2530	2760	4670
150	J	1710	2300	2740	2800	3000	3400	4300	5370	7850
	T	1300	1690	2160	2210	2785	2800	3170	3660	5250
100	J	1980	2740	3150	3270	4010	4100	5060	6300	6370
	T	1580	2140	2620	2720	3330	3000	3940	4490	6670
75	J	2172	3095	3380	3385	4215	4060	5660	7490	11000
	T	1720	2280	2895	3030	3440	3600	4545	5330	7335
60	J	2320	3210	3780	4010	4860	5480	6100	7680	12070
	T	1850	2500	3140	3370	4100	4250	4850	5600	7990
50	J	2400	3345	3900	4210	5060	5600	6335	7800	12080
	T	2135	2635	3290	3475	4280	4500	4930	5770	8000
37.5	J	2720	3810	4490	4620	5760	6500	7200	9100	13100
	T	2220	2980	3785	3930	4860	5290	5730	6825	9630
25	J	3130	4400	5160	5450	6780	7200	8560	10700	15500
	T	2550	3530	4440	4700	5850	6200	6900	8160	11510
21	J	3450	4800	5600	5850	7350	8150	9400	11800	16800
	T	2780	3725	4800	5100	6300	6800	7500	9000	12600

ALLOWABLE LOAD ON BEARING (Kgs) SNU-CVDM, CVDM HEAVY DUTY STIRRER UNITS

		4	5	6	7	8	9	10.5	12	14
300	J	1295	1715	1945	2175	2500	3050	3575	4500	7000
	TU	800	1015	1275	1350	1660	2050	2400	2900	4500
	TD	1680	1900	220	2800	3400	3590	4100	4300	5600
200	J	1600	2175	2575	2540	3000	3530	4000	4840	7750
	TU	1150	1495	1960	1850	2200	2800	3000	3000	5100
	TD	2200	2450	2900	3450	4100	4280	4675	5900	8600
150	J	1880	2530	3000	3080	3300	3750	4700	5900	8600
	TU	1400	1860	2375	2400	3150	2770	3500	4025	5800
	TD	2500	3000	3410	4250	5200	5450	5550	5700	6400
100	J	2175	3015	3460	3600	4400	4950	5550	6900	10300
	TU	1730	2350	2900	3000	3650	3800	4300	4950	7300
	TD	2800	3550	3600	5020	6100	6400	6750	7000	7300
75	J	2400	3410	3700	3725	4600	5500	6200	8250	12100
	TU	1890	2510	3180	3300	3775	4500	5000	5875	8050
	TD	3000	3900	4000	5500	6800	7000	7200	7500	9800
60	J	2550	3530	4160	4400	5340	6000	6700	8400	13200
	TU	2030	2750	4350	3700	4500	4850	5300	6150	8500
	TD	3200	4100	4600	6000	7100	7500	7950	8300	10000
50	J	2640	3685	4300	4630	5550	6700	7000	8600	13250
	TU	2350	2900	3620	3825	4700	5100	5400	6350	8800
	TD	3500	4300	4800	6500	8100	8300	8580	8700	12000
37.5	J	2990	4200	4950	5100	6300	7300	7900	10000	14000
	TU	2420	3275	4160	4300	5300	5400	6300	7500	10500
	TD	3800	4600	5600	6975	8400	8850	9350	9600	12500
25	J	3440	4840	5675	6000	7450	8400	9400	11750	17000
	TU	2800	3880	4880	5150	6400	6850	7600	9000	12100
	TD	4300	5500	6700	8150	9150	10100	10600	11000	13500
21	J	3800	5300	6150	6400	8100	9000	10350	13000	18400
	TU	3060	5275	5275	5600	6900	8150	8200	9900	13800
	TD	4800	6050	7200	8750	10900	1150	12000	12450	14800

J=JORNAL LOAD, TU=THRUST LOAD (UPWARD), TD=THRUST LOAD (DOWNWARD)