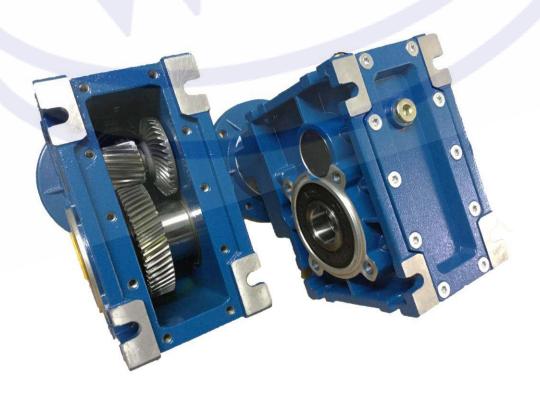


**KM - SERIES HYPOID HELICAL GEARBOX** 

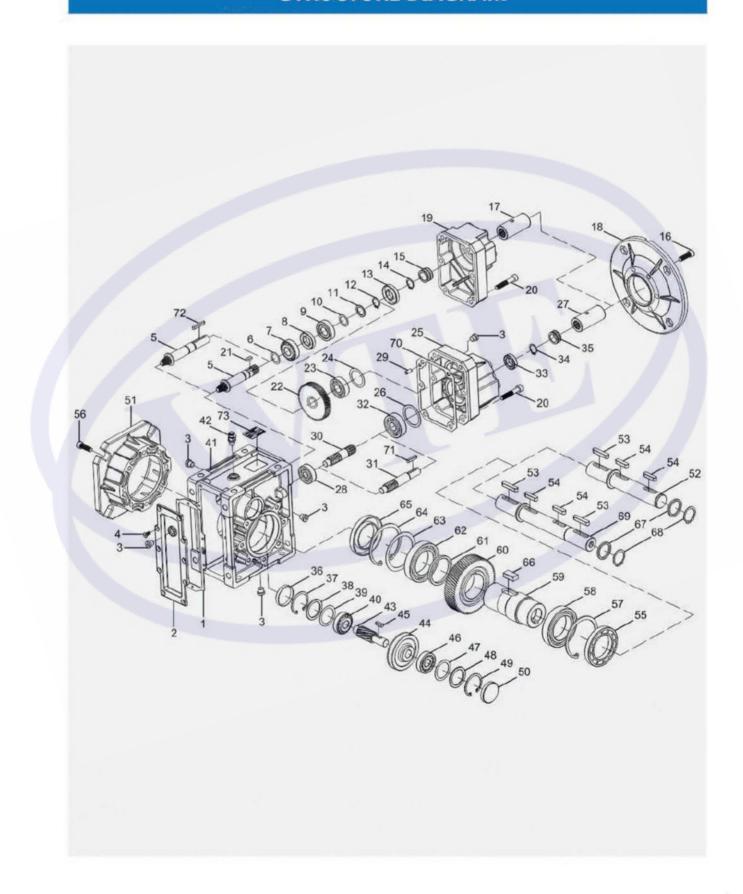




## **KM Series Hypoid Gearbox**



### STRUCTURE DIAGRAM





### STRUCTURE DIAGRAM

1	Rubber gasket	38	Washer
2	Gearcase cover	39	Shim ring
3	Oil plug	40	Bearing
4	Hexagon sunk screw	41	Gearcase
5	Pinion shaft	42	Breather valve
6	Shin ring	43	Pinion shaft
7	Bearing	44	Gear
8	Oil seal	45	Key
9	Bearing	46	Bearing
10	Shin ring	47	Shim ring
11	Washer	48	Washer
12	Shaft-circlip	49	Hole-circlip
13	Oil seal	50	Closing cap
14	Shaft-circlip	51	Output flange
15	Rubber boot	52	Single output shaft
16	Inner hex screw	53	Key
17	Input shaft	54	Key
18	Input flange	55	Oil seal
19	2 stage input box cover	56	Inner hex screw
20	Inner hex screw	57	Hole-circlip
21	Key	58	Bearing
22	Gear	59	Hollow shaft
23	Bearing	60	Gear
24	Shim ring	61	Washer
25	3 stage input box cover	62	Bearing
26	Shim ring	63	Shim ring
27	Input shaft	64	Hole-circlip
28	Bearing	65	Oil seal
29	Stifte	66	Key
30	Pinion	67	Washer
31	Pinion shaft	68	Shaft-circlip
32	Bearing	69	Double output shaft
33	Oil sea	70	Housing gasket
34	Shaft-circlip	71	Key
35	Rubber boot	72	Key
36	Closing cap	73	Nameplate
37	Hole-circlip		

#### DESIGN FEATURES

#### Summarize

KM series high efficiency hypoid gearbox is a new generation of product developed by our company. Fuses the advanced technology both at home and abroad. The mounting dimension of KM the same with NMRV Series worm gearbox. Adpot gear transmission used for reference SEW helical gearbox structure to improve transmission efficiency, solved NMRV worm gearbox transmission efficiency low, service life short and etc. questions.

In industrial developing KM the role of saving energy and reducing consumption, green environmental protection.

#### Products characteristics

- 1. Driven by hypoid gear , has big ratios.
- 2. Large in output torpue, high efficiency, energy saving and environmental protection.
- 3. Made of high-quality aluminum ally , light in weight and non-rusting.
- 4. Smooth in running and low in nosie, can work long time in dreadful conditions.
- 5. Good-looking in appearance, durable in service life and small in volume.
- 6. Suitable for all round installation, wide application and easy of use.
- The mounting dimension of KM series are compatible with NMRV series worm gear unit(A part of NMRV050 dimensions are different from KM050)
- 8. Modular and multi-structure can meet the demands of various conditions.

#### Comparative advantage

#### 1. High sfficiency & energy-saving

The hypoid gear has low friction, efficiency is as high as 92%, compared with the worm gearbox, the efficiency improved about 10%-40%.

Туре	Ratios[i]	Input speed[n1]	Efficiency[ $\eta$ ]
KM075	30.24	1400	90%
NMRV075	30	1400	60%

#### 2. High strength & long life

The hypoid gear made of high quality alloy, treated by surface hardening, and produced by high-precision grinding machine, the output torque gaer strength and life are much better than worm gearbox.

#### Main materials

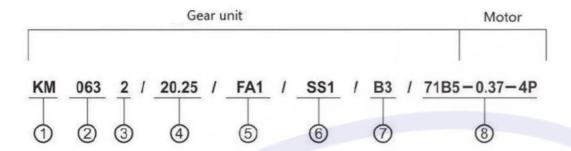
- Housing:die-cast aluminum alloy (frame size:050 to 090); grey cast iron(frame size:110);
- Gear wheel:20CrMnTi,carbonization & nitriding treatment make the hardness of gear's surface up to 58-62
   HRC,retain carburized layer's thickness between 0.3 and 0.6mm after accurate grinding.

#### Surface painting

Aluminum alloy housing:

- 1. Shot blasting and special antiseptic treatment on the aluminum alloy surface.
- 2. After phosphating, spray the paint RAL7035 in grey or RAL5010 in blue.

#### **MODEL ILLUMINATE**



NO	Comments
1	Code for gear units series : KM
2	Specification code of gear units 050, 063, 075, 090, 110
3	1. 2:Means 2 stages 2. 3:Means 3 stages
4	Speed ratio of reducer i
5	1.No mark means without output flange 2.FA、FB、FC、FD、FE(1/2):output Flange and position
6	1.No mark means hole output 2.SS(1/2):Single output shaft and position 3.DS:Double output shaft
7	Installation position code
8	71B5:IEC input flange code     MV7124: Compact motor type     71B5-0.37-4P: IEC input flange code and model motors(poles of power)

#### RELEVANT PARAMETER

#### POWER P

 $P_1=P_2/\eta$  (kW)  $P_{1n} \ge P_1 \cdot fs(kW)$  P<sub>1</sub> Input power

P<sub>2</sub> Output power

P<sub>1n</sub> Rated input motor power

fs Service factor

η Transmission efficiency

The efficiency of KM gear units varies with the number of gear stages, which is 92% for 2-stage, 90% for 3-stage.

#### Rotation speed n

n<sub>1</sub> Gear units input speed

n<sub>2</sub> Gear units output speed

If driven by the external gearing, 1400r/min or lower rotation speed is suggested so as to optimize the working conditions and prolong the service life. Higher input rotation speed is permitted, but in this situation, the rated torque  $M_2$  will be reduced.

#### Transmission ratio i

 $i=n_1/n_2$ 

Usually transmission ratio is decimal fraction with 2 radix point tagged in selection tables.

#### Torque m

 $M_2=9550 \cdot P_1 \cdot \eta /n_2(Nm)$ 

 $M_{2n} \ge M_2 \cdot fs(Nm)$ 

M<sub>2</sub> Output torque

Man Rated output torque

P. Input power

η Transmission efficiency

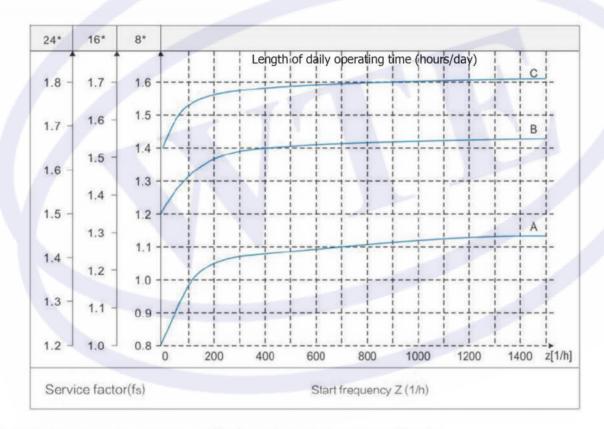
fs Service factor

#### **RELEVANT PARAMETER**

#### Service factor fs

The effect of the driven machine on the gear unit is taken into account to a sufficient level of accuracy using the service factor fs. The service factor is determined according to the daily operating time and the starting frequency Z.

Three load classifications are considered depending on the mass acceleration factor. You can read off the service factor applicable to your application in following figure. The service factor selected using this diagram must be less than or equal to the service factor as given in the performance parameter table.



 starting frepuency Z: The cycles include all starting and braking procedures as well as change overs from low to high speed.

#### RELEVANT PARAMETER

#### Load classifications

#### Type of load:

- A. Uniform ,permitted mass acceleration factor Fa≤0.2
- B. Moderate shock load, permitted mass acceleration factor Fa≤3
- C. Heavy shock load,permitted mass acceleration factor Fa≤10

Screw feeders for light materials, fans, assembly lines, conveyor belts for light materials, small mixers, lifts, cleaning machines, fillers, control machines.

Winding devices, woodworking machine feeders, goods lifts, balancers, threading machines, medium mixers, conveyor belts for heavy materials, winches, sliding doors, fertilize scrapers, packing machines, concrete mixers, crane mechanisms, milling cutters, folding machines, gear pumps.

Mixers for heavy materials, shears, presses, centrifuges, rotating supports, winches and lifts for heavy materials, grinding lathes, stone mills, bucket elevators, drilling machines, hammer mills, cam presses, folding machines, turntables, tumbling barrels, vibrators, shredders.

#### Mass acceleration factor

The mass acceleration factor is calculated as follows:

#### Fa=Jc/Jm

Fa Mass acceleration factor

Jc All external mass moments of inertia(kgm²)

Jm Mass moment of inertia on the motor end(kgm²)

If mass acceleration factors fa>10,please call our Technical

Service.

To keep the service-life of gear units, use factor fs selected from the catalogue must be equal or slightly higher than the calculated use factor fs.

#### Example:

Mass acceleration factor 2.5 ( load classification B ) , 14hours/day operating time ( read off at 16h/d ) and 200 cycles/hour result in a service factor fs=1.48.

choose the service factor fs≥1.48 according to the parameter sheet.

#### RELEVANT PARAMETER

Overhung loads and axial forces

When determining the resulting radial loads, the type of transmission elements, mounted on the shaft end must be considered, Varous transmission elements are corresponding with following transmission element factors fz:

Transmission element	Transmission element factor fz	Comments
Gears	1.15	<17 teeth
Chain sprockets	1.25	<20 teeth
Chain sprockets	1.40	<13 teeth
Narrow V-belt pulleys	1.75	Influence of the tensile force
Flat belt pulleys	2.50	Influence of the tensile force
Toothed belt pulleys	2.50	Influence of the tensile force

The overhung loads exerted on the motor or gear shaft is then calculated as follows.

$$Fr = \frac{M \cdot 2000 \cdot fz}{d_0} (N)$$

- Fr Resulting radial load [N]
- M Torque on the shafts [Nm]
- do Mean diameter of the mounted transmission element in [mm]
- fz Transmission element factor

The basis for determining the permitted radial loads is the computation of the rated service life  $L_{ton}$  of the bearings (according to ISO0281) For special operating conditions, the permitted radial loads can be determined with regard service life Lna.

The permitted radial loads given in the selection tables must be calculated using the following formula in the event of force application not in the center of the shaft end. The smaller of the two values FxL (according to bearing service life)

according to bearing service life:

$$FxL=Fr_{(1,2)} \cdot \frac{a}{b+x}[N]$$

 $Fr_1$ ,  $Fr_2$  = Permitted overhung load (x=L/2) for footmounted gear units according to he selection tables in [N] X = Distance from the shaft shoulder to the force application point in [mm] a,b = Gear unit constant for overhung load conversion [mm]

#### **GEAR UNIT SELECTION TABLES**

#### KM 050..Possible geometrical combinations (n<sub>1</sub> =1400r/min)

Gear units	i Nominal	i Actual	n <sub>z</sub> [r/min]	M <sub>2max</sub> [Nm]	F <sub>12</sub> [N]	MV63	MV71	MV80	MV90
				3 St	age				
KM0503	300	291.79	4.8	130	4100				
KM0503	250	244.29	5.7	130	4100				
KM0503	200	200.44	7.0	130	4100				
KM0503	150	146.67	9.5	130	4000				
KM0503	125	120.34	11.6	130	3770				7 A
KM0503	100	101.04	13.9	100	3560			1	
KM0503	75	74.62	18.8	80	3220				
KM0503	60	62.36	22	130	3030				
KM0503	50	52.36	27	100	2860				7
				2 St	age				
KM0502	60	58.36	24	130	2960				
KM0502	50	48.86	29	130	2790				
KM0502	40	40.09	35	130	2610				
KM0502	30	29.33	48	130	2350				
KM0502	25	24.07	58	130	2200				
KM0502	20	20.21	69	100	2080				
KM0502	15	14.92	94	80	1880				
KM0502	12.5	12.47	112	130	1770				
KM0502	10	10.47	134	100	1670				
KM0502	7.5	7.73	181	80	1510				



### **GEAR UNIT SELECTION TABLES**

KM 063..Possible geometrical combinations (n<sub>1</sub> =1400r/min)

	i	1							
Gear units	Nominal	Actual	n <sub>2</sub> [r/min]	M <sub>2rriax</sub> [Nm]	F <sub>2</sub> [N]	MV63	MV71	MV80	MV90
				3 St	age				
KM0633	300	302.50	4.6	200	4800				
KM0633	250	243.57	5.7	200	4800				
KM0633	200	196.43	7.1	180	4800				
KM0633	150	151.56	9.2	200	4650	1		1	
KM0633	125	122.22	11.5	180	4330				
KM0633	100	101.27	13.8	150	4070				
KM0633	75	73.33	19.1	110	3650				
KM0633	60	63.33	22	180	3480				
KM0633	50	52.48	27	150	3270				
				2 St	age				
KM0632	60	60.50	23	200	3430				
KM0632	50	48.71	29	200	3190				
KM0632	40	39.29	36	180	2970				
KM0632	30	30.31	46	200	2720				
KM0632	25	24.44	57	180	2530				
KM0632	20	20.25	69	150	2380				
KM0632	15	14.67	95	110	2130				
KM0632	12.5	12.67	110	180	2030				
KM0632	10	10.50	133	150	1910				
KM0632	7.5	7.60	184	110	1710				

### **GEAR UNIT SELECTION TABLES**

KM 075..Possible geometrical combinations (n, =1400r/min)

Gear units	i Nominal	i Actual	n <sub>2</sub> [r/min]	M <sub>2max</sub> [Nm]	F <sub>12</sub> [N]	MV63	MV71	MV80	MV90	MV100	MV112
					3 Sta	age					
KM0753	300	297.21	4.7	350	6500						
KM0753	250	240.89	5.8	350	6500						
KM0753	200	200.66	7.0	300	6500						
KM0753	150	151.20	9.3	350	6500						
KM0753	125	125.95	11.1	300	5980						
KM0753	100	99.22	14.1	240	5520						
KM0753	75	75.45	18.6	200	5040						
KM0753	60	62.43	22	300	4730						
KM0753	50	49.18	28	240	4370						
					2 Sta	age					
KM0752	60	59.44	24	350	4660						
KM0752	50	48.18	29	350	4340						
KM0752	40	40.13	35	300	4080						
KM0752	30	30.24	46	350	3720						
KM0752	25	25.19	56	300	3500						
KM0752	20	19.84	71	240	3230						
KM0752	15	15.09	93	200	2950						
KM0752	12.5	12.49	112	300	2770						
KM0752	10	9.84	142	240	2550						
KM0752	7.5	7.48	187	200	2330						



### **GEAR UNIT SELECTION TABLES**

KM 090..Possible geometrical combinations (n<sub>1</sub> =1400r/min)

Gear units	i	ì	N <sub>2</sub>	M <sub>2max</sub>	F <sub>12</sub>	MV63	MV71	MV80	MV90	MV100	MV112
	Nominal	Actual	[r/min]	[Nm]	[N]						
					3 Sta	ige					
KM0903	300	295.18	4.7	500	8300						
KM0903	250	240.89	5.8	500	8300				-		
KM0903	200	200.66	7.0	480	8300						
KM0903	150	151.20	9.3	500	8050				17		
KM0903	125	125.95	11.1	480	7580				A		
KM0903	100	99.22	14.1	380	7000					A	
KM0903	75	75.45	18.6	300	6390						
KM0903	60	62.43	22	480	6000						
KM0903	50	49.18	28	380	5540						
			4		2 Sta	ge					
KM0902	60	59.04	24	500	5890						
KM0902	50	48.18	29	500	5500						
KM0902	40	40.13	35	480	5170						
KM0902	30	30.24	46	500	4710						
KM0902	25	25.19	56	480	4430						
KM0902	20	19.84	71	380	4090						
KM0902	15	15.09	93	300	3730						
KM0902	12.5	12.49	112	480	3510						
KM0902	10	9.84	142	380	3240						
KM0902	7.5	7.48	187	300	2950						

#### PERFORMANCE PARAMETER

#### Performance parameter

Pto	n <sub>2</sub>	M <sub>2max</sub>	1	1	F <sub>12</sub>	fs	i de		8	<b>A</b>		
[kW]	[r/min]	[Nm]	Nominal	Actual	[N]		1	l .	Less		hermon	
	4.8	215	300	291.79	4100	0.6						
	5.7	180	250	244.29	4100	0.72						
	7.0	148	200	200.44	4100	0.88						
	9.5	108	150	146.67	4000	1.2						
	11.6	89	125	120.34	3770	1.5	KM0503	MV6314	KM0503	63B5	6314	
	13.9	74	100	101.04	3560	1.3						
	18.8	55	75	74.62	3220	1.5						
	22	46	60	62.36	3030	2.8						
	27	39	50	52.36	2860	2.6						
	24	44	60	58.36	2960	3.0			1 ,			
	29	37	50	48.86	2790	3.5						
	35	30	40	40.09	2610	4.3					III	
	48	22	30	29.33	2350	5.9						
	58	18.1	25	24.07	2200	7.2	VM0E02	MV6314	KM0502	63B5	6314	
	69	15.2	20	20.21	2080	6.6	KM0502	10100314	KWOSOZ	0303	0314	
1	94	11.2	15	14.92	1880	7.1						
1	112	9.4	12.5	12.47	1770	13.8						
	134	7.9	10	10.47	1670	12.7						
	181	5.8	7.5	7.73	1510	13.7						
0.12	4.6	223	300	302.50	4800	0.9						
0.12	5.7	179	250	243.57	4800	1.1						
	7.1	145	200	196.43	4800	1.2						
	9.2	112	150	151.56	4650	1.8	KM0633	MV6314	KM0633	63B5	6314	
	11.5	90	125	122.22	4330	2.0						
	13.8	75	100	101.27	4070	2.0						
	19.1	54	75	73.33	3650	2.0						
	22	47	60	63.33	3480	3.9						
	27	39	50	52.48	3270	3.9						
	23	46	60	60.50	3420	4.4						
	29	37	50	48.71	3190	5.5	KWUESS	MV6244	KMOS22	63PE	6244	
	36	30	40	39.29	2970	6.1	KM0632	MV6314	KM0632	0303	6314	
	46	23	30	30.31	2720	8.8						
	4.7	219	300	297.21	6500	1.6						
	5.8	177	250	240.89	6500	2.0						
	7.0	148	200	200.66	6500	2.0						
	9.3	111	150	151.20	6500	3.1	KM0753	MV6314	KM0753	63B5	6314	
	11.1	93	125	125.95	5980	3.2			posederaters of			
	14.1	73	100	99.22	5520	3.3						
	18.6	56	75	75.45	5040	3.6						



			i	i			and and	60	-	- and	100
P <sub>tn</sub> [kW]	n <sub>2</sub> [r/min]	M <sub>2max</sub> [Nm]	Nominal	Actual	F <sub>2</sub> [N]	fs		W.	10	MR.	
	4.7	217	300	295.18	8300	2.3					
0.12	5.8	177	250	240.89	8300	2.8			14110000		
	7.0	148	200	200.66	8300	3.2	KM0903	MV6314	KM0903	63B5	6314
	9.3	111	150	151.20	8050	4.5					
	9.6	161	300	291.79	4000	0.81					
	11.5	135	250	244.29	3790	0.96					
	14.0	111	200	200.44	3550	1.2					
	19.1	81	150	146.67	3200	1.6					
	23	66	125	120.34	2990	2.0	KM0503	MV6312	KM0503	63B5	6312
	28	56	100	101.04	2820	1.8					
	38	41	75	74.62	2550	1.9					
	45	34	60	62.36	2400	3.8					
	53	29	50	52.36	2270	3.5					
	11.6	133	125	120.34	3770	0.98		, I			
	13.9	112	100	101.04	3560	0.9					
	18.8	82	75	74.62	3220	0.97	KM0503	MV6324	KM0503	63B5	6324
	22	69	60	62.36	3030	1.9					
V	27	58	50	52.36	2860	1.7					
	24	66	60	58.36	2960	2.0					
	29	55	50	48.86	2790	2.4					
	35	45	40	40.09	2610	2.9					
0.18	48	33	30	29.33	2350	3.9	KM0502	MV6324	KM0502	63B5	6324
0.10	58	27	25	24.07	2200	4.8					
	69	23	20	20.21	2080	4.4					
	94	17.2	15	14.92	1880	4.7					
	14.4	107	60	62.36	3510	1.2	KM0503	MV7116	KW0503	71B5/B14	7116
	17.2	90	50	52,36	3310	1.1	KWIU3U3	WIV/110	KWUUUU	/103/014	7110
	15.4	103	60	58.36	3430	1.3					
	18.4	86	50	48.86	3240	1.5					
	22	70	40	40.09	3030	1.8					
	31	52	30	29.33	2730	2.5					
	37	42	25	24.07	2550	3.1					
	45	36	20	20.21	2410	2.8	KM0502	MV7116	KM0502	71B5/B14	7116
	60	26	15	14.92	2180	3.1					
	72	22	12.5	12.47	2050	5.9					
	86	18.4	18.4 10 10.47 1930 5.4								
	116	13.6	7.5	7.73	1750	5.9					
	9.3	167	300	302.50	4650	1.2					
	11.5	135	250	243.57	4330	1.5					
	14.3	109	200	196.43	4030	1.7	KM0633	MV6312	KM0633	63B5	6312
	18.5	84	150	151.56	3690	2.4					
	23	68	125	122.22	3440	2.7					

P <sub>10</sub>	n <sub>2</sub>	M <sub>2max</sub>	1	i	Fa	fs	Į.		Á	वार्ष	60
[kW]	[r/min]	[Nm]	Nominal	Actual	[N]		KO	J	K.	Mari	1223
	28	56	100	101.27	3230	2.7					
	38	41	75	73.33	2900	2.7		122532527127	00011000		10000
	44	35	60	63.33	2760	5.1	KM0633	MV6312	KM0633	63B5	6312
	53	29	50	52.48	2590	5.2		Constitution of the second			
	7.1	217	200	196.43	4800	0.83					
	9.2	167	150	151.56	4650	1.2					
	11.5	135	125	122.22	4330	1.3					
	13.8	112	100	101.27	4070	1.3	KM0633	MV6324	KM0633	63B5	6324
	19.1	81	75	73.33	3650	1.4					
	22	70	60	63.33	3480	2.6					
	27	58	50	52.48	3270	2.6					
	23	68	60	60.50	3430	2.9					
	29	55	50	48.71	3190	3.6	KM0632	MV6324	KM0632	63B5	6324
	36	44	40	39.29	2970	4.1				1	
	7.4	210	125	122.22	4800	0.86					
A	8.9	174	100	101.27	4720	0.86					
	12.3	126	75	73.33	4230	0.87	KM0633	MV7116	KM0633	71B5/B14	7116
	14.2	109	60	63.33	4030	1.7					
	17.1	90	50	52.48	3790	1.7					
10	14.9	106	60	60.50	3970	1.9					
).18	18.5	86	50	48.71	3690	2.3					
	23	69	40	39.29	3440	2.6					
	30	53	30	30.31	3150	3.8	KM0632	MV7116	KM0632	71B5/B14	7116
	37	43	25	24.44	2930	4.2			77777.741111.553.11		
	44	36	20	20.25	2760	4.2					
	61	26	15	14.67	2470	4.3					
	9.4	164	300	297.21	6320	2.1					
	11.6	133	250	240.89	5890	2.6	KM0753	MV6242	VM0752	CODE	6245
	14.0	111	200	200.66	5540	2.7	KWI0/53	MV6312	KM0753	63B5	6312
	18.5	84	150	151.20	5040	4.2					
	4.7	328	300	297.21	6500	1.1					
	5.8	266	250	240.89	6500	1.3					
	7.0	222	200	200.66	6500	1.4					
	9.3	167	150	151.20	6500	2.1	KM0753	MV6324	KM0753	63B5	6324
	11.1	139	125	125.95	5980	2.2					
	14.1	110	100	99.22	5520	2.2					
	18.6	83	75	75.45	5040	2.4					
	3.7	414	250	240.89	6500	0.85					
	4.5	345	200	200.66	6500	0.87	KM0753	MV7116	KM0753	71B5/B14	7116
	6.0	260	150	151.20	6500	1.3					



			i	8	-		-		EX-	ार्च ।	100
P <sub>tn</sub> [kW]	n <sub>2</sub> [r/min]	M <sub>2max</sub> [Nm]	Nominal	Actual	F <sub>12</sub> [N]	fs	KO	-			
	7.1	217	125	125.95	6500	1.4					
	9.1	171	100	99.22	6400	1.4					
	11.9	130	75	75.45	5840	1.5	KM0753	MV7116	KM0753	71B5/B14	7116
	14.4	107	60	62.43	5480	2.8					
	18.3	85	50	49.18	5060	2.8					
	15.1	107	60	59.44	5390	3.4					
	18.7	85	50	48.18	5030	4.1	KM0752	MV7116	KM0752	71B5/B14	7116
	22	71	40	40.13	4730	4.3					
	9.5	163	300	295.18	7990	3.1					
	11.6	133	250	240.89	7470	3.8	KM0903	MV6312	KM0903	63B5	6312
	14.0	111	200	200.66	7030	4.3					
	4.7	326	300	295.18	8300	1.5					
	5.8	266	250	240.89	8300	1.9		7 1			
	7.0	222	200	200.66	8300	2.2		1			
	9.3	167	150	151.20	8050	3.0	KM0903	MV6324	KM0903	63B5	6324
	11.1	139	125	125.95	7580	3.4		0.000			
0.40	14.1	110	100	99.22	7000	3.5					
0.18	18.6	83	75	75.45	6390	3.6					
	3.0	507	300	295.18	8300	1.0					
	3.7	414	250	240.89	8300	1.2					
	4.5	345	200	200.66	8300	1.4					
	6.0	260	150	151.20	8300	1.9					
	7.1	217	125	125.95	8300	2.2	KM0903	MV7116	KM0903	71B5/B14	7116
	9.1	171	100	99.22	8110	2.2					
	11.9	130	75	75.45	7400	2.3					
	14.4	107	60	62.43	6950	4.5					
	18.3	85	50	49.18	6420	4.5					
	3.0	520	300	296.10	10000	1.5					
	3.7	420	250	244.29	10000	1.8					
	4.4	355	200	206.29	10000	2.1					
	5.9	264	150	153.33	10000	2.8	KM1103	MV7116	KM1103	71B5/B14	7116
	7.0	223	125	129.48	9840	3.4					
	8.7	178	100								
	11.9	130	75	75.55	8220	4.0					
	19.1	113	150	146.67	3200	1.2					
	23	92	125	120.34	2990	1.4					
0.05	28	78	100	101.04	2820	1.3	MACCOC	MVCCCC	VMOFOO	Cape	6220
0.25	38	57	75	74.62	2550	1.4	KM0503	MV6322	KM0503	63B5	6322
	45	48	60	62.36	2400	2.7					
	53	40	50	52.36	2270	2.5					

-			i	i	-		-1		改	- जार्स	100
P <sub>in</sub> [kW]	n <sub>2</sub> [r/min]	M <sub>2max</sub> [Nm]	Nominal	Actual	F <sub>2</sub> [N]	fs		A TOTAL		AN	
	22	96	60	62.36	3030	1.4					
	27	80	50	52.36	2860	1.2	KM0503	MV6334	KM0503	71B5/B14	7114
	24	92	60	58.36	2960	1.4					
	29	77	50	48.86	2790	1.7		Constitution of the second			
	35	63	40	40.09	2610	2.1					
	48	46	30	29.33	2350	2.8	KM0502	MV6334	KM0502	71B5/B14	7114
	58	38	25	24.07	2200	3.4					
	69	32	20	20.21	2080	3.2					
	94	23	15	14.92	1880	3.4					
	15.4	142	60	58.36	3430	0.9					
	18.4	119	50	48.86	3240	1.1					
1	22	98	40	40.09	3030	1.3					
	31	72	30	29.33	2730	1.8	///				
	37	59	25	24.07	2550	2.2				L	
	45	49	20	20.21	2410	2.0	KM0502	MV7126	KM0502	71B5/B14	7126
	60	36	15	14.92	2180	2.2					
	72	30	12.5	12.47	2050	4.3					
	86	26	10	10.47	1930	3.9					
	116	19	7.5	7.73	1750	4.2					
05	9.3	232	300	302.50	4650	0.86					
.25	11.5	187	250	243.57	4330	1.1					
	14.3	151	200	196.43	4030	1.2					
	18.5	116	150	151.56	3690	1.7					
	23	94	125	122.22	3440	1.9	KM0633	MV6322	KM0633	63B5	6322
	28	78	100	101.27	3230	1.9					
	38	56	75	73.33	2900	2.0					
	44	49	60	63.33	2760	3.7					
	53	40	50	52.48	2590	3.7					
	9.2	233	150	151.56	4650	0.86					
	11.5	188	125	122.22	4330	0.96					
	13.8	155	100	101.27	4070	0.97	KHACCO	MVCCCA	KMACCO	74D5/D44	7444
	19.1	113	75	73.33	3650	1.0	KM0633	MV6334	KW0633	71B5/B14	7114
	22	97	60	63.33	3480	1.9					
	27	81	50	52.48	3270	1.9					
	23	95	60	60.50	3430	2.1					
	29	76	50	48.71	3190	2.6	KMOcoo	MVC224	KMOCOO	74DE/D44	744.4
	36	62	40	39.29	2970	2.9	KM0632	MV6334	KW10632	71B5/B14	7114
	46	48	30	30.31	2720	4.2					
	14.2	151	60	63.33	4030	1.2	KMOcaa	M\/7426	KMOCOO	74DE/D44	7400
	17.1	125	50	52.48	3790	1.2	KM0633	MV7126	KM0633	71B5/B14	7126



			i	ì				100	co-A	-	100
Pin	n <sub>2</sub>	M <sub>2max</sub>			F <sub>12</sub>	fs	18		18		
[kW]	[r/min]	[Nm]	Nominal	Actual	[N]		152		Links	<u> </u>	
	14.9	148	60	60.50	3970	1.4					
	18.5	119	50	48.71	3690	1.7					
	23	96	40	39.29	3440	1.9	Truspeller II				
	30	74	30	30.31	3150	2.7	KM0632	MV7126	KM0632	71B5/B14	7126
	37	60	25	24.44	2930	3.0					
	44	49	20	20.25	2760	3.0					
	61	36	15	14.67	2470	3.1					
	9.4	228	300	297,21	6320	1.5					
	11.6	185	250	240.89	5890	1.9					
	14.0	154	200	200.66	5540	1.9					
	18.5	116	150	151.20	5040	3.0	KM0753	MV6322	KM0753	63B5	6322
	22	97	125	125.95	4750	3.1					
	28	76	100	99.22	4380	3.2		1			
	37	58	75	75.45	4000	3.5					
	5.8	370	250	240.89	6500	0.95				· A	
	7.0	308	200	200.66	6500	1.0					
	9.3	232	150	151.20	6500	1.5					
	11.1	193	125	125.95	5980	1.6	KM0753	MV6334	KM0753	71B5/B14	7114
M	14.1	152	100	99.22	5520	1.6	KM0753	101 0 0 0 0 0 0 0	KW0755	7103/014	7114
0.25	18.6	116	75	75.45	5040	1.7				53 71B5/B14	
1.23	22	96	60	62.43	4730	3.1					
	28	75	50	49.18	4370	3.2					
	24	93	60	59.44	4660	3.8	KM0752	MV6334	KM0752	71B5/B14	7114
	29	76	50	48.18	4340	4.6	KIVIO7 32	W V 0334	KW0752	7103/014	/114
	6.0	361	150	151.20	6500	0.97					
	7.1	301	125	125.95	6500	1.0					
	9.1	237	100	99.22	6400	1.0	VM07F2	MV7426	KM0753	74 DE/D4 4	7426
	11.9	180	75	75.45	5840	1.1	KM0753	MV7126	KWU/53	71B5/B14	7126
	14.4	149	60	62.43	5480	2.0					
	18.3	117	50	49.18	5060	2.0					
	15.1	145	60	59.44	5390	2.4					
	18.7	118	50	48.18	5030	3.0	KM0752	MV7126	KM0752	71B5/B14	7126
	22	98	40	40.13	4730	3.1				71B5/B14 70903 63B5	
	9.5	227	300	295.18	7990	2.2					
	11.6	185	250	240.89	7470	2.7	KWOOOO	MVC222	Managa		6000
	14.0	154	200	200.66	7030	3.1	KM0903	MV6322	VM0303		6322
	18.5	116	150	151.20	6390						
	4.7	453	300	295.18	8300	1.1					
	5.8	370	250	240.89	8300	1.4	KM0903	MV6334	KM0903	71B5/B14	7114
	7.0	308	200	200.66	8300	1.6					

P	n	NA.	i	1	_		ri.		13	ार्व	00
P <sub>tn</sub> [kW]	n <sub>2</sub> [r/min]	M <sub>2max</sub> [Nm]	Nominal	Actual	F <sub>2</sub> [N]	fs		Levy-	K	MA	- LVV
fixial			- CONTRACTOR - CON	200000	2000	0.0		8		1	IIE I
	9.3	232	150	151.20	8050	2.2					
	11.1	193	125	125.95	7580	2.5					
	14.1	152	100	99.22	7000	2.5	KM0903	MV6334	KM0903	71B5/B14	7114
	18.6	116	75	75.45	6390	2.6					
	22	96	60	62.43	6000	5.0					
	28	75	50	49.18	5540	5.0					
	3.0	705	300	295.18	8300	0.71					
	3.7	575	250	240.89	8300	0.9					
	4.5	479	200	200.66	8300	1.0					
	6.0	361	150	151.20	8300	1.4	14110000	100	1/110000	7405/044	7400
	7,1	301	125	125.95	8300	1.6	KM0903	MV7126	KM0903	71B5/B14	7126
	9.1	237	100	99.22	8110	1.6					
	11.9	180	75	75.45	7400	1.7					
	14.4	149	60	62.43	6950	3.2				1	
	18.3	117	50	49.18	6420	3.2			•	4	
	15.2	144	60	59.04	6820	3.5	KM0902	MV7126	KM0902	71B5/B14	7126
A	18.7	118	50	48.18	6370	4.3					
	4.7	454	300	296.10	10000	1.7					
	5.7	375	250	244.29	10000	2.0				CM1103 71B5/B14	
0.25	6.8	317	200	206.29	9920	2.4	KM1103	MV6334	KM1103	71B5/B14	7114
	9.1	235	150	153.33	8980	3.2					
	10.8	199	125	129.48	8490	3.8					
	13.5	159	100	103.64	7880	4.1					
	3.0	707	300	296.10	10000	1.1					
	3.7	583	250	244.29	10000	1.3					
	4.4	493	200	206.29	10000	1.5					
	5.9	366	150	153.33	10000	2.0	KM1103	MV7126	KM1103	71B5/B14	7126
	7.0	309	125	129.48	9840	2.4					
	8.7	247	100	103.64	9130	2.6					
	11.9	180	75	75.55	8220	2.9					
	23	137	125	120.34	2990	0.95					
	28	115	100	101.04	2820	0.87				this beautiful	
	38	85	75	74.62	2550	0.94	KM0503	MV6332	KM0503	71B5/B14	7112
	45	71	60	62.36	2400	1.8					
0.37	53	59	50	52.36	2270	1.7					
0.07	24	136	60	58.36	2960	0.96					
	29	113	50	48.86	2790	1.1					
	35	93	40	40.09	2610	1.4	KM0502	MV7124	KM0502	71B5/B14	7124
	48	68	30	29.33	2350	1.9					
	58	56	25	24.07	2200	2.3					



			i	i				100	pate	and .	100
Pin	n <sub>2</sub>	M <sub>2max</sub>			F <sub>12</sub>	fs	18		18		
[kW]	[r/min]	[Nm]	Nominal	Actual	[N]		150		Link		
	69	47	20	20.21	2080	2.1					
	94	35	15	14.92	1880	2.3					
	112	29	12.5	12.47	1770	4.5	KM0502	MV7124	KM0502	71B5/B14	7124
	134	24	10	10.47	1670	4.1					
	181	17.9	7.5	7.73	1510	4.5					
	22	145	40	40.09	3030	0.9					
	31	106	30	29.33	2730	1.2					
	37	87	25	24.07	2550	1.5					
	45	73	20	20.21	2410	1.4	KM0502	MV8016	KM0502	80B5/B14	8016
	60	54	15	14.92	2180	1.5	ranosoz	mitooio	11110002	0000/014	0010
	72	45	12.5	12.47	2050	2.9				<b>7</b>	
	86	38	10	10.47	1930	2.6					
	116	28	7.5	7.73	1750	2.9		7			
	18.5	172	150	151.56	3690	1.2				A	
	23	139	125	122,22	3440	1.3				' A I	
	28	115	100	101.27	3230	1.3	KM0633	MV6332	KM0633	71B5/B14	7112
	38	83	75	73.33	2900	1.3	ranosos	11110002	11110000	7100/014	7112
	44	72	60	63.33	2760	2.5					
M	53	60	50	52.48	2590	2.5					
0.37	22	144	60	63.33	3480	1.3	KM0633	MV7124	KM0633	0633 71B5/B14	7124
0.01	27	119	50	52.48	3270	1.3	TUNIOSOS	M17124	Timotos		1124
	23	140	60	60,50	3430	1.4					
	29	113	50	48.71	3190	1.8					
	36	91	40	39.29	2970	2.0					
	46	70	30	30.31	2720	2.8	KM0632	MV7124	KM0632	71B5/B14	7124
	57	57	25	24.44	2530	3.2					
	69	47	20	20.25	2380	3.2					
	95	34	15	14.67	2130	3.2					
	14.9	219	60	60.50	3970	0.92					
	18.5	176	50	48.71	3690	1.1					
	23	142	40	39.29	3440	1.3					
	30	109	30	30.31	3150	1.8					
	37	88	25	24.44	2930	2.0	KM0632	MV8016	KWU633	32 80B5/B14	8016
	44	73	20	20.25	2760	2.1	TAHOOOZ	11110010	11110032		0010
	61	53	15	14.67	2470	2.1					
	71	46	12.5	12.67	2360	3.9					
	86	38	10	10.50	2210	4.0					
	118	27	7.5	7.60	1990	4.0					
	9.4	338	300	297.21	6320	1.0	KM0753	MV6332	KM0753	71B5/B14	7112
	11.6	274	250	240.89	5890	1.3	KINU193	WIV 0332	KINU/33	/ 100/D14	7112

Pin	n <sub>2</sub>	M <sub>2max</sub>	I	i	Fe	fs	8		Ó	I	-
[kW]	[r/min]	[Nm]	Nominal	Actual	[N]		1950	1	Line	2	100000
	14.0	228	200	200.66	5540	1.3					
	18.5	172	150	151.20	5040	2.0					
	22	143	125	125.95	4750	2.1					
	28	113	100	99.22	4380	2.1	KM0753	MV6332	KM0753	71B5/B14	7112
	37	86	75	75.45	4000	2.3					
	45	71	60	62.43	3750	4.2					
	57	56	50	49.18	3470	4.3					
	9.3	343	150	151.20	6500	1.0					
	11.1	286	125	125.95	5980	1.0					
	14.1	225	100	99.22	5520	1.1	KM0753	MV7124	KM0753	71D5/D14	7124
	18.6	171	75	75.45	5040	1.2	KWIU133	WW 1124	KM0753	71B5/B14	7124
	22	142	60	62.43	4730	2.1					
	28	112	50	49.18	4370	2.1					
	24	138	60	59.44	4660	2.5				1	
	29	112	50	48.18	4340	3.1	KM0752	MV7124	KM0752	71B5/B14	7124
	35	93	40	40.13	4080	3.2					
	14.4	221	60	62.43	5480	1.4	KM0753	MVOOLE	KM0753	90DE/D14	9046
	18.3	174	50	49.18	5060	1.4	KWIU/53	MV8016	KINU/33	80B5/B14	8016
	15.1	215	60	59.44	5390	1.6					
0.77	18.7	174	50	48.18	5030	2.0					
0.37	22	145	40	40.13	4730	2.1					
	30	109	30	30.24	4310	3.2	KM0752	MV8016	KM0752	80B5/B14	8016
	36	91	25	25.19	4050	3.3					
	45	72	20	19.84	3740	3.3					
	60	55	15	15.09	3410	3.7					
	9.5	335	300	295.18	7990	1.5					
	11.6	274	250	240.89	7470	1.8					
	14.0	228	200	200.66	7030	2.1					
	18.5	172	150	151.20	6390	2.9	KM0903	MV6332	KM0903	71B5/B14	7112
	22	143	125	125.95	6010	3.4					
	28	113	100	99.22	5550	3.4					
	37	86	75	75.45	5070	3.5					
	4.7	671	300	295.18	8300	0.75					
	5.8	547	250	240.89	8300	0.91					
	7.0	456	200	200.66	8300	1.1					
	9.3	343	150	151.20	8050	1.5	14110000				
	11.1	286	125	125.95	7580	1.7	KM0903	MV7124	KM0903	71B5/B14	7124
	14.1	225	100	99.22	7000	1.7					
	18.6	171	75	75.45	6390	1.8					
	22	142	60	62.43	6000	3.4					



			i	i			and the	100	gantan	नार्थ	100
Ptn	n <sub>2</sub>	M <sub>2max</sub>			F <sub>12</sub>	fs	18		k8		100
[kW]	[r/min]	[Nm]	Nominal	Actual	[N]		LAC		Land	4	The state of
	28	112	50	49.18	5540	3.4	KM0903	MV7124	KM0903	71B5/B14	7124
	24	137	60	59.04	5890	3.6	KM0902	MV7124	KM0902	71B5/B14	7124
	29	112	50	48.18	5500	4.5	14110002	111111111111111111111111111111111111111	TUHOUUZ	7100/014	7.12-4
	6.0	534	150	151.20	8300	0.94					
	7.1	445	125	125.95	8300	1.1					
	9.1	351	100	99.22	8110	1.1	KM0903	MV8016	KM0903	80B5/B14	8016
	11.9	267	75	75.45	7400	1.1	TUMOSOS	MIVOOTO	Rinosos	0003/014	0010
	14.4	221	60	62.43	6950	2.2					
	18.3	174	50	49.18	6420	2.2					
	15.2	213	60	59.04	6820	2.3					
	18.7	174	50	48.18	6370	2.9	KM0902	MV8016	KM0902	80B5/B14	8016
	22	145	40	40.13	6000	3.3					
1	9.5	336	300	296.10	8880	2.2		1			
	11.5	277	250	244.29	8330	2.7	KM1103	MV6332	KM1102	71B5/B14	7112
	13.6	234	200	206.29	7870	3.2	KWIIIUS	W V U 3 3 2	KWIIUS	7103/014	7112
	18.3	174	150	153.33	7130	4.3					
	4.7	673	300	296.10	10000	1.1					
	5.7	555	250	244.29	10000	1.4					
	6.8	469	200	206.29	9920	1.6					
27	9.1	348	150	153.33	8980	2.2	KM1103	MV7124	KM1103	71B5/B14	7124
0.37	10.8	294	125	129.48	8490	2.5					
	13.5	235	100	103.64	7880	2.8					
	18.5	172	75	75.55	7090	3.0					
1	4.4	729	200	206.29	10000	1.0					
	5.9	542	150	153.33	10000	1.4					
	7.0	458	125	129.48	9840	1.6					
	8.7	366	100	103.64	9130	1.8	KM1103	MV8016	KM1103	80B5/B14	8016
	11.9	267	75	75.55	8220	1.9					
	14.0	227	60	64.18	7780	3.3					
	17.5	182	50	51.37	7230	3.6					
	15.2	214	60	59.22	7580	3.5	Marros	141/0040	WM4400	0005/04 1	8045
	18.4	176	50	48.86	7110	4.2	KM1102	MV8016	KM1102	80B5/B14	8016
	45	105	60	62.36	2400	1.2					
	53	88	50	52.36	2270	1.1	KM0503	MV7122	KM0503	71B5/B14	7122
	35	138	40	40.09	2610	0.94					
	48	101	30	29.33	2350	1.3					
0.55	58	83	25	24.07	2200	1.6					
	69	70	20	20.21	2080	1.4	KM0502	MV8014	KM0502	80B5/B14	8014
	94	51	15	14.92	1880	1.6					
	112	43	12.5	12.47	1770	3.0					

P <sub>tn</sub>	n <sub>2</sub> [r/min]	M <sub>2max</sub>	i Naminal	Actual	F <sub>2</sub>	fs	8			A	
[KVV]			Nominal 10	Actual	10.00	0.0	(800000)	FF .	OFFE	1	- A \_
	134	36 27		10.47	1670	2.8	KM0502	MV8014	KM0502	80B5/B14	8014
	181 37	129	7.5 25	7.73	1510	3.0			Cont.		
	45	109	20		2550	1.0					
	60	80	15	20.21	2410 2180	0.92					
	72	67	12.5	12.47	2050	1.9	KM0502	MV8026	KM0502	80B5/B14	8026
	86	56	10	10.47	1930	1.8					
	116	42	7.5	7.73	1750	1.9					
	23	206	125	122.22	3440	0.87					
	28	171	100	101.27	3230	0.88					
1	38	124	75	73.33	2900	0.9	KM0633	MV7122	KM0633	71B5/B14	7122
	44	107	60	63.33	2760	1.7	KWI0033	WW 1122	KINIOUSS	7103/014	1122
	53	89	50	52.48	2590	1.7					
	23	209	60	60.50	3430	0.96	-				
	29	168	50	48.71	3190	1.2				A .	
	36	136	40	39.29	2970	1.3					
	46	105	30	30.31	2720	1.9					
1	57	84	25	24.44	2530	2.1					
	69	70	20	20.25	2380	2.1	KM0632	MV8014	KM0632 80B5/B14	80B5/B14	8014
	95	51	15	14.67	2130	2.2					
.55	110	44	12.5	12.67	2030	4.1					
	133	36	10	10.50	1910	4.1					
	184	26	7.5	7.60	1710	4.2					
	23	216	40	39.29	3440	0.85					
	30	163	30	30.31	3150	1.2					
	37	131	25	24.44	2930	1.4					
	44	109	20	20.25	2760	1.4					
	61	79	15	14.67	2470	4.4	KM0632	MV8026	KM0632	80B5/B14	8026
	71	68	12.54	12.67	2360	2.6					
	86	56	10	10.50	2210	2.7					
	118	41	7.5	7.60	1990	2.7					
	11.6	407	250	240.89	5890	0.86					
	14.0	339	200	200.66	5540	0.9					
	18.5	255	150	151.20	5040	1.4					
	22	213	125	125.95	4750	1.4	to intelligence which is the	100000000000000		NAME OF TAXABLE PARTY.	
	28	168	100	99.22	4380	1.4	KM0753	MV7122	KM0753	71B5/B14	7122
	37	127	75	75.45	4000	1.6				addining and seeds of the seeds	
	45	105	60	62.43	3750	2.8					
	57	83	50	49.18	3470	2.9					
	18.6	255	75	75.45	5040	0.8	KM0753	MV8014	KM0753	80B5/B14	8014



2210			i	i			gradening.	100	ert-	and a	100
P <sub>in</sub> [kW]	n <sub>2</sub> [r/min]	M <sub>2nax</sub>	Managara	Antoni	F <sub>r2</sub>	fs	18				
[vvv]	200	[Nm]	Nominal	Actual	[N]		Grandfrest.			77.0	
	22	211	60	62.43	4730	1.4	KM0753	MV8014	KM0753	80B5/B14	8014
	28	166	50	49.18	4370	1.4					
	24	205	60	59.44	4660	1.7					
	29	166	50	48.18	4340	2.1					
	35	139	40	40.13	4080	2.2	1/110750	*******	1/110750	0005/044	2044
	46	104	30	30.24	3720	3.4	KM0752	MV8014	KM0752	80B5/B14	8014
	56	87	25	25.19	3500	3.5					
	71	68	20	19.84	3230	3.5					
	93	52	15	15.09	2950	3.8					
	14.4	328	60	62.43	5480	0.91	KM0753	MV8026	KM0753	80B5/B14	8026
	18.3	258	50	49.18	5060	0.93					
	15.1	319	60	59.44	5390	1.1					
	18.7	259	50	48.18	5030	1.4		, 1			
	22	215	40	40.13	4730	1.4					
	30	162	30	30.24	4310	2.2	KM0752	MV8026	KM0752	80B5/B14	8026
	36	135	25	25.19	4050	2.2					
	45	107	20	19.84	3740	2.3					
	60	81	15	15.09	3410	2.5					
17	9.5	498	300	295.18	7990	1.0					
.55	11.6	407	250	240.89	7470	1.2				2 7405/044	
	14.0	339	200	200.66	7030	1.4					
	18.5	255	150	151.20	6390	2.0	Europeolia.	A SAME STATE OF	See Labour		
	22	213	125	125.95	6010	2.3	KM0903	MV7122	KM0903	71B5/B14	7122
1	28	168	100	99.22	5550	2.3					
	37	127	75	75.45	5070	2.4					
	45	105	60	62.43	4760	4.6					
	57	83	50	49.18	4390	4.6					
	9.3	511	150	151.20	8050	1.0					
	11.1	425	125	125.95	7580	1.1					
	14.1	335	100	99.22	7000	1.1	KM0903	MV8014	KM0903	80B5/B14	8014
	18.6	255	75	75.45	6390	1.2		10 TO			
	22	211	60	62.43	6000	2.3					
	28	166	50	49.18	5540	2.3					
	24	204	60	59.04	5890	2.5					
	29	166	50	48.18	5500	3.0	KM0902	MV8014	KM0902	02 80B5/B14	8014
	35	139	40	40.13	5170	3.5	14110302	11110014	TIMOSOZ		3014
	46	104	30	30.24	4710	4.8					
	14.4	328	60	62.43	6950	0 1.5 KM0903 MV8026	KM0903	80B5/B14	8026		
	18.3	258	50	49.18	6420	1.5	ravios03	W V 0020	KW0903	0000/014	0020
	15.2	317	60	59.04	6820	1.6	KM0902	MV8026	KM0902	80B5/B14	8026

			i	i				-		-1	1
Pin	n <sub>2</sub>	M <sub>2max</sub>			Fa	fs	8		18	ALL OF THE PARTY O	
[kW]	[r/min]	[Nm]	Nominal	Actual	[N]			1	EX		parati
	18.7	259	50	48.18	6370	1.9					
	22	215	40	40.13	6000	2.2					
	30	162	30	30.24	5460	3.1	KM0902	MV8026	KM0902	80B5/B14	8026
	36	135	25	25.19	5130	3.5	KWIU9UZ	W V 0 0 2 0	KW0902	00B3/B14	8020
	45	107	20	19.84	4740	3.6					
	60	81	15	15.09	4330	3.7					
	9.5	500	300	296.10	8880	1.5					
	11.5	412	250	244.29	8330	1.8					
	13.6	348	200	206.29	7870	2.2					
	18.3	259	150	153,33	7130	2.9	KM1103	MV7122	KM1103	71B5/B14	7122
	22	219	125	129,48	6740	3.4					
	27	175	100	103.64	6260	3.7					
	37	128	75	75.55	5630	4.1					
	5.7	825	250	244.29	10000	0.91				1	
	6.8	697	200	206.29	9920	1.1				A A	
	9.1	518	150	153.33	8980	1.4					
0.55	10.8	437	125	129,48	8490	0 1.7 KM1103 MV8014 KM1103 80B5/B14					
	13.5	350	100	103.64	7880	1.9	KM1103	WV8014	KW1103	80B5/B14	8014
	18.5	255	75	75.55	7090	2.0					
	22	217	60	64.18	6720	3.5					
	27	173	50	51.37	6240	3.7					
	24	204	60	59.22	6540	3.7					Tananana I
	29	169	50	48.86	6130	4.4	KM1102	MV8014	KM1102	80B5/B14	8014
	5.9	805	150	153.33	10000	0.93					
	7.0	680	125	129.48	9840	1,1					
	8.7	544	100	103.64	9130	1.2	0200000				100000
	11.9	397	75	75.55	8220	1.3	KM1103	MV8026	KM1103	80B5/B14	8026
	14.0	337	60	64.18	7780	2.2					
	17.5	270	50	51.37	7230	2.4					
	15.2	318	60	59.22	7580	2.4					
	18.4	262	50	48.86	7110	2.9				100 100 100 100 100 100 100 100 100 100	12.2
	22	222	40	41.26	6720	3.4	KM1102	MV8026	KM1102	80B5/B14	8026
	29	165	30	30.67	6090	4.6					
	48	138	30	29.33	2350	0.94					
	58	113	25	24.07	2200	1.1					
	69	95	20	20.21	2080	1.1					
0.75	94	70	15	14.92	1880	1.1	KM0502	MV8024	KM0502	M0502 80B5/B14	8024
	112	59	12.5	12.47	1770	2.2	- AND THE		2000 A. C. C.		8024
	134	49	10	10.47	1670	2.0					
	181	36	7.5	7.73	1510	2.2					



			i	ì				60			1 600
P <sub>in</sub> [kW]	n <sub>2</sub> [r/min]	M <sub>2max</sub> [Nm]	Nominal	Actual	F <sub>12</sub> [N]	fs					
	72	91	12.5	12.47	2050	1.4					
	86	77	10	10.47	1930	1.3	KM0502	MV90S6	KM0502	90B5/B14	9056
	116	57	7.5	7.73	1750	1.4					
	44	146	60	63.33	2760	1.2		******	14110000		2242
	53	121	50	52.48	2590	1.2	KM0633	MV8012	KM0633	80B5/B14	8012
	29	229	50	48.71	3190	0.87					
	36	185	40	39.29	2970	0.97					
	46	143	30	30.31	2720	1.4					
	57	115	25	24.44	2530	1.6					
	69	95	20	20.25	2380	1.6	KM0632	MV8024	KM0632	80B5/B14	8024
	95	69	15	14.67	2130	1.6					
	110	60	12.5	12.67	2030	3.0					
	133	49	10	10.50	1910	3.0		7 1			
	184	36	7.5	7.60	1710	3.1				4	
	30	222	30	30.31	3150	0.9				A	
	37	179	25	24.44	2930	1.0	KMUCSS				
	44	148	20	20.25	2760	1.0					
	61	107	15	14.67	2470	1.0	KM0632	MV90S6	KM0632	90B5/B14	9086
M	71	93	12.5	12.67	2360	1.9					
75	86	77	10	The state of the s							
0.75	118	56	7.5	7.60	1990	2.0				2 90B5/B14	
	18.5	348	150	151.20	5040	1.0					
	22	290	125	125.95	4750	1.0					
	28	228	100	99.22	4380	1.1	1/240750	*******	1/110770	0005/044	0040
	37	174	75	75.45	4000	1.2	KM0753	MV8012	KM0753	80B5/B14	8012
	45	144	60	62.43	3750	2.1					
	57	113	50	49.18	3470	2.1					
	22	287	60	62.43	4730	1.0	MARGATO	********	1410750	0005/044	0004
	28	226	50	49.18	4370	1.1	KM0753	MV8024	KM0753	80B5/B14	8024
	24	280	60	59.44	4660	1.3					
	29	227	50	48.18	4340	1.5					
	35	189	40	40.13	4080	1.6					
	46	142	30	30.24	3720	2.5	KM0752	MV8024	KM0752	80B5/B14	8024
	56	119	25	25.19	3500	2.5			4 KM0752 80B5/B14		
	71	93	20	19.84	3230	2.6					
	93	71	15	15.09	2950	2.8					
	18.7	353	50	48.18	5030	1.0					
	22	294	40	40.13	4730	1.0					
	30	221	30	30.24	4310	1.6	KM0752	MV90S6	KM0752	90B5/B14	9086
	36	184	25	25.19	4050	1.6					

			i	i				100	-		100
P <sub>in</sub> [kW]	n <sub>2</sub> [r/min]	M <sub>2max</sub> [Nm]	Nominal	Actual	F <sub>a</sub> [N]	fs	8				
	45	145	20	19.84	3740	1.7	03312		0.00		
	60	110	15	15.09	3410	1.8					
	72	91	12.5	12.49	3210	3.3	KM0752	MV90S6	KM0752	90B5/B14	90S6
	91	72	10	9.84	2960	3.3	KWI0752	14149030	KWO752	3003/014	9030
	120	55	7.5	7.48	2700	3.7					
	11.6	555	250	240.89	7470	0.9					<u> </u>
	14.0	462	200	200.66	7030	1.0					
	18.5	348	150	151.20	6390	1.4					
	22	290	125	125.95	6010	1.7					
	28	228	100	99.22	5550	1.7	KM0903	MV8012	KM0903	80B5/B14	8012
	37	174	75	75.45	5070	1.7					
	45	144	60	62.43	4760	3.3					
	57	113	50	49.18	4390	3.4					
	11.1	580	125	125.95	7580	0.83					
	14.1	457	100	99.22	7000	0.83				A .	
	18.6	247	75	75.45	6390	0.86	KM0903	MV8024	KM0903	80B5/B14	8024
	22	287	60	62.43	6000	1.7	7,111.0000		T. Miles		
	28	226	50	49.18	5540	1.7					
	24	278	60	59.04	5890	1.8					
	29	227	50	48.18	5500	2.2					
0.75	35	189	40	40.13	5170	2.5					
	46	142	30	30.24	4710	3.5	KM0902	MV8024	KM0902	80B5/B14	8024
	56	119	25	25.19	4430	4.0		ATTOTOLOGICAL TO STOLEN		Section Continues Continues	
	71	93	20	19.84	4090	4.1					
	93	71	15	15.09	3730	4.2					
	14.4	447	60	62.43	6950	1.1					
	18.3	352	50	49.18	6420	1.1	KM0903	MV90S6	KM0903	90B5/B14	90\$6
	15.2	432	60	59.04	6820	1.2					
	18.7	353	50	48.18	6370	1.4					
	22	294	40	40.13	6000	1.6					
	30	221	30	30.24	5460	2.3	KM0902	MV90S6	KM0902	90B5/B14	9086
	36	184	25	25.19	5130	2.6					
	45	145	20	19.84	4740	2.6					
	60	110	15	15.09	4330	2.7					
	9.5	682	300	296.10	8880	1.1					
	11.5	562	250	244.29	8330	1.3					
	13.6	475	200	206.29	7870	1.6	Windson	BB (00 (0	1/11/100	0005/04	0015
	18.3	353	150	153.33	7130	2.1	KM1103	MV8012	KM1103	80B5/B14	8012
	22	298	125	129,48	6740	2.5					
	27	239	100	103.64	6260	2.7					



			i	i			72.1	100			100
Pin	n <sub>2</sub>	M <sub>2max</sub>			F <sub>12</sub>	fs	8		18		1
[kW]	[r/min]	[Nm]	Nominal	Actual	[N]		1000		Livi	4	1
	37	174	75	75.55	5630	3.0	KM1103	Mv8012	KM1103	80B5/B14	8012
	9.1	706	150	153.33	8980	1.1					
	10.8	596	125	129.48	8490	1.3					
	13.5	477	100	103.64	7880	1.4	KM1103	MV8024	KM1103	80B5/B14	8024
	18.5	348	75	75.55	7090	1.5	RWITIOS	W V O U Z 4	KWIIIO	0003/014	0024
	22	296	60	64.18	6720	2.5					
	27	237	50	51.37	6240	2.7					
	24	279	60	59.22	6540	2.7					
	29	230	50	48.86	6130	3.3	KM1102	MV8024	KM1102	80B5/B14	8024
0.75	34	194	40	41.26	5800	3.9					
0.75	8.7	742	100	103.64	9130	0.88					
	11.9	541	75	75.55	8220	0.96	KM1103	MV90S6	VM4402	00DE/D44	0000
	14.0	460	60	64.18	7780	1.6	KWITIUS	MIV9036	KM1103	9000/014	90S6
	17.5	368	50	51.37	7230	1.8		1			
A	15.2	434	60	59.22	7580	1.7					
	18.4	358	50	48.86	7110	2.1					
	22	302	40	41.26	6720	2.5	VM4402	MAYOOGG	VM4402	00DE/D44	0000
	29	225	30	30.67	6090	3.3	KM1102	MV90S6	KM1102	9000/014	9086
M	35	190	25	25.90	5750	4.0					
	43	152	20	20.73	5340	4.3				80B5/B14	
	112	86	12.5	12.47	1770	1.5					
	134	72	10	10.47	1670	1.4	KM0502	MV90S4	KM0502	90B5/B14	9054
	181	53	7.5	7.73	1510	1.5					
	72	134	12.5	12.47	2050	0.97					
	86	112	10	10.47	1930	0.89	KM0502	MV90L6	KM0502	90B5/B14	90L6
	116	83	7.5	7.73	1750	0.96					
	46	209	30	30.31	2720	0.96					
	57	169	25	24.44	2530	1.1					
	69	140	20	20.25	2380	1.1					
4.4	95	101	15	14.67	2130	1.1	KM0632	MV90S4	KM0632	90B5/B14	90\$4
1.1	110	87	12.5	12.67	2030	2.1					
	133	72	10	10.50	1910	2.1					
	184	52	7.5	7.60	1710	2.1					
	71	136	12.5	12.67	2360	1.3					
	86	113	10	10.50	2210	1.3	KM0632	MV90L6	KM0632	90B5/B14	90L6
	118	82	7.5	7.60	1990	1.3					
	45	211	60	62.43	3750	1.4					
	57	166	50	49.18	3470	1.4	KM0753	Mv8022	KM0753	80B5/B14	8022
	24	410	60	59.44	4660	0.85	Day Lower to	12-22 (22-12-12-12	2222	90B5/B14  90B5/B14  90B5/B14  80B5/B14	
	29	333	50	48.18	4340	1.1	KM0752	MV90S4	KM0752	90B5/B14	9054

P <sub>in</sub> [kW]	n <sub>2</sub> [r/min]	M <sub>2max</sub> [Nm]	i Nominal	i Actual	F <sub>2</sub> [N]	fs	6			A	
	35	277	40	40.13	4080	1.1				Ī	
	46	209	30	30.24	3720	1.7					
	56	174	25	25.19	3500	1.7					
	71	137	20	19.84	3230	1.8					
	93	104	15	15.09	2950	1.9	KM0752	MV90S4	KM0752	90B5/B14	9054
	112	86	12.5	12.49	2770	3.5					
	142	68	10	9.84	2550	3.5					
	187	52	7.5	7.48	2330	3.9		et est est est est est est est est			
	30	325	30	30.24	4310	1.1					
	36	271	25	25.19	4050	1.1					
	45	213	10	19.84	3740	1.1					
	60	162	15	15.09	3410	1.2	KM0752	MV90L6	KM0752	90B5/B14	90L6
	72	134	12.5	12.49	3210	2.2					
	91	106	10	9.84	2960	2.3					
	120	80	7.5	7.48	2700	2.5				A A	
	18.5	511	150	151.20	6390	1.0					
	22	425	125	125.95	6010	1.1					
	28	335	100	99.22	5550	1.1	1/110000	141/0000	1/110000	0005/044	0000
	37	255	75	75.45	5070	1.2	KM0903	MV8022	KM0903	80B5/B14	8022
	45	211	60	62.43	4760	2.3					
1.1	57	166	50	49.18	4390	2.3					
	22	422	60	62.43	6000	1.1	14110000	141/0004	L/240000	0005/044	0004
	28	332	50	49.18	5540	1.1	KM0903	MV90S4	KM0903	90B5/B14	9054
	24	408	60	59.04	5890	1.2					
	29	333	50	48.18	5500	1.5					
	35	277	40	40.13	5170	1.7	KM0902	MV90S4	KM0902	90B5/B14	9054
	46	209	30	30.24	4710	2.4					
	56	174	25	25.19	4430	2.8					
	71	137	20	19.84	4090	2.8					
	93	104	15	15.09	3730	2.9					
	15.2	634	60	59.04	6820	0.8					
	18.7	517	50	48.18	6370	0.97					
	22	431	40	40.13	6000	1.1					
	30	325	30	30.24	5460	1.5					
	36	271	25	25.19	5130	1.8	KWOOOO	MVOOL 6	KM0000	00DE/D44	001.0
	45	213	20	19.84	4740	1.8	KM0902	MV90L6	KM0902	90B5/B14	90L6
	60	162	15	15.09	4330	1.9					
	72	134	12.5	12.49	4060	3.6					
	91	106	10	9.84	3750	3.6					
	120	80	7.5	7.48	3420	3.7					



			i	i	-	120	rin		EX-	and	100
P <sub>in</sub> [kW]	n <sub>2</sub> [r/min]	M <sub>2nax</sub> [Nm]	Nominal	Actual	F <sub>12</sub> [N]	fs	K	- Invita			
	11.5	825	250	244.29	8330	0.91					
	13.6	697	200	206.29	7870	1.1					
	18.3	518	150	153.33	7130	1.4					
	22	437	125	129.48	6740	1.7					
	27	350	100	103.64	6260	1.9	KM1103	MV8022	KM1103	80B5/B14	8022
	37	255	75	75.55	5630	2.0					
	44	217	60	64.18	5330	3.5					
	55	173	50	51.37	4950	3.7					
	10.8	874	125	129.48	8490	0.86					
	13.5	700	100	103.64	7880	0.93					
	18.5	510	75	75.55	7090	1.0	KM1103	MV90S4	KM1103	90B5/B14	9054
	22	433	60	64.18	6720	1.7	130000000000000000000000000000000000000	,	2330 2020	A CONTRACTOR	
	27	347	50	51.37	6240	1.9		7 1			
	24	409	60	59.22	6540	1.8					
1.1	29	337	50	48.86	6130	2.2				\ A	
	34	285	40	41.26	5800	2.6	THE STATE OF THE S	Warrangiano	CHEST SALES CO.	Parameter State (1974)	10000
	46	212	30	30.67	5250	3.5	KM1102	MV90S4	KM1102	90B5/B14	9054
	54	179	25	25.90	4960	4.2					
	68	143	20	20.73	4610	4.5					
	14.0	674	60	64.18	7780	1.1	1011100		1414400		
	17.5	540	50	51.37	7230	1.2	KM1103	MV90L6	KM1103	90B5/B14	90L6
	15.2	636	60	59.22	7580	1.2					
	18.4	525	50	48.86	7110	1.4					
	22	443	40	41.26	6720	1.7					
	29	329	30	30.67	6090	2.3	KM1102	MV90L6	KM1102	90B5/B14	90L6
	35	278	25	25.90	5750	2.7					
	43	223	20	20.73	5340	2.9					
	60	162	15	15.11	4810	3.2					
	112	117	12.5	12.47	1770	1.1					
	134	99	10	10.47	1670	1.0	KM0502	MV90L4	KM0502	90B5/B14	90L4
	181	73	7.5	7.73	1510	1.1					
	57	230	25	24.44	2530	0.8					
	69	191	20	20.25	2380	0.8					
1 5	95	138	15	14.67	2130	0.8	KMOSSS	MVOOLA	KM0622	00BE/B44	001.4
1.5	110	119	12.5	12.67	2030	1.5	KM0632	MV90L4	NWU032	90B5/B14	90L4
	133	99	10	10.50	1910	1.5					
	184	72	7.5	7.60	1710	1.5					
	45	287	60	62.43	3750	1.0	KM0753	MV90S2	KM0753	00B5/B44	90S2
	57	226	50	49.18	3470	1.1	KIVIU/ 53	W V 9 U 5 Z	KINU/53	90B5/B14	9052
	29	454	50	48.18	4340	0.77	KM0752	MV90L4	KM0752	90B5/B14	90L4

			i	ì			-	100	rsk	-ाम	100
P <sub>in</sub> [kW]	n <sub>2</sub> [r/min]	M <sub>2max</sub> [Nm]	Nominal	Actual	F <sub>2</sub> [N]	fs			K	MA	
	35	378	40	40.13	4080	0.79				T	
	46	285	30	30.24	3720	1.2					
	56	237	25	25.19	3500	1.3					
	71	187	20	19.84	3230	1.3					
	93	142	15	15.09	2950	1.4	KM0752	MV90L4	KM0752	90B5/B14	90L4
	112	118	12.5	12.49	2770	2.6					
	142	93	10	9.84	2550	2.6					
	187	70	7.5	7.48	2330	2.8					
	45	291	20	19.84	3740	0.83					1.
	60	221	15	15.09	3410	0.91					
	72	183	12.5	12.49	3210	1.6	KM0752	MV100L6	KM0752	100B5/B14	100L6
	91	144	10	9.84	2960	1.7	5200 M.D. B. 524		1 Charles and Land	property and after	
	120	110	7.5	7.48	2700	1.8					
	22	580	125	125.95	6010	0.83					
	28	457	100	99.22	5550	0.85				$\mathbf{A} = \mathbf{A}$	
	37	347	75	75.45	5070	0.86	KM0903	MV90S2	KM0903	90B5/B14	9052
	45	287	60	62.43	4760	1.7					
	57	226	50	49.18	4390	1.7					
	24	556	60	59.04	5890	0.9					
-	29	454	50	48.18	5500	1.1					
.5	35	378	40	40.13	5170	1.3					
	46	285	30	30.24	4710	1.8					
	56	237	25	25.19	4430	2.0	KMOOOO	NAV (00) 4	14110000	00DE/D44	001.4
	71	187	20	19.84	4090	2.0	KM0902	MV90L4	KM0902	90B5/B14	90L4
	93	142	15	15.09	3730	2.1					
	112	118	12.5	12.49	3510	4.1					
	142	93	10	9.84	3240	4.1					
	187	70	7.5	7.48	2950	4.3					
	30	443	30	30.24	5460	1.1					
	36	369	25	25.19	5130	1.3					
	45	291	20	19.84	4740	1.3					
	60	221	15	15.09	4330	1.4	KM0902	MV100L6	KM0902	100B5/B14	100L6
	72	183	12.5	12.49	4060	2.6					
	91	144	10	9.84	3750	2.6					
	120	110	7.5	7.48	3420	2.7					
	18.3	706	150	153.33	7130	1.1					
	22	596	125	129.48	6740	1.3					
	27	477	100	103.64	6260	1.4	KM1103	MV90S2	KM1103	90B5/B14	90\$2
	37	348	75	75.55	5630	1.5					
	44	296	60	64.18	5330	2.5					



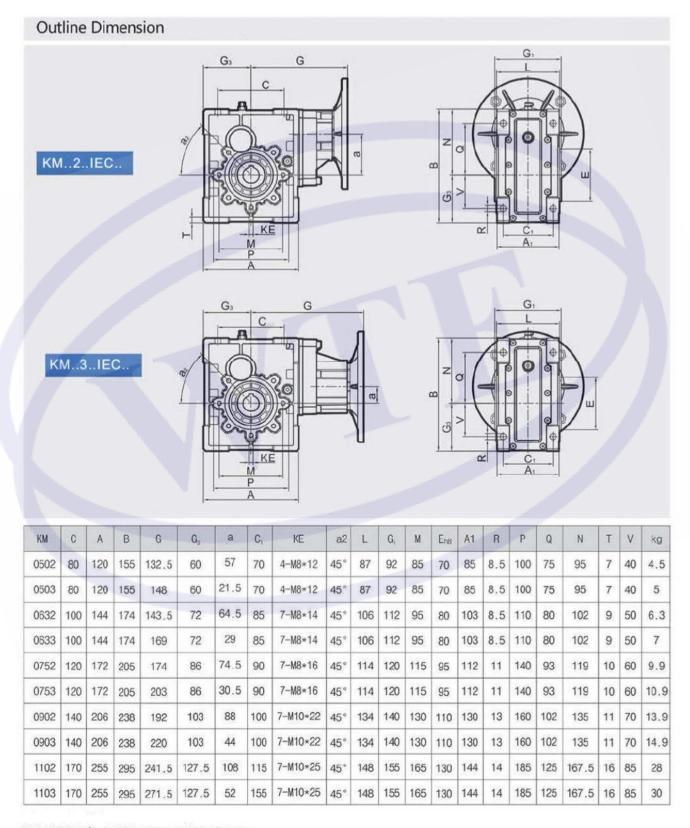
P <sub>in</sub>	n <sub>2</sub> [r/min]	M <sub>2max</sub> [Nm]	i Nominal	i Actual	F <sub>12</sub>	fs				A	
[mv]	55	237	50	51.37	4950	2.7	KM1103	MV90S2	KM1103	90B5/B14	90S2
0	22	591	60	64.18	6720	1.3	KWIIIOS	14143032	KWI 1103	3003/014	3032
	27	473	50	51.37	6240	1.4	KM1103	MV90L4	KM1103	90B5/B14	90L4
	24	557	60	59.22	6540	1.3					
	29	460	50	48.86	6130	1.6					
	34	388	40	41.26	5800	1.9					
	46	289	30	30.67	5250	2.6	KM1102	MV90L4	KM1102	BKM110B	90L4
	54	244	25	25.90	4960	3.1	RWITIUZ	WV90L4	KWI1102	BKMIIOB	30L4
	68	195	20	20.73	4610	3.3					
	93	142	15	15.11	4150	3.7					
1.5	15.2	867	60	59.22	7580	0.86					
1.5	18.4	715	50	48.86	7110	1.0				1	
	22	604	40	41.26	6720	1.2		7 I			
		449				1.7		, /			
	29 35	379	30 25	30.67 25.90	6090 5750	2.0		1			
	43		20			2.1	KM1102	MV100L6	KM1102	100B5/B14	100L6
		304		20.73	5340						
	60	221	16 12.5	15.11 12.84	4810	2.4					
1//	70	188			4550						
	88	150	10	10.27	4220	4.3					
	120	110	7.5	7.49	3800	4.7					
	46	418	30	30.24	3720	0.84					
	56	348	25	25.19	3500	0.86					
	71	274	20	19.84	3230	0.88	1/140750	BB (400) 4 4	1/110750	400DE/D44	4001.4.4
1	93	208	15	15.09	2950	0.96	KW0/52	MV100L1-4	KM0752	100B5/B14	100L1-4
	112	172	12.5	12.49	2770	1.7					
	142	136	10	9.84	2550	1.8					
	187	103	7.5	7.48	2330	1.9					
	72	268	12.5	12.49	3210	1.1	1010000		14110770		
	91	211	10	9.84	2960	1.1	KM0752	MV112M6	KM0752	112B5/B14	112M6
2.2	120	161	7.5	7.48	2700	1.2					
	45	422	60	62.43	4760	1.1	KM0903	MV90L2	KM0903	90B5/B14	90L2
	57	332	50	49.18	4390	1.1					
	35	554	40	40.13	5170	0.87					
	46	418	30	30.24	4710	1.2					
	56	348	25	25.19	4430	1.4					
	71	274	20	19.84	4090	1.4	KM0902	MV100L1-4	KM0902	100B5/B14	100L1-4
	93	208	15	15.09	3730	1.4	DOMESTIC STATES	aposta senta 20 f.	10000000000000000000000000000000000000	AND SECTION OF THE SE	A
	112	172	12.5	12.49	3510	2.8					
	142	136	10	9.84	3240	2.8					
	187	103	7.5	7.48	2950	2.9					

			i	i			150	(00)			1 (66)
P <sub>in</sub>	n <sub>2</sub>	$M_{2max}$			Fe	fs	À		2	ALA	
[kW]	[r/min]	[Nm]	Nominal	Actual	[N]				Las		ÎN ANO
	36	541	25	25.19	5130	0.9					
	45	426	20	19.84	4740	0.9					
	60	324	15	15.09	4330	0.93	KM0902	MV112M6	KM0902	112B5/B14	112M6
	72	268	12.5	12.49	4060	1.8	KWIU9UZ	WV 112WO	KW0902	11203/014	1121010
	91	211	10	9.84	3750	1.8					
	120	161	7.5	7.48	3420	1.9					
	22	874	125	129.48	6740	0.86					
	27	700	100	103.64	6260	0.93					
	37	510	75	75.55	5630	1.0	KM1103	MV90L2	KM1103	90B5/B14	90L2
	44	433	60	64.18	5330	1.7					
	55	347	50	51.37	4950	1.9					
	24	818	60	59.22	6540	0.92					
	29	675	50	48.86	6130	1.1					
0.0	34	570	40	41.26	5800	1.3					
2.2	46	423	30	30.67	5250	1.8				A 4	
	54	358	25	25.90	4960	2.1	1/184400	BD/40014 4	1/11/4/00	40005/044	40014
	68	286	20	20.73	4610	2.3	KW11102	MV100L1-4	KM1102	100B5/B14	100L1-4
	93	209	15	15.11	4150	2.5					
	109	177	12.5	12.84	3930	4.2					
	136	142	10	10.27	3650	4.6					
	187	103	7.5	7.49	3280	5.0					
	29	659	30	30.67	6090	1.1					
	35	556	25	25.90	5750	1.3					
	43	445	20	20.73	5340	1.5					
	60	325	15	15.11	4810	1.6	KM1102	MV112M6	KM1102	112B5/B14	112M6
	70	276	12.5	12.84	4550	2.7					
	88	221	10	10.27	4220	2.9					
	120	161	7.5	7.49	3800	3.2					
	112	235	12.5	12.49	2770	1.3					
	142	185	10	9.84	2550	1.3	KM0752	MV100L2-4	KM0752	100B5/B14	100L2-4
	187	141	7.5	7.48	2330	1.4	The second of				
	46	569	30	30.24	4710	0.9					
	56	474	25	25.19	4430	1.0					
0.0	71	374	20	19.84	4090	1.0					
3.0	93	284	15	15.09	3730	1.1	KM0902	MV100L2-4	KM0902	100B5/B14	100L2-4
	112	235	12.5	12.49	3510	2.0					
	142	185	10	9.84	3240	2.1					
	187	141	7.5	7.48	2950	2.1					
	44	591	60	64.18	5330	1.3					
	55	473	50	51.37	4950	1.4	KM1103	MV100L2	KM1103	100B5/B14	100L2



P <sub>in</sub> [kW]	n <sub>2</sub> [r/min]	M <sub>2max</sub> [Nm]	i Nominal	i Actual	F <sub>r2</sub> [N]	fs				A	
	34	777	40	41.26	5800	0.97					
	46	577	30	30.67	5250	1.3					
	54	488	25	25.90	4960	1.5					
0.0	68	390	20	20.73	4610	1.7	10001100			40005/044	40010
3.0	93	284	15	15.11	4150	1.8	KM1102	MV100L2-4	KM1102	100B5/B14	100L2-4
	109	242	12.5	12.84	3930	3.1					
	136	193	10	10.27	3650	3.4					
	187	141	7.5	7.49	3280	3.7					
	35	759	25	25.90	5750	1.0					
	43	607	20	20.73	5340	1.1					
	60	443	15	15.11	4810	1.2	15844400	10,40000	14114400	40005	40000
	70	376	12.5	12.84	4550	2.0	KM1102	MV132S6	KM1102	132B5	132S6
	88	301	10	10.27	4220	2.2					
	120	219	7.5	7.49	3800	2.4		1			
	112	314	12.5	12.49	2770	0.96					
	142	247	10	9.84	2550	1.0	KM0752	MV112M4	KM0752	112B5/B14	112M4
	187	188	7.5	7.48	2330	1.1					
	112	314	12.5	12.49	3510	1.5					
	142	247	10	9.84	3240	1.5	KM0902	MV112M4	KM0902	112B5/B14	112M4
	187	188	7.5	7.48	2950	1.6					
4.0	46	770	30	30.67	5250	1.0					
	54	650	25	25.90	4960	1.2					
	68	520	20	20.73	4610	1.2					
	93	379	15	15.11	4150	1.4	KM1102	MV112M4	KM1102	112B5/B14	112M4
	109	322	12.5	12.84	3930	2.3					
	136	258	10	10.27	3650	2.5					
	187	188	7.5	7.49	3280	2.8					
	68	716	20	20.73	4610	0.9					
	93	522	15	15.11	4150	1.0					
5.5	109	443	12.5	12.84	3930	1.7	KM1102	MV132S4	KM1102	132B5	13254
	136	354	10	10.27	3650	1.8					
	187	259	7.5	7.49	3280	2.0					

#### **OUTLINE DIMENSION SHEET**

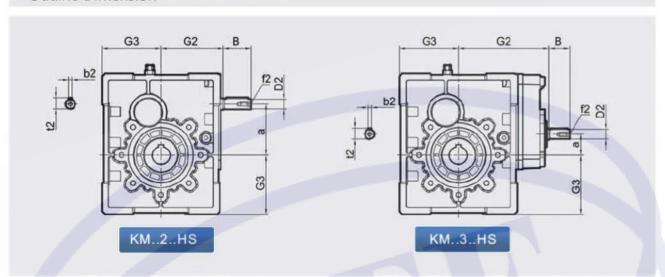


Note: Weight (kg) without the weight of motor.



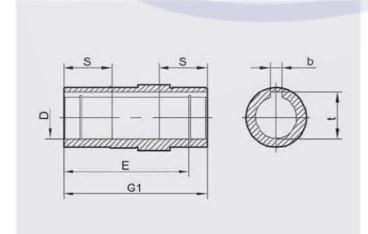
#### **OUTLINE DIMENSION SHEET**

#### Outline Dimension



KM	В	D <sub>2,16</sub>	G <sub>2</sub>	G <sub>3</sub>	a	b <sub>2</sub>	t <sub>2</sub>	f <sub>2</sub>
0502	23	11	65	60	57	4	12.5	-
0503	23	11	100	60	21.5	4	12.5	-
0632	30	14	76	72	64.5	5	16	M6
0633	23	11	111	72	29	4	12.5	
0752	40	16	91	86	74.5	5	18	M6
0753	30	14	132	86	30.5	5	16	M6
0902	40	19	107	103	88	6	21.5	M6
0903	30	14	146	103	44	5	16	M6
1102	50	24	132	127.5	108	8	27	M6
1103	40	19	181	127.5	52	6	21.5	M6

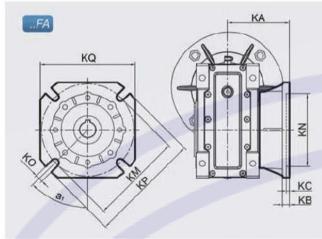
#### Hollow Output Shaft Dimension

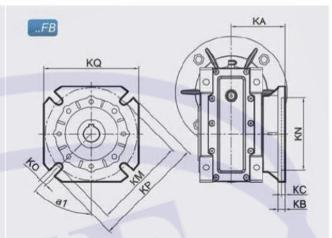


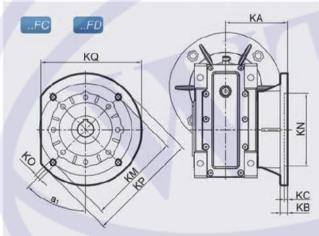
KM	S	E	G1	Dh8	b	t
050	-00	77		20	6	22.8
050	30	77	92	24	8	27.3
063	36	97	112	25	8	28.3
000	50	31	112	28	8	31.3
				28	8	31.3
075	40	105	120	30	8	33.3
				35	10	38.3
000	45	100	140	35	10	38.3
090	45	122	140	38	10	41.3
110	50	131	155	40	12	43.3
110	30	131	100	42	12	45.3

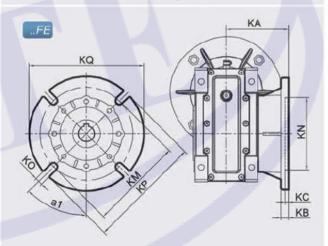
#### **CONNECTING DIMENSION SHEET**

#### **Output Flage Dimension**









VA.A		FA													
KM	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ						
050	45°	90	9	5	85	70	11(n=4)	125	110						
063	45°	82	10	6	150	115	11(n=4)	180	142						
075	45°	111	13	6	165	130	14(n=4)	200	170						
090	45"	111	13	6	175	152	14(n=4)	210	200						
110	45°	139	15	6	230	170	14(n=8)	280	260						

VA A		FB													
KM	a1	KA	KB	KC	KM	KNH8	KO	KP	KQ						
050	45°	120	9	5	85	70	11(n=4)	125	110						
063	45°	112	10	6	150	115	11(n=4)	180	142						
075	45°	90	13	6	130	110	11(n=4)	160	-						
090	45°	122	18	6	215	180	14(n=4)	250							
110		-	-	-	-	-	-	-	-						

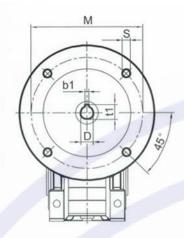
VA 4		FC													
KM	a1	KA	KB	KC	KM	КМнв	KO	KP	KQ						
050	45°	89	10	5	130	110	9(n=4)	160	-						
063	45°	98	10	5	165	130	11(n=4)	200	-						
090	45°	110	17	6	165	130	11(n=4)	200	-						

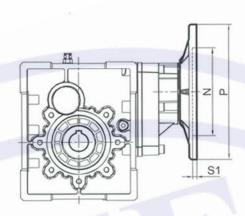
KM					FD	)			
KIVI	a1	KA	KB	KC	KM	KN <sub>H8</sub>	КО	KP	KQ
050	45°	72	14.5	5	115	95	11(n=4)	140	-
063	45"	107	10	5	165	130	11(n=4)	200	
090	45°	151	13	6	175	152	14(n=4)	210	-

KM					FE				
KIVI	a1	KA	KB	KC	KM	KNH8	KO	KP	KQ
050	-	-	-	-	-	-	-	-	_
063	45°	80. 5	16.5	5	130	110	11(n=4)	160	-
090	-	-	-	-	-	-	1	-	_



### **CONNECTING DIMENSION SHEET**

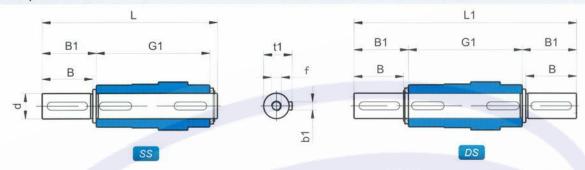




1	AFTE	No		F.				100			-101						-		11-		i(rat	io)	pri.			91	150				
	DAMIEC		V	,	М		P	-	3	6.4		-4	7.5	10	12.5	15	20	25	30	40	50	60	50	60	75	100	125	150	200	250	300
KM	PAM-IEC	-				0.5		-		b1	t1	s1										D									
		B5	B14	B5	B14	B5	B14	85	B14						81		В										C				
	63B5	95	-	115	-	140	-	9	-0	4	12.8	5	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
	71B5/B14	110	70	130	85	160	105	9	7	5	16.3	5	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	4	-	-	-
050	80B5/B14	130	80	165	100	200	120	11	7	6	21.8	5	19	19	19	19	19	19	19	19	19	19	-	-	-	-	4	-	-	-	-
	90B5/B14	130	95	165	115	200	140	11	9	8	27.3	5	24	24	24	24	24	24	24	-	-	-	-	-	-	-	=	-	-	-	-
	63B5	95	-	115	-	140	-	9	-	4	12.8	5	-	-	-	_	-	-	11	11	11	11	11	11	11	11	11	11	11	11	11
	71B5/B14	110	70	130	85	160	105	9	7	5	16.3	5	-	-	-	14	14	14	14	14	14	14	14	14	14	14	14		-	-	-
063	80B5/B14	130	80	165	100	200	120	11	7	6	21.8	5	19	19	19	19	19	19	19	19	19	19	19	19	-	-	-	-	-	-	-
	9085/B14	130	95	165	115	200	140	11	9	8	27.3	5	24	24	24	24	24	24	24	24	24	-	-	-		-	-	-	=	-	-
	63B5	95	-	115	_	140	-	9	-	4	12.8	5	-	-	-	-	-	1	-		-		-	-	11	11	11	11	11	11	11
	71B5	110	-	130	-	160	-	9	7	5	16.3	5	-	-	_	-	-	-	-	14	14	14	14	14	14	14	14	14	14	14	14
	80B5/B14	130	80	165	100	200	120	11	7	6	21.8	5	-	-	-	19	19	19	19	19	19	19	19	19	19	19	19	19	-	-	-
075	90B5/B14	130	95	165	115	200	140	11	9	8	27.3	5	24	24	24	24	24	24	24	24	24	24	24	24	-			-	-	-	-
	100B5/B14	180	110	215	130	250	160	13	9	8	31.3	5.5	28	28	28	28	28	28	28	28	-	-	-	-	-	-	-	-	-	-	-
	112B5/B14	180	110	215	130	250	160	13	9	8	31.3	5.5	28	28	28	28	28	28	-	-	-				-	-	-	-	-	-	-
	6385	95	-	115	_	140	-	9	-	4	12.8	5	-	-	-	-	-	-	-	-	-	-	-	-	11	11	11	11	11	11	11
	71B5	110	-	130	-	160	-	9	7	5	16.3	5	-	-	-	-	-	-	-	-	14	14	14	14	14	14	14	14	14	14	14
222	80B5/B14	130	80	165	100	200	120	11	7	6	21.8	5	-	-	-	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	-
090	90B5/B14	130	95	165	115	200	140	11	9	8	27.3	5	24	24	24	24	24	24	24	24	24	24	24	24	-	-	-	-	-	-	-
	100B5/B14	180	110	215	130	250	160	13	9	8	31.3	5.5	28	28	28	28	28	28	28	28	28	28	-	-	-	-	-	-	-	-	-
	112B5/B14	180	110	215	130	250	160	13	9	8	31.3	5.5	28	28	28	28	28	28	28	28	-	-	-	-	-	-	-	-	-	-	-
	71B5	110	-	130	-	160	-	9	7	5	16.3	6	-	-	-	-	-	-	-	-	-	-	-	-	14	14	14	14	14	14	14
	80B5	130	-	165	_	200	-	11	7	6	21.8	6	-	-	-	-	-	-	-	19	19	19	19	19	19	19	19	19	19	19	19
	9085	130	-	165	-	200	-	11	9	8	27.3	6	-	-	-	24	24	24	24	24	24	24	24	24	24	24	24	24		-	-
110	100B5/B14	180	110	215	130	250	160	13	9	8	31.3	6	28	28	28	28	28	28	28	28	28	28	28	28	-	-		-	-	-	-
	112B5/B14	180	110	215	130	250	160	13	9	8	31.3	6	28	28	28	28	28	28	28	28	28	28	28	28	-	-	-	-		-	-
	132B5	230	-	265	-	300	-	13	_	10	41.3	6	38	38	38	38	38	38	38	38	38	-	-	-	-	-	-	-	-	-	-

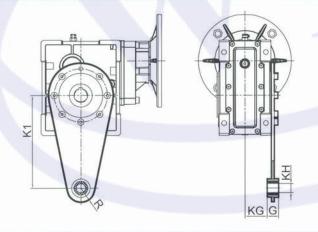
### **OUTLINE DIMENSION SHEET**

#### **Output Shafts**



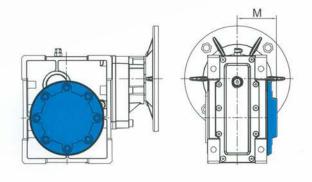
KM	d <sub>h6</sub>	В	B1	G1	L	L1	f	b1	t1
050	25	50	53.5	92	153	199	M10*27	8	28
063	25	50	53.5	112	173	219	M10*27	8	28
075	28	60	63.5	120	192	247	M10*27	8	31
090	35	80	84.5	140	234	309	M12*34	10	38
110	42	80	84.5	155	249	324	M16*42	12	45

#### Torque Arm



KM	K1	G	KG	KH	R
050	100	14	38.5	10	18
063	150	14	49	10	18
075	200	25	47.5	20	30
090	200	25	57.5	20	30
110	250	30	62	25	35

#### Cover

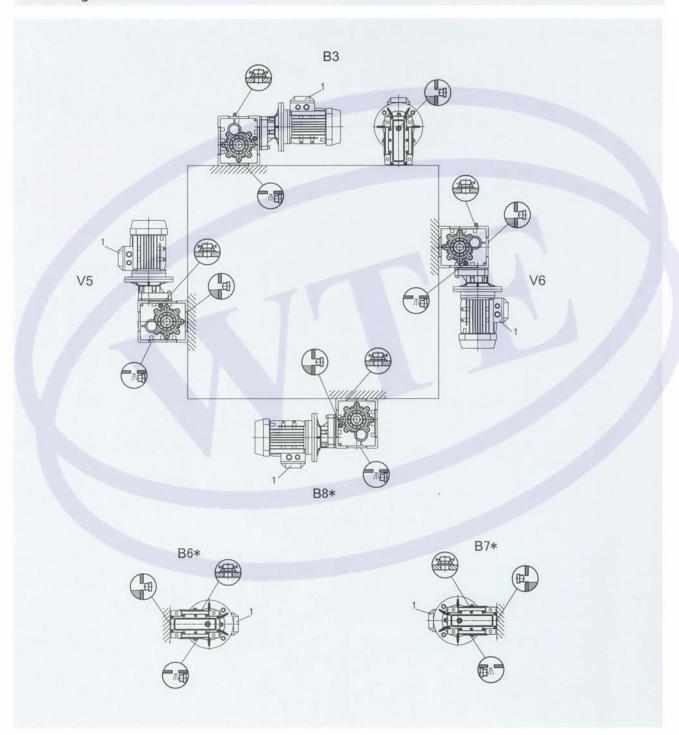


KM	М
050	58
063	69
075	74
090	86
110	94



### **INSTALLATION POSITIONS DIAGRAM**

#### **Mounting Positions**



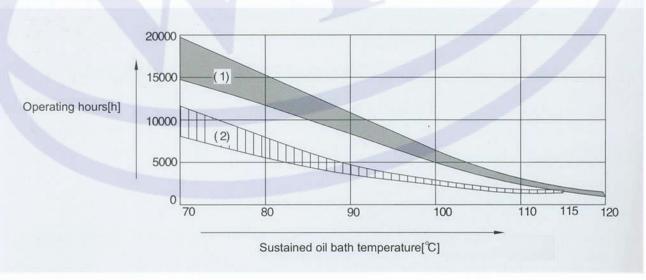
\* It means the lubricant can't be added according to the oil level line plug, but also higher the plug to fill quantity as shown in the table.

### LUBRICATION

#### Types of lubrication

	Cim	Tempreatur(°C)	ISO Viscosity Class	SHELL	AGIP	ESSO	Mobil MOBIL	CASTROL	BP BP	广研	Lubrication type
		BP Energol GX-XP 220									
	-20	+25	VG150 VG100	Shell Omala 100			Mobil gear 627		BP Energol GX-XP 100		
	-30	+10	VG110-46 VG32	Shell Omala T32			Mobil D.T.E.13M				Mineral o
км	-40	20	VG22 VG15	Shell Omala T15			Mobil D.T.E.11M		BP Energol HLP-HM 15		
	-40	+80	VG220	Shell Omala HD220			Mobil SHC630				
	-40	+40	VG150	Mobil SHC629			Mobil SHC629				Syntheti
	-40	+10	VG32	Mobil SHC624			Mobil SHC624				

Oil change intervals for standard gear units under normal environmental conditions



- Average value per oil type at 70℃
  - (1) Synthetic oil (2) Mineral oil

## POWER TRANSMISSION

### LUBRICATION

#### Lubricant fill quantity

-	ear units			Fill quantity	y in liters		
Ge	ear units	В3	В6	B7	B8	V5	V6
	KM0502	0.22	0.20*	0.13*	0.15	0.25	0.14
	KM0503"	0.08	0.05	0.05	0.06	0.09	0.10
	KM0632	0.42	0.35*	0.24*	0.22	0.46	0.25
	KM0633"	0.07	0.05	0.05	0.06	0.09	0.10
1/0.4	KM0752	0.70	0.58*	0.42*	0.42	0.75	0.45
KM	KM0753"	0.15	0.11	0.11	0.11	0.17	0.20
	KM0902	1.21	0.95*	0.72*	0.67	1.30	0.74
	KM0903"	0.15	0.11	0.11	0.11	0.17	0.20
	KM1102	2.15	1.70*	1.10*	1.25	2.20	1.20
	KM1103"	0.25	0.17	0.17	0.20	0.32	0.36

The specified fill quantities are recommended values. The precise values vary depending on the number of stages and gear ratio. When filling, it is essential to check the oil level plug since it indicates the precise oil capacity.

- #: Means the oil quantity in the 3rd stage housing, as this one is separated from the 2nd housing, please fill them separately while in 3 stages.
- $^{*}$ : It means the lubricat can't be according to the oil level line plug, but also highter the plug the fill quantity sa shown in the table.





**Hypoid Gear Motor** 



**Worm Gear Motor** 



Helical Gear Motor



**Electromagnetic Brake** 



## บริษัท วิฑูรย์เอ็นจิเนียริ่ง แอนด์ เทรคดิ้ง จำกัด WITOONENGINEERING & TRADING CO.,LTD.

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