

**METRIC K**  
HELICAL + BEVEL GEAR REDUCERS  
**SERIES**



# ISO 9001



Certificate TW98/14175

The management system of

## CHEN TA PRECISION MACHINERY INDUSTRIAL INC. / JEN WU MACHINERY CO., LTD.

No. 118, Hall Tran Lane, Jen Wu,  
Kaohsiung Hsien, Taiwan

has been assessed and certified as meeting the requirements of

### ISO 9001:2008

For the following activities

**DESIGN AND MANUFACTURE OF HELICAL GEAR SPEED REDUCER,  
WORM GEAR SPEED REDUCER AND GEAR MOTOR, GEAR BOX AND  
WATER PADDLE-WHEEL AERATOR.**

Further clarifications regarding the scope of this certificate and the applicability of  
ISO 9001:2008 requirements may be obtained by consulting the organization

This certificate is valid from 18 September 2009 until 18 September 2012  
and remains valid subject to satisfactory surveillance audits.  
Re certification audit due before 25 August 2012  
Issue 5. Certified since 18 September 1998

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Page 1 of 1



Graphic design and layout: David Smith, www.sgs.com

# Operation Manual

Manual Operasional

- Manual operasi ini untuk membantu anda menginstalasi dan mengoperasikan gearbox dengan benar. Untuk menghindari kerusakan pada gearbox, instalasi dan pengoperasian yang tepat sangat penting. Manual ini juga mencakup rekomendasi resmi tentang pemeliharaan untuk umur yang panjang dari gearbox.
- Setiap gearbox CHENTA lulus inspeksi dan pengujian yang ketat sebelum dikemas dengan benar untuk pengiriman. Setelah menerima gearbox, silahkan periksa kekurangan atau kerusakan parts selama transit. Harap untuk menghubungi CHENTA untuk mengidentifikasi penyedia layanan yang bertanggung jawab dan mencatat masalah ini. Kami berkomitmen untuk keunggulan dalam kualitas dan ditujukan untuk memecahkan masalah bagi klien kami.

## I. Pelumasan

Kecuali permintaan khusus dari pelanggan, setiap gearbox CHENTA akan diberikan pelumas dengan jumlah yang tepat sesuai dengan posisi pemasangan yang berbeda sebelum pengiriman. Jika pelanggan lebih memilih untuk mengisi oli pelumas sendiri, silakan ikuti instruksi manual pengoperasian dalam katalog ini

## II. Penyimpanan

Jika anda tidak akan segera menginstalasi gearbox, harap jauhkan dari tempat lembab dan hubungi staf layanan kami jika anda ingin memasang gearbox untuk di operasikan setelah penyimpanan. Staf layanan kami akan memberi tahu anda apa yang harus diperhatikan dan diperiksa terlebih dahulu sebelum pengoperasian.

## III. Memasang parts pada shaft gearbox

1. Perhatikan: Hindari dampak berat pada shaft! Ini dapat menyebabkan kerusakan bearing dan merusak kinerja bearing. Jika bearing harus diganti, kami sarankan mengikuti metode pemanasan yang memanaskan di atas 80°C, yang pas pada shaft dan mengurangi kerusakan pada shaft. Untuk toleransi diameter shaft, silahkan lihat spesifikasi di katalog.
2. Saat memasang kopling, pastikan untuk memeriksa penyelarasan kopling dan shaft gearbox dengan benar untuk menghindari kerusakan pada bearing dan mengurangi frekuensi getaran dan keausan abnormal.
3. Untuk menghindari beban berlebih pada bearing output shaft, silahkan merujuk ke OHL (muatan berlebih) di katalog. Untuk beban aksial yang berlebih, silahkan hubungi teknisi servis kami untuk konsultasi.
4. Aplikasi aktual dari faktor-faktor berikut seperti kecepatan input dan output, arah rotasi, lokasi pemasangan dan pemuatan aksial dan radial yang berlebihan harus diperiksa dengan cermat.

## IV. Instalasi & Operasional

1. Faktor-faktor dasar yang harus dipertimbangkan:
  - Suhu sekitar di bawah 40°C
  - Lokasi dengan ventilasi udara yang baik
  - Posisi yang tepat untuk oil plug dan drain plug
  - Ruang yang cukup untuk inspeksi, perawatan, dan penggantian berkala
2. Unit harus dipasang pada dasar yang rata, stabil, dan kaku untuk penyejajaran yang akurat untuk mencegah kerusakan pada rumah reduksi.
3. Toleransi yang disarankan untuk kerataan di dasar:
  - Untuk ukuran 77 atau lebih kecil, <0,1mm/m
  - Untuk ukuran 87 atau lebih besar, <0,2mm/m
4. Untuk menghindari percikan pelumas selama transportasi, breather plug dengan pin merah dimasukkan ke lubang pernapasan udara. Harap lepaskan pin merah sebelum memulai.
5. Sebelum pemasangan, silakan periksa horsepower input dan rasio agar sama dengan pelat nama yang terpasang.

## V. Perawatan

Waspada! Daya harus dimatikan sebelum melepas atau mengganti gearbox.

1. Level oli dan pelumas berkualitas adalah titik kunci pemeliharaan sehari-hari. Silahkan lihat saran kami untuk mengganti pelumas secara berkala sesuai dengan situasi lokasi dan frekuensi operasi.
2. Periksa kesejajaran kopling, kekencangan rantai, mur dan tetap bersihkan gearbox.

# Operation Instruction

Instruksi Operasional

## I. Instalasi

1. Input shaft terhubung ke motor secara langsung, kopling fleksibel lebih baik diterapkan sesuai: output shaft terhubung ke mesin, lebih baik menggunakan gear coupling.
2. Pasang pada fondasi yang stabil dan ventilasi udara yang baik dan kenyamanan pengisian / pengeringan oli harus dipertimbangkan.
3. Input shaft dan motor shaft harus sejajar dan toleransi harus sesuai yang diperbolehkan.
4. Setelah instalasi, silakan periksa input shaft dengan tangan terlebih dahulu untuk memeriksa apakah berjalan dengan lancar.
5. Sebelum dimulai, test tanpa beban harus dilakukan dan status abnormal apapun harus segera diperbaiki.

## II. Pelumasan

1. Gearbox baru perlu penggantian oli di awal 500 jam operasi, dan kemudian setiap 2.500 jam ganti lagi. Diperlukan pengecekan oli secara teratur dan diganti jika diperlukan.
2. Silahkan ganti dengan spesifikasi oli yang setara dan jangan campur dengan spesifikasi oli merek lain.
3. Sebelum mengganti oli, bagian dalam gearbox harus disiram dan dikeringkan dahulu lalu isi dengan oli baru.
4. Selama pengoperasian, jika panas lebih dari 80°C atau kebisingan abnormal terjadi, silahkan matikan gearbox untuk segera diperiksa dan dijalankan kembali hanya setelah penyebabnya diselesaikan.
5. Rekomendasi pelumas: MOBIL gear 632, SHELL omala 320, MOBIL mobilube HD80W-90, SHELL spirax E.P 90.

## III. Perawatan

1. Perawatan rutin diperlukan dan jika ditemukan aus, tindakan korektif harus diambil. Keakuratan suku cadang yang diganti harus persis sama dengan standar asli dan diperlukan pengujian tanpa beban terlebih dahulu.
2. Bangun sistem pemeliharaan dan pengumpulan data kerusakan dengan hati-hati.

## Masalah umum & Perbaikan

Daftar berikut adalah situasi masalah umum. Jika terjadi masalah lain, silakan hubungi kami langsung untuk dapatkan informasi lebih lanjut.

	PENYEBAB	ALASAN	PERBAIKAN
I	Terlalu Panas	<ol style="list-style-type: none"><li>1. Kelebihan beban</li><li>2. Kelebihan atau kekurangan pelumas oli</li><li>3. Pelumas oli yang tidak tepat</li><li>4. Gesekan berlebih pada oil seal</li></ol>	<ol style="list-style-type: none"><li>1. Sesuaikan beban yang tepat</li><li>2. Tambahkan oli ke level yang tepat</li><li>3. Ganti pelumas oli yang tepat</li><li>4. Beri pelumas pada oil seal</li></ol>
II	Kebisingan	<ol style="list-style-type: none"><li>1. Kebisingan yang konsisten: (kontak gear yang tidak benar) (bearing rusak)</li><li>2. Suara menjerit: (celah bearing terlalu kecil) (kekurangan pelumas oli)</li><li>3. Kebisingan yang tidak konsisten: (kemasukan benda) (bearing rusak)</li></ol>	<ol style="list-style-type: none"><li>1. Perbaiki gear ganti bearing</li><li>2. Ganti bearing Isi pelumas oli</li><li>3. Bersihkan &amp; ganti oli ganti bearing</li></ol>
III	Getaran	<ol style="list-style-type: none"><li>1. Gear rusak</li><li>2. Ada benda didalam</li><li>3. Bearing rusak</li><li>4. Baut longgar</li></ol>	<ol style="list-style-type: none"><li>1. Ganti gear</li><li>2. Bersihkan &amp; ganti oli</li><li>3. Ganti bearing</li><li>4. Kencangkan baut</li></ol>
IV	Kebocoran oli	<ol style="list-style-type: none"><li>1. Kerusakan oil seal</li><li>2. Kerusakan gasket</li><li>3. Saluran pembuangan longgar</li><li>4. Tutup longgar</li></ol>	<ol style="list-style-type: none"><li>1. Ganti oil seal</li><li>2. Ganti gasket</li><li>3. Kencangkan saluran pembuangan</li><li>4. Kencangkan baut</li></ol>
V	Input & output shaft rusak	<ol style="list-style-type: none"><li>1. Gear terikat karena terlalu panas</li><li>2. Kerusakan bearing</li><li>3. Objek pengganggu diantara gear</li></ol>	<ol style="list-style-type: none"><li>1. Sesuaikan / ganti gear</li><li>2. Ganti bearing</li><li>3. Bersihkan lalu ganti pelumas oli</li></ol>
VI	Input shaft tidak dapat menggerakkan output shaft	<ol style="list-style-type: none"><li>1. Kerusakan gear</li><li>2. Kerusakan pada kunci penghubung antara gear &amp; shaft output</li><li>3. Input shaft pecah</li><li>4. Output shaft pecah</li></ol>	<ol style="list-style-type: none"><li>1. Ganti gear</li><li>2. Ganti kunci</li><li>3. Ganti input shaft</li><li>4. Ganti output shaft</li></ol>
VII	Gear aus	<ol style="list-style-type: none"><li>1. Kelebihan beban</li><li>2. Pelumas oli yang tidak tepat</li><li>3. Kekurangan pelumas oli</li><li>4. Suhu sekitar yang berlebihan</li></ol>	<ol style="list-style-type: none"><li>1. Sesuaikan beban yang tepat</li><li>2. Ganti pelumas oli yang tepat</li><li>3. Isi ulang pelumas oli</li><li>4. Perbaiki ventilasi</li></ol>

# Selection Table of Lubricant

Referensi oli

Beban Standar, Input 600 RPM atau lebih			
Temperature(°C)	ISO VG	Mobil	Shell
-30 ~ -15	VG 100	Mobilgear 600xp 100	Shell Omala S2G100
-15 ~ -3	VG 150	Mobilgear 600xp 150	Shell Omala S2G150
-3 ~ 23	VG 220	Mobilgear 600xp 220	Shell Omala S2G220
23 ~ 40	VG 320	Mobilgear 600xp 320	Shell Omala S2G320
40 ~ 80	VG 460	Mobilgear 600xp 460	Shell Omala S2G460

Beban Berat, Input 600 RPM atau lebih			
Temperature(°C)	ISO VG	Mobil	Shell
-30 ~ -15	VG 150	Mobilgear 600xp 150	Shell Omala S2G150
-15 ~ -3	VG 220	Mobilgear 600xp 220	Shell Omala S2G220
-3 ~ 23	VG 320	Mobilgear 600xp 320	Shell Omala S2G320
23 ~ 40	VG 460	Mobilgear 600xp 460	Shell Omala S2G460
40 ~ 80	VG 680	Mobilgear 600xp 680	Shell Omala S2G680

Volume Pelumas (L)						
Gear unit	M1	M2	M3	M4	M5	M6
K...37	0.50	1.00	1.00	1.40	1.00	1.00
K...47	0.80	1.30	1.60	2.15	1.60	1.60
K...57	1.30	2.30	2.70	3.15	2.90	2.70
K...67	1.10	2.40	2.70	3.70	2.60	2.60
K...77	2.10	4.10	4.60	5.90	4.40	4.40
K...87	3.70	8.20	8.80	11.1	8.00	8.00
K...97	7.00	14.7	15.7	20.0	15.7	15.7
K...107	10.0	20.5	24.0	32.4	24.0	24.0

\*REKOMENDASI\*

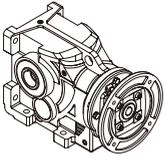
# Numbering System

Kode Sistem

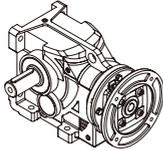
Column only for couple with motor

Helical-Bevel Gear	Model	Input Type	Size	Ratio	Flange Frame	Direction of Shaft	Mounting Positions	Voltage	Hz	Pole	Position of Terminal Box
<b>K</b>	<b>M</b>	<b>F</b>	<b>047</b>	<b>010</b>	<b>QQ</b>	A B C	M1 M2 M3 M4 M5 M6	2 - 220/380 4 - 240/415 5 - 220/440 A - 220/230 B - 220/240 C - 220/400 D - 230/400 E - 230/440 F - 240/480 G - 120/208 H - 200/346 K - 208/220 M - 208/240 N - 380/660	5 - 50HZ 6 - 60HZ	2 - 2P 4 - 4P 6 - 6P 8 - 8P	U D L R
<b>S</b> - Solid Output Shaft (Foot Mounting) <b>H</b> - Hollow Output Shaft (Foot Mounting) <b>N</b> - Solid Output Shaft with Mounting Flange <b>A</b> - Hollow Output Shaft (Flange Mounting) <b>M</b> - Hollow Output Shaft with Mounting Flange		<b>F</b> - Input Flange IEC B5 <b>B</b> - Input Flange IEC B14 <b>N</b> - Input Flange NEMA <b>S</b> - Solid Input Shaft <b>M</b> - Couple with Motor	<b>037</b> - 37 <b>047</b> - 47 <b>057</b> - 57 <b>067</b> - 67 <b>077</b> - 77 <b>087</b> - 87 <b>097</b> - 97 <b>107</b> - 107	<b>005</b> - 1/5 <b>010</b> - 1/10 <b>015</b> - 1/15 <b>020</b> - 1/20 <b>025</b> - 1/25 <b>030</b> - 1/30 <b>035</b> - 1/35 <b>040</b> - 1/40 <b>045</b> - 1/45 <b>050</b> - 1/50 <b>055</b> - 1/55 <b>060</b> - 1/60 <b>065</b> - 1/65 <b>070</b> - 1/70 <b>075</b> - 1/75 <b>080</b> - 1/80 <b>085</b> - 1/85 <b>090</b> - 1/90 <b>095</b> - 1/95 <b>100</b> - 1/100 . . . . . <b>215</b> - 1/215	<b>IEC Standard : 4 - POLE</b> <b>QQ</b> - 1/4HP Ø16 <b>HH</b> - 1/2HP Ø16 <b>01</b> - 1HP Ø19 <b>02</b> - 2HP Ø24 <b>03</b> - 3HP Ø28 <b>05</b> - 5HP Ø28 <b>07</b> - 7.5HP Ø38 <b>10</b> - 10HP Ø38 <b>15</b> - 15HP Ø42 <b>20</b> - 20HP Ø42  <b>NEMA Standard</b> <b>01</b> - 56C <b>02</b> - 143T <b>04</b> - 182/184T <b>06</b> - 213/215T <b>08</b> - 254/256T						

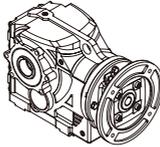
\* Please specify voltage, Hz, Pole, Phase, IP Grade.  
 Brake require or not if type of couple with motor needed



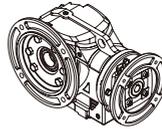
KHF...



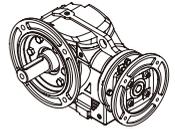
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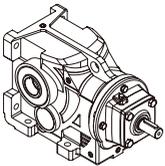
KAF...



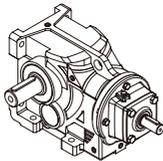
KMF...



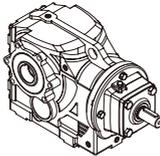
KNF...



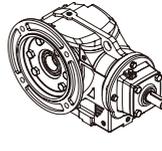
KHS...



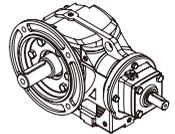
KSS...



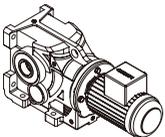
KAS...



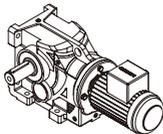
KMS...



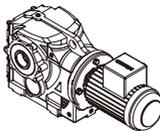
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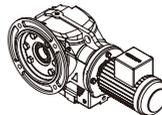
KHM...



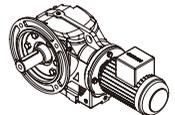
KSM...



KAM...



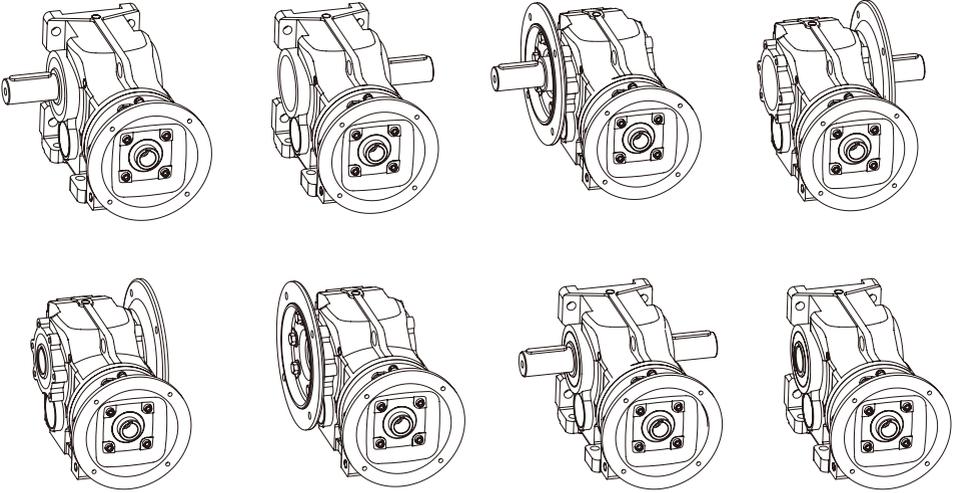
KMM...



KNM...

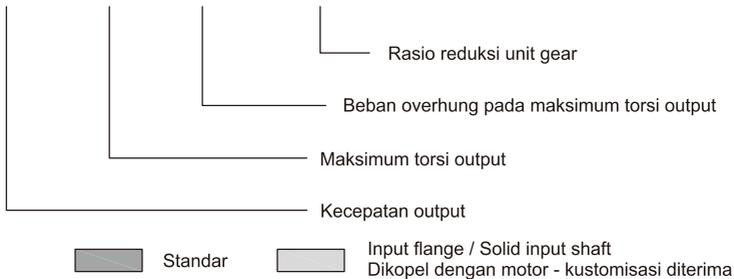
# Direction of Shaft

Arah shaft



## Kombinasi yang di izinkan

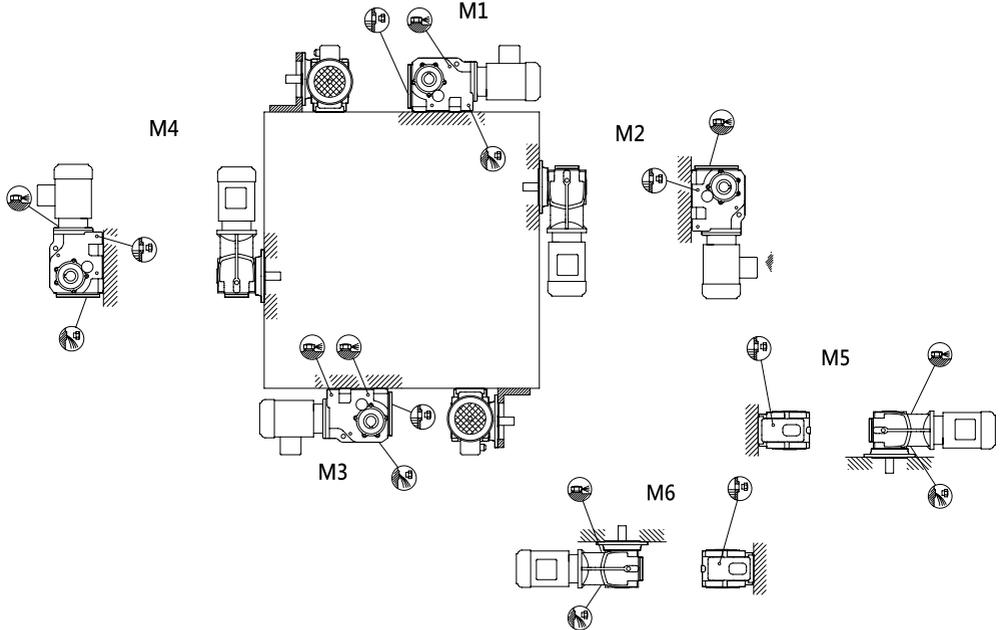
K107, ne=1500 1/min				8000 Nm						Input shaft mm
na [1/min]	Mamax [Nm]	OHL Fra [N]	i	100L	112M	132S	132M	160M	160L	
11	8000	65000	142.68							Ø28
12	8000	61100	121.21							
14	8000	57700	106.39							Ø38
15	8000	56100	99.86							
16	8000	54800	94.90							Ø42
17	8000	53600	90.15							
18	8000	51300	81.88							
20	8000	49100	74.66							
23	8000	46300	65.93							
26	8000	43400	57.43							



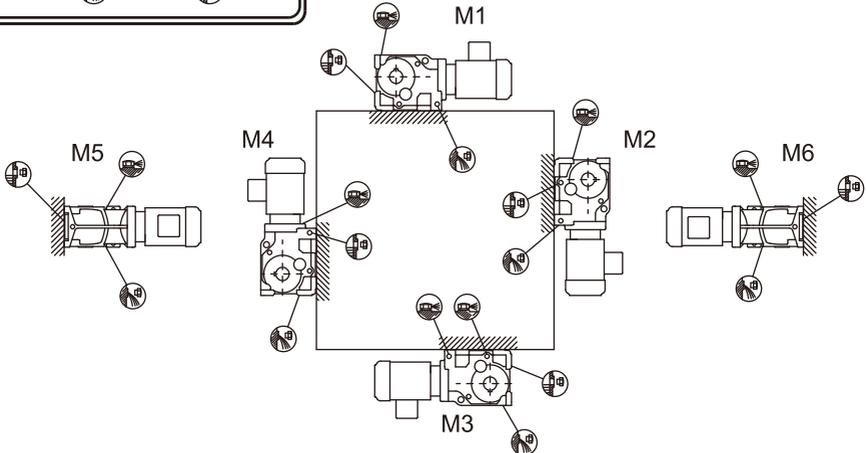
# Mount Position

Posisi Pemasangan

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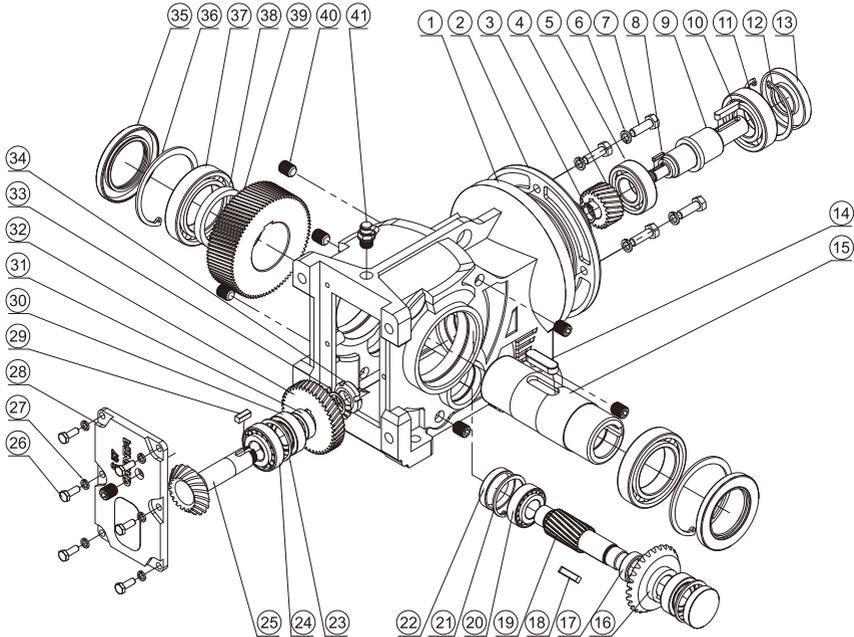
KS../KH..37-107



# Basic Structure

Struktur Dasar

MODEL : KHS



ITEM	PARTS NAME	QTY	ITEM	PARTS NAME	QTY	ITEM	PARTS NAME	QTY	ITEM	PARTS NAME	QTY
1	Housing	1	11	Bearing	1	21	Snap ring	2	31	Spacer	1
2	Input cover	1	12	Snap ring	1	22	Oil seal	2	32	Gear	1
3	Snap ring	1	13	Oil seal	1	23	Snap ring	1	33	Multi-tang washer	1
4	Pinion	1	14	Key	1	24	Bearing	1	34	Slotted nut	1
5	Bearing	1	15	Output shaft	2	25	Bevel pinion	1	35	Oil seal	2
6	Spring	4	16	Bevel gear	1	26	Screw	6	36	Snap ring	2
7	Screw	4	17	Spacer	1	27	Spring	6	37	Bearing	2
8	Key	1	18	Key	1	28	Cover	1	38	Spacer	1
9	Input shaft	1	19	Pinion	1	29	Key	1	39	Gear	1
10	Key	1	20	Bearing	2	30	Bearing	1	40	Breather cap	1
									41	Degassing valve	1

Material Glance :

1. Housing, Cover, Flange : FCD45

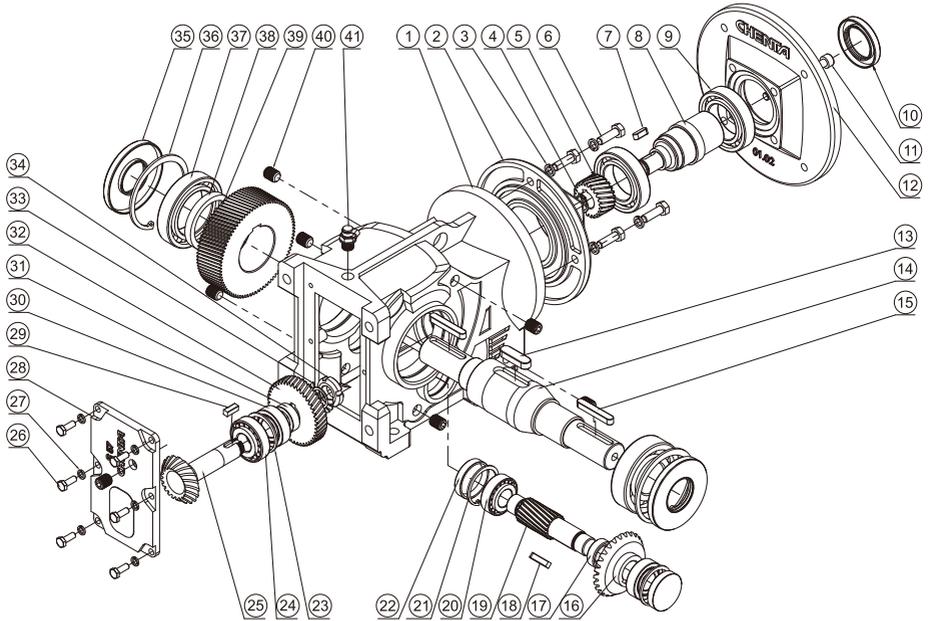
2. Input Shaft, Output Shaft : SCM440, S45C

3. Gear : SCM415

# Basic Structure

Struktur Dasar

MODEL : KSF



ITEM	PARTS NAME	QTY	ITEM	PARTS NAME	QTY	ITEM	PARTS NAME	QTY	ITEM	PARTS NAME	QTY
1	Housing	1	11	Screw	4	21	Snap ring	2	31	Spacer	1
2	Input cover	1	12	Input flange	1	22	Oil seal	2	32	Gear	1
3	Spring	4	13	Key	1	23	Snap ring	1	33	Multi-tang washer	1
4	Snap ring	1	14	Output shaft	1	24	Bearing	1	34	Slotted nut	1
5	Pinion	1	15	Key	2	25	Bevel pinion	1	35	Oil seal	2
6	Screw	4	16	Bevel gear	1	26	Screw	6	36	Snap ring	2
7	Key	1	17	Spacer	1	27	Spring	6	37	Bearing	2
8	Input shaft	1	18	Key	1	28	Cover	1	38	Spacer	1
9	Bearing	2	19	Pinion	1	29	Key	1	39	Gear	1
10	Oil seal	1	20	Bearing	2	30	Bearing	1	40	Breather cap	1
									41	Degassing valve	1

Material Glance :

1. Housing, Cover, Flange : FCD45
2. Input Shaft, Output Shaft : SCM440, S45C
3. Gear : SCM415

# Information of Selection Tables

Informasi tabel

K..F/..M

Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
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[1]

[2]

[3]

[4]

[5]

[6]

[7]

[8]

[9]

[1] Rated power driving motor

[6] Service factor

[2] Output speed

[7] Gear unit size

[3] Output torque

[8] Motor type

[4] Gear unit reduction ratio

[9] Weight

[5] Permissible overhung load output side (OHL)

K..S

i	na [1/min]	Mamax [Nm]	Pe [kW]	FRa [N]	FRe [N]			m [kg]
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[1]

[2]

[3]

[4]

[5]

[6]

[7]

[8]

[9]

[1] Gear unit reduction ratio

[6] Permitted overhung load on the input side (OHL)

[2] Output speed

[7] Gear unit size

[3] Maximum permitted output torque

[8] Input shaft diameter

[4] Calculated drive power of the gear unit

[9] Weight

[5] Permitted overhung load at maximum output torque (OHL)

# Input Horsepower & Output Torque

Daya yang tersedia & Torsi Keluar

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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## (0.25HP)

4581	0.33	4856	40000	0.89		
4051	0.37	4295	40000	1.00		
3553	0.42	3766	40000	1.14		
3112	0.48	3299	40000	1.30		
2787	0.54	2954	40000	1.46		
2364	0.63	2584	40000	1.66		
2132	0.70	2330	40000	1.85		
1887	0.79	2063	40000	2.08		
1586	0.95	1734	40000	2.48		
1406	1.07	1536	40000	2.80		
1245	1.20	1361	40000	3.16		
1110	1.35	1213	40000	3.54		
995	1.51	1088	40000	3.95		
897	1.67	981	40000	4.38		
734	2.04	803	40000	5.36		
679	2.21	742	40000	5.80		
3128	0.48	3316	27300	0.81		
2764	0.54	2930	27300	0.92		
2346	0.64	2487	27300	1.09		
2081	0.72	2275	27300	1.19		
1817	0.83	1986	27300	1.36		
1667	0.90	1822	27300	1.48		
1449	1.04	1583	27300	1.71		
1279	1.17	1398	27300	1.93		
1117	1.34	1220	27300	2.21		
948	1.58	1036	27300	2.61		
828	1.81	905	27300	2.98		
720	2.08	787	27300	3.43		
629	2.39	687	27300	3.93		
534	2.81	584	27300	4.62		
467	3.21	510	27300	5.29		
428	3.51	468	27300	5.77		
1548	0.97	1692	14500	0.92		
1388	1.08	1517	14500	1.02		
1246	1.20	1362	14500	1.14		
1123	1.34	1228	14500	1.26		
923	1.63	1009	14500	1.54		
823	1.82	900	14500	1.72		
716	2.09	783	14500	1.98		
622	2.41	680	14500	2.28		
564	2.66	617	14500	2.51		
468	3.20	512	14500	3.03		
420	3.57	460	14500	3.37		
374	4.01	409	14500	3.79		
336	4.47	367	14500	4.22		
287	5.23	314	14500	4.94		
241	6.23	263	14500	5.89		
841	1.78	919	10300	0.89		
791	1.90	865	10300	0.95		
698	2.15	763	10300	1.08		
613	2.45	670	10300	1.22		
540	2.78	591	10300	1.39		
475	3.16	519	10300	1.58		
405	3.71	442	10300	1.85		
356	4.21	389	10300	2.11		
320	4.69	350	10300	2.34		
278	5.40	303	10300	2.70		
249	6.02	272	10300	3.01		
218	6.87	239	10300	3.44		

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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## (0.25HP)

192	7.79	210	10300	3.90		
166	9.03	182	10300	4.52		
143	10.46	157	10300	5.23		
616	2.43	674	7630	0.89		
537	2.80	586	7630	1.02		
476	3.15	520	7630	1.15		
428	3.51	467	7630	1.28		
391	3.83	428	7630	1.40		
357	4.20	390	7630	1.54		
321	4.68	351	7630	1.71		
283	5.29	310	7630	1.94		
245	6.12	268	7630	2.24		
213	7.04	233	7630	2.58		
189	7.94	207	7630	2.91		
167	9.01	182	7630	3.30		
144	10.43	157	7630	3.82		
129	11.62	141	7630	4.25		
110	13.60	121	7630	4.98		
102	14.70	111	7630	5.38		
428	3.50	468	5920	0.86		
376	3.99	411	5920	0.97		
327	4.58	358	5920	1.12		
302	4.96	330	5920	1.21		
280	5.36	306	5920	1.31		
264	5.68	288	5920	1.39		
240	6.25	262	5920	1.53		
190	7.88	208	5920	1.92		
167	8.97	183	5920	2.19		
156	9.62	170	5920	2.35		
134	11.17	147	5920	2.73		
114	13.18	124	5920	3.21		
100	15.05	109	5920	3.67		
93	16.07	102	5920	3.92		
148.65	10.09	173	10300	4.75		
129.77	11.56	151	10300	5.44		
149.02	10.07	173	7630	3.47		
130.09	11.53	151	7630	3.97		
117.71	12.74	137	7630	4.39		
107.64	13.94	125	7630	4.80		
95.12	15.77	110	7630	5.43		
130.00	11.54	151	5920	2.65		
116.10	12.92	135	5920	2.97		
108.20	13.86	126	5920	3.18		
96.31	15.57	112	5920	3.57		
86.36	17.37	100	5920	3.89		
75.87	19.77	88	5920	4.42		
71.34	21.03	83	5920	4.70		
65.35	22.95	76	5920	5.07		
60.90	24.63	71	5920	5.36		
54.21	27.67	63	5920	5.94		
149.56	10.03	174	5640	1.15		
134.14	11.18	156	5640	1.28		
115.57	12.98	134	5640	1.49		
105.56	14.21	123	5640	1.63		
92.28	16.26	107	5640	1.87		

# Input Horsepower & Output Torque

Daya yang tersedia & Torsi Keluar

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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## (0.25HP)

83.18	18.03	97	5640	2.07		
75.12	19.97	87	5640	2.29	KSF37	
67.39	22.26	78	5640	2.55	KHF37	
59.31	25.29	69	5480	2.90	KAF37	63
49.21	30.48	57	5240	3.50	KNF37	
44.19	33.95	51	5100	3.90	KMF37	
37.74	39.74	44	4900	4.56		
32.00	46.88	37	4690	5.24		

## (0.5HP)

4451	0.34	9437	60600	0.85		
3876	0.39	8217	60600	0.97		
3402	0.44	7213	60600	1.11		
3034	0.49	6433	60600	1.24		
2618	0.57	5551	60600	1.44		
2278	0.66	4830	60600	1.66	KSF107 R77	71
2069	0.72	4387	60600	1.82	KHF107 R77	
1798	0.83	3930	60600	2.04	KAF107 R77	
1601	0.94	3500	60600	2.29	KNF107 R77	
1406	1.07	3072	60600	2.60	KMF107 R77	
1191	1.26	2603	60600	3.07		
986	1.52	2156	60600	3.71		
781	1.92	1708	60600	4.68		
681	2.20	1488	60600	5.38		
2364	0.63	5168	40000	0.83		
2132	0.70	4660	40000	0.92		
1887	0.79	4125	40000	1.04		
1586	0.95	3468	40000	1.24		
1406	1.07	3072	40000	1.40		
1245	1.20	2722	40000	1.58		
1110	1.35	2427	40000	1.77	KSF97 R57	71
995	1.51	2176	40000	1.98	KHF97 R57	
897	1.67	1962	40000	2.19	KAF97 R57	
734	2.04	1605	40000	2.68	KNF97 R57	
679	2.21	1484	40000	2.90	KMF97 R57	
612	2.45	1338	40000	3.21		
542	2.77	1185	40000	3.63		
504	2.98	1102	40000	3.90		
454	3.30	993	40000	4.33		
359	4.18	784	40000	5.48		
1449	1.04	3166	27300	0.85		
1279	1.17	2796	27300	0.97		
1117	1.34	2441	27300	1.11		
948	1.58	2072	27300	1.30		
828	1.81	1809	27300	1.49	KSF87 R57	71
720	2.08	1573	27300	1.72	KHF87 R57	
629	2.39	1374	27300	1.97	KAF87 R57	
534	2.81	1168	27300	2.31	KNF87 R57	
467	3.21	1020	27300	2.65	KMF87 R57	
428	3.51	935	27300	2.89		
378	3.97	826	27300	3.27		
330	4.55	721	27300	3.74		
270	5.55	591	27300	4.57		
228	6.57	499	27300	5.41		
823	1.82	1799	14500	0.86	KSF77 R37	71
716	2.09	1566	14500	0.99	KHF77 R37	
622	2.41	1360	14500	1.14	KAF77 R37	
564	2.66	1234	14500	1.26	KNF77 R37	
					KMF77 R37	

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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## (0.5HP)

468	3.20	1024	14500	1.51		
420	3.57	919	14500	1.69		
374	4.01	818	14500	1.90		
336	4.47	734	14500	2.11	KSF77 R37	71
287	5.23	627	14500	2.47	KHF77 R37	
241	6.23	526	14500	2.94	KAF77 R37	
223	6.73	487	14500	3.18	KNF77 R37	
190	7.90	415	14500	3.74	KMF77 R37	
177	8.48	387	14500	4.01		
159	9.44	347	14500	4.46		
405	3.71	885	10300	0.93		
356	4.21	779	10300	1.05		
320	4.69	699	10300	1.17		
278	5.40	607	10300	1.35	KSF67 R37	71
249	6.02	545	10300	1.50	KHF67 R37	
218	6.87	477	10300	1.72	KAF67 R37	
192	7.79	421	10300	1.95	KNF67 R37	
166	9.03	363	10300	2.26	KMF67 R37	
143	10.46	313	10300	2.62		
122	12.25	268	10300	3.06		
321	4.68	701	7630	0.86		
283	5.29	619	7630	0.97		
245	6.12	536	7630	1.12		
213	7.04	466	7630	1.29	KSF57 R37	71
189	7.94	413	7630	1.45	KHF57 R37	
167	9.01	364	7630	1.65	KAF57 R37	
144	10.43	314	7630	1.91	KNF57 R37	
129	11.62	282	7630	2.13	KMF57 R37	
110	13.60	241	7630	2.49		
102	14.70	223	7630	2.69		
190	7.88	416	5920	0.96		
167	8.97	365	5920	1.09	KSF47 R37	71
156	9.62	341	5920	1.17	KHF47 R37	
134	11.17	294	5920	1.36	KAF47 R37	
114	13.18	249	5920	1.61	KNF47 R37	
100	15.05	218	5920	1.84	KMF47 R37	
93	16.07	204	5920	1.96		
148.65	10.09	345	10300	2.37		
129.77	11.56	301	10300	2.72		
107.37	13.97	249	10300	3.29		
117.42	12.77	273	10300	3.01	KSF67	71
94.89	15.81	220	10300	3.60	KHF67	
83.59	17.94	194	10300	3.94	KAF67	
68.53	21.89	159	10300	4.53	KNF67	
64.58	23.23	150	10300	4.72	KMF67	
55.75	26.91	130	10300	5.23		
53.41	28.09	124	10300	5.41		
52.28	28.69	121	10300	5.46		
149.02	10.07	346	7630	1.73		
130.09	11.53	302	7630	1.99	KSF57	71
117.71	12.74	273	7630	2.19	KHF57	
107.64	13.94	250	7630	2.40	KAF57	
95.12	15.77	221	7630	2.72	KNF57	
83.80	17.90	195	7630	3.08	KMF57	
68.70	21.83	160	7630	3.76		
64.73	23.17	150	7630	3.99		
55.88	26.84	130	7630	4.62		
53.54	28.02	124	7630	4.82		
47.16	31.80	110	7510	5.48		
44.16	33.97	103	7370	5.85		

# Input Horsepower & Output Torque

Daya yang tersedia & Torsi Keluar

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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## (0.5HP)

130.00	11.54	302	5920	1.32	KSF47 KHF47 KAF47 KNF47 KMF47	71
116.10	12.92	270	5920	1.48		
108.20	13.86	251	5920	1.59		
96.31	15.57	224	5920	1.78		
86.36	17.37	201	5920	1.94		
75.87	19.77	176	5920	2.21		
71.34	21.03	166	5920	2.35		
65.35	22.95	152	5920	2.54		
60.90	24.63	141	5920	2.68		
54.21	27.67	126	5920	2.97		
48.61	30.86	113	5920	3.29		
42.70	35.13	99	5920	3.70		
40.15	37.36	93	5920	3.89		
29.81	50.32	69	5810	4.95		
26.34	56.95	61	5590	5.34		
23.14	64.82	54	5410	5.99		
105.56	14.21	245	4760	0.82	KHF37 KHF37 KAF37 KNF37 KMF37	71
92.28	16.26	214	4790	0.93		
83.18	18.03	193	4790	1.03		
75.12	19.97	175	4770	1.15		
67.39	22.26	157	4740	1.28		
59.31	25.29	138	4680	1.45		
49.21	30.48	114	4580	1.75		
44.19	33.95	103	4500	1.95		
37.74	39.74	88	4390	2.28		
32.00	46.88	74	4250	2.62		
26.04	57.61	60	4070	3.09		
23.36	64.22	54	3980	3.12		
20.56	72.97	48	3860	3.75		
17.06	87.94	40	3690	4.47		
15.32	97.94	36	3590	4.98		
13.08	114.66	30	3440	5.63		

## (0.75HP)

2278	0.66	6656	60600	1.17	KSF107 R77 KHF107 R77 KAF107 R77 KNF107 R77 KMF107 R77	80		
2069	0.72	6054	60600	1.29				
1798	0.83	5424	60600	1.45				
1601	0.94	4830	60600	1.63				
1406	1.07	4239	60600	1.85				
1191	1.26	3592	60600	2.19				
986	1.52	2975	60600	2.64				
781	1.92	2357	60600	3.33				
681	2.20	2053	60600	3.83				
602	2.49	1814	60600	4.33				
521	2.88	1573	60600	4.99				
455	3.30	1373	60600	5.72				
391	3.84	1180	60600	6.65				
356	4.22	1072	60600	7.32				
1245	1.20	3756	40000	1.12			KSF97 R57 KHF97 R57 KAF97 R57	80
1110	1.35	3349	40000	1.25				
995	1.51	3002	40000	1.40				
897	1.67	2707	40000	1.56				
734	2.04	2215	40000	1.91				
679	2.21	2048	40000	2.07				
612	2.45	1846	40000	2.28	KSF97 R57 KHF97 R57 KAF97 R57	80		
542	2.77	1635	40000	2.59				

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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## (0.75HP)

504	2.98	1520	40000	2.77	KNF97 R57 KMF97 R57	80		
454	3.30	1370	40000	3.08				
359	4.18	1083	40000	3.89				
301	4.98	909	40000	4.64				
257	5.84	774	40000	5.45				
241	6.23	726	40000	5.81				
203	7.37	614	40000	6.88				
828	1.81	2497	27300	1.07			KSF87 R57 KHF87 R57 KAF87 R57 KNF87 R57 KMF87 R57	80
720	2.08	2171	27300	1.23				
629	2.39	2632	27300	1.40				
534	2.81	1612	27300	1.64				
467	3.21	1407	27300	1.88				
428	3.51	1291	27300	2.05				
378	3.97	1140	27300	2.32				
330	4.55	995	27300	2.67				
270	5.55	815	27300	3.25				
228	6.57	689	27300	3.84				
200	7.49	604	27300	4.39				
162	9.28	487	27300	5.44				
137	10.98	412	27300	6.43				
468	3.20	1412	14500	1.08	KSF77 R37 KHF77 R37 KAF77 R37 KNF77 R37 KMF77 R37	80		
420	3.57	1268	14500	1.20				
374	4.01	1128	14500	1.35				
336	4.47	1013	14500	1.51				
287	5.23	866	14500	1.76				
241	6.23	726	14500	2.09				
223	6.73	672	14500	2.27				
190	7.90	573	14500	2.65				
177	8.48	534	14500	2.85				
159	9.44	479	14500	3.17				
249	6.02	752	10300	1.07			KSF67 R37 KHF67 R37 KAF67 R37 KNF67 R37 KMF67 R37	80
218	6.87	659	10300	1.23				
192	7.79	581	10300	1.39				
166	9.03	501	10300	1.60				
143	10.46	433	10300	1.87				
122	12.25	369	10300	2.17				
167	9.01	503	7630	1.17	KSF57 R37 KHF57 R37 KAF57 R37 KNF57 R37 KMF57 R37	80		
144	10.43	434	7630	1.36				
129	11.62	389	7630	1.51				
110	13.60	333	7630	1.77				
102	14.70	308	7630	1.91				
114	13.18	344	5920	1.15			KSF47 R37 KHF47 R37 KNF47 R37 KMF47 R37	80
100	15.05	301	5920	1.31				
93	16.07	282	5920	1.40				
213.20	7.04	684	27300	2.23	KSF87 KHF87 KAF87 KNF87 KMF87	80		
189.23	7.93	606	27300	2.23				
179.23	8.37	575	27300	2.23				
150.68	9.96	483	27300	2.23				
128.47	11.68	412	27300	6.43				
116.85	12.84	375	27300	7.07				
107.35	13.97	344	27300	7.69				
2278	0.66	9056	60600	2.23			KSF87 KHF87 KAF87 KNF87 KMF87	80
2069	0.72	8226	60600	2.23				
1798	0.83	7369	60600	2.23				
1601	0.94	6563	60600	2.23				

# Input Horsepower & Output Torque

Daya yang tersedia & Torsi Keluar

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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## (0.75HP)

1406	1.07	5760	60600	2.23	KSF77 KHF77 KAF77 KNF77 KMF77	80		
1191	1.26	4881	60600	3.91				
986	1.52	4042	60600	4.19				
781	1.92	3202	60600	4.57				
681	2.20	2789	60600	5.24				
602	2.49	2465	60600	6.32				
521	2.88	2137	60600	7.07				
455	3.30	1865	60600	7.87				
148.65	10.09	477	10300	1.69	KSF67 KHF67 KAF67 KNF67 KMF67	80		
129.77	11.56	416	10300	1.93				
107.37	13.97	344	10300	2.33				
117.42	12.77	376	10300	2.13				
94.89	15.81	304	10300	2.56				
83.59	17.94	268	10300	2.80				
68.53	21.89	219	10300	3.21				
64.58	23.23	207	10300	3.36				
55.75	26.91	179	10300	3.72				
53.41	28.09	171	10300	3.84				
52.28	28.69	168	10300	3.88				
46.05	32.57	148	10300	4.35				
44.05	34.05	141	10300	4.49				
38.57	38.89	124	10300	5.09				
37.75	39.73	121	10300	5.05				
36.35	41.27	116	10300	5.01				
33.26	45.09	107	10300	5.33				
31.38	47.81	101	10300	5.56				
27.27	55.00	88	10300	6.13				
25.70	58.37	82	10300	6.40				
24.80	60.49	79	10300	6.56				
22.18	67.62	71	10300	7.08				
21.25	70.59	68	10300	7.11				
149.02	10.07	478	7630	1.23			KSF57 KHF57 KAF57 KNF57 KMF57	80
130.09	11.53	417	7630	1.41				
117.71	12.74	378	7630	1.56				
107.64	13.94	345	7630	1.71				
95.12	15.77	305	7630	1.93				
83.80	17.90	269	7580	2.19				
68.70	21.83	220	7370	2.68				
64.73	23.17	208	7300	2.84				
55.88	26.84	179	7110	3.28				
53.54	28.02	171	7060	3.43				
47.16	31.80	151	6880	3.89				
44.16	33.97	141	6790	4.16				
38.67	38.79	124	6600	4.64				
36.44	41.17	117	6510	4.88				
33.35	44.98	107	6380	5.24				
31.45	47.69	101	6290	5.49				
27.34	54.87	88	6080	6.05				
25.76	58.23	82	5990	6.28				
24.86	60.34	79	5930	6.41				
22.24	67.45	71	5770	6.88				
108.20	13.86	347	5020	1.13	KSF47	80		
96.31	15.57	309	5190	1.27				
86.36	17.37	277	5310	1.39				
75.87	19.77	243	5410	1.57				
71.34	21.03	229	5440	1.67				
65.35	22.95	210	5460	1.80				
60.90	24.63	195	5470	1.91				
54.21	27.67	174	5470	2.11				

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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## (0.75HP)

48.61	30.86	156	5450	2.33	KHF47 KAF47 KNF47 KMF47	80
42.70	35.13	137	5400	2.63		
40.15	37.36	129	5360	2.76		
29.81	50.32	96	5160	3.52		
26.34	56.95	85	4970	3.80		
23.14	64.82	74	4860	4.25		
21.32	70.37	68	4870	4.51		
18.36	81.71	59	4720	5.07		
17.54	85.53	56	4670	5.23		
14.25	105.27	46	4410	5.59		
13.40	111.95	43	4350	5.81		
9.95	150.79	32	4050	7.09		
49.21	30.48	158	3410	1.24	KSF37 KHF37 KAF37 KNF37 KMF37	80
44.19	33.95	141	3460	1.39		
37.74	39.74	121	3490	1.63		
32.00	46.88	102	3500	1.87		
26.04	57.61	83	3460	2.20		
23.36	64.22	75	3420	2.23		
20.56	72.97	66	3370	2.67		
17.06	87.94	54	3280	3.17		
15.32	97.94	49	3230	3.55		
13.08	114.66	42	3140	4.00		
11.09	135.25	35	3030	4.56		
9.09	164.95	29	2900	5.41		
7.96	188.49	26	2750	6.09		
6.80	220.67	22	2650	6.73		
5.76	260.30	18	2550	7.48		

## (1HP)

2278	0.66	9056	60600	0.88	KSF107 R77 KHF107 R77 KAF107 R77 KNF107 R77 KMF107 R77	80		
2069	0.72	8226	60600	0.97				
1798	0.83	7369	60600	1.09				
1601	0.94	6563	60600	1.22				
1406	1.07	5760	60600	1.39				
1191	1.26	4881	60600	1.64				
986	1.52	4042	60600	1.98				
781	1.92	3202	60600	2.50				
681	2.20	2789	60600	2.87				
602	2.49	2465	60600	3.25				
521	2.88	2137	60600	3.74				
455	3.30	1865	60600	4.29				
391	3.84	1603	60600	4.99				
356	4.22	1457	60600	5.49				
1245	1.20	5103	40000	0.84			KSF97 R57 KHF97 R57 KAF97 R57	80
1110	1.35	4550	40000	0.94				
995	1.51	4079	40000	1.05				
897	1.67	3678	40000	1.17				
734	2.04	3009	40000	1.43				
679	2.21	2782	40000	1.55				
612	2.45	2508	40000	1.71				
542	2.77	2222	40000	1.94				
504	2.98	2065	40000	2.08	KNF97 R57 KMF97 R57	80		
454	3.30	1862	40000	2.31				
359	4.18	1471	40000	2.92				
301	4.98	1235	40000	3.48				
257	5.84	1052	40000	4.09				
241	6.23	986	40000	4.36				
203	7.37	834	40000	5.16				

# Input Horsepower & Output Torque

Daya yang tersedia & Torsi Keluar

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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(1HP)

828	1.81	3392	27300	0.80	KSF87 R57 KHF87 R57 KAF87 R57 KNF87 R57 KMF87 R57	80		
720	2.08	2950	27300	0.92				
629	2.39	2576	27300	1.05				
534	2.81	2190	27300	1.23				
467	3.21	1912	27300	1.41				
428	3.51	1754	27300	1.54				
378	3.97	1549	27300	1.74				
330	4.55	1352	27300	2.00				
270	5.55	1107	27300	2.44				
228	6.57	936	27300	2.88				
200	7.49	821	27300	3.29				
162	9.28	662	27300	4.08				
137	10.98	560	27300	4.82				
468	3.20	1919	14500	0.81	KSF77 R37 KHF77 R37 KAF77 R37 KNF77 R37 KMF77 R37	80		
420	3.57	1723	14500	0.90				
374	4.01	1533	14500	1.01				
336	4.47	1377	14500	1.13				
287	5.23	1176	14500	1.32				
241	6.23	987	14500	1.57				
223	6.73	913	14500	1.70				
190	7.90	778	14500	1.99				
177	8.48	725	14500	2.14				
159	9.44	651	14500	2.38				
249	6.02	1022	10300	0.80			KSF67 R37 KHF67 R37 KAF67 R37 KNF67 R37 KMF67 R37	80
218	6.87	895	10300	0.92				
192	7.79	789	10300	1.04				
166	9.03	681	10300	1.20				
143	10.46	588	10300	1.40				
122	12.25	502	10300	1.63				
167	9.01	683	7630	0.88	KSF57 R37 KHF57 R37 KAF57 R37 KNF57 R37 KMF57 R37	80		
144	10.43	589	7630	1.02				
129	11.62	529	7630	1.13				
110	13.60	452	7630	1.33				
102	14.70	418	7630	1.43				
114	13.18	467	5920	0.86			KSF47 R37 KHF47 R37 KAF47 R37 KNF47 R37 KMF47 R37	80
100	15.05	409	5920	0.98				
93	16.07	383	5920	1.05				
213.20	7.04	929	27300	1.67	KSF87 KHF87 KAF87 KNF87 KMF87	80		
189.23	7.93	824	27300	1.67				
179.23	8.37	781	27300	1.67				
150.68	9.96	656	27300	1.67				
128.47	11.68	560	27300	4.82				
116.85	12.84	509	27300	5.30				
107.35	13.97	468	27300	5.77				
193.18	7.76	841	14500	1.67			KSF77 KHF77	80
179.07	8.38	780	14500	1.67				
159.79	9.39	696	14500	1.67				
143.26	10.47	624	14500	1.67				
122.19	12.28	532	14500	1.67				
108.64	13.81	473	14500	2.93	KAF77 KNF77 KMF77	80		
100.05	14.99	436	14500	3.14				
89.54	16.75	390	14500	3.43				
77.60	19.33	338	14500	3.93	KAF77 KNF77 KMF77	80		
63.67	23.56	277	14500	4.74				
56.71	26.45	247	14500	5.30	KAF77 KNF77 KMF77	80		
50.87	29.49	222	14500	5.90				

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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(1HP)

148.65	10.09	648	10300	1.27	KSF67 KHF67 KAF67 KNF67 KMF67	80		
129.77	11.56	565	10300	1.45				
107.37	13.97	468	10300	1.75				
117.42	12.77	511	10300	1.60				
94.89	15.81	413	10300	1.92				
83.59	17.94	364	10300	2.10				
68.53	21.89	298	10300	2.41				
64.58	23.23	281	10300	2.52				
55.75	26.91	243	10300	2.79				
53.41	28.09	233	10300	2.88				
52.28	28.69	228	10300	2.91				
46.05	32.57	201	10300	3.26				
44.05	34.05	192	10300	3.37				
38.57	38.89	168	10300	3.82				
37.75	39.73	164	10300	3.79				
36.35	41.27	158	10300	3.76				
33.26	45.09	145	10300	4.00				
31.38	47.81	137	10300	4.17				
27.27	55.00	119	10300	4.60				
25.70	58.37	112	10300	4.80				
24.80	60.49	108	10300	4.92				
22.18	67.62	97	10300	5.31				
21.25	70.59	93	10300	5.33				
149.02	10.07	649	7630	0.92	KSF57 KHF57 KAF57 KNF57 KMF57	80		
130.09	11.53	567	7630	1.06				
117.71	12.74	513	7630	1.17				
107.64	13.94	469	7630	1.28				
95.12	15.77	414	7630	1.45				
83.80	17.90	365	7580	1.64				
68.70	21.83	299	7370	2.01				
64.73	23.17	282	7300	2.13				
55.88	26.84	243	7110	2.46				
53.54	28.02	233	7060	2.57				
47.16	31.80	205	6880	2.92				
44.16	33.97	192	6790	3.12				
38.67	38.79	168	6600	3.48				
36.44	41.17	159	6510	3.66				
33.35	44.98	145	6380	3.93				
31.45	47.69	137	6290	4.12				
27.34	54.87	119	6080	4.54				
25.76	58.23	112	5990	4.71				
24.86	60.34	108	5930	4.81				
22.24	67.45	97	5770	5.16				
108.20	13.86	471	5020	0.85	KSF47	80		
96.31	15.57	420	5190	0.95				
86.36	17.37	376	5310	1.04				
75.87	19.77	330	5410	1.18				
71.34	21.03	311	5440	1.25				
65.35	22.95	285	5460	1.35				
60.90	24.63	265	5470	1.43				
54.21	27.67	236	5470	1.58				
48.61	30.86	212	5450	1.75			KHF47 KAF47 KNF47 KMF47	80
42.70	35.13	186	5400	1.97				
40.15	37.36	175	5360	2.07				
29.81	50.32	130	5160	2.64				
26.34	56.95	115	4970	2.85				
23.14	64.82	101	4860	3.19				
21.32	70.37	93	4870	3.38				

# Input Horsepower & Output Torque

Daya yang tersedia & Torsi Keluar

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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**(1HP)**

18.36	81.71	80	4720	3.80	KHF47 KAF47 KNF47 KMF47	80
17.54	85.53	76	4670	3.92		
14.25	105.27	62	4410	4.19		
13.40	111.95	58	4350	4.36		
9.95	150.79	43	4050	5.32		
49.21	30.48	214	3410	0.93	KSF37 KHF37 KAF37 KNF37 KMF37	80
44.19	33.95	192	3460	1.04		
37.74	39.74	164	3490	1.22		
32.00	46.88	139	3500	1.40		
26.04	57.61	113	3460	1.65		
23.36	64.22	102	3420	1.67		
20.56	72.97	90	3370	2.00		
17.06	87.94	74	3280	2.38		
15.32	97.94	67	3230	2.66		
13.08	114.66	57	3140	3.00		
11.09	135.25	48	3030	3.42		
9.09	164.95	40	2900	4.06		
7.96	188.49	35	2750	4.57		
6.80	220.67	30	2650	5.05		
5.76	260.30	25	2550	5.61		

**(1.5HP)**

1191	1.26	7185	60600	1.09	KSF107 R77 KHF107 R77 KAF107 R77 KNF107 R77 KMF107 R77	90S
986	1.52	5951	60600	1.32		
781	1.92	4713	60600	1.67		
681	2.20	4106	60600	3.24		
602	2.49	3628	60600	3.49		
521	2.88	3145	60600	2.49		
455	3.30	2745	60600	2.85		
391	3.84	2360	60600	3.33		
356	4.22	2145	60600	3.67		
324	4.63	1956	60600	4.01		
274	5.48	1650	60600	4.76		
249	6.02	1504	60600	5.21		
216	6.93	1306	60600	6.01		
193	7.78	1163	60600	6.75		
173	8.67	1043	60600	7.52		
612	2.45	3693	40000	1.15	KSF97 R57 KHF97 R57 KAF97 R57 KNF97 R57 KMF97 R57	90S
542	2.77	3271	40000	1.29		
504	2.98	3040	40000	1.39		
454	3.30	2742	40000	1.53		
359	4.18	2165	40000	1.95		
301	4.98	1818	40000	3.65		
257	5.84	1549	40000	2.72		
241	6.23	1452	40000	2.91		
203	7.37	1228	40000	3.44		
378	3.97	2279	27300	1.16	KSF87 R57 KHF87 R57 KAF87 R57 KNF87 R57 KMF87 R57	90S
330	4.55	1990	27300	1.33		
270	5.55	1630	27300	1.63		
228	6.57	1378	27300	1.92		
200	7.49	1209	27300	2.19		
162	9.28	974	27300	2.72		
137	10.98	824	27300	3.21		
223	6.73	1344	14500	1.13	KSF77 R37 KHF77 R37 KAF77 R37 KNF77 R37 KMF77 R37	90S
190	7.90	1145	14500	1.33		
177	8.48	1067	14500	1.43		
159	9.44	958	14500	1.59		

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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**(1.5HP)**

122	12.25	739	10300	1.09	KSF67 R37 KHF67 R37 KAF67 R37 KNF67 R37 KMF67 R37	90S
213.20	7.04	1367	27300	1.11	KSF87 KHF87 KAF87 KNF87 KMF87	90S
189.23	7.93	1214	27300	1.11		
179.23	8.37	1149	27300	1.11		
150.68	9.96	966	27300	1.11		
128.47	11.68	824	27300	3.21		
116.85	12.84	749	27300	3.53		
107.35	13.97	688	27300	3.85		
93.28	16.08	598	27300	4.41		
82.36	18.21	528	27300	4.88		
71.91	20.86	461	27300	5.45		
61.04	24.57	392	27300	6.23		
53.30	28.14	342	27300	6.95		
50.15	29.91	322	27300	7.29		
46.35	32.36	297	27300	7.79		
193.18	7.76	1239	14500	1.11	KSF77 KHF77 KAF77 KNF77 KMF77	90S
179.07	8.38	1148	14500	1.11		
159.79	9.39	1025	14500	1.11		
143.26	10.47	919	14500	1.11		
122.19	12.28	783	14500	1.11		
108.64	13.81	696	14500	1.96		
100.05	14.99	642	14500	2.09		
89.54	16.75	574	14500	2.29		
77.60	19.33	498	14500	2.61		
63.67	23.56	408	14500	3.16		
56.71	26.45	364	14500	3.53		
50.87	29.49	326	14500	3.93		
46.83	32.03	300	14500	4.24		
39.52	37.96	253	14500	5.09		
35.84	41.86	230	14500	5.60		
31.92	47.00	205	14500	6.25		
28.63	52.39	183	14500	6.88		
26.36	56.90	169	14500	7.29		
25.34	59.20	163	14500	7.49		
107.37	13.97	688	10300	1.17	KSF67 KHF67 KAF67 KNF67 KMF67	90S
117.42	12.77	753	10000	1.07		
94.89	15.81	609	10300	1.28		
83.59	17.94	536	10300	1.40		
68.53	21.89	439	10300	1.61		
64.58	23.23	414	10300	1.68		
55.75	26.91	358	10300	1.85		
53.41	28.09	342	10300	1.92		
52.28	28.69	335	10300	1.95		
46.05	32.57	295	10300	2.17	KSF67 KHF67 KAF67 KNF67 KMF67	90S
44.05	34.05	283	10300	2.25		
38.57	38.89	247	10300	2.55		
37.75	39.73	242	10300	2.53		
36.35	41.27	233	10300	2.51		
33.26	45.09	213	10300	2.67		
31.38	47.81	201	10300	2.79		
27.27	55.00	175	10300	3.07		
25.70	58.37	165	10300	3.20		
24.80	60.49	159	10300	3.28		
22.18	67.62	142	10240	3.55		

# Input Horsepower & Output Torque

Daya yang tersedia & Torsi Keluar

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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## (1.5HP)

21.25	70.59	136	10160	3.55	KSF67	90S		
17.53	85.56	113	9810	4.17	KHF67			
14.16	105.95	91	9390	5.03	KAF67			
12.22	122.73	78	9100	5.61	KNF67			
9.66	155.31	62	8630	6.87	KMF67			
83.80	17.90	537	5190	1.09	KSF57 KHF57 KAF57 KNF57 KMF57		90S	
68.70	21.83	440	5420	1.33				
64.73	23.17	415	5460	1.41				
55.88	26.84	358	5520	1.64				
53.54	28.02	343	5530	1.72				
47.16	31.80	302	5540	1.95				
44.16	33.97	283	5530	2.08				
38.67	38.79	248	5500	2.32				
36.44	41.17	233	5470	2.44				
33.35	44.98	214	5430	2.63				
31.45	47.69	202	5400	2.75				
27.34	54.87	175	5300	3.03				
25.76	58.23	165	5260	3.13				
24.86	60.34	160	5230	3.21				
22.24	67.45	143	5140	3.44				
18.03	83.21	116	4940	4.27				
15.56	96.39	100	4790	4.73				
13.53	110.90	87	4650	5.20				
12.75	117.69	82	4590	5.41				
11.00	136.33	71	4430	5.96				
8.69	172.51	56	4180	6.97				
48.61	30.86	311	3180	1.17		KSF47 KHF47 KAF47 KNF47 KMF47		90S
42.70	35.13	274	3400	1.32				
40.15	37.36	258	3490	1.39				
29.81	50.32	191	3770	1.76				
26.34	56.95	169	3640	1.91				
23.14	64.82	149	3700	2.13				
21.32	70.37	137	3870	2.25				
18.36	81.71	118	3860	2.53				
17.54	85.53	113	3860	2.61				
14.25	105.27	91	3690	2.80				
13.40	111.95	86	3680	2.91				
9.95	150.79	64	3550	3.55				
7.11	210.89	46	3350	4.44				
5.85	256.31	38	3220	5.05				
26.04	57.61	167	2140	1.09	KSF37 KHF37 KAF37 KNF37 KMF37		90S	
23.36	64.22	149	2240	1.11				
20.56	72.97	132	2330	1.33				
17.06	87.94	110	2420	1.59				
15.32	97.94	98	2450	1.77				
13.08	114.66	84	2470	2.00				
11.09	135.25	71	2470	2.28				
9.09	164.95	58	2440	2.71				
7.96	188.49	51	2280	3.04				
6.80	220.67	43	2250	3.37				
5.76	260.30	37	2210	3.75				
4.73	317.46	30	2150	4.23				

## (2HP)

1191	1.26	9762	60600	0.82	KSF107 R77	90L
986	1.52	8085	60600	0.99	KHF107 R77	
781	1.92	6404	60600	1.25	KAF107 R77	
681	2.20	5579	60600	1.43	KNF107 R77	
					KMF107 R77	

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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## (2HP)

602	2.49	4930	60600	1.62	KSF107 R77 KHF107 R77 KAF107 R77 KNF107 R77 KMF107 R77	90L		
521	2.88	4273	60600	1.87				
455	3.30	3730	60600	2.14				
391	3.84	3206	60600	2.50				
356	4.22	2914	60600	2.75				
324	4.63	2657	60600	3.01				
274	5.48	2242	60600	3.57				
249	6.02	2044	60600	3.91				
216	6.93	1774	60600	4.51				
193	7.78	1580	60600	5.06				
173	8.67	1417	60600	5.64				
612	2.45	5017	40000	0.86			KSF97 R57 KHF97 R57 KAF97 R57 KNF97 R57 KMF97 R57	90L
542	2.77	4444	40000	0.97				
504	2.98	4131	40000	1.04				
454	3.30	3725	40000	1.15				
359	4.18	2942	40000	1.46				
301	4.98	2470	40000	1.74				
257	5.84	2104	40000	2.04				
241	6.23	1973	40000	2.18				
203	7.37	1668	40000	2.58				
378	3.97	3097	27300	0.87	KSF87 R57 KHF87 R57 KAF87 R57 KNF87 R57 KMF87 R57	90L		
330	4.55	2704	27300	1.00				
270	5.55	2215	27300	1.22				
228	6.57	1872	27300	1.44				
200	7.49	1642	27300	1.64				
162	9.28	1324	27300	2.04				
137	10.98	1120	27300	2.41				
223	6.73	1826	14500	0.85			KSF77 R37 KHF77 R37 KAF77 R37 KNF77 R37 KMF77 R37	90L
190	7.90	1556	14500	1.00				
177	8.48	1450	14500	1.07				
159	9.44	1302	14500	1.19				
122	12.25	1004	10300	0.82				
213.20	7.04	1857	27300	0.83	KSF87 KHF87 KAF87 KNF87 KMF87	90L		
189.23	7.93	1649	27300	0.83				
179.23	8.37	1561	27300	0.83				
150.68	9.96	1313	27300	0.83				
128.47	11.68	1119	27300	2.41				
116.85	12.84	1018	27300	2.65				
107.35	13.97	935	27300	2.89				
93.28	16.08	813	27300	3.31				
82.36	18.21	717	27300	3.66				
71.91	20.86	626	27300	4.09				
61.04	24.57	532	27300	4.67				
53.30	28.14	464	27300	5.21				
50.15	29.91	437	27300	5.47				
46.35	32.36	404	27300	5.84				
193.18	7.76	1683	14500	0.83	KSF77 KHF77 KAF77 KNF77 KMF77	90L		
179.07	8.38	1560	14500	0.83				
159.79	9.39	1392	14500	0.83				
143.26	10.47	1248	14500	0.83				
122.19	12.28	1064	14500	0.83				
108.64	13.81	946	14500	1.47				
100.05	14.99	872	14500	1.57				

# Input Horsepower & Output Torque

Daya yang tersedia & Torsi Keluar

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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## (2HP)

89.54	16.75	780	14500	1.72	KSF77 KHF77 KAF77 KNF77 KMF77	90L
77.60	19.33	676	14500	1.96		
63.67	23.56	555	14500	2.37		
56.71	26.45	494	14500	2.65		
50.87	29.49	443	14500	2.95		
46.83	32.03	408	14500	3.18		
39.52	37.96	344	14500	3.82		
35.84	41.86	312	14500	4.20		
31.92	47.00	278	14500	4.69		
28.63	52.39	249	14500	5.16		
26.36	56.90	230	14500	5.47		
25.34	59.20	221	14500	5.62		
107.37	13.97	935	10300	0.88	KSF67 KHF67 KAF67 KNF67 KMF67	90L
117.42	12.77	1023	10000	0.80		
94.89	15.81	827	10300	0.96		
83.59	17.94	728	10300	1.05		
68.53	21.89	597	10300	1.21		
64.58	23.23	563	10300	1.26		
55.75	26.91	486	10300	1.39		
53.41	28.09	465	10300	1.44		
52.28	28.69	455	10300	1.46		
46.05	32.57	401	10300	1.63		
44.05	34.05	384	10300	1.69		
38.57	38.89	336	10300	1.91		
37.75	39.73	329	10300	1.90		
36.35	41.27	317	10300	1.88		
33.26	45.09	290	10300	2.00		
31.38	47.81	273	10300	2.09		
27.27	55.00	238	10300	2.30		
25.70	58.37	224	10300	2.40		
24.80	60.49	216	10300	2.46		
22.18	67.62	193	10240	2.66		
21.25	70.59	185	10160	2.66		
17.53	85.56	153	9810	3.13		
14.16	105.95	123	9390	3.77		
12.22	122.73	106	9100	4.21		
9.66	155.31	84	8630	5.15		
83.80	17.90	730	5190	0.82	KSF57 KHF57 KAF57 KNF57 KMF57	90L
68.70	21.83	598	5420	1.00		
64.73	23.17	564	5460	1.06		
55.88	26.84	487	5520	1.23		
53.54	28.02	466	5530	1.29		
47.16	31.80	411	5540	1.46		
44.16	33.97	385	5530	1.56		
38.67	38.79	337	5500	1.74		
36.44	41.17	317	5470	1.83		
33.35	44.98	291	5430	1.97		
31.45	47.69	274	5400	2.06		
27.34	54.87	238	5300	2.27		
25.76	58.23	224	5260	2.35		
24.86	60.34	217	5230	2.41		
22.24	67.45	194	5140	2.58		
18.03	83.21	157	4940	3.20		
15.56	96.39	136	4790	3.55		
13.53	110.90	118	4650	3.90		
12.75	117.69	111	4590	4.06		
11.00	136.33	96	4430	4.47		
8.69	172.51	76	4180	5.23		

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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## (2HP)

48.61	30.86	423	3180	0.88	KSF47 KHF47 KAF47 KNF47 KMF47	90L
42.70	35.13	372	3400	0.99		
40.15	37.36	350	3490	1.04		
29.81	50.32	260	3770	1.32		
26.34	56.95	229	3640	1.43		
23.14	64.82	202	3700	1.60		
21.32	70.37	186	3870	1.69		
18.36	81.71	160	3860	1.90		
17.54	85.53	153	3860	1.96		
14.25	105.27	124	3690	2.09		
13.40	111.95	117	3680	2.18		
9.95	150.79	87	3550	2.66		
7.11	210.89	62	3350	3.33		
5.85	256.31	51	3220	3.79		
26.04	57.61	227	2140	0.82		
23.36	64.22	203	2240	0.83		
20.56	72.97	179	2330	1.00		
17.06	87.94	149	2420	1.19		
15.32	97.94	133	2450	1.33		
13.08	114.66	114	2470	1.50		
11.09	135.25	97	2470	1.71		
9.09	164.95	79	2440	2.03		
7.96	188.49	69	2280	2.28		
6.80	220.67	59	2250	2.53		
5.76	260.30	50	2210	2.81		
4.73	317.46	41	2150	3.17		

## (3HP)

781	1.92	9392	60600	0.85	KSF107 R77 KHF107 R77 KAF107 R77 KNF107 R77 KMF107 R77	100L
681	2.20	8182	60600	0.98		
602	2.49	7231	60600	1.11		
521	2.88	6267	60600	1.28		
455	3.30	5470	60600	1.46		
391	3.84	4701	60600	1.70		
356	4.22	4274	60600	1.87		
324	4.63	3897	60600	2.05		
274	5.48	3289	60600	2.43		
249	6.02	2998	60600	2.67		
216	6.93	2602	60600	3.07		
193	7.78	2318	60600	3.45		
173	8.67	2079	60600	3.85		
156	9.64	1871	60600	4.28		
142	10.55	1710	60600	4.68		
359	4.18	4315	40000	1.00	KSF97 R57 KHF97 R57 KAF97 R57 KNF97 R57 KMF97 R57	100L
301	4.98	3623	40000	1.19		
257	5.84	3085	40000	1.39		
241	6.23	2893	40000	1.49		
203	7.37	2446	40000	1.76		
270	5.55	3248	27300	0.83	KSF87 R57 KHF87 R57 KAF87 R57 KNF87 R57 KMF87 R57	100L
228	6.57	2746	27300	0.98		
200	7.49	2408	27300	1.12		
162	9.28	1942	27300	1.39		
137	10.98	1642	27300	1.64		
159	9.44	1909	14500	0.81	KSF77 R37 KHF77 R37 KAF77 R37 KNF77 R37 KMF77 R37	100L

# Input Horsepower & Output Torque

Daya yang tersedia & Torsi Keluar

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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### (3HP)

156.04	9.61	1994	40000	2.16	KSF97 KHF97 KAF97 KNF97 KMF97	100L		
137.60	10.90	1758	40000	2.45				
125.64	11.94	1605	40000	2.68				
107.03	14.01	1368	40000	3.14				
100.39	14.94	1283	40000	3.35				
90.52	16.57	1157	40000	3.72				
80.18	18.71	1024	40000	4.20				
71.49	20.98	913	40000	4.71				
64.10	23.40	819	40000	5.17				
57.79	25.96	738	40000	5.74				
128.47	11.68	1641	27300	1.64	KSF87 KHF87 KAF87 KNF87 KMF87	100L		
116.85	12.84	1493	27300	1.81				
107.35	13.97	1372	27300	1.97				
93.28	16.08	1192	27300	2.26				
82.36	18.21	1052	27300	2.49				
71.91	20.86	919	27300	2.79				
61.04	24.57	780	27300	3.18				
53.30	28.14	681	27300	3.55				
50.15	29.91	641	27300	3.73				
46.35	32.36	592	27300	3.98				
43.05	34.84	550	27300	4.23	KSF87 KHF87 KAF87 KNF87 KMF87	100L		
40.47	37.06	517	27300	4.45				
39.36	38.11	503	27300	4.55				
37.12	40.41	474	26990	4.77				
32.77	45.77	419	26220	5.34				
28.62	52.42	366	25380	6.00				
108.64	13.81	1388	14500	1.00			KSF77 KHF77 KAF77 KNF77 KMF77	100L
100.05	14.99	1278	14500	1.07				
89.54	16.75	1144	14500	1.17				
77.60	19.33	991	14500	1.34				
63.67	23.56	814	14500	1.62				
56.71	26.45	725	14500	1.81				
50.87	29.49	650	14500	2.01				
46.83	32.03	598	14500	2.17				
39.52	37.96	505	14500	2.60				
35.84	41.86	458	14500	2.87				
31.92	47.00	408	14500	3.20				
28.63	52.39	366	14500	3.52				
26.36	56.90	337	14500	3.73				
25.34	59.20	324	14500	3.83				
22.57	66.47	288	14500	4.15				
20.24	74.10	259	14500	4.48				
18.64	80.48	238	14500	4.75				
17.05	87.97	218	14500	4.89				
15.73	95.38	201	14500	5.35				
15.30	98.07	195	14500	5.28				
13.54	110.82	173	14500	5.75				
68.53	21.89	876	8450	0.82	KSF67 KHF67 KAF67 KNF67 KMF67	100L		
64.58	23.23	825	8650	0.86				
55.75	26.91	712	9030	0.95				
53.41	28.09	682	9120	0.98				
52.28	28.69	668	9140	0.99				
46.05	32.57	588	9330	1.11				
44.05	34.05	563	9400	1.15				
38.57	38.89	493	9500	1.30				
37.75	39.73	482	9500	1.29				
36.35	41.27	464	9530	1.28				
33.26	45.09	425	9540	1.36				
31.38	47.81	401	9540	1.42				

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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### (3HP)

27.27	55.00	348	9500	1.57	KSF67 KHF67 KAF67 KNF67 KMF67	100L
25.70	58.37	328	9470	1.63		
24.80	60.49	317	9440	1.68		
22.18	67.62	283	9360	1.81		
21.25	70.59	272	9310	1.82		
17.53	85.56	224	9110	2.14		
14.16	105.95	181	8830	2.57		
12.22	122.73	156	8610	2.87		
9.66	155.31	123	8240	3.51		
55.88	26.84	714	4040	0.84		
53.54	28.02	684	4110	0.88		
47.16	31.80	603	4290	1.00		
44.16	33.97	564	4360	1.06		
38.67	38.79	494	4470	1.19		
36.44	41.17	466	4510	1.25		
33.35	44.98	426	4540	1.34		
31.45	47.69	402	4560	1.41		
27.34	54.87	349	4580	1.55		
25.76	58.23	329	4570	1.60		
24.86	60.34	318	4570	1.64		
22.24	67.45	284	4550	1.76		
18.03	83.21	230	4460	2.19		
15.56	96.39	199	4380	2.42		
13.53	110.90	173	4290	2.66		
12.75	117.69	163	4250	2.76		
11.00	136.33	141	4140	3.05		
8.69	172.51	111	3950	3.57		
29.81	50.32	381	2470	0.90	KSF47 KHF47 KAF47 KNF47 KMF47	100L
26.34	56.95	337	2410	0.97		
23.14	64.82	296	2610	1.09		
21.32	70.37	272	2940	1.15		
18.36	81.71	235	3060	1.30		
17.54	85.53	224	3090	1.34		
14.25	105.27	182	3030	1.43		
13.40	111.95	171	3050	1.49		
9.95	150.79	127	3080	1.81		
7.11	210.89	91	3020	2.27		
5.85	256.31	75	2950	2.58		

### (4HP)

455	3.30	6771	60600	1.20	KSF107 R77 KHF107 R77 KAF107 R77 KNF107 R77 KMF107 R77	112M
391	3.84	5820	60600	1.01		
356	4.22	5291	60600	1.11		
324	4.63	4824	60600	1.22		
274	5.48	4071	60600	1.45		
249	6.02	3711	60600	1.59		
216	6.93	3221	60600	1.83		
193	7.78	2869	60600	2.05		
173	8.67	2573	60600	2.29		
156	9.64	2316	60600	2.54		
142	10.55	2117	60600	2.78		
257	5.84	3819	40000	1.14		
241	6.23	3581	40000	1.21		
203	7.37	3028	40000	1.44		

# Input Horsepower & Output Torque

Daya yang tersedia & Torsi Keluar

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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**(4HP)**

142.68	10.51	2257	65000	3.59		
121.21	12.37	1917	65000	4.22		
106.39	14.10	1682	65000	4.81	KSF107	
99.86	15.02	1579	65000	5.13	KHF107	
94.90	15.81	1501	65000	5.39	KAF107	112M
90.15	16.64	1426	65000	5.68	KNF107	
81.88	18.32	1295	65000	6.26	KMF107	
74.66	20.09	1181	65000	6.86		
65.93	22.75	1043	65000	7.77		
156.04	9.61	2468	40000	1.76		
137.60	10.90	2176	40000	1.99		
125.64	11.94	1987	40000	2.19	KSF97	
107.03	14.01	1693	40000	2.57	KHF97	
100.39	14.94	1588	40000	2.74	KAF97	112M
90.52	16.57	1432	40000	3.04	KNF97	
80.18	18.71	1268	40000	3.44	KMF97	
71.49	20.98	1130	40000	3.85		
64.10	23.40	1013	40000	4.22		
57.79	25.96	914	40000	4.69	KSF97	
47.28	31.72	748	40000	5.73	KHF97	
43.71	34.32	691	40000	6.20	KAF97	112M
39.41	38.06	623	40000	6.81	KNF97	
34.91	42.97	552	40000	7.52	KMF97	
150.68	9.96	2383	26500	1.14		
128.47	11.68	2032	27150	1.35		
116.85	12.84	1848	27300	1.49		
107.35	13.97	1698	27300	1.61		
93.28	16.08	1475	27300	1.84	KSF87	112M
82.36	18.21	1303	27300	2.04		
71.91	20.86	1137	27300	2.28		
61.04	24.57	966	26920	2.60		
53.30	28.14	843	26510	2.90		
50.15	29.91	793	26300	3.05		
46.35	32.36	733	26010	3.26		
43.05	34.84	681	25730	3.45		
40.47	37.06	640	25480	3.63		
39.36	38.11	623	25360	3.71		
37.12	40.41	587	25110	3.91	KHF87	
32.77	45.77	518	24560	4.37	KAF87	112M
28.62	52.42	453	23940	4.91	KNF87	
27.71	54.14	438	23380	5.02	KMF87	
24.29	61.75	384	23160	5.51		
21.21	70.72	336	22500	6.20		
19.96	75.17	316	22200	6.56		
17.13	87.56	271	21450	7.66		
77.60	19.33	1227	14500	1.10		
63.67	23.56	1007	14500	1.32		
56.71	26.45	897	14500	1.49	KSF77	
50.87	29.49	804	14500	1.65	KHF77	
46.83	32.03	740	14500	1.77	KAF77	112M
39.52	37.96	625	14500	2.13	KNF77	
35.84	41.86	567	14500	2.34	KMF77	
31.92	47.00	505	14500	2.61		
28.63	52.39	453	14500	2.87		
26.36	56.90	417	14500	3.05		
25.34	59.20	400	14500	3.14		
22.57	66.47	357	14500	3.40		

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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**(4HP)**

20.24	74.10	320	14500	3.67		
18.64	80.48	294	14500	3.88		
17.05	87.97	269	14500	4.00	KSF77	
15.73	95.38	249	14500	4.37	KHF77	112M
15.30	98.07	242	14500	4.32	KAF77	
13.54	110.82	214	14330	4.70	KNF77	
12.06	124.42	191	14040	5.10	KMF77	
10.81	138.71	171	13750	5.50		
9.96	150.65	158	13520	5.83		
8.40	178.54	133	13050	6.56		
33.26	45.09	526	6710	1.11		
31.38	47.81	496	6870	1.17		
27.27	55.00	431	7180	1.28		
25.70	58.37	406	7280	1.33	KSF67	
24.80	60.49	392	7330	1.38	KHF67	112M
22.18	67.62	351	7470	1.49	KAF67	
21.25	70.59	336	7490	1.49	KNF67	
17.53	85.56	277	7620	1.75	KMF67	
14.16	105.95	224	7620	2.10		
12.22	122.73	194	7570	2.35		
9.66	155.31	153	7420	2.87		
33.35	44.98	528	1870	1.10		
31.45	47.69	498	2170	1.16		
27.34	54.87	432	2780	1.27		
25.76	58.23	408	3010	1.31	KSF57	
24.86	60.34	393	3140	1.35	KHF57	112M
22.24	67.45	352	3280	1.44	KAF57	
18.03	83.21	285	3430	1.79	KNF57	
15.56	96.39	246	3490	1.98	KMF57	
13.53	110.90	214	3520	2.17		
12.75	117.69	202	3520	2.26		
11.00	136.33	174	3510	2.49		
8.69	172.51	138	3460	2.92		

**(5.5HP)**

455	3.30	9200	60600	0.87		
391	3.84	7907	60600	1.01		
356	4.22	7189	60600	1.11		
324	4.63	6554	60600	1.22	KSF107 R77	
274	5.48	5531	60600	1.45	KHF107 R77	112M
249	6.02	5042	60600	1.59	KAF107 R77	
216	6.93	4377	60600	1.83	KNF107 R77	
193	7.78	3898	60600	2.05	KMF107 R77	
173	8.67	3496	60600	2.29		
156	9.64	3147	60600	2.54		
142	10.55	2876	60600	2.78		
257	5.84	5189	40000	0.83	KSF97 R57	
241	6.23	4866	40000	0.88	KHF97 R57	112M
203	7.37	4114	40000	1.05	KAF97 R57	
					KNF97 R57	
					KMF97 R57	
142.68	10.51	3066	65000	2.61		
121.21	12.37	2605	65000	3.07		
106.39	14.10	2286	65000	3.50		
99.86	15.02	2146	65000	3.73	KSF107	
94.90	15.81	2039	65000	3.92	KHF107	112M
90.15	16.64	1937	65000	4.13	KAF107	
81.88	18.32	1760	65000	4.55	KNF107	
74.66	20.09	1604	65000	4.99	KMF107	
65.93	22.75	1417	65000	5.65		

# Input Horsepower & Output Torque

Daya yang tersedia & Torsi Keluar

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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**(5.5HP)**

156.04	9.61	3353	40000	1.28	KSF97 KHF97 KAF97 KNF97 KMF97	112M
137.60	10.90	2957	40000	1.45		
125.64	11.94	2700	40000	1.59		
107.03	14.01	2300	40000	1.87		
100.39	14.94	2157	40000	1.99		
90.52	16.57	1945	40000	2.21		
80.18	18.71	1723	40000	2.50		
71.49	20.98	1536	40000	2.80		
64.10	23.40	1377	40000	3.07		
57.79	25.96	1242	40000	3.41		
47.28	31.72	1016	40000	4.17		
43.71	34.32	939	40000	4.51		
39.41	38.06	847	40000	4.95		
34.91	42.97	750	40000	5.47		

150.68	9.96	3238	26500	0.83	KSF87 KHF87 KAF87 KNF87 KMF87	112M
128.47	11.68	2761	27150	0.98		
116.85	12.84	2511	27300	1.08		
107.35	13.97	2307	27300	1.17		
93.28	16.08	2004	27300	1.34		
82.36	18.21	1770	27300	1.48		
71.91	20.86	1545	27300	1.66		
61.04	24.57	1312	26920	1.89		
53.30	28.14	1145	26510	2.11		
50.15	29.91	1078	26300	2.22		
46.35	32.36	996	26010	2.37		
43.05	34.84	925	25730	2.51		
40.47	37.06	870	25480	2.64		
39.36	38.11	846	25360	2.70		
37.12	40.41	798	25110	2.84		
32.77	45.77	704	24560	3.18		
28.62	52.42	615	23940	3.57		
27.71	54.14	595	23380	3.65		
24.29	61.75	522	23160	4.01		
21.21	70.72	456	22500	4.51		
19.96	75.17	429	22200	4.77		
17.13	87.56	368	21450	5.57		

77.60	19.33	1667	14500	0.80	KSF77 KHF77 KAF77 KNF77 KMF77	112M
63.67	23.56	1368	14500	0.96		
56.71	26.45	1219	14500	1.08		
50.87	29.49	1093	14500	1.20		
46.83	32.03	1006	14500	1.29		
39.52	37.96	849	14500	1.55		
35.84	41.86	770	14500	1.70		
31.92	47.00	686	14500	1.90		
28.63	52.39	615	14500	2.09		
26.36	56.90	566	14500	2.22		
25.34	59.20	544	14500	2.28		
22.57	66.47	485	14500	2.47		
20.24	74.10	435	14500	2.67		
18.64	80.48	400	14500	2.82		
17.05	87.97	366	14500	2.91		
15.73	95.38	338	14500	3.18		
15.30	98.07	329	14500	3.14		
13.54	110.82	291	14330	3.42		
12.06	124.42	259	14040	3.71		
10.81	138.71	232	13750	4.00		
9.96	150.65	214	13520	4.24		
8.40	178.54	181	13050	4.77		

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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**(5.5HP)**

33.26	45.09	715	6710	0.81	KSF67 KHF67 KAF67 KNF67 KMF67	112M
31.38	47.81	674	6870	0.85		
27.27	55.00	586	7180	0.93		
25.70	58.37	552	7280	0.97		
24.80	60.49	533	7330	1.00		
22.18	67.62	477	7470	1.08		
21.25	70.59	457	7490	1.08		
17.53	85.56	377	7620	1.27		
14.16	105.95	304	7620	1.53		
12.22	122.73	263	7570	1.71		
9.66	155.31	208	7420	2.09		

33.35	44.98	717	1870	0.80	KSF57 KHF57 KAF57 KNF57 KMF57	112M
31.45	47.69	676	2170	0.84		
27.34	54.87	587	2780	0.92		
25.76	58.23	554	3010	0.95		
24.86	60.34	534	3140	0.98		
22.24	67.45	478	3280	1.05		
18.03	83.21	387	3430	1.30		
15.56	96.39	334	3490	1.44		
13.53	110.90	291	3520	1.58		
12.75	117.69	274	3520	1.64		
11.00	136.33	236	3510	1.81		
8.69	172.51	187	3460	2.12		

**(7.5HP)**

324	4.63	9743	60600	0.82	KSF107 R77 KHF107 R77 KAF107 R77 KNF107 R77 KMF107 R77	132S
274	5.48	8221	60600	0.97		
249	6.02	7495	60600	1.07		
216	6.93	6506	60600	1.23		
193	7.78	5794	60600	1.38		
173	8.67	5197	60600	1.54		
156	9.64	4677	60600	1.71		
142	10.55	4275	60600	1.87		

142.68	10.51	4557	65000	1.76	KSF107 KHF107 KAF107 KNF107 KMF107	132S
121.21	12.37	3872	65000	2.07		
106.39	14.10	3398	65000	2.35		
99.86	15.02	3190	65000	2.51		
94.90	15.81	3031	65000	2.64		
90.15	16.64	2880	65000	2.78		
81.88	18.32	2616	65000	3.06		
74.66	20.09	2385	65000	3.35		
65.93	22.75	2106	65000	3.80		
57.43	26.12	1835	64360	4.36		
45.53	32.94	1454	60900	5.29		
41.70	35.97	1332	59600	5.71		

156.04	9.61	4984	40000	0.86	KSF97 KHF97 KAF97 KNF97 KMF97	132S
137.60	10.90	4395	40000	0.98		
125.64	11.94	4013	40000	1.07		
107.03	14.01	3419	40000	1.26		
100.39	14.94	3207	40000	1.34		
90.52	16.57	2891	40000	1.49		
80.18	18.71	2561	40000	1.68		
71.49	20.98	2284	40000	1.88		
64.10	23.40	2047	40000	2.07		
57.79	25.96	1846	40000	2.29		
47.28	31.72	1510	40000	2.80		
43.71	34.32	1396	40000	3.03		
39.41	38.06	1259	40000	3.33		
34.91	42.97	1115	40000	3.68		

# Input Horsepower & Output Torque

Daya yang tersedia & Torsi Keluar

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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## (7.5HP)

31.13	48.19	994	40000	4.04	KSF97	132S	
27.91	53.75	891	39340	4.41	KHF97		
24.68	60.77	788	38250	4.88	KAF97		
22.01	68.15	703	37240	5.36	KNF97		
20.59	72.86	658	36650	5.66	KMF97		
19.73	76.02	630	36270	5.86			
17.77	84.42	568	34990	5.88			
93.28	16.08	2979	21930	0.90			132S
82.36	18.21	2631	22510	1.00			
71.91	20.86	2297	22940	1.11			
61.04	24.57	1950	23220	1.27			
53.30	28.14	1703	23270	1.42			
50.15	29.91	1602	23260	1.49			
46.35	32.36	1481	23200	1.59			
43.05	34.84	1375	23110	1.69			
40.47	37.06	1293	23020	1.78			
39.36	38.11	1257	22970	1.82	KSF87		
37.12	40.41	1186	22860	1.91	KHF87		
32.77	45.77	1047	22580	2.14	KAF87		
28.62	52.42	914	22200	2.40	KNF87		
27.71	54.14	885	21500	2.46	KMF87		
24.29	61.75	776	21690	2.70			
21.21	70.72	678	21210	3.03			
19.96	75.17	637	20990	3.21			
17.13	87.56	547	20410	3.75			
15.66	95.77	500	20060	4.08			
15.10	99.32	482	19580	4.06			
12.82	117.00	410	18960	4.55			
11.19	134.00	358	18440	5.01			
10.53	142.42	336	18200	5.23			
9.04	165.90	289	17600	5.82			
50.87	29.49	1625	12110	0.80		132S	
46.83	32.03	1496	12520	0.87			
39.52	37.96	1262	13180	1.04			
35.84	41.86	1145	13450	1.15			
31.92	47.00	1020	13680	1.28			
28.63	52.39	915	13820	1.41			
26.36	56.90	842	13880	1.49	KSF77		
25.34	59.20	809	13900	1.53	KHF77		
22.57	66.47	721	13910	1.66	KAF77		
20.24	74.10	647	13870	1.79	KNF77		
18.64	80.48	595	13820	1.90	KMF77		
17.05	87.97	545	13320	1.96			
15.73	95.38	502	13640	2.14			
15.30	98.07	489	13230	2.11			
13.54	110.82	432	13090	2.30			
12.06	124.42	385	12930	2.49			
10.81	138.71	345	12760	2.69			
9.96	150.65	318	12610	2.85			
8.40	178.54	268	12280	3.21			

## (10HP)

142.68	10.51	6215	65000	1.29		132M
121.21	12.37	5280	65000	1.52		
106.39	14.10	4634	65000	1.73	KSF107	
99.86	15.02	4350	65000	1.84	KHF107	
94.90	15.81	4134	65000	1.94	KAF107	
90.15	16.64	3927	65000	2.04	KNF107	
81.88	18.32	3567	65000	2.24	KMF107	

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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## (10HP)

74.66	20.09	3252	65000	2.46		132M	
65.93	22.75	2872	63800	2.79	KSF107		
57.43	26.12	2502	62080	3.20	KHF107		
45.53	32.94	1983	59100	3.88	KAF107		
41.70	35.97	1817	57950	4.18	KNF107		
37.73	39.76	1643	56640	4.50	KMF107		
32.59	46.03	1419	54730	4.73			
29.71	50.49	1294	53530	5.12			
107.03	14.01	4662	40000	0.92			132M
100.39	14.94	4373	40000	0.98			
90.52	16.57	3943	40000	1.09			
80.18	18.71	3492	40000	1.23			
71.49	20.98	3114	40000	1.38			
64.10	23.40	2792	40000	1.52			
57.79	25.96	2517	40000	1.68			
47.28	31.72	2060	40000	2.06			
43.71	34.32	1904	40000	2.22			
39.41	38.06	1717	40000	2.44			
34.91	42.97	1521	39370	2.70	KSF97		
31.13	48.19	1356	38580	2.96	KHF97		
27.91	53.75	1216	37800	3.24	KAF97		
24.68	60.77	1075	36890	3.58	KNF97		
22.01	68.15	959	36030	3.93	KMF97		
20.59	72.86	897	35510	4.15			
19.73	76.02	859	35190	4.30			
17.77	84.42	774	33870	4.32			
15.93	94.16	694	33080	4.66			
14.09	106.47	614	32180	5.08			
12.56	119.40	547	31340	5.50			
11.26	133.18	491	30540	5.94			
71.91	20.86	3132	18100	0.82		132M	
61.04	24.57	2659	19110	0.93			
53.30	28.14	2322	19690	1.04			
50.15	29.91	2184	19880	1.09			
46.35	32.36	2019	20080	1.17			
43.05	34.84	1875	20220	1.24			
40.47	37.06	1763	20300	1.30			
39.36	38.11	1714	20330	1.33			
37.12	40.41	1617	20360	1.40			
32.77	45.77	1428	20370	1.57	KSF87		
28.62	52.42	1246	20280	1.76	KHF87		
27.71	54.14	1207	19420	1.80	KAF87		
24.29	61.75	1058	20050	1.98	KNF87		
21.21	70.72	924	19790	2.22	KMF87		
19.96	75.17	869	19650	2.35			
17.13	87.56	746	19260	2.75			
15.66	95.77	682	19000	2.99			
15.10	99.32	658	18440	2.98			
12.82	117.00	558	18000	3.34			
11.19	134.00	488	17590	3.67			
10.53	142.42	459	17410	3.83			
9.04	165.90	394	16910	4.26			
8.27	181.45	360	16620	4.54			

## (15HP)

142.68	10.51	9115	61720	0.88		160M
121.21	12.37	7744	61950	1.03	KSF107	
106.39	14.10	6797	61790	1.18	KHF107	
99.86	15.02	6379	61610	1.25	KAF107	
90.15	16.64	6063	61430	1.32	KNF107	
81.88	18.32	5747	61250	1.40	KMF107	

# Input Horsepower & Output Torque

Daya yang tersedia & Torsi Keluar

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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## (15HP)

90.15	16.64	5759	61210	1.39		160M
81.88	18.32	5231	60710	1.53	KSF107	
74.66	20.09	4770	60140	1.68	KHF107	
65.93	22.75	4212	59240	1.90	KAF107	
57.43	26.12	3669	58100	2.18	KNF107	
45.53	32.94	2909	55940	2.65	KMF107	
41.70	35.97	2664	55070	2.85		

37.73	39.76	2410	54030	3.07	KSF107	160M
32.59	46.03	2082	52470	3.23	KHF107	
29.71	50.49	1898	51470	3.49	KAF107	
22.86	65.63	1460	48580	4.35	KNF107	
19.84	75.61	1267	47010	4.86	KMF107	
16.13	92.97	1031	44730	5.84		

80.18	18.71	5122	35470	0.84		160M
71.49	20.98	4567	36080	0.94		
64.10	23.40	4095	36460	1.03		
57.79	25.96	3692	36670	1.15		
47.28	31.72	3021	36690	1.40		
43.71	34.32	2792	36580	1.52		
39.41	38.06	2518	36370	1.66		
34.91	42.97	2230	36010	1.84		
31.13	48.19	1989	35580	2.02	KSF97	
27.91	53.75	1783	35100	2.21	KHF97	
24.68	60.77	1577	34510	2.44	KAF97	
22.01	68.15	1406	33900	2.68	KNF97	
20.59	72.86	1315	33530	2.83	KMF97	
19.73	76.02	1261	33280	2.93		
17.77	84.42	1135	31910	2.94		
15.93	94.16	1018	31320	3.18		
14.09	106.47	900	30630	3.46		
12.56	119.40	803	29950	3.75		
11.26	133.18	720	29300	4.05		
10.16	147.70	649	28670	4.35		
8.31	180.53	531	27420	5.01		

46.35	32.36	2961	14620	0.80		160M
43.05	34.84	2750	15140	0.85		
40.47	37.06	2586	15530	0.89		
39.36	38.11	2515	15690	0.91		
37.12	40.41	2371	15990	0.95		
32.77	45.77	2094	16510	1.07		
28.62	52.42	1828	16910	1.20		
27.71	54.14	1770	15760	1.23		
24.29	61.75	1552	17190	1.35	KSF87	
21.21	70.72	1355	17290	1.52	KHF87	
19.96	75.17	1275	17290	1.60	KAF87	
17.13	87.56	1094	17240	1.87	KNF87	
15.66	95.77	1001	17150	2.04	KMF87	
15.10	99.32	965	16450	2.03		
12.82	117.00	819	16310	2.28		
11.19	134.00	715	16120	2.50		
10.53	142.42	673	16020	2.61		
9.04	165.90	578	15720	2.91		
8.27	181.45	528	15530	3.10		

## (20HP)

106.39	14.10	9268	53370	0.86	KSF107	160L
99.86	15.02	8699	53710	0.92	KHF107	
94.90	15.81	8267	53920	0.97	KAF107	
					KNF107	

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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## (20HP)

90.15	16.64	7854	54070	1.02		160L
81.88	18.32	7133	54220	1.12		
74.66	20.09	6504	54220	1.23		
65.93	22.75	5743	54020	1.39		
57.43	26.12	5003	53560	1.60		
45.53	32.94	3967	52340	1.94		
41.70	35.97	3633	51770	2.09		
37.73	39.76	3287	51040	2.25		
32.59	46.03	2839	49890	2.37		
29.71	50.49	2588	49110	2.56	KSF107	
22.86	65.63	1991	46770	3.19	KHF107	
19.84	75.61	1728	45440	3.56	KAF107	
16.13	92.97	1406	43450	4.28	KNF107	
14.59	102.79	1271	42480	4.70	KMF107	
10.77	139.31	938	39150	5.56		
57.79	25.96	5035	30290	0.84		
47.28	31.72	4119	31470	1.03		
43.71	34.32	3808	31760	1.11		

39.41	38.06	3433	32010	1.22		160L
34.91	42.97	3041	32150	1.35	KSF97	
31.13	48.19	2712	32140	1.48	KHF97	
27.91	53.75	2431	32020	1.62	KAF97	
24.68	60.77	2150	31780	1.79	KNF97	
22.01	68.15	1917	31470	1.97	KMF97	
20.59	72.86	1794	31250	2.08		
19.73	76.02	1719	31100	2.15		
17.77	84.42	1548	29680	2.16		
15.93	94.16	1388	29320	2.33		
14.09	106.47	1227	28850	2.54		
12.56	119.40	1094	28370	2.75		
11.26	133.18	981	27880	2.97		
10.16	147.70	885	27390	3.19		
8.31	180.53	724	26380	3.67		

## (25HP)

90.15	16.64	9686	47830	0.83		180M
81.88	18.32	8798	48560	0.91		
74.66	20.09	8022	49050	1.00		
65.93	22.75	7083	49450	1.13		
57.43	26.12	6171	49580	1.30		
45.53	32.94	4892	49190	1.57		
41.70	35.97	4481	48880	1.70	KSF107	
37.73	39.76	4053	48430	1.83	KHF107	
32.59	46.03	3501	47640	1.92	KAF107	
29.71	50.49	3192	47060	2.08	KNF107	
22.86	65.63	2456	45190	2.58	KMF107	
19.84	75.61	2132	44060	2.89		
16.13	92.97	1734	42330	3.47		
14.59	102.79	1568	41470	3.81		
10.77	139.31	1157	38320	4.51		
8.67	172.98	932	36490	5.25		

47.28	31.72	5080	26900	0.83		180M
43.71	34.32	4696	27540	0.90		
39.41	38.06	4235	28210	0.99	KSF97	
34.91	42.97	3751	28780	1.09	KHF97	
31.13	48.19	3345	29140	1.20	KAF97	
27.91	53.75	2999	29330	1.31	KNF97	
24.68	60.77	2652	29400	1.45	KMF97	
22.01	68.15	2365	29350	1.59		

# Input Horsepower & Output Torque

Daya yang tersedia & Torsi Keluar

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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## (25HP)

20.59	72.86	2212	29260	1.68	KSF97 KHF97 KAF97 KNF97 KMF97	180M
19.73	76.02	2120	29200	1.74		
17.77	84.42	1909	27720	1.75		
15.93	94.16	1712	27570	1.89		
14.09	106.47	1514	27300	2.06		
12.56	119.40	1350	26990	2.23		
11.26	133.18	1210	26640	2.41		
10.16	147.70	1091	26270	2.59		
8.31	180.53	893	25460	2.98		

## (25HP)

90.15	16.64	9686	47830	0.83	KSF107 KHF107 KAF107 KNF107 KMF107	180M
81.88	18.32	8798	48560	0.91		
74.66	20.09	8022	49050	1.00		
65.93	22.75	7083	49450	1.13		
57.43	26.12	6171	49580	1.30		
45.53	32.94	4892	49190	1.57		
41.70	35.97	4481	48880	1.70		
37.73	39.76	4053	48430	1.83		
32.59	46.03	3501	47640	1.92		
29.71	50.49	3192	47060	2.08		
22.86	65.63	2456	45190	2.58		
19.84	75.61	2132	44060	2.89		
16.13	92.97	1734	42330	3.47		
14.59	102.79	1568	41470	3.81		
10.77	139.31	1157	38320	4.51		
8.67	172.98	932	36490	5.25		

47.28	31.72	5080	26900	0.83	KSF97 KHF97 KAF97 KNF97 KMF97	180M
43.71	34.32	4696	27540	0.90		
39.41	38.06	4235	28210	0.99		
34.91	42.97	3751	28780	1.09		
31.13	48.19	3345	29140	1.20		
27.91	53.75	2999	29330	1.31		
24.68	60.77	2652	29400	1.45		
22.01	68.15	2365	29350	1.59		
20.59	72.86	2212	29260	1.68		
19.73	76.02	2120	29200	1.74		
17.77	84.42	1909	27720	1.75		
15.93	94.16	1712	27570	1.89		
14.09	106.47	1514	27300	2.06		
12.56	119.40	1350	26990	2.23		
11.26	133.18	1210	26640	2.41		
10.16	147.70	1091	26270	2.59		
8.31	180.53	893	25460	2.98		

## (30HP)

74.66	20.09	9539	43880	0.84	KSF107 KHF107 KAF107 KNF107 KMF107	180L
65.93	22.75	8424	44890	0.95		
57.43	26.12	7338	45600	1.09		
45.53	32.94	5818	46030	1.32		
41.70	35.97	5328	45990	1.43		
37.73	39.76	4820	45810	1.54		
32.59	46.03	4163	45380	1.61		
29.71	50.49	3796	45000	1.75		
22.86	65.63	2920	43600	2.17		
19.84	75.61	2535	42690	2.43		
16.13	92.97	2062	41220	2.92		
14.59	102.79	1864	40460	3.20		
10.77	139.31	1376	37480	3.79		
8.67	172.98	1108	35820	4.41		

Ratio	Output Speed [1/min]	Output Torque [Nm]	OHL [N]	Sf	Gear Type	Motor Frame
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## (30HP)

39.41	38.06	5036	24400	0.83	KSF97 KHF97 KAF97 KNF97 KMF97	180L
34.91	42.97	4461	25410	0.92		
31.13	48.19	3977	26130	1.01		
27.91	53.75	3566	26630	1.10		
24.68	60.77	3154	27010	1.22		
22.01	68.15	2812	27220	1.34		
20.59	72.86	2631	27280	1.42		
19.73	76.02	2521	27290	1.47		
17.77	84.42	2270	25770	1.47		
15.93	94.16	2035	25820	1.59		
14.09	106.47	1800	25760	1.73		
12.56	119.40	1605	25610	1.88		
11.26	133.18	1439	25410	2.03		
10.16	147.70	1298	25160	2.18		
8.31	180.53	1062	24550	2.51		

## (40HP)

57.43	26.12	10007	36510	0.80	KSF107 KHF107 KAF107 KNF107 KMF107	200L
45.53	32.94	7933	38820	0.97		
41.70	35.97	7266	39390	1.05		
37.73	39.76	6573	39850	1.13		
32.59	46.03	5677	40220	1.18		
29.71	50.49	5177	40300	1.28		
22.86	65.63	3982	39980	1.59		
19.84	75.61	3457	39550	1.78		
16.13	92.97	2811	38670	2.14		
14.59	102.79	2542	38150	2.35		
10.77	139.31	1876	35580	2.78		
8.67	172.98	1511	34290	3.24		

27.91	53.75	4863	20470	0.81	KSF97 KHF97 KAF97 KNF97 KMF97	200L
24.68	60.77	4300	21560	0.89		
22.01	68.15	3835	22360	0.98		
20.59	72.86	3587	22730	1.04		
19.73	76.02	3438	22930	1.07		
17.77	84.42	3096	21300	1.08		
15.93	94.16	2776	21810	1.17		
14.09	106.47	2455	22210	1.27		
12.56	119.40	2189	22450	1.38		
11.26	133.18	1962	22570	1.49		
10.16	147.70	1769	22600	1.60		
8.31	180.53	1448	22460	1.84		

## (50HP)

41.70	35.97	8961	33600	0.85	KSF107 KHF107 KAF107 KNF107 KMF107	225S
37.73	39.76	8107	34620	0.91		
32.59	46.03	7002	35710	0.96		
29.71	50.49	6384	36180	1.04		
22.86	65.63	4911	36820	1.29		
19.84	75.61	4263	36800	1.44		
16.13	92.97	3467	36430	1.74		
14.59	102.79	3136	36130	1.91		
10.77	139.31	2314	33910	2.25		
8.67	172.98	1863	32940	2.62		

## (60HP)

29.71	50.49	7765	31480	0.85	KSF107 KHF107 KAF107 KNF107 KMF107	225M
22.86	65.63	5973	33200	1.06		
19.84	75.61	5185	33660	1.19		
16.13	92.97	4217	33870	1.43		
14.59	102.79	3814	33820	1.57		
10.77	139.31	2814	32000	1.85		
8.67	172.98	2266	31410	2.16		

# Input Horsepower & Output Torque

Daya yang tersedia & Torsi Keluar

Ratio	Output Speed [1/min]	Output Torque [Nm]	Input Power [kW]	OHL FRa [N]	Gear Type	dia [Ø]	m [kg]
<b>K...37</b>							200Nm
149.56	10.0	200	0.23	5640	KSS37 KHS37 KAS37 KNS37 KMS37	Ø16	13.4 12.7 12 14.4 13.6
134.14	11	200	0.26	5640			
115.57	13	200	0.30	5520			
105.56	14	200	0.33	5290			
92.28	16	200	0.37	4960			
83.18	18	200	0.41	4710			
75.12	20	200	0.46	4470			
67.39	22	200	0.51	4230			
59.31	25	200	0.58	3960			
49.21	30	200	0.70	3580	KSS37 KHS37 KAS37 KNS37 KMS37	Ø19	13.8 13.1 12.4 14.8 14 14.8 14.8 14 14 14 14 14 14 14 14
44.19	34	200	0.78	3370			
37.74	40	200	0.9	3080			
32.00	47	195	1.1	2850			
26.04	58	185	1.2	2600			
23.36	64	185	1.4	2470			
20.56	73	180	1.5	2330			
17.06	88	175	1.8	2090			
15.32	98	175	2.0	1940			
13.08	115	170	2.2	1810			
11.09	135	165	2.6	1680			
9.09	165	160	3.0	1490			
7.96	188	160	3.5	1080			
6.80	221	150	3.8	1030			
5.76	260	140	4.2	990			
4.73	317	130	4.7	940			

Ratio	Output Speed [1/min]	Output Torque [Nm]	Input Power [kW]	OHL FRa [N]	Gear Type	dia [Ø]	m [kg]
<b>K...47</b>							400Nm
130.00	12	400	0.53	5920	KSS47 KHS47 KAS47 KNS47 KMS47	Ø16	20.3 19.4 18.8 23 21.5
116.10	13	400	0.59	5920			
108.20	14	400	0.64	5790			
96.31	16	400	0.71	5410			
86.36	17	390	0.78	5160			
75.87	20	390	0.88	4770	KSS47 KHS47 KAS47 KNS47 KMS47	Ø19	20.5 19.6 19 23.2 21.7 21.7 21.7 21.7 21.7 21.7 21.7 21.7 21.7 21.7 21.7
71.34	21	390	0.94	4590			
65.35	23	385	1.0	4390			
60.90	25	380	1.1	4250			
54.21	28	375	1.2	3990			
48.61	31	370	1.3	3740			
42.70	35	365	1.5	3450			
40.15	37	365	1.6	3350			
29.81	50	345	2.0	2880			
26.34	57	320	2.1	2610			
23.14	65	305	2.3	2500			
21.32	70	315	2.5	2490			
18.36	82	305	2.9	2320			
17.54	86	300	2.9	2280			
14.25	105	260	3.1	2130			
13.40	112	255	3.3	2090			
9.95	151	230	4.0	1890	KSS47 KHS47 KAS47 KNS47	Ø24	20.7 19.8 19.2 23.4
7.11	211	205	5.0	1690			
5.85	256	195	5.7	1580			

# Input Horsepower & Output Torque

Daya yang tersedia & Torsi Keluar

Ratio	Output Speed [1/min]	Output Torque [Nm]	Input Power [kW]	OHL FRa [N]	Gear Type	dia [Ø]	m [kg]
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**K...57** 600Nm

149.02	10.1	600	0.69	7630	KSS57 KHS57 KAS57 KNS57 KMS57	Ø19	29.6 28 26.9 32.3 30.3
130.09	12	600	0.79	7620			
117.71	13	600	0.88	7240			
107.64	14	600	0.96	6910			
95.12	16	600	1.1	6470			
83.80	18	600	1.2	6040			
68.70	22	600	1.5	5400			
64.73	23	600	1.6	5220			
55.88	27	600	1.9	4790			
53.54	28	600	1.9	4660			
47.16	32	600	2.2	4310			
44.16	34	600	2.3	4130			
38.67	39	585	2.6	3870			
36.44	41	580	2.7	3760			
33.35	45	570	3.0	3600			
31.45	48	565	3.1	3500	KSS57 KHS57 KAS57 KNS57 KMS57	Ø24	29.8 28.2 27.1 32.5 30.5
27.34	55	540	3.4	3330			
25.76	58	530	3.5	3290			
24.86	60	520	3.6	3270			
22.24	67	500	3.9	3200			
18.03	83	505	4.8	2670			
15.56	96	480	5.3	2530			
13.53	111	460	5.9	2420			
12.75	118	450	6.1	2370			
11.00	136	415	6.7	2250			
8.69	173	375	7.9	2080			

Ratio	Output Speed [1/min]	Output Torque [Nm]	Input Power [kW]	OHL FRa [N]	Gear Type	dia [Ø]	m [kg]
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**K...67** 820Nm

148.65	10.1	820	0.95	10300	KSS67 KHS67 KAS67 KNS67 KMS67	Ø19	33.3 31.6 30.1 36.1 33.6
129.77	12	820	1.1	10300			
117.42	13	820	1.2	10300			
107.37	14	820	1.3	10300			
94.89	16	794	1.4	10300			
83.59	18	765	1.6	10300			
68.53	22	720	1.8	9970			
64.58	23	708	1.9	9790			
55.75	27	677	2.1	9370			
53.41	28	671	2.2	9230			
52.28	29	663	2.2	9180			
46.05	33	654	2.5	8690			
44.05	34	647	2.5	8580			
38.57	39	641	2.9	8050			
37.75	40	624	2.9	8110			
36.35	41	596	2.8	8240			
33.26	45	580	3.0	8030			
31.38	48	570	3.1	7890	KSS67 KHS67 KAS67 KNS67 KMS67	Ø24	33.5 31.8 30.3 36.3 33.8
27.27	55	546	3.5	7560			
25.70	58	537	3.6	7430			
24.80	60	531	3.7	7350			
22.18	68	514	4.0	7110			
21.25	71	493	4.0	7140			
17.53	86	479	4.7	6620			
14.16	106	465	5.7	6040			
12.22	123	448	6.3	5750			
9.66	155	433	7.7	5200			

# Input Horsepower & Output Torque

Daya yang tersedia & Torsi Keluar

Ratio	Output Speed [1/min]	Output Torque [Nm]	Input Power [kW]	OHL FRa [N]	Gear Type	dia [Ø]	m [kg]
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**K...77**

1450Nm

193.18	7.8	1450	1.3	14500			
179.07	8.4	1450	1.4	14500	KSS77		59.7
159.79	9.4	1450	1.6	14500	KHS77	Ø19	55.1
143.26	10.5	1430	1.7	14500	KAS77		56.1
122.19	12	1410	2.0	14500	KNS77		66.7
108.64	14	1390	2.2	14500	KMS77		62.5
100.05	15	1370	2.4	14500			
89.54	17	1340	2.6	14500			
77.60	19	1330	3.0	14500			
63.67	24	1315	3.6	14500	KSS77		59.9
56.71	26	1310	4.0	14500	KHS77	Ø24	55.3
50.87	29	1310	4.4	14500	KAS77		56.3
					KNS77		66.9
					KMS77		62.7
46.83	32	1300	4.8	14100			
39.52	38	1315	5.7	12800			
35.84	42	1310	6.3	12100			
31.92	47	1305	7.0	11400			
28.63	52	1285	7.7	10800			
26.36	57	1255	8.2	10600	KSS77		65.1
25.34	59	1240	8.4	10500	KHS77	Ø38	60.5
22.57	66	1200	9.1	10100	KAS77		61.5
20.24	74	1160	9.9	9800	KNS77		72.1
18.64	80	1130	10.5	9500	KMS77		67.9
17.05	88	1065	10.8	8800			
15.73	95	1075	11.8	9100			
15.30	98	1030	11.6	8500			
13.54	111	995	12.6	8200			
12.06	124	960	13.7	7900			
10.81	139	930	14.8	7700			
9.96	151	905	15.7	7500			
8.40	179	860	17.7	7100			

Ratio	Output Speed [1/min]	Output Torque [Nm]	Input Power [kW]	OHL FRa [N]	Gear Type	dia [Ø]	m [kg]
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**K...87**

2700Nm

213.20	7.0	2700	2.2	27300			
189.23	7.9	2700	2.5	27300	KSS87		97.7
179.23	8.4	2700	2.6	27300	KHS87	Ø19	90.7
150.68	10.0	2700	3.1	27300	KAS87		86.8
128.47	12	2700	3.6	27300	KNS87		103.5
116.85	13	2700	4.0	26300	KMS87		95.1
107.35	14	2700	4.3	25200			
93.28	16	2690	5.0	23600	KSS87		98
					KHS87	Ø28	91
					KAS87		87.1
					KNS87		103.8
					KMS87		95.4
82.36	18	2625	5.5	22600	KSS87		102.3
71.91	21	2560	6.1	21400	KHS87	Ø38	95.3
61.04	25	2480	7.0	20100	KAS87		91.4
53.30	28	2420	7.8	19100	KNS87		108.1
50.15	30	2390	8.2	18700	KMS87		99.7
46.35	32	2355	8.8	18100			
43.05	35	2325	9.3	17600			
40.47	37	2300	9.8	17200			
39.36	38	2285	10.0	17000			

# Input Horsepower & Output Torque

Daya yang tersedia & Torsi Keluar

Ratio	Output Speed [1/min]	Output Torque [Nm]	Input Power [kW]	OHL FRa [N]	Gear Type	dia [Ø]	m [kg]
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**K...87** 2700Nm

37.12	40	2260	10.5	16600			
32.77	46	2235	11.8	15700			
28.62	52	2195	13.2	14800			
27.71	54	2175	13.5	13100			
24.29	62	2095	14.8	14100	KSS87		110.5
21.21	71	2055	16.7	13200	KHS87		103.5
19.96	75	2045	18	12800	KAS87	Ø42	99.6
17.13	88	2050	21	11700	KNS87		116.3
15.66	96	2045	22	11100	KMS87		107.9
15.10	99	1960	22	10000			
12.82	117	1865	25	9500			
11.19	134	1790	28	9100			
10.53	142	1760	29	9000			
9.04	166	1680	32	8600			
8.27	181	1635	34	8400			

Ratio	Output Speed [1/min]	Output Torque [Nm]	Input Power [kW]	OHL FRa [N]	Gear Type	dia [Ø]	m [kg]
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**K...97** 4300Nm

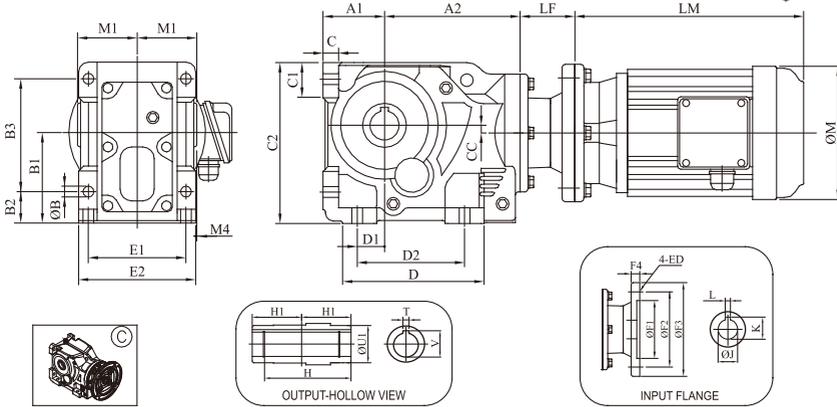
156.04	9.6	4300	4.8	40000	KSS97		154.9
137.60	10.9	4300	5.4	40000	KHS97	Ø28	147.1
125.64	12	4300	5.9	40000	KAS97		140.4
					KNS97		171.4
					KMS97		149.8
107.03	14	4300	6.9	40000	KSS97		159.1
100.39	15	4300	7.4	40000	KHS97	Ø38	151.3
90.52	17	4300	8.2	40000	KAS97		144.6
80.18	19	4300	9.2	39400	KNS97		175.6
					KMS97		154
71.49	21	4300	10.4	37400	KSS97		167.1
64.10	23	4240	11.4	35800	KHS97	Ø42	159.3
57.79	26	4235	12.6	34100	KAS97		152.6
47.28	32	4235	15.4	30900	KNS97		183.6
43.71	34	4235	16.7	29700	KMS97		162
39.41	38	4190	18.3	28400			
34.91	43	4100	20	27100			
31.13	48	4015	22	26000			
27.91	54	3935	24	24900			
24.68	61	3845	27	23700			
22.01	68	3770	29	22700	KSS97		167.1
20.59	73	3725	31	22100	KHS97	Ø48	166.3
19.73	76	3695	32	21700	KAS97		159.6
17.77	84	3340	32	20000	KNS97		190.6
15.93	94	3235	35	19300	KMS97		169
14.09	106	3115	38	18600			
12.56	119	3010	41	18000			
11.26	133	2915	45	17400			
10.16	148	2825	48	16900			
8.31	181	2660	55	15900			

# Input Horsepower & Output Torque

Daya yang tersedia & Torsi Keluar

Ratio	Output Speed [1/min]	Output Torque [Nm]	Input Power [kW]	OHL FRa [N]	Gear Type	dia [Ø]	m [kg]
<b>K...107</b>							8000Nm
142.68	11	8000	9.7	65000	KSS107	Ø28	273
121.21	12	8000	11.4	61100	KHS107		244
					KAS107		219
					KNS107		262
					KMS107		236
106.39	14	8000	13.0	57700	KSS107	Ø38	277
99.86	15	8000	13.8	56100	KHS107		248
94.90	16	8000	14.5	54800	KAS107		223
					KNS107		266
					KMS107	240	
90.15	17	8000	15.3	53600	KSS107	Ø42	284
81.88	18	8000	16.8	51300	KHS107		255
74.66	20	8000	18.5	49100	KAS107		230
65.93	23	8000	20.9	46300	KNS107		273
57.43	26	8000	24.0	43400	KMS107		247
45.53	33	7700	29.1	39600	KSS107 KHS107 KAS107 KNS107 KMS107	Ø48	295 266 241 284 258
41.70	36	7600	31	38200			
37.73	40	7400	34	37000			
32.59	46	6720	36	36700			
29.71	50	6625	38	35400			
22.86	66	6345	48	31900			
19.84	76	6160	53	30300			
16.13	93	6020	64	27700			
14.59	103	5975	70	26500			
10.77	139	5215	83	22800			
8.67	173	4890	97	21400			

# Model KHF

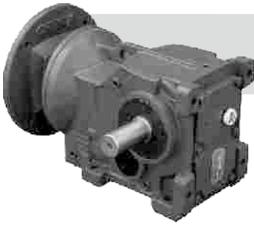


KHF	A1	A2	B	B1	B2	B3	C	CC	C1	C2	D	D1	D2	E1	E2	M1	M4
37	63	139	11	100	32	115	16	7.8	36	164	145	28	110	100	120	60	2
47	71	166	11	112	37	130	18	5.2	34	186	169	35	130	120	145	75	2.5
57	80	173	13.5	132	45.5	150	21	14.5	43	217	192	30	130	130	157	83	3
67	90	179	13.5	140	45	160	24	19.1	54	228	170	30	120	140	170	90	3.5
77	112	202	17.5	180	55	200	27	37.3	60	293	220	40	150	165	200	105	4
87	132	257	22	212	70	233	32	31.4	88	340	280	55	180	180	224	120	4
97	160	277	26	265	75	295	36	46.15	86	417	310	75	240	240	290	150	4
107	200	341	33	315	95	360	36	67.4	100	453	395	95	280	270	340	175	2

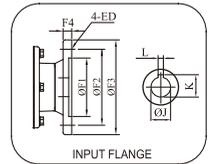
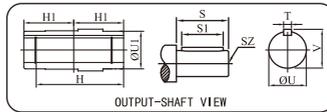
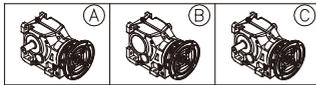
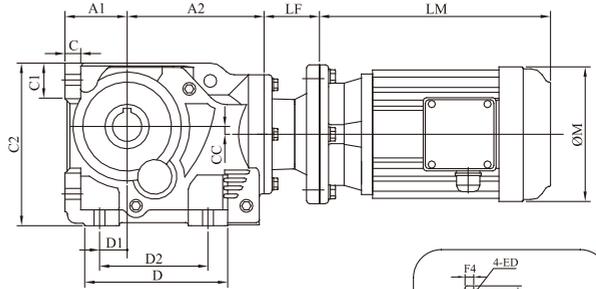
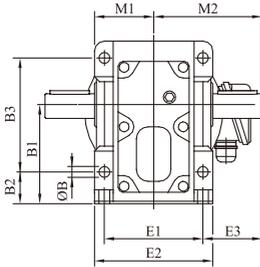
INPUT FLANGE																
TYPE	F1	F2	F3	F4	ED	J	K	L	LF				LM			
									K37	K47	K57	K67	K77	K87	K97	K107
63	95	115	140	10	M8	11	12.8	4	53	48.5	46.5	46.5				
71	110	130	160	10	M8	14	16.3	5	53	48.5	46.5	46.5				
80	130	165	200	12	M10	19	21.8	6	71	66.5	64.5	64.5	59	49.5		
90	130	165	200	12	M10	24	27.3	8	71	66.5	64.5	64.5	59	49.5		
100	180	215	250	15	M12	28	31.3	8		83	81	81	75.5	66	62	62
112	180	225	250	15	M12	28	31.3	8		83	81	81	75.5	66	62	62
132	230	265	300	16	M12	38	41.3	10					124	114.5	106.5	97
160	250	300	350	20	M16	42	45.3	12						150.5	142.5	133
180	250	300	350	20	M16	48	51.8	14							151.5	142
200	300	350	400	20	M16	55	59.3	16								142
225	350	400	450	20	M16	60	64.4	18								173

KHF	OUTPUT-HOLLOW				
	V	T	H1	H	U1
37	33.3	8	60	105	30
47	38.3	10	75	132	35
57	43.3	12	83	142	40
67	43.3	12	90	156	40
77	53.8	14	105	183	50
87	64.4	18	120	210	60
97	75	20	150	270	70
107	95.4	25	175	313	90

DATA MOTOR		
FRAME	LM	M
63	207	130
71	225	145
80	255	175
90S/L	270/295	195
100L	325	215
112M	345	240
132S/M	390/430	275
160M/L	495/550	330
180M/L	580/615	380
200L	658.5	420
225S/M	670/695	465



# Model KSF



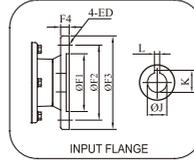
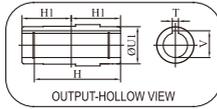
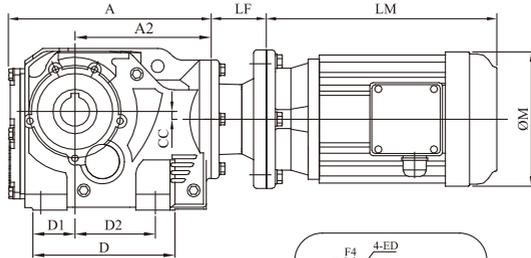
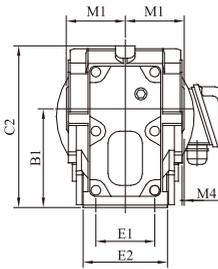
KSF	A1	A2	B	B1	B2	B3	C	CC	C1	C2	D	D1	D2	E1	E2	E3	M1	M2
37	63	139	11	100	32	115	16	7.8	36	164	145	28	110	100	120	60	60	110
47	71	166	11	112	37	130	18	5.2	34	186	169	35	130	120	145	75	72.5	135
57	80	173	13.5	132	45.5	150	21	14.5	43	217	192	30	130	130	157	88	80	153
67	90	179	13.5	140	45	160	24	19.1	54	228	170	30	120	140	170	101	86.5	171
77	112	202	17.5	180	55	200	27	37.3	60	293	220	40	150	165	200	123.5	100	206
87	132	257	22	212	70	233	32	31.4	88	340	280	55	180	180	224	150	112	240
97	160	277	26	265	75	295	36	46.15	86	417	310	75	240	240	290	171	145	291
107	200	341	33	315	95	360	36	67.4	100	453	395	95	280	270	340	212	173	347

INPUT FLANGE																		
TYPE	F1	F2	F3	F4	ED	J	K	L	LF	K37	K47	K57	K67	K77	K87	K97	K107	
63	95	115	140	10	M8	11	12.8	4		53	48.5	46.5	46.5					
71	110	130	160	10	M8	14	16.3	5		53	48.5	46.5	46.5					
80	130	165	200	12	M10	19	21.8	6		71	66.5	64.5	64.5	59	49.5			
90	130	165	200	12	M10	24	27.3	8		71	66.5	64.5	64.5	59	49.5			
100	180	215	250	15	M12	28	31.3	8			83	81	81	75.5	66	62	62	
112	180	125	250	15	M12	28	31.3	8			83	81	81	75.5	66	62	62	
132	230	265	300	16	M12	38	41.3	10							124	114.5	106.5	97
160	250	300	350	20	M16	42	45.3	12								150.5	142.5	133
180	250	300	350	20	M16	48	51.8	14									151.5	142
200	300	350	400	20	M16	55	59.3	16										142
225	350	400	450	20	M16	60	64.4	18										173

KSF	OUTPUT-SHAFT									
	U	V	T	H1	H	U1	S	S1	SZ	
37	25	28	8	60	105	30	50	40	M10x20L	
47	30	33	8	75	132	35	60	50	M10x20L	
57	35	38	10	83	142	40	70	60	M12x25L	
67	40	43	12	90	156	40	80	70	M16x32L	
77	50	53.5	14	105	183	50	100	80	M16x32L	
87	60	64	18	120	210	60	120	100	M20x40L	
97	70	74.5	20	150	270	70	140	110	M20x40L	
107	90	95	25	175	313	90	170	160	M24x32L	

DATA MOTOR		
FRAME	LM	M
63	207	130
71	225	145
80	255	175
90S/L	270/295	195
100L	325	215
112M	345	240
132S/M	390/430	275
160M/L	495/550	330
180M/L	580/615	380
200L	658.5	420
225S/M	670/695	465

# Model KAF



KAF	A	A2	B1	C2	CC	D	D1	D2	E1	E2	M1	M4
37	203	139	100	164	7.8	140	35	82	60	100	60	3.5
47	239	166	112	186	5.2	169	40	100	70	106	75	3.5
57	258	173	132	217	14.5	191	47	105	88	122	83	4
67	273	179	140	228	19.1	175	42	110	88	134	90	4
77	326	202	180	293	37.3	220	48	122	102	164	105	4
87	390	257	212	340	31.4	274	65	160	118	152	120	5
97	448	277	265	417	46.15	310	83	165	160	234	150	5
107	541	341	315	503	67.4	390	100	190	190	254	175	5

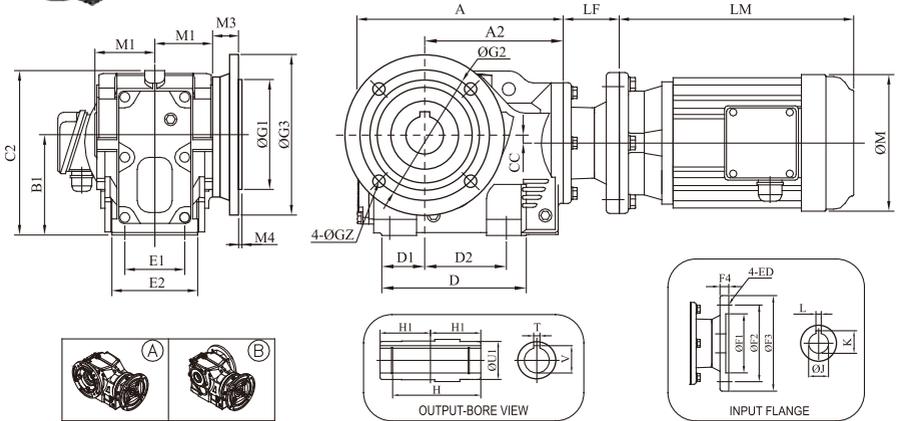
INPUT FLANGE																	
TYPE	F1	F2	F3	F4	ED	J	K	L		K37	K47	K57	K67	K77	K87	K97	K107
63	95	115	140	10	M8	11	12.8	4	LF	53	48.5	46.5	46.5				
71	110	130	160	10	M8	14	16.3	5		53	48.5	46.5	46.5				
80	130	165	200	12	M10	19	21.8	6		71	66.5	64.5	64.5	59	49.5		
90	130	165	200	12	M10	24	27.3	8		71	66.5	64.5	64.5	59	49.5		
100	180	215	250	15	M12	28	31.3	8			83	81	81	75.5	66	62	62
112	180	125	250	15	M12	28	31.3	8			83	81	81	75.5	66	62	62
132	230	265	300	16	M12	38	41.3	10						124	114.5	106.5	97
160	250	300	350	20	M16	42	45.3	12							150.5	142.5	133
180	250	300	350	20	M16	48	51.8	14								151.5	142
200	300	350	400	20	M16	55	59.3	16									142
225	350	400	450	20	M16	60	64.4	18									173

KAF	OUTPUT-HOLLOW				
	V	T	H1	H	U1
37	33.3	8	60	105	30
47	38.3	10	75	132	35
57	43.3	12	83	142	40
67	43.3	12	90	156	40
77	53.8	14	105	183	50
87	64.4	18	120	210	60
97	75	20	150	270	70
107	95.4	25	175	313	90

DATA MOTOR		
FRAME	LM	M
63	207	130
71	225	145
80	255	175
90S/L	270/295	195
100L	325	215
112M	345	240
132S/M	390/430	275
160M/L	495/550	330
180M/L	580/615	380
200L	658.5	420
225S/M	670/695	465



# Model KMF



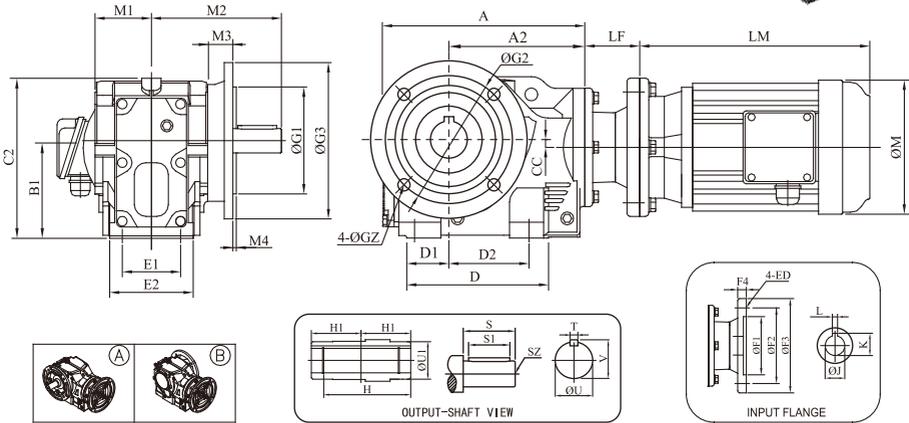
KMF	A	A2	B1	C2	CC	D	D1	D2	E1	E2	M1	M3	M4	G1	G2	G3	GZ
37	203	139	100	164	7.8	140	35	82	60	100	60	24	3.5	110	130	160	9
47	239	166	112	186	5.2	169	40	100	70	106	75	25	3.5	130	165	200	11
57	258	173	132	217	14.5	191	47	105	88	122	83	23.5	4	180	215	250	13.5
67	273	179	140	228	19.1	175	42	110	88	134	90	23	4	180	215	250	13.5
77	326	202	180	293	37.3	220	48	122	102	164	105	37	4	230	265	300	13.5
87	390	257	212	340	31.4	274	65	160	118	152	120	30	5	250	300	350	17.5
97	448	277	265	417	46.15	310	83	165	160	234	150	42	5	350	400	450	17.5
107	541	341	315	503	67.4	390	100	190	190	254	175	41	5	350	400	450	17.5

INPUT FLANGE																
TYPE	F1	F2	F3	F4	ED	J	K	L	LF					K		
									K37	K47	K57	K67	K77	K87	K97	K107
63	95	115	140	10	M8	11	12.8	4	53	48.5	46.5	46.5				
71	110	130	160	10	M8	14	16.3	5	53	48.5	46.5	46.5				
80	130	165	200	12	M10	19	21.8	6	71	66.5	64.5	64.5	59	49.5		
90	130	165	200	12	M10	24	27.3	8	71	66.5	64.5	64.5	59	49.5		
100	180	215	250	15	M12	28	31.3	8		83	81	81	75.5	66	62	62
112	180	215	250	15	M12	28	31.3	8		83	81	81	75.5	66	62	62
132	230	265	300	16	M12	38	41.3	10					124	114.5	106.5	97
160	250	300	350	20	M16	42	45.3	12						150.5	142.5	133
180	250	300	350	20	M16	48	51.8	14						151.5	142	
200	300	350	400	20	M16	55	59.3	16							142	
225	350	400	450	20	M16	60	64.4	18								173

KMF	OUTPUT-HOLLOW				
	V	T	H1	H	U1
37	33.3	8	60	105	30
47	38.3	10	75	132	35
57	43.3	12	83	142	40
67	43.3	12	90	156	40
77	53.8	14	105	183	50
87	64.4	18	120	210	60
97	75	20	150	270	70
107	95.4	25	175	313	90

DATA MOTOR		
FRAME	LM	M
63	207	130
71	225	145
80	255	175
90S/L	270/295	195
100L	325	215
112M	345	240
132S/M	390/430	275
160M/L	495/550	330
180M/L	580/615	380
200L	658.5	420
225S/M	670/695	465

# Model KNF



KNF	A	A2	B1	C2	CC	D	D1	D2	E1	E2	M1	M2	M3	M4	G1	G2	G3	GZ
37	203	139	100	164	7.8	140	35	82	60	100	58	134	24	3.5	110	130	160	9
47	239	166	112	186	5.2	169	40	100	70	106	72	160	25	3.5	130	165	200	11
57	258	173	132	217	14.5	191	47	105	88	122	80	176.5	23.5	4	180	215	250	13.5
67	273	179	140	228	19.1	175	42	110	88	134	86.5	193	23	4	180	215	250	13.5
77	326	202	180	293	37.3	220	48	122	102	164	101	242	37	4	230	265	300	13.5
87	390	257	212	340	31.4	274	65	160	118	152	116	270	30	5	250	300	350	17.5
97	448	277	265	417	46.15	310	83	165	160	234	146	332	42	5	350	400	450	17.5
107	541	341	315	503	67.4	390	100	190	190	254	173	386	41	5	350	400	450	17.5

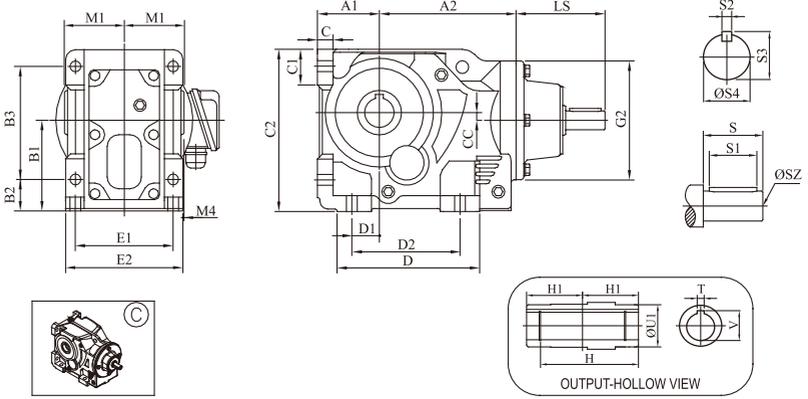
INPUT FLANGE																		
TYPE	F1	F2	F3	F4	ED	J	K	L	LF									
									K37	K47	K57	K67	K77	K87	K97	K107		
63	95	115	140	10	M8	11	12.8	4	53	48.5	46.5	46.5						
71	110	130	160	10	M8	14	16.3	5	53	48.5	46.5	46.5						
80	130	165	200	12	M10	19	21.8	6	71	66.5	64.5	64.5	59	49.5				
90	130	165	200	12	M10	24	27.3	8	71	66.5	64.5	64.5	59	49.5				
100	180	215	250	15	M12	28	31.3	8		83	81	81	75.5	66	62	62		
112	180	125	250	15	M12	28	31.3	8		83	81	81	75.5	66	62	62		
132	230	265	300	16	M12	38	41.3	10					124	114.5	106.5	97		
160	250	300	350	20	M16	42	45.3	12						150.5	142.5	133		
180	250	300	350	20	M16	48	51.8	14							151.5	142		
200	300	350	400	20	M16	55	59.3	16								142		
225	350	400	450	20	M16	60	64.4	18								173		

KNF	OUTPUT-SHAFT									
	U	V	T	H1	H	U1	S	S1	SZ	
37	25	28	8	60	105	30	50	40	M10x20L	
47	30	33	8	75	132	35	60	50	M10x20L	
57	35	38	10	83	142	40	70	60	M12x25L	
67	40	43	12	90	156	40	80	70	M16x32L	
77	50	53.5	14	105	183	50	100	80	M16x32L	
87	60	64	18	120	210	60	120	100	M20x40L	
97	70	74.5	20	150	270	70	140	110	M20x40L	
107	90	95	25	175	313	90	170	160	M24x32L	

DATA MOTOR		
FRAME	LM	M
63	207	130
71	225	145
80	255	175
90S/L	270/295	195
100L	325	215
112M	345	240
132S/M	390/430	275
160M/L	495/550	330
180M/L	580/615	380
200L	658.5	420
225S/M	670/695	465



# Model KHS



KHS	A1	A2	B1	B2	B3	C	CC	C1	C2	D	D1	D2	E1	E2	M1
37	63	139	100	32	115	16	7.8	36	164	145	28	82	100	120	60
47	71	166	112	37	130	18	5.2	34	186	169	35	95	120	145	75
57	80	173	132	45.5	150	21	14.5	43	217	192	30	100	130	157	83
67	90	179	140	45	160	24	19.1	54	228	170	30	90	140	170	90
77	112	202	180	55	200	27	37.3	60	293	220	40	110	165	200	105
87	132	257	212	70	233	32	31.4	88	340	280	55	135	180	224	120
97	160	277	265	75	295	36	46.15	86	417	310	75	165	240	290	150
107	200	341	315	95	360	36	67.4	100	453	395	95	185	270	340	175

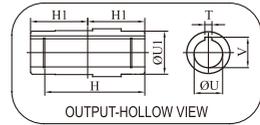
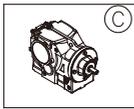
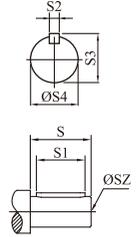
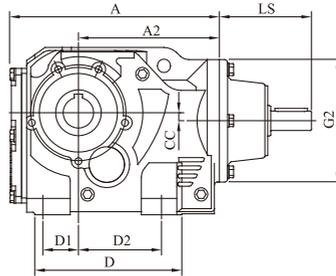
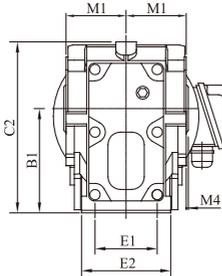
KHS	INPUT SHAFT						
	S1	S2	S3	S4	S	SZ	LS
37	32	5	18	16k6	40	M5*10L	88
	32	6	21.5	19k6	40	M6*12L	90.5
47	32	5	18	16k6	40	M5*10L	83.5
	32	6	21.5	19k6	40	M6*12L	86
	40	8	27	24k6	50	M8*16L	96
57	32	6	21.5	19k6	40	M6*12L	95
	40	8	27	24k6	50	M8*16L	119.5
67	32	6	21.5	19k6	40	M6*12L	95
	40	8	27	24k6	50	M8*16L	119.5
77	32	6	21.5	19k6	40	M6*12L	89.5
	32	6	21.5	19k6	40	M6*12L	106
	40	8	27	24k6	50	M8*16L	114
	70	10	41	38k6	80	M12*24L	177
87	32	6	21.5	19k6	40	M6*12L	95.5
	50	8	31	28k6	60	M8*16L	114.5
	70	10	41	38k6	80	M12*24L	167.5
	70	12	45	42k6	110	M16*32L	240.5
97	50	8	31	28k6	60	M8*16L	110.5
	70	10	41	38k6	80	M12*24L	159.5
	70	12	45	42k6	110	M16*32L	232.5
107	80	14	51.5	48k6	110	M16*32L	237.5
	50	8	31	28k6	60	M8*16L	110.5
	70	10	41	38k6	80	M12*24L	150
	70	12	45	42k6	110	M16*32L	223
	80	14	51.5	48k6	110	M16*32L	228

KHS	OUTPUT-HOLLOW				
	V	T	H1	H	U1
37	33.3	8	60	105	30
47	38.3	10	75	132	35
57	43.3	12	83	142	40
67	43.3	12	90	156	40
77	53.8	14	105	183	50
87	64.4	18	120	210	60
97	75	20	150	270	70
107	95.4	25	175	313	90





# Model KAS

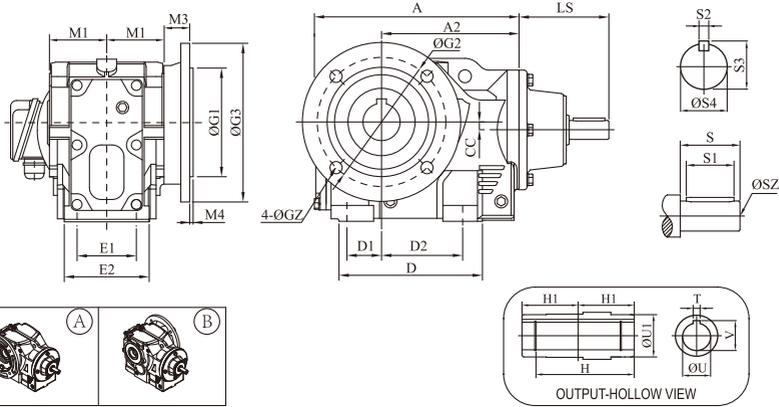


KAS	A	A2	B1	C2	CC	D	D1	D2	E1	E2	M1	M4
37	202	139	100	164	7.8	140	35	82	100	120	60	2
47	237	166	112	186	5.2	169	40	100	120	145	72.5	2.5
57	253	173	132	217	14.5	191	47	105	130	157	80	3
67	269	179	140	228	19.1	175	42	110	140	170	86.5	3.5
77	314	202	180	293	37.3	220	48	122	165	200	100	4
87	389	257	212	340	31.4	274	65	160	180	224	112	4
97	437	277	265	417	46.15	310	83	165	240	290	145	4
107	541	341	315	453	67.4	390	100	190	270	340	173	4

KAS	INPUT SHAFT						
	S1	S2	S3	S4	S	SZ	LS
37	32	5	18	16k6	40	M5*10L	88
	32	6	21.5	19k6	40	M6*12L	90.5
47	32	5	18	16k6	40	M5*10L	83.5
	32	6	21.5	19k6	40	M6*12L	86
57	40	8	27	24k6	50	M8*16L	96
	32	6	21.5	19k6	40	M6*12L	95
67	40	8	27	24k6	50	M8*16L	119.5
	32	6	21.5	19k6	40	M6*12L	95
77	40	8	27	24k6	50	M8*16L	119.5
	32	6	21.5	19k6	40	M6*12L	89.5
	32	6	21.5	19k6	40	M6*12L	106
	40	8	27	24k6	50	M8*16L	114
87	70	10	41	38k6	80	M12*24L	177
	32	6	21.5	19k6	40	M6*12L	95.5
	50	8	31	28k6	60	M8*16L	114.5
	70	10	41	38k6	80	M12*24L	167.5
97	70	12	45	42k6	110	M16*32L	240.5
	50	8	31	28k6	60	M8*16L	110.5
	70	10	41	38k6	80	M12*24L	159.5
	70	12	45	42k6	110	M16*32L	232.5
107	80	14	51.5	48k6	110	M16*32L	237.5
	50	8	31	28k6	60	M8*16L	110.5
	70	10	41	38k6	80	M12*24L	150
	70	12	45	42k6	110	M16*32L	223
	80	14	51.5	48k6	110	M16*32L	228

KAS	OUTPUT-HOLLOW				
	V	T	H1	H	U1
37	33.3	8	60	105	30
47	38.3	10	75	132	35
57	43.3	12	83	142	40
67	43.3	12	90	156	40
77	53.8	14	105	183	50
87	64.4	18	120	210	60
97	80	20	150	270	70
107	95.4	25	175	313	90

# Model KMS



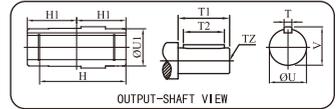
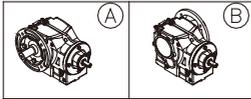
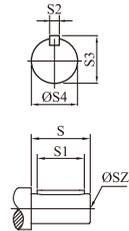
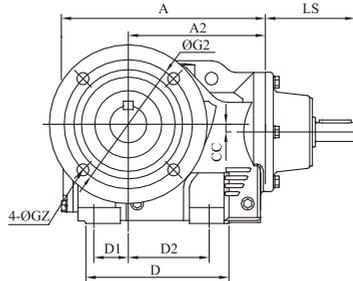
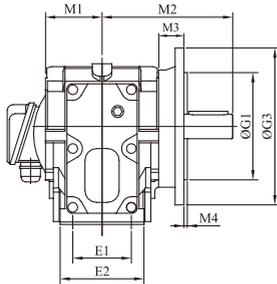
KMS	A	A2	CC	D	D1	D2	E1	E2	M1	M3	M4	G1	G2	G3	GZ
37	202	139	7.8	140	35	82	100	120	60	24	2	110	130	160	9
47	237	166	5.2	169	40	100	120	145	72.5	25	2.5	130	165	200	11
57	253	173	14.5	191	47	105	130	157	80	23.5	3	180	215	250	13.5
67	269	179	19.1	175	42	110	140	170	86.5	23	3.5	180	215	250	13.5
77	314	202	37.3	220	48	122	165	200	100	37	4	230	265	300	13.5
87	389	257	31.4	274	65	160	180	224	112	30	4	250	300	350	17.5
97	437	277	46.15	310	83	165	240	290	145	42	4	350	400	450	17.5
107	541	341	67.4	390	100	190	270	340	173	41	4	350	400	450	17.5

KMS	INPUT SHAFT						
	S1	S2	S3	S4	S	SZ	LS
37	32	5	18	16k6	40	M5*10L	88
	32	6	21.5	19k6	40	M6*12L	90.5
47	32	5	18	16k6	40	M5*10L	83.5
	32	6	21.5	19k6	40	M6*12L	86
	40	8	27	24k6	50	M8*16L	96
57	32	6	21.5	19k6	40	M6*12L	95
	40	8	27	24k6	50	M8*16L	119.5
67	32	6	21.5	19k6	40	M6*12L	95
	40	8	27	24k6	50	M8*16L	119.5
77	32	6	21.5	19k6	40	M6*12L	89.5
	32	6	21.5	19k6	40	M6*12L	106
	40	8	27	24k6	50	M8*16L	114
	70	10	41	38k6	80	M12*24L	177
87	32	6	21.5	19k6	40	M6*12L	95.5
	50	8	31	28k6	60	M8*16L	114.5
	70	10	41	38k6	80	M12*24L	167.5
	70	12	45	42k6	110	M16*32L	240.5
97	50	8	31	28k6	60	M8*16L	110.5
	70	10	41	38k6	80	M12*24L	159.5
	70	12	45	42k6	110	M16*32L	232.5
	80	14	51.5	48k6	110	M16*32L	237.5
107	50	8	31	28k6	60	M8*16L	110.5
	70	10	41	38k6	80	M12*24L	150
	70	12	45	42k6	110	M16*32L	223
	80	14	51.5	48k6	110	M16*32L	228

KMS	OUTPUT-HOLLOW				
	V	T	H1	H	U1
37	33.3	8	60	105	30
47	38.3	10	75	132	35
57	43.3	12	83	142	40
67	43.3	12	90	156	40
77	53.8	14	105	183	50
87	64.4	18	120	210	60
97	80	20	150	270	70
107	95.4	25	175	313	90



# Model KNS

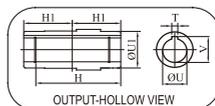
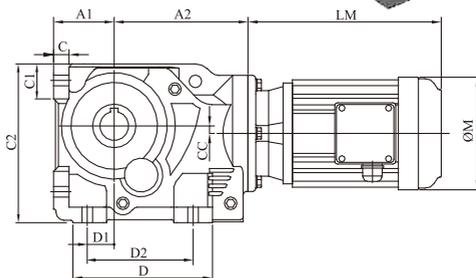
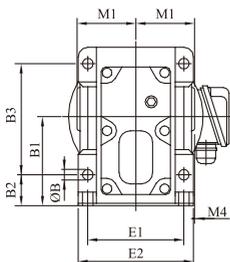
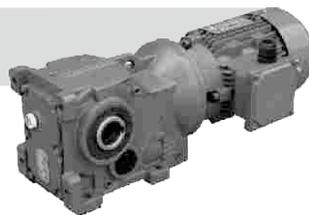


KNS	A	A2	CC	D	D1	D2	E1	E2	M1	M2	M3	M4	G1	G2	G3	GZ
37	202	139	7.8	140	35	82	100	120	60	134	24	2	110	130	160	9
47	237	166	5.2	169	40	100	120	145	72.5	160	25	2.5	130	165	200	11
57	253	173	14.5	191	47	105	130	157	80	176.5	23.5	3	180	215	250	13.5
67	269	179	19.1	175	42	110	140	170	86.5	193	23	3.5	180	215	250	13.5
77	314	202	37.3	220	48	122	165	200	100	242	37	4	230	265	300	13.5
87	389	257	31.4	274	65	160	180	224	112	270	30	4	250	300	350	17.5
97	437	277	46.15	310	83	165	240	290	145	332	42	4	350	400	450	17.5
107	541	341	67.4	390	100	190	270	340	173	386	41	4	350	400	450	17.5

KNS	INPUT SHAFT						
	S1	S2	S3	S4	S	SZ	LS
37	32	5	18	16k6	40	M5*10L	88
	32	6	21.5	19k6	40	M6*12L	90.5
47	32	5	18	16k6	40	M5*10L	83.5
	32	6	21.5	19k6	40	M6*12L	86
	40	8	27	24k6	50	M8*16L	96
57	32	6	21.5	19k6	40	M6*12L	95
	40	8	27	24k6	50	M8*16L	119.5
67	32	6	21.5	19k6	40	M6*12L	95
	40	8	27	24k6	50	M8*16L	119.5
77	32	6	21.5	19k6	40	M6*12L	89.5
	32	6	21.5	19k6	40	M6*12L	106
	40	8	27	24k6	50	M8*16L	114
	70	10	41	38k6	80	M12*24L	177
87	32	6	21.5	19k6	40	M6*12L	95.5
	50	8	31	28k6	60	M8*16L	114.5
	70	10	41	38k6	80	M12*24L	167.5
	70	12	45	42k6	110	M16*32L	240.5
97	50	8	31	28k6	60	M8*16L	110.5
	70	10	41	38k6	80	M12*24L	159.5
	70	12	45	42k6	110	M16*32L	232.5
	80	14	51.5	48k6	110	M16*32L	237.5
107	50	8	31	28k6	60	M8*16L	110.5
	70	10	41	38k6	80	M12*24L	150
	70	12	45	42k6	110	M16*32L	223
	80	14	51.5	48k6	110	M16*32L	228

KNS	OUTPUT-SHAFT								
	U	V	T	H1	H	U1	T1	T2	TZ
37	25	28	8	60	105	30	50	40	M10x20L
47	30	33	8	75	132	35	60	50	M10x20L
57	35	38	10	83	142	40	70	60	M12x25L
67	40	43	12	90	156	40	80	70	M16x32L
77	50	53.5	14	105	183	50	100	80	M16x32L
87	60	64	18	120	210	60	120	100	M20x40L
97	70	74.5	20	150	270	70	140	110	M20x40L
107	90	95	25	175	313	90	170	160	M24x32L

# Model KHM

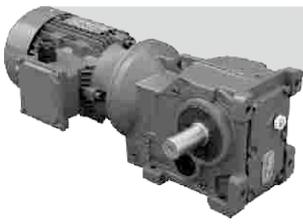


KHM	A1	A2	B	B1	B2	B3	C	CC	C1	C2	D	D1	D2	E1	E2	M1	M4
37	63	139	11	100	32	115	16	7.8	36	164	145	28	110	100	120	60	3.5
47	71	166	11	112	37	130	18	5.2	34	186	169	35	130	120	145	72.5	3.5
57	80	173	13.5	132	45.5	150	21	14.5	43	217	192	30	130	130	157	80	4
67	90	179	13.5	140	45	160	24	19.1	54	228	170	30	120	140	170	86.5	4
77	112	202	17.5	180	55	200	27	37.3	60	293	220	40	150	165	200	100	4
87	132	257	22	212	70	233	32	31.4	88	340	280	55	180	180	224	112	5
97	160	277	26	265	75	295	36	46.15	86	417	310	75	240	240	290	145	5
107	200	341	33	315	95	360	36	67.4	100	453	395	95	280	270	340	173	5

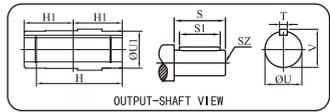
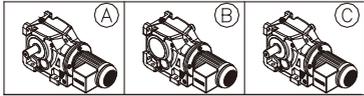
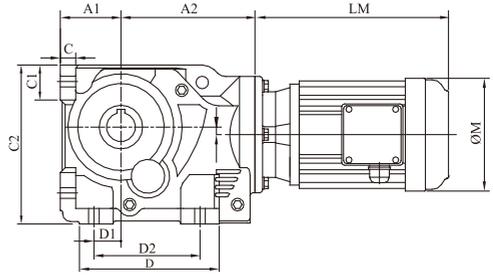
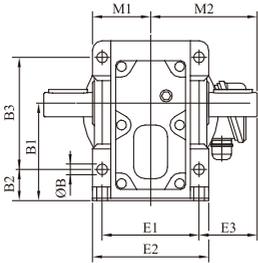
MOTOR DIMENSION																
TYPE	LM								M							
	K37	K47	K57	K67	K77	K87	K97	K107	K37	K47	K57	K67	K77	K87	K97	K107
63	231.5	227	225	225					120	120	120	120				
71	247.5	243	241	241					136	136	136	136				
80	309	304.5	302.5	302.5	297	287.5			160	160	160	160	160	160		
90	354.5	350	348	348	342.5	333			176	176	176	176	176	176		
100		398	396	396	390.5	381	377	369		198	198	198	198	198	198	198
112			408	408	402.5	393	389	381			220	220	220	220	220	220
132S					441	431.5	423.5	414					258	258	258	258
132M						469.5	461.5	452						258	258	258
160M						550	542	532.5						334	334	334
160L							586	576.5							334	334
180M							607.5	598							382	382
200L								636								382
225								713								458

KHM	OUTPUT-HOLLOW				
	V	T	H1	H	U1
37	33.3	8	60	105	30
47	38.3	10	75	132	35
57	43.3	12	83	142	40
67	43.3	12	90	156	40
77	53.8	14	105	183	50
87	64.4	18	120	210	60
97	80	20	150	270	70
107	95.4	25	175	313	90

FRAME	DATA MOTOR	
	LM	M
63	207	130
71	225	145
80	255	175
90S/L	270/295	195
100L	325	215
112M	345	240
132S/M	390/430	275
160M/L	495/550	330
180M/L	580/615	380
200L	658.5	420
225S/M	670/695	465



# Model KSM



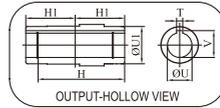
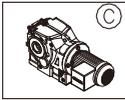
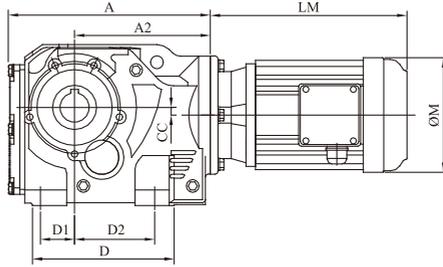
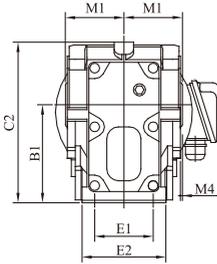
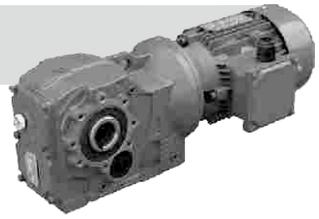
KSM	A1	A2	B	B1	B2	B3	C	CC	C1	C2	D	D1	D2	E1	E2	E3	M1	M2
37	63	139	11	100	32	115	16	7.8	36	164	145	28	110	100	120	60	60	110
47	71	166	11	112	37	130	18	5.2	34	186	169	35	130	120	145	75	72.5	135
57	80	173	13.5	132	45.5	150	21	14.5	43	217	192	30	130	130	157	88	80	153
67	90	179	13.5	140	45	160	24	19.1	54	228	170	30	120	140	170	101	86.5	171
77	112	202	17.5	180	55	200	27	37.3	60	293	220	40	150	165	200	123.5	100	206
87	132	257	22	212	70	233	32	31.4	88	340	280	55	180	180	224	150	112	240
97	160	277	26	265	75	295	36	46.15	86	417	310	75	240	240	290	171	145	291
107	200	341	33	315	95	360	36	67.4	100	453	395	95	280	270	340	212	173	347

MOTOR DIMENSION																	
TYPE	K37	K47	K57	K67	K77	K87	K97	K107		K37	K47	K57	K67	K77	K87	K97	K107
63	231.5	227	225	225						120	120	120	120				
71	247.5	243	241	241						136	136	136	136				
80	309	304.5	302.5	302.5	297	287.5				160	160	160	160	160	160		
90	354.5	350	348	348	342.5	333				176	176	176	176	176	176		
100		398	396	396	390.5	381	377	369			198	198	198	198	198	198	198
112			408	408	402.5	393	389	381				220	220	220	220	220	220
132S					441	431.5	423.5	414						258	258	258	258
132M						469.5	461.5	452							258	258	258
160M						550	542	532.5							334	334	334
160L							586	576.5								334	334
180M							607.5	598								382	382
200L								636									382
225								713									458

KSM	OUTPUT-SHAFT								
	U	V	T	H1	H	U1	S	S1	SZ
37	25	28	8	60	105	30	50	40	M10x20L
47	30	33	8	75	132	35	60	50	M10x20L
57	35	38	10	83	142	40	70	60	M12x25L
67	40	43	12	90	156	40	80	70	M16x32L
77	50	53.5	14	105	183	50	100	80	M16x32L
87	60	64	18	120	210	60	120	110	M20x40L
97	70	74.5	20	150	270	70	140	110	M20x40L
107	90	95	25	175	313	90	170	160	M24x32L

DATA MOTOR		
FRAME	LM	M
63	207	130
71	225	145
80	255	175
90S/L	270/295	195
100L	325	215
112M	345	240
132S/M	390/430	275
160M/L	495/550	330
180M/L	580/615	380
200L	658.5	420
225S/M	670/695	465

# Model KAM

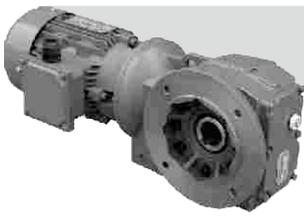


KAM	A	A2	B1	C2	CC	D	D1	D2	E1	E2	M1	M4
37	203	139	100	164	7.8	140	35	82	60	100	60	3.5
47	239	166	112	186	5.2	169	40	100	70	106	75	3.5
57	258	173	132	217	14.5	191	47	105	88	122	83	4
67	273	179	140	228	19.1	175	42	110	88	134	90	4
77	326	202	180	293	37.3	220	48	122	102	164	105	4
87	390	257	212	340	31.4	274	65	160	118	152	120	5
97	448	277	265	417	46.15	310	83	165	160	234	150	5
107	541	341	315	503	67.4	390	100	190	190	254	175	5

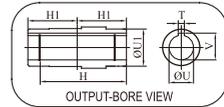
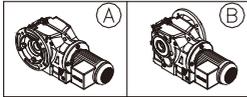
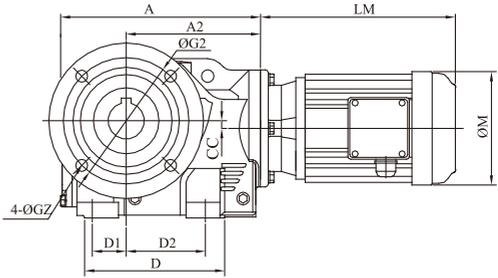
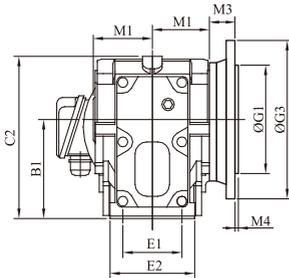
MOTOR DIMENSION																
TYPE	K37	K47	K57	K67	K77	K87	K97	K107	K37	K47	K57	K67	K77	K87	K97	K107
63	231.5	227	225	225					120	120	120	120				
71	247.5	243	241	241					136	136	136	136				
80	309	304.5	302.5	302.5	297	287.5			160	160	160	160	160	160		
90	354.5	350	348	348	342.5	333			176	176	176	176	176	176		
100		398	396	396	390.5	381	377	369		198	198	198	198	198	198	198
112			408	408	402.5	393	389	381			220	220	220	220	220	220
132S					441	431.5	423.5	414					258	258	258	258
132M					469.5	461.5	452							258	258	258
160M					550	542	532.5							334	334	334
160L						586	576.5								334	334
180M						607.5	598								382	382
200L							636									382
225							713									458

KAM	OUTPUT-HOLLOW				
	V	T	H1	H	U1
37	33.3	8	60	105	30
47	38.3	10	75	132	35
57	43.3	12	83	142	40
67	43.3	12	90	156	40
77	53.8	14	105	183	50
87	64.4	18	120	210	60
97	80	20	150	270	70
107	95.4	25	175	313	90

DATA MOTOR		
FRAME	LM	M
63	207	130
71	225	145
80	255	175
90S/L	270/295	195
100L	325	215
112M	345	240
132S/M	390/430	275
160M/L	495/550	330
180M/L	580/615	380
200L	658.5	420
225S/M	670/695	465



# Model KMM



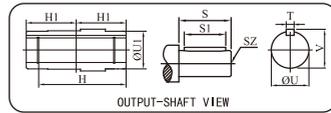
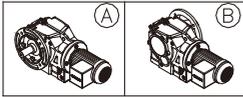
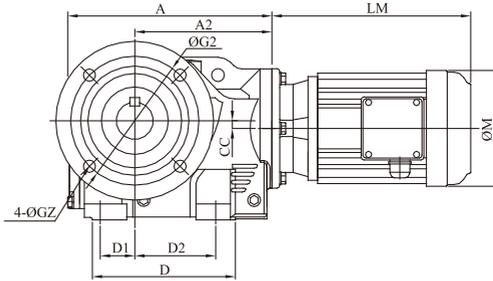
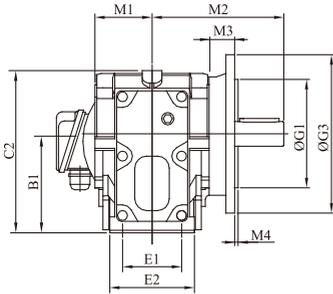
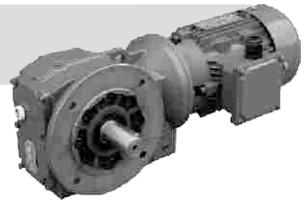
KMM	A	A2	B1	C2	CC	D	D1	D2	E1	E2	M1	M3	M4	G1	G2	G3	GZ
37	203	139	100	164	7.8	140	35	82	60	100	60	24	3.5	110	130	160	9
47	239	166	112	186	5.2	169	40	100	70	106	75	25	3.5	130	165	200	11
57	258	173	132	217	14.5	191	47	105	88	122	83	23.5	4	180	215	250	13.5
67	273	179	140	228	19.1	175	42	110	88	134	90	23	4	180	215	250	13.5
77	326	202	180	293	37.3	220	48	122	102	164	105	37	4	230	265	300	13.5
87	390	257	212	340	31.4	274	65	160	118	152	120	30	5	250	300	350	17.5
97	448	277	265	417	46.15	310	83	165	160	234	150	42	5	350	400	450	17.5
107	541	341	315	503	67.4	390	100	190	190	254	175	41	5	350	400	450	17.5

MOTOR DIMENSION																		
TYPE	LM								M									
	K37	K47	K57	K67	K77	K87	K97	K107	K37	K47	K57	K67	K77	K87	K97	K107		
63	231.5	227	225	225					120	120	120	120						
71	247.5	243	241	241					136	136	136	136						
80	309	304.5	302.5	302.5	297	287.5			160	160	160	160	160	160				
90	354.5	350	348	348	342.5	333			176	176	176	176	176	176				
100		398	396	396	390.5	381	377	369		198	198	198	198	198	198	198		
112			408	408	402.5	393	389	381			220	220	220	220	220	220		
132S					441	431.5	423.5	414					258	258	258	258		
132M						469.5	461.5	452						258	258	258		
160M						550	542	532.5						334	334	334		
160L							586	576.5							334	334		
180M							607.5	598							382	382		
200L								636								382		
225								713								458		

KMM	OUTPUT-BORE				
	V	T	H1	H	U1
37	33.3	8	60	105	30
47	38.3	10	75	132	35
57	43.3	12	83	142	40
67	43.3	12	90	156	40
77	53.8	14	105	183	50
87	64.4	18	120	210	60
97	80	20	150	270	70
107	95.4	25	175	313	90

DATA MOTOR		
FRAME	LM	M
63	207	130
71	225	145
80	255	175
90S/L	270/295	195
100L	325	215
112M	345	240
132S/M	390/430	275
160M/L	495/550	330
180M/L	580/615	380
200L	658.5	420
225S/M	670/695	465

# Model KNM



KNM	A	A2	B1	C2	CC	D	D1	D2	E1	E2	M1	M2	M3	M4	G1	G2	G3	GZ
37	203	139	100	164	7.8	140	35	82	60	100	58	134	24	3.5	110	130	160	9
47	239	166	112	186	5.2	169	40	100	70	106	72	160	25	3.5	130	165	200	11
57	258	173	132	217	14.5	191	47	105	88	122	80	176.5	23.5	4	180	215	250	13.5
67	273	179	140	228	19.1	175	42	110	88	134	86.5	193	23	4	180	215	250	13.5
77	326	202	180	293	37.3	220	48	122	102	164	101	242	37	4	230	265	300	13.5
87	390	257	212	340	31.4	274	65	160	118	152	116	270	30	5	250	300	350	17.5
97	448	277	265	417	46.15	310	83	165	160	234	146	332	42	5	350	400	450	17.5
107	541	341	315	503	67.4	390	100	190	190	254	173	386	41	5	350	400	450	17.5

MOTOR DIMENSION																		
TYPE	LM										M							
	K37	K47	K57	K67	K77	K87	K97	K107			K37	K47	K57	K67	K77	K87	K97	K107
63	231.5	227	225	225							120	120	120	120				
71	247.5	243	241	241							136	136	136	136				
80	309	304.5	302.5	302.5	297	287.5					160	160	160	160	160	160		
90	354.5	350	348	348	342.5	333					176	176	176	176	176	176		
100		398	396	396	390.5	381	377	369				198	198	198	198	198	198	198
112			408	408	402.5	393	389	381					220	220	220	220	220	220
132S					441	431.5	423.5	414							258	258	258	258
132M						469.5	461.5	452								258	258	258
160M						550	542	532.5								334	334	334
160L							586	576.5										
180M								607.5	598								382	382
200L									636									382
225									713									458

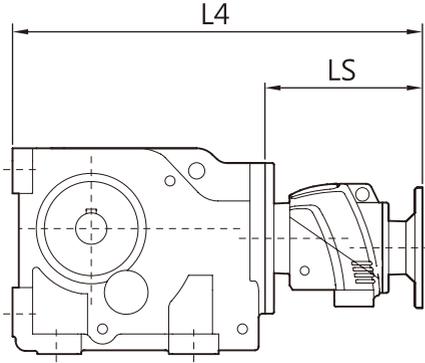
KNM	OUTPUT-SHAFT								
	U	V	T	H1	H	U1	S	S1	SZ
37	25	28	8	60	105	30	50	40	M10x20L
47	30	33	8	75	132	35	60	50	M10x20L
57	35	38	10	83	142	40	70	60	M12x25L
67	40	43	12	90	156	40	80	70	M16x32L
77	50	53.5	14	105	183	50	100	80	M16x32L
87	60	64	18	120	210	60	120	100	M20x40L
97	70	74.5	20	150	270	70	140	110	M20x40L
107	90	95	25	175	313	90	170	160	M24x32L

DATA MOTOR		
FRAME	LM	M
63	207	130
71	225	145
80	255	175
90S/L	270/295	195
100L	325	215
112M	345	240
132S/M	390/430	275
160M/L	495/550	330
180M/L	580/615	380
200L	658.5	420
225S/M	670/695	465

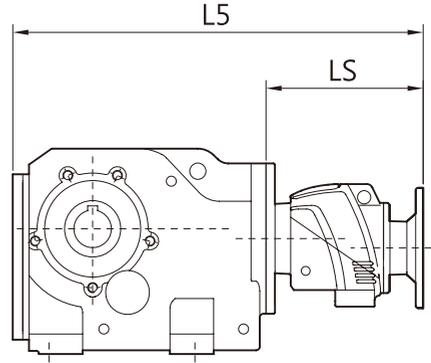
# Multi Stages Gear Unit

Unit Gear Multi Tahap

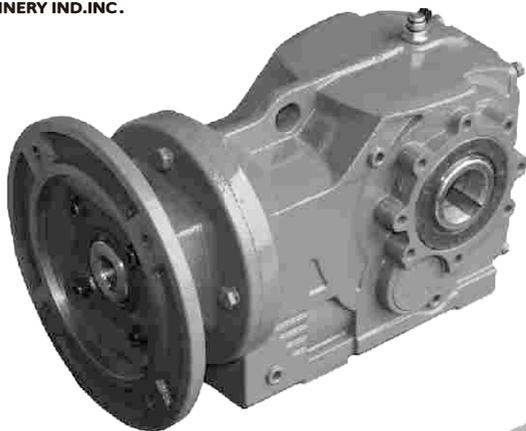
**KSF/KHF**



**KAF/KMF/KNF**



Size	Motor Frame	LS	L4	L5
K..47R37	IEC63	219	456	458
	IEC71	219	456	458
	IEC80	237	474	476
	IEC90	237	474	476
K..57R37	IEC63	217	470	475
	IEC71	217	470	475
	IEC80	235	488	493
	IEC90	235	488	493
K..67R37	IEC63	217	486	490
	IEC71	217	486	490
	IEC80	235	504	508
	IEC90	235	504	508
K..77R37	IEC63	211.5	525.5	537
	IEC71	211.5	525.5	537
	IEC80	229.5	543.5	555
	IEC90	229.5	543.5	555
K..87R57	IEC63	249.5	638.5	639.5
	IEC71	249.5	638.5	639.5
	IEC80	267.5	656.5	657.5
	IEC90	267.5	656.5	657.5
	IEC100	284	673	674
	IEC112	284	673	674
K..97R57	IEC63	241.5	678.5	689.5
	IEC71	241.5	678.5	689.5
	IEC80	259.5	696.5	707.5
	IEC90	259.5	696.5	707.5
	IEC100	276	713	724
	IEC112	276	713	724
K..107R77	IEC71	298.5	839.5	839.5
	IEC80	306.5	847.5	847.5
	IEC90	306.5	847.5	847.5
	IEC100	323	864	864
	IEC112	323	864	864
	IEC132S	371.5	912.5	912.5



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HELICAL WORM GEAR



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