KM6

Single Flange 6″ Borehole Submersible Electric Water Cooled Rewindable Motors

Models Range
Standard: Single Flange

Power Range
From: 5,5 HP (4 kW)
To: 70 HP (52 kW)

Voltage Range
380 ~ 415 Volts, 50 Hertz
230 Volts - 60 Hertz
380 Volts - 60 Hertz
460 Volts - 60 Hertz

Speed Range
2 Poles, 2900 RPM
2 Poles, 3600 RPM

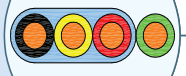
Construction Material
Cast Iron with Stainless Steel Cover

info@komaxmotor.com

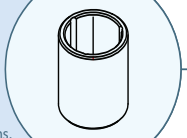
X-Sectional View with Specification

KM6 Single Flange

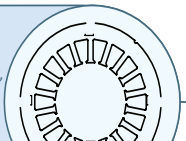
- 3 meter long Tail Cable, Red, Black and Yellow Colored and Green coloured ground wire.
- Pure Copper with a high-grade rubber sheath.
- Robust Sealing ensures safe and reliable operation.



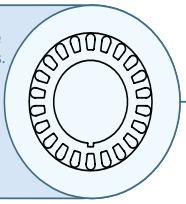
- The upper portion with carbon bushes gives greater stability and vibration-free operation of the motor.
- Avoid damage to motor internal parts even in the worst pump malfunction / damaged conditions.



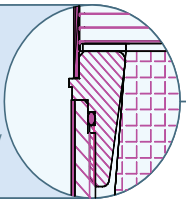
- Stator made of high-grade silicon steel sheet.
- Low core losses, higher efficiency, lower ampere consumption and lower heat generation.
- Low-quality motors use ordinary steel sheets to save cost, hence sacrificing efficiency and reliability.



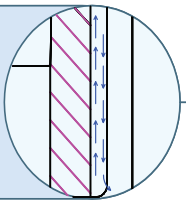
- The rotor is made of a high-grade silicon steel sheet with low losses.
- Pure copper bar inserted in rotor slots.
- High efficiency and longer service life.



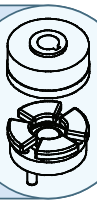
- Stator upper and lower ends are welded with threaded flange.
- Allows more dimensional accuracy due to independent machine-ability.
- Provide better structural integrity serviceability and vibration-free operation.

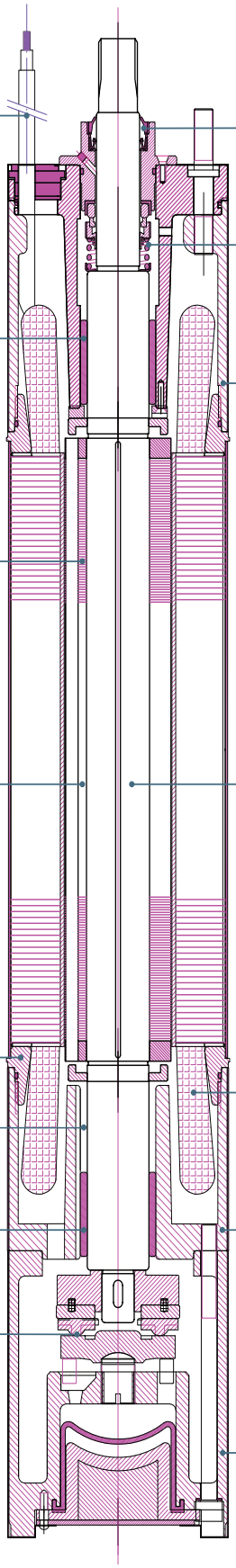


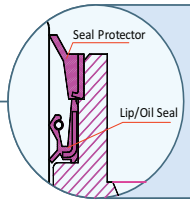
- The lower portion with carbon bushes gives greater stability and vibration-free operation of the motor.
- With water passage all along for better lubrication and heat dissipation.



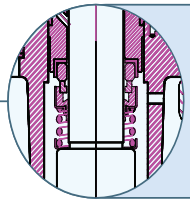
- Robust and overrated thrust bearing made of high-grade material (Stainless Steel 400 Series) with the finest workmanship.
- Water lubricated, low friction and highly durable.
- Thrust load capacity from 24000 N to 60000 N



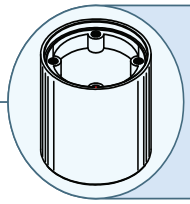




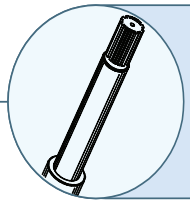
- Komax Sealing has 3 layers of Protection.
- Seal Protector resists sand, clay and mud against entering to Seal Support, while remaining intact at 3500 RPM.
- Lip/Oil Seal resist fine sand against entering to Mechanical Seal.
- And finally, Mechanical Seal - Sealing it perfectly.



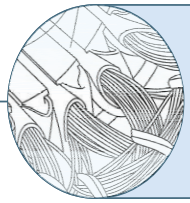
- High grade spring-loaded Mechanical Seal made of Silicon Carbide.
- Ensures perfect sealing in extreme working conditions.
- Highly resistive to fine and coarse sand particles, thus ensuring safe operation in sandy wells.



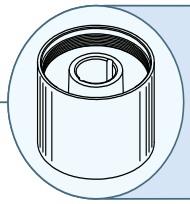
- Upper socket made of cast iron grade GG25 having a wall thickness of 8 mm and further covered SS 304 sheet, thus giving strength and surface protection at the same time.
- 100% leak-proof and explosion-proof.
- Better structural integrity.



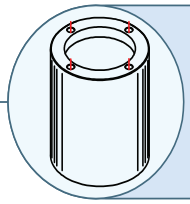
- High grade SS420 stainless steel shaft hardened to 40 HRC.
- Integral / single-piece design ensures better stiffness and dimensional accuracy.
- Fully machined and grinded throughout the length.



- Pure copper winding wire with BOPP+BOPET Insulation for higher temperature and better insulation as compared to PE//PA insulation.
- Mechanized coil insertion to maintain quality and precision.
- Oversized wire gauge to ensure longer service life and higher efficiency.



- Lower socket made of cast iron grade GG25 having a wall thickness of 8mm and further covered SS304 sheet, thus giving strength and surface protection at the same time.
- 100% leak-proof and explosion-proof.
- Better structural integrity.



- Robust and over-designed lower support covered with stainless steel sheet gives a stable foundation to the motor.
- More space to easily accommodate larger thrust bearings.
- More space allows more coolant water for better heat dissipation.

KM6 SF

SINGLE FLANGE 6-INCH SERIES

Salient Features

KM6 6" water-filled submersible electric motors have asynchronous three-phase rewindable stator and squirrel cage rotor.

The new improved series of 6" submersible electric motors KM6 has been designed to achieve compatibility with VFD outputs making it the first choice for solar and other high efficiency applications. In this optional design and material selection all efforts have been made to offer an energy efficient product to our customers which stand for reliability, excellent quality, long and trouble-free life.

- Wet Stator Design
- High Grade Material
- Easy Maintenance
- Long Service Life
- High Thermal Capacity
- High Efficiency
- High Sand Resistance
- Re-windable
- Eco Friendly
- Industrial, Commercial, Agriculture and Irrigation Purpose

Technical Specification

IP68	degree of protection
A / B	insulation class
50 °C	ambient temperature
+6% / -10%	voltage tolerance
Vertical*	mounting position
16 cm/sec	min. cooling flow rate speed
150 m	max. immersion depth
110	starts per 24 hours
Wooden case	packing

** Double carbon bush bearings in lower & upper supports for horizontal/inclined installation are available on request.*

Specifications

Winding:
Made of pure electrolytic copper wire sheathed with BOPP+BOPET insulation for high temperature. Robust winding having extra copper than standard version to lower the current density and the electric resistance resulting in reduced winding losses.

Stator:
Increased length with M800 low-losses electrical magnetic sheet fixed in a stainless steel casing.

Rotor:
Increased length with M800 low-losses electrical magnetic sheet fixed with high-grade copper bars.

Spline Shaft:
AISI 420 stainless steel induction hardened and grinded, flange dimensions according to 6" NEMA standard, oversize designed to ensure stiffness in severe conditions.

Shaft Bearing/Bush:
Super finished water-lubricated guide bearing/ bush made of high-grade carbon, are fixed in upper and lower brackets.

Thrust Bearings:
Super grade thrust sliding block bearings, self-aligning Mitchell type, with an axial load capacity of 24000 N (upto 50 HP) and 60000 N (60 to 70 HP).

Mechanical Seal with Lip/Oil Seal:
Silicon carbide mechanical seal for normal and sandy wells and new added Lip/Oil seal resist fine sand against entering to Mechanical Seal.

Pressure Equalizing System:
Consists of rubber diaphragm located at the lower end providing compensative volume for internal pressure developed during operation.

Brackets:
High resistance cast iron upper & lower bracket supports are dressed in stainless steel jackets.

Filler Fluid:
Water mixed with non-toxic antifreeze provide cooling and lubrication, also protect and prevent inside parts from corrosion.

Connection:
Connected through rubber sheathed cable
Available in Delta & WYE (Star) configuration.

Note: All specifications are subject to change without any prior notice.

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Electrical DATA - 50 Hz

Electrical Data - Three Phase - 2 Pole - 380 ~ 415 Volt @ 50 Hz

380 - 415V @ 50 Hz

Motor Type	Motor Size		RPM	Full Load Current (Amp.)	Starting Current (Amp.)	Efficiency at % Load			Cos. Φ at % Load			Service Factor
	HP	kW				50	75	100	50	75	100	
KM6 055T	5,5	4	2870	10,0	48	70,4	76,0	75,6	0,64	0,74	0,78	1
KM6 075T	7,5	5,5	2865	13,2	51	70,5	76,9	76,4	0,68	0,77	0,80	1
KM6 100T	10	7,5	2865	17,1	63	74,9	79,0	78,3	0,69	0,78	0,81	1
KM6 125T	12,5	9,3	2870	20,7	79	76,2	80,9	80,4	0,68	0,77	0,81	1
KM6 150T	15	11	2865	24,2	97	77,3	81,9	81,4	0,69	0,78	0,82	1
KM6 175T	17,5	13	2870	28,2	121	77,6	82,1	81,8	0,70	0,78	0,82	1
KM6 200T	20	15	2865	31,9	150	78,7	82,7	82,3	0,70	0,78	0,82	1
KM6 250T	25	18,5	2870	39,1	172	77,2	83,9	83,4	0,70	0,79	0,82	1
KM6 300T	30	22	2870	47,1	226	77,1	83,8	83,3	0,71	0,79	0,82	1
KM6 350T	35	26	2875	55,0	275	77,5	84,2	83,7	0,70	0,78	0,82	1
KM6 400T	40	30	2870	64,5	342	76,8	83,0	82,3	0,69	0,77	0,81	1
KM6 500T	50	37	2860	80,8	437	77,1	81,9	81,4	0,69	0,78	0,82	1
KM6 600T	60	45	2865	96,3	539	78,2	82,2	81,7	0,70	0,78	0,82	1
KM6 700T	70	52	2860	111,1	622	78,1	82,6	82,1	0,70	0,79	0,83	1

Electrical DATA - 60 Hz

Electrical Data - Three Phase - 2 Pole - 230 Volts, 380 Volts & 460 Volt @ 60 Hz													
	Motor Type	Motor Size		RPM	Full Load Current (Amp.)	Safety Load Current (Amp.)	Starting Current (Amp.)	Efficiency at % Load			Cos. Φ at % Load			Service Factor
		HP	kW					50	75	100	50	75	100	
230V @ 60 Hz	KM6 055T	5,5	4	3480	17,9	20,4	86	70,4	76,0	75,4	0,63	0,72	0,76	1,15
	KM6 075T	7,5	5,5	3475	22,9	26,5	89	70,8	77,3	77,4	0,67	0,76	0,79	1,15
	KM6 100T	10	7,5	3475	30,8	35,3	114	74,3	78,6	78,0	0,67	0,75	0,78	1,15
	KM6 150T	15	11	3470	43,5	50,0	174	77,1	81,6	81,1	0,67	0,76	0,80	1,15
	KM6 200T	20	15	3475	57,0	65,8	268	78,4	82,7	82,3	0,68	0,76	0,80	1,15
	KM6 250T	25	18,5	3480	71,1	82,0	313	77,1	83,5	83,2	0,66	0,75	0,79	1,15
	KM6 300T	30	22	3475	84,7	97,8	407	77,5	84,0	83,7	0,68	0,76	0,79	1,15
380V @ 60 Hz	KM6 055T	5,5	4	3475	10,7	12,2	51	70,4	76,0	75,6	0,63	0,73	0,77	1,15
	KM6 075T	7,5	5,5	3470	13,8	15,9	54	70,6	77,1	77,0	0,68	0,77	0,80	1,15
	KM6 100T	10	7,5	3470	18,3	21,0	68	74,6	78,8	78,2	0,67	0,76	0,79	1,15
	KM6 150T	15	11	3470	25,9	29,8	104	77,4	81,9	81,3	0,68	0,77	0,81	1,15
	KM6 200T	20	15	3470	34,0	39,2	160	78,4	82,5	82,1	0,69	0,77	0,81	1,15
	KM6 250T	25	18,5	3475	42,6	49,1	187	76,9	83,4	83,1	0,67	0,76	0,80	1,15
	KM6 300T	30	22	3470	50,8	58,6	244	77,2	83,8	83,4	0,69	0,77	0,80	1,15
	KM6 350T	35	26	3475	58,8	68,2	294	78,1	84,7	84,2	0,68	0,76	0,80	1,15
	KM6 400T	40	30	3475	68,0	78,4	360	77,1	83,4	82,7	0,69	0,77	0,81	1,15
	KM6 500T	50	37	3465	86,8	99,5	469	77,0	81,7	81,3	0,67	0,75	0,80	1,15
460V @ 60 Hz	KM6 055T	5,5	4	3470	8,8	10,0	42	70,4	76,0	75,4	0,64	0,74	0,78	1,15
	KM6 075T	7,5	5,5	3465	11,4	13,0	44	70,8	77,1	76,5	0,69	0,78	0,81	1,15
	KM6 100T	10	7,5	3470	14,9	17,1	55	74,7	78,9	78,1	0,69	0,77	0,81	1,15
	KM6 150T	15	11	3465	21,1	24,3	85	77,2	81,8	81,2	0,69	0,78	0,82	1,15
	KM6 200T	20	15	3465	27,9	32,0	131	78,2	82,3	81,9	0,70	0,78	0,82	1,15
	KM6 250T	25	18,5	3470	34,8	40,0	153	76,8	83,3	82,8	0,68	0,77	0,81	1,15
	KM6 300T	30	22	3465	41,5	47,9	199	77,1	83,6	83,2	0,70	0,78	0,81	1,15
	KM6 350T	35	26	3470	48,1	55,7	241	77,8	84,5	83,9	0,69	0,77	0,81	1,15
	KM6 400T	40	30	3470	55,8	64,2	296	76,6	82,8	82,2	0,70	0,78	0,82	1,15
	KM6 500T	50	37	3460	69,4	79,9	375	77,0	82,3	81,9	0,68	0,77	0,82	1,15
	KM6 600T	60	45	3465	82,0	95,1	459	78,4	83,1	82,6	0,70	0,79	0,83	1,15
	KM6 700T	70	52	3460	95,7	110,2	536	78,1	82,8	82,4	0,71	0,80	0,83	1.15

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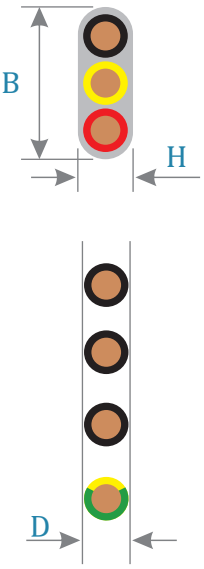
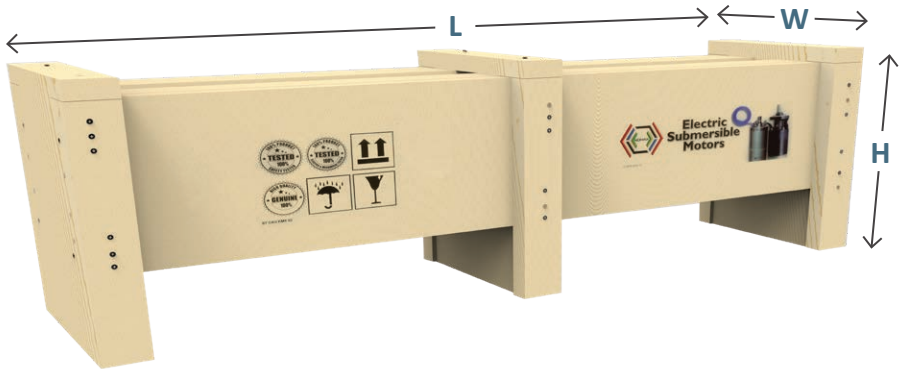
Technical DATA

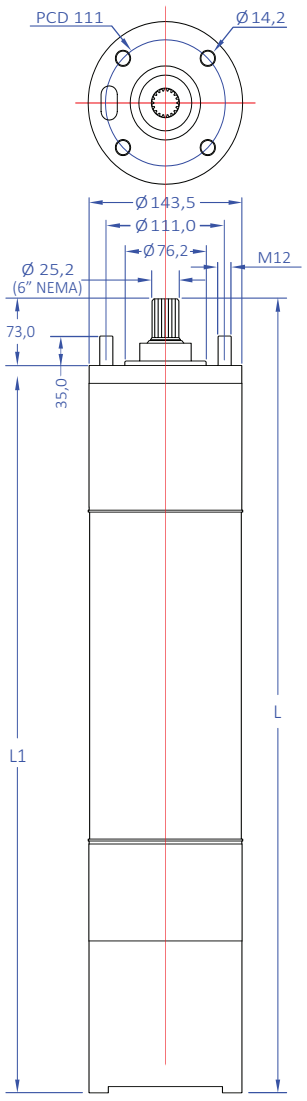
	Size & Dimensions Motor Tail Cable - Three Phase - 50 Hz / 60 Hz							
	Sr: No.	Volts	Motor Size		Cable Size Nos. x Cross Section (mm2)	Dimension B x H (mm)	Cable Length (mtr)	Qty (Nr.)
			HP	kW				
DOL	1	230	5,5 ~ 15	4 ~ 11	3 x 6 1 x 10	19 x 8 D = 6,7	3 3	1 1
	2	380 ~ 415	5,5 ~ 30	4 ~ 22				
	3	460	5,5 ~ 30	4 ~ 22				
	4	230	20 ~ 30	15 ~ 22	3 x 10 1 x 10	24 x 9 D = 6,7	3 3	1 1
	5	380 ~ 415	35 ~ 50	26 ~ 37				
	6	460	35 ~ 50	26 ~ 37				
	7	380 ~ 415	60 ~ 70	45 ~ 52	1 x 16* 1 x 10	D = 10,3 D = 6,7	3 3	3 1
	8	460	60 ~ 70	45 ~ 52				
SD	9	230	5,5 ~ 30	4 ~ 22	3 x 6 1 x 10	19 x 8 D = 6,7	3 3	2 1
	10	380 ~ 415	5,5 ~ 70	4 ~ 52				
	11	460	5,5 ~ 70	4 ~ 52				



** 1 x 16 mm² as black color used for all three (3) wires.*

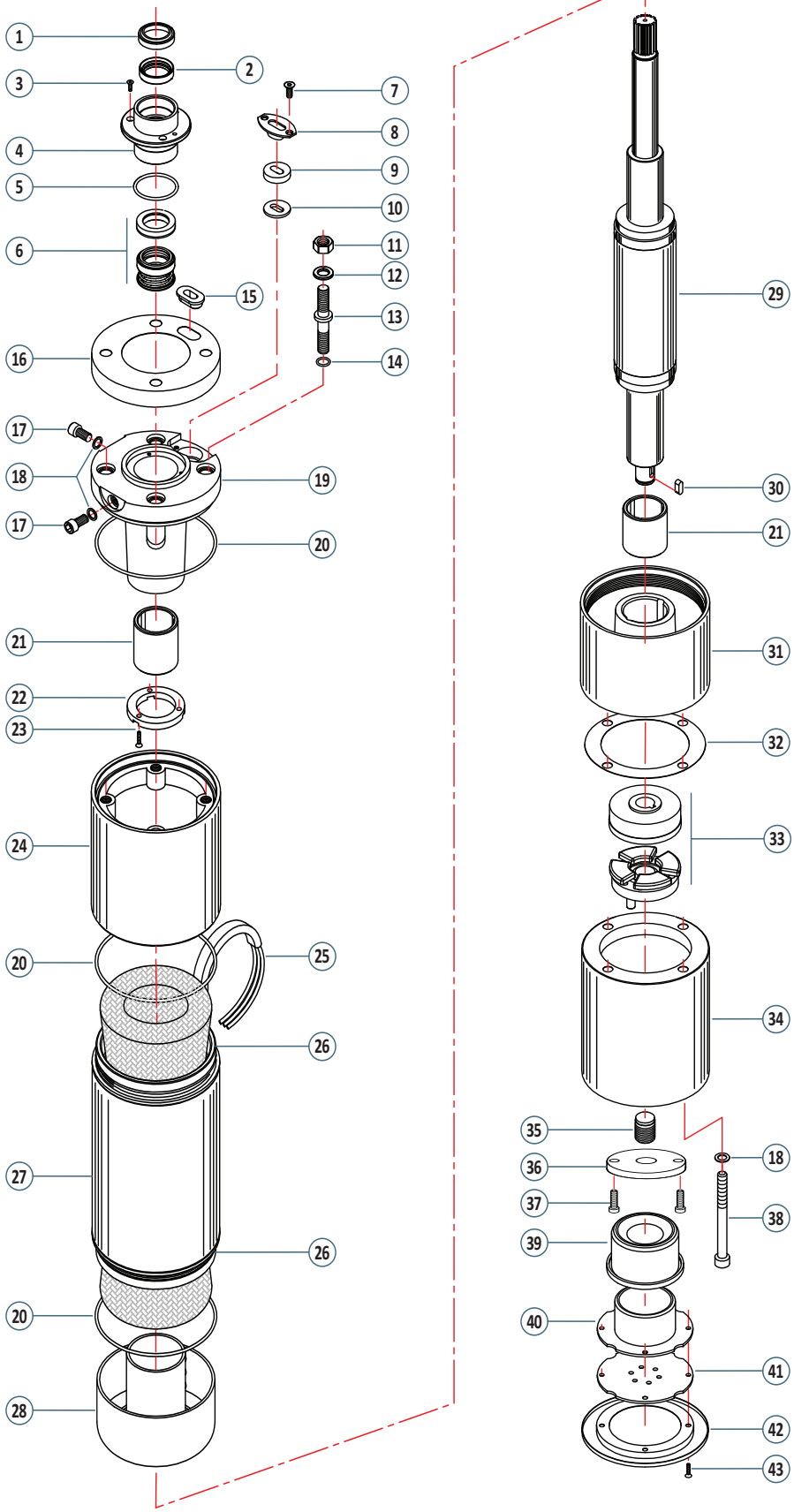
Motor Dimensions and Weights KM6 Single Flange								
Motor Type	Motor Size		Thrust Load (N)	L Motor Length (mm)	L1 Motor Length (mm)	Packing Dimension W x H x L (mm)	Weight (Kg)	
	HP	kW					Without Packing	With Packing
KM6 055T	5,5	4,0	24000	718	645	245 x 330 x 845	52	62
KM6 075T	7,5	5,5	24000	718	645	245 x 330 x 845	52	62
KM6 100T	10	7,5	24000	768	695	245 x 330 x 845	56	66
KM6 125T	12,5	9,3	24000	853	780	245 x 330 x 1010	66	76
KM6 150T	15	11	24000	853	780	245 x 330 x 1010	66	76
KM6 175T	17,5	13,0	24000	943	870	245 x 330 x 1010	75	86
KM6 200T	20	15	24000	943	870	245 x 330 x 1010	75	86
KM6 250T	25	18,5	24000	1033	960	245 x 330 x 1212	86	97
KM6 300T	30	22	24000	1118	1045	245 x 330 x 1212	95	106
KM6 350T	35	26	24000	1213	1140	245 x 330 x 1352	104	116
KM6 400T	40	30	24000	1253	1180	245 x 330 x 1352	109	122
KM6 500T	50	37	24000	1253	1180	245 x 330 x 1352	109	122
KM6 600T	60	45	60000	1321	1248	245 x 330 x 1420	117	131
KM6 700T	70	52	60000	1381	1308	245 x 330 x 1480	123	137



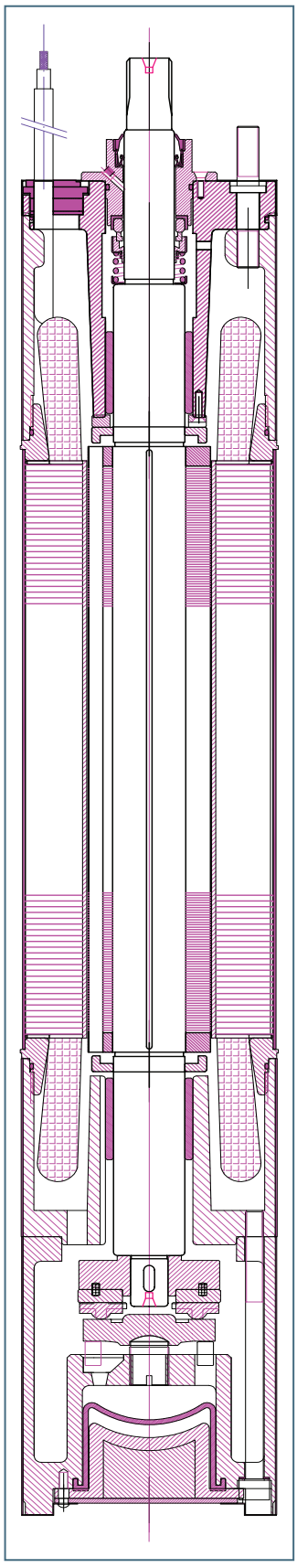


All dimensions are in mm

Exploded View



Cross-Sectional View



Parts LIST with Material & Quantity

Pos.	Item Code	Part Name	Material	Qty	Unit
1	60101480	Wiper Seal	NBR + Stainless Steel	1	Nr
2	60101475	Lip Seal / Oil Seal	NBR + Stainless Steel	1	Nr
3	60101075	Allen Bolt (Seal Support)	Stainless Steel	3	Nr
4	60101090	Seal Support KM6	Stainless Steel	1	Nr
5	60101095	O. Ring (Seal Support)	NBR	1	Nr
6	60101080	Mechanical Seal	Silicon Carbide + NBR + S Steel	1	Nr
7	60101077	Screw (Tail Cable)	Stainless Steel	2	Nr
8	60101137	Cable Top Plate (Tail Cable)	Stainless Steel	1	Nr
9	60101125	Gasket Rubber (Tail Cable)	NBR	1	Nr
10	60101130	Cable Washer (Tail Cable)	Stainless Steel	1	Nr
11	60101117	Hex: M12 Nut	Stainless Steel	4	Nr
12	60101120	Spring Washer for M12	Stainless Steel	4	Nr
13	60101115	Bolt M12	Stainless Steel	4	Nr
14	60101156	Washer Bonded / Dowty Seal	NBR + Carbon Steel	4	Nr
15	60101122	Gasket for Top Cover (Tail Cable)	NBR	1	Nr
16	60101039	Top Cover KM6 (Top Piece)	Stainless Steel	1	Nr
17	60101068	Allen Bolt (Top Piece)	Stainless Steel	2	Nr
18	60101157	Dowty Washer	NBR + Carbon Steel	6	Nr
19	60101002	Upper Support / Top Piece	Cast Iron	1	Nr
20	60101065	O. Ring 3500	NBR	3	Nr
21	60101055	Carbon Bush Large (Lower & Upper)	Carbon	2	Nr
22	60101087	Upper Thrust Bearing	Brass	1	Nr
23	60101142	Screw (Upper Thrust)	Stainless Steel	3	Nr
24	60101010	Upper Threaded Socket	Cast Iron	1	Nr
25	60101170	Motor Tail Cable (03 Core)	Copper + PE + PVC	3	Mtr
26	60101465	Flange SS304	Silicon Steel (M800-50A)	1	Set
27	601013XX	Stator Stack (Assembly)	Silicon Steel (M800-50A)	1	Set
28	60101202	Winding Protection Cover (Lower)	LDPE	1	Nr
29	60101350	Rotor Lamination (Assembly)	Silicon Steel (M800-50A)	1	Set
30	60101145	Key for Rotor Shaft	Stainless Steel	1	Nr
31	60101013	Lower Support	Cast Iron	1	Nr
32	60101212	Gasket	Fiberglass	1	Nr
33	60101025	Thrust Bearing	Stainless Steel + Carbon	1	Nr
34	60101018	Thrust Support	Cast Iron	1	Nr
35	60101030	Adjustment Bolt (Thrust Bearing)	Stainless Steel	1	Nr
36	60101233	Thrust Washer MS for Adjustment Bolt	Mild Steel	1	Nr
37	60161252	Bolt Allen M6x20	Stainless Steel	2	Nr
38	60101071	Bolt Allen M10x170	Carbon Steel 12,9	4	Nr
39	60101045	Diaphragm Rubber	NBR	1	Nr
40	60101216	Diaphragm Support	Polycarbonate	1	Nr
41	60101050	End Cover of Diaphragm	Stainless Steel	1	Nr
42	60101052	Cover for Thrust Support	Stainless Steel	1	Nr
43	60101143	Allen Bolt (Lower Thrust Plate)	Stainless Steel	4	Nr