



SINCE 1982

SAN YUAN

MATERIAL HANDLING

Professional design & manufacturer

Shaft Mounted Helical Geared Motor



SM type



www.TaiwanHoist.com

Overview

They are specially designed with the output shaft parallel to the motor shaft but not in line. Both hollow shaft and normal shaft types enable space saving designs. Like all helical gears these units provide high efficiency, cost competitive gear parts and other benefits.

Key features -

- Outstanding efficiency means greater energy savings (98% per gear stage)
- Flexible mounting options
- Also available for slow speed operations

Applications -

- Material-handling equipment such as conveyor belts
- Textile machinery
- Winches

GENERAL

With precise machining and accurate assembly, our hollow shaft geared motors reach outstanding performance and high efficiency. The modularized design to connect with different types of gear box and wide range of ratios provides economical solution to meet customers' needs.

MOTORS

1. Design Standards:

Motors comply with the DIN VDE 0530 specification for electrical machinery and VDE 0171 standard for motors with increased safety respect.

2. Enclosure:

The standard motor protection is IP54 according to IEC60034-5 standard.

Higher protection grade is also available on request.

3. Power requirement:

Various power input mode can be choose:

50HZ- 220V, 380V, 400V, 415V, 525V

60HZ- 220V, 380V, 440V, 460V, 480V

- Please advise the type of starting (direct-on-line or star-delta starting) when placing orders.

4. Insulation:

standard insulation of 220v motor is B grade, and F grade for 440v.

Conditions of sale

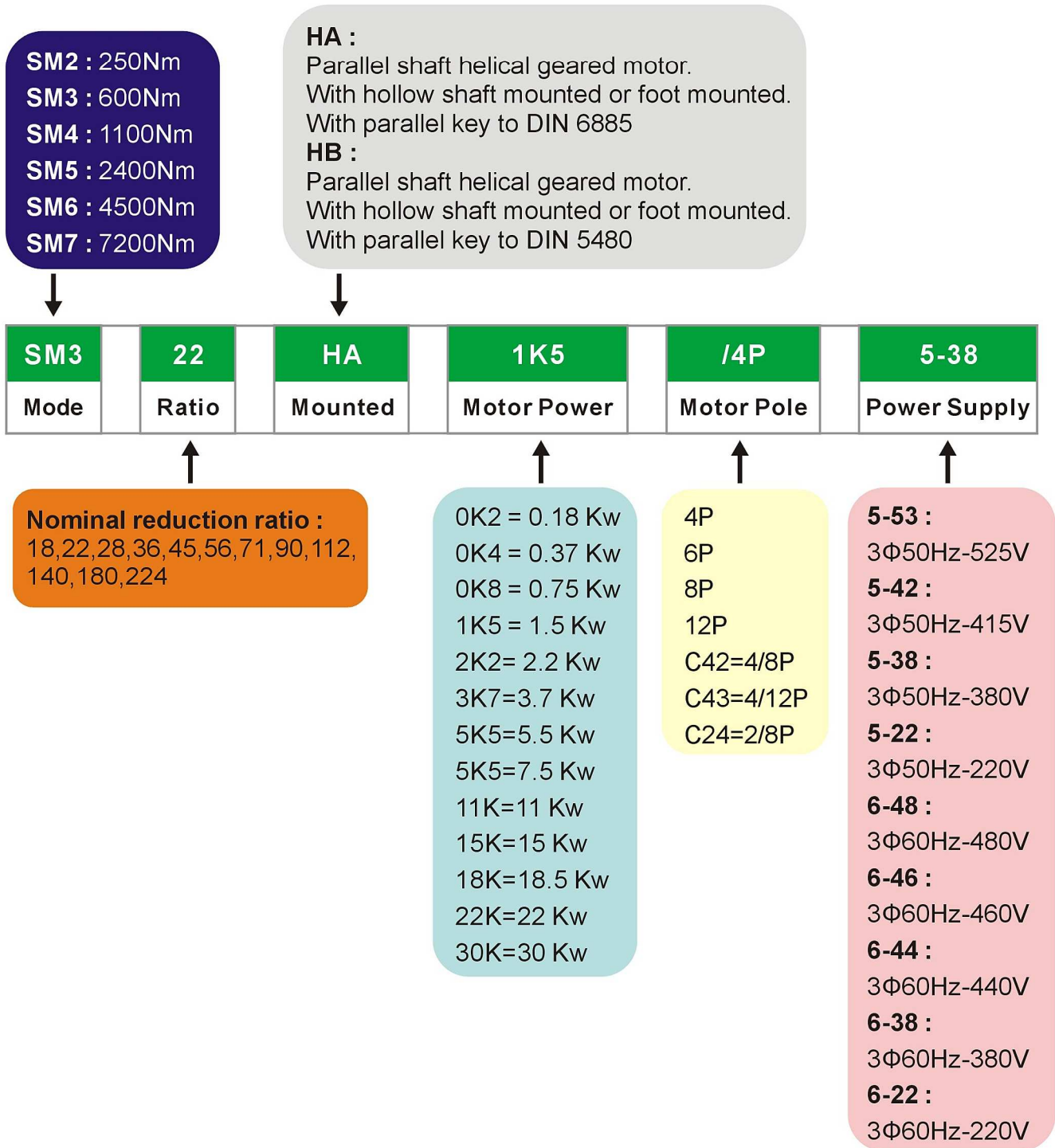
- ⌘ We reserve the right to change ratings, data, and dimensions without prior notice due to further product improvement.
- ⌘ Gear Motors must be installed according to our installation instructions and applicable safety regulation.

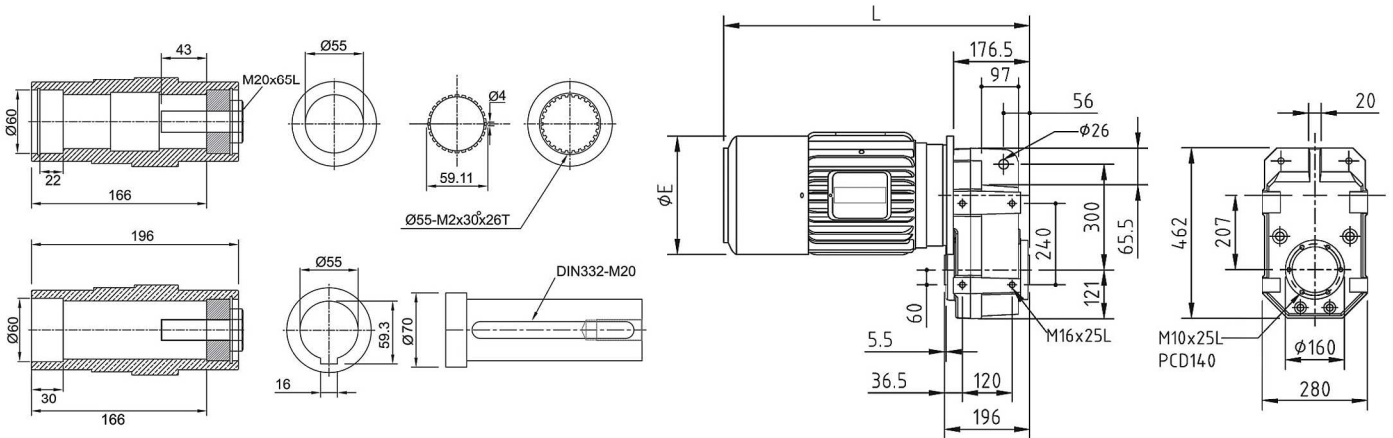
CONTENTS

Features & Index	1 ~ 2
SM2 & SM3 Gear Motors	3 ~ 4
SM4 & SM5 Gear Motors	5 ~ 6
SM6 & SM7 Gear Motors	7 ~ 8
Dimensions Of Gear Motors	9 ~ 10

Ordering example : SM3-22HA/1K5-4P-5-22

Order no.



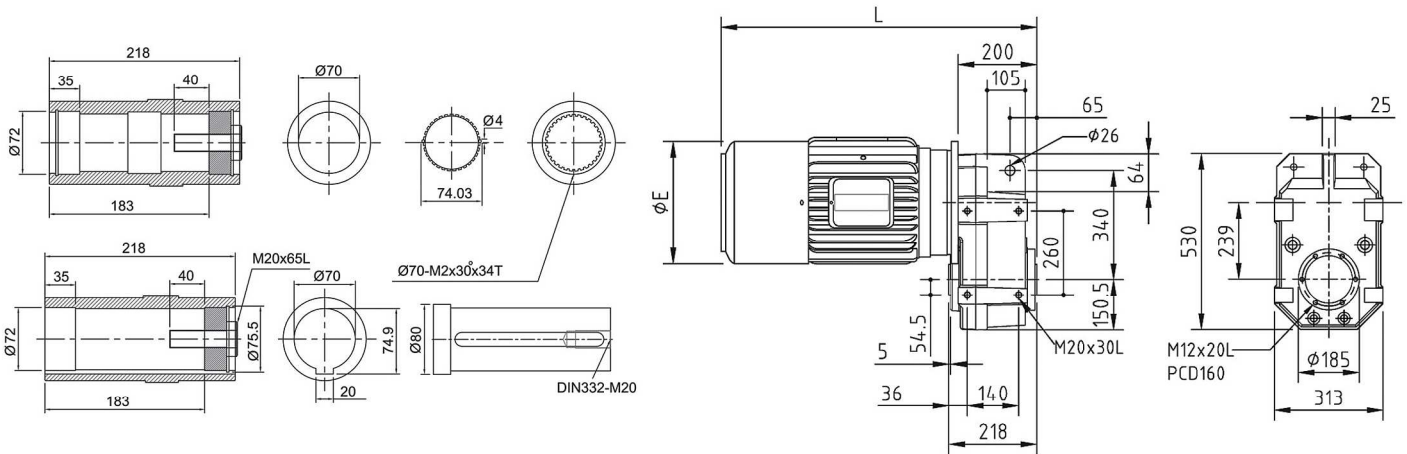


Type : **SM5** Single Speed

Gear box Type	Gear Ratio	Output Speed @ 50 Hz (rpm)		Service Factor												
				0.75Kw		1.5Kw		2.2Kw		3.7Kw		5.5Kw		7.5Kw		
		4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P		
SM5-18	17.5	83.5	55.7									4.0	3.4	2.3	2.5	
SM5-22	21.8	67.0	44.6								4.9	3.2	3.3	2.2	2.4	
SM5-28	27.3	53.2	35.5					4.3	3.9	2.6	2.6	1.7	1.9			
SM5-36	34.6	42.2	28.1				5.0	5.1	3.4	3.0	2.0	2.0	1.4	1.5		
SM5-45	45.2	32.1	21.3				3.8	3.9	2.6	2.3	1.5	1.5				
SM5-56	57.3	25.2	16.7			4.4	3.0	3.1	2.1	1.8						
SM5-71	73.9	19.5	13.0			3.4	2.3	2.4	1.6	1.4						
SM5-90	90.0	15.9	10.6	5.6	3.7	2.8	1.9	2.0	1.3							
SM5-112	110.1	13.0	8.7	4.6	3.1	2.3	1.6	1.6								
SM5-140	139.6	10.3	6.8	3.6	2.4	1.8		1.3								
SM5-180	180.0	7.9	5.3	2.7	1.8	1.4										
SM5-224	219.2	6.5	4.3	2.3	1.5											
Motor Length, L (mm)				488	528	527.5	527.5/528	527.5	589.5	589.5	674.5	674.5	674.5	674.5		
Motor Diameter ΦE (mm)				173	173	198	198/173	198	232	232	266	266	266	266		

Type : **SM5** Two Speed

Gear box Type	Gear Ratio	Output Speed @ 50 Hz (rpm)		Service Factor												
				0.75/0.25Kw	1.5/0.5Kw	2.2/0.75Kw	3.75/1.25Kw	1.5/0.37Kw	2.2/0.55Kw	3.75/0.9Kw						
		4/12P	2/8P	4/12P				2/8P								
SM5-18	17.5	84.0/28.0	166.0/41.5					5.0								
SM5-22	21.8	67.4/22.5	133.2/33.3					4.8								
SM5-28	27.3	53.7/17.9	106.1/26.5					3.8								
SM5-36	34.6	42.3/14.1	83.9/21.0				5.1	3.0						6.0		
SM5-45	45.2	32.1/10.7	64.1/16.0				3.9	2.3						4.5		
SM5-56	57.3	25.4/8.5	50.6/12.6			4.4	3.1	1.8						3.6		
SM5-71	73.9	19.6/6.5	39.1/9.8			3.4	2.4	1.5				4.8		3.0		
SM5-90	90.0	16.0/5.3	32.1/8.0	5.6	2.8	2.0	1.3	5.6	3.9	2.5						
SM5-112	110.1	13.0/4.3	26.2/6.6	4.6	2.3	1.6		4.6	3.2	2.1						
SM5-140	139.6	10.2/3.4	20.7/5.2	3.6	1.8	1.3		3.6	2.5	1.6						
SM5-180	180.0	8.0/2.7	16.0/4.0	2.7	1.4			2.8	2.0							
SM5-224	219.2	6.5/2.2	13.1/3.3	2.3				2.3								
Motor Length, L (mm)				528	567.5	589.5	674.5	567.5	589.5	674.5						
Motor Diameter ΦE (mm)				173	198	232	266	198	232	266						

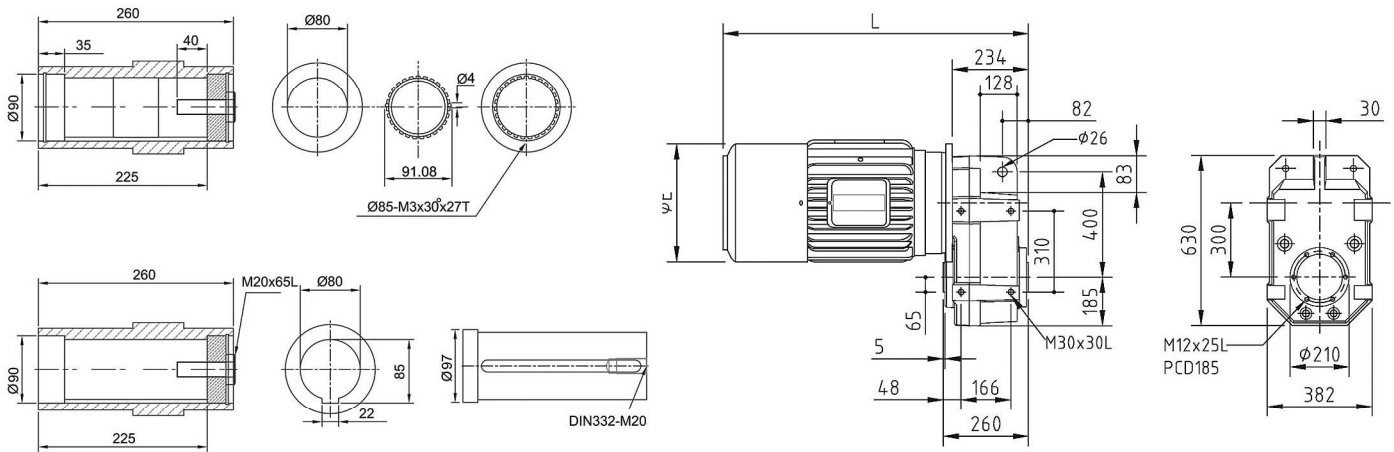


Type : **SM6** Single Speed

Gear box Type	Gear Ratio	Output Speed @ 50 Hz (rpm)		Service Factor															
				1.5Kw		2.2Kw		3.7Kw		5.5Kw		7.5Kw		11Kw		15Kw		18.5Kw	
		4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	
SM6-18	18.1	80.9	53.9												3.2	2.1	2.3	1.5	1.8
SM6-22	22.2	66.0	43.9								3.9	4.4	2.5	2.6	1.7	1.9			1.5
SM6-28	28.0	52.3	34.9								3.1	3.5	2.3	2.4	1.6	1.7			
SM6-36	36.6	40.0	26.6						3.5	3.6	2.4	2.7	1.8	1.8					
SM6-45	45.2	32.4	21.5						2.9	2.9	1.9	2.1	1.4	1.5					
SM6-56	57.1	25.5	17.0				3.8	3.4	2.3	2.3	1.6	1.7							
SM6-71	71.3	20.4	13.6				3.1	2.7	1.8	1.8		1.4							
SM6-90	92.0	15.8	10.5		3.5	3.6	2.4	2.1	1.4	1.4									
SM6-112	110.2	13.1	8.7	4.4	2.9	3.0	2.0	1.8											
SM6-140	137.6	10.4	7.0	3.5	2.3	2.4	1.6	1.4											
SM6-180	177.5	8.1	5.4	2.7	1.8	1.8	1.2												
SM6-224	219.5	6.6	4.3	2.2	1.5	1.5													
Motor Length, L (mm)				551	551	551	613	613	685	685	685	685	785	785	825	785	825	825	825
Motor Diameter ØE (mm)				198	198	198	232	232	266	266	266	266	315	315	315	315	315	315	315

Type : **SM6** Two Speed

Gear box Type	Gear Ratio	Output Speed @ 50 Hz (rpm)		Service Factor											
				1.5/0.5Kw	2.2/0.75Kw	3.75/1.25Kw	5.5/1.85Kw	7.5/2.5Kw	2.2/0.55Kw	3.75/0.9Kw	5.5/1.4Kw	7.5/1.8Kw			
		4/12P	2/8P	4/12P					2/8P						
SM6-18	18.1	80.9/27.0	160.9/40.2							4.7					
SM6-22	22.2	66.0/22.0	131.2/32.8						5.2	3.8					
SM6-28	28.0	52.5/17.5	104.3/26.1						4.8	3.5					
SM6-36	36.6	40.1/13.4	79.8/19.9						3.6	2.7					5.3
SM6-45	45.2	32.5/10.8	64.6/16.1				4.2	2.9	2.2					5.9	4.3
SM6-56	57.1	25.7/8.6	51.1/12.8				3.4	2.3	1.7					4.6	3.4
SM6-71	71.3	20.6/6.9	40.9/10.2				2.7	1.8						3.7	2.7
SM6-90	92.0	15.8/5.3	31.6/7.9			3.6	2.1						4.1	2.9	2.1
SM6-112	110.2	13.2/4.4	26.3/6.6	4.4	3.0	1.7							3.5	2.4	
SM6-140	137.6	10.6/3.5	21.0/5.3	3.5	2.4	1.4						4.8	2.8	1.9	
SM6-180	177.5	8.1/2.7	16.3/4.1	2.7	1.8							3.7	2.1		
SM6-224	219.5	6.6/2.2	13.1/3.3	2.2	1.5							3.0	1.7		
Motor Length, L (mm)				586	613	680	785	785	613	680	785	785			
Motor Diameter ØE (mm)				198	232	266	315	315	232	266	315	315			



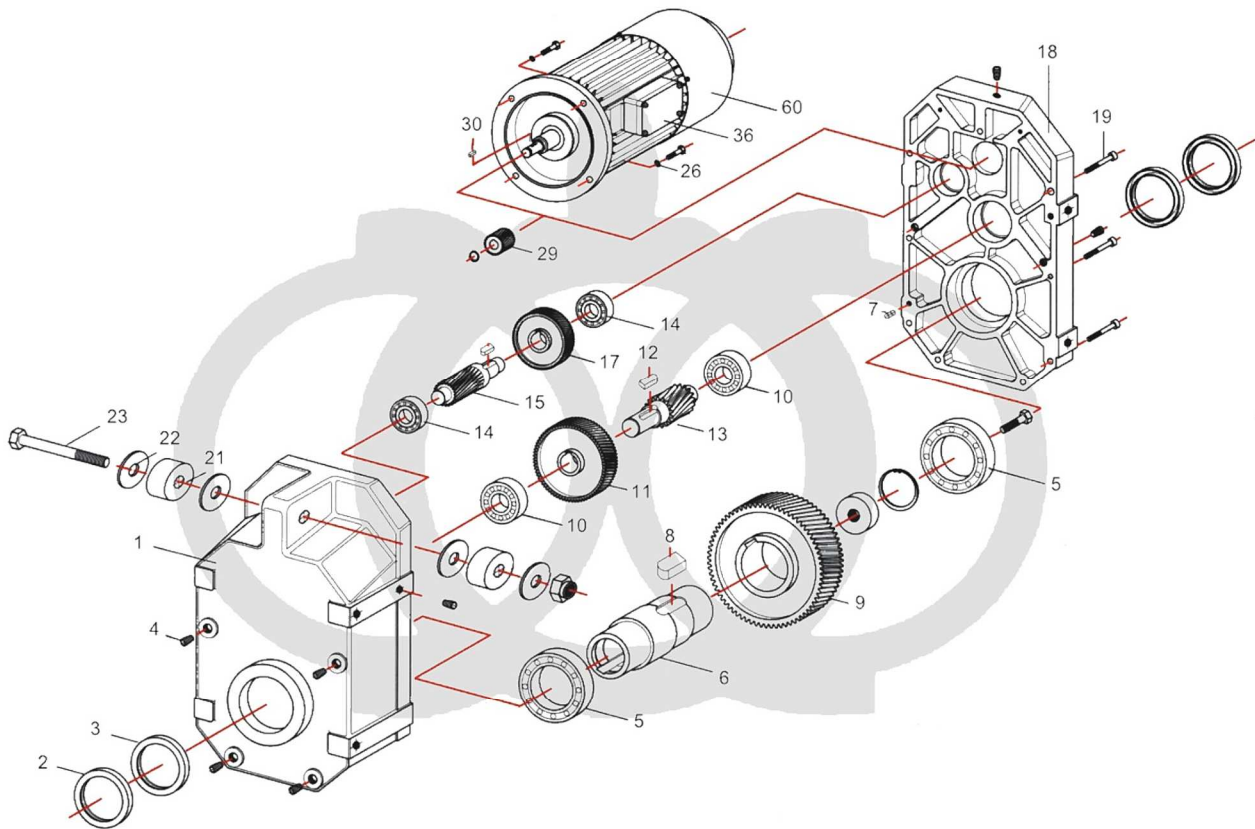
Type : **SM7** Single Speed

Gear box Type	Gear Ratio	Output Speed @ 50 Hz (rpm)		Service Factor																	
				1.5Kw		2.2Kw		3.7Kw		5.5Kw		7.5Kw		11Kw		15Kw		18.5Kw		22Kw	
		4P	6P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P	6P	4P
SM7-18	18.6	78.8	52.7													2.4	3.0	2.0	2.5	1.7	1.8
SM7-22	21.4	68.6	45.8											2.9	3.2	2.1	2.6	1.7	2.2	1.4	1.6
SM7-28	27.6	53.1	35.4											2.2	2.5	1.6	2.0		1.7		
SM7-36	35.0	41.8	27.9									2.9	3.0	2.0	2.2		1.8		1.5		
SM7-45	44.2	33.2	22.1						3.2	3.5	2.3	2.4	1.6	1.8							
SM7-56	55.9	26.2	17.4					3.8	3.8	2.5	2.8	1.8	1.9		1.4						
SM7-71	71.6	20.4	13.6					2.9	3.0	2.0	2.2	1.5	1.5								
SM7-90	90.5	16.1	10.8					3.5	2.3	2.4	1.6	1.7									
SM7-112	111.4	13.1	8.7			3.2	2.8	1.9	1.9	1.3	1.4										
SM7-140	139.5	10.4	6.9	3.8	3.9	2.6	2.3	1.5	1.5												
SM7-180	180.3	8.0	5.3	2.9	3.0	2.0	1.8														
SM7-224	226.0	6.4	4.3	2.3	2.4	1.6	1.4														
Motor Length, L (mm)				603	563	625	625	697	697	697	697	797	797	837	797	837	837	929	929	967	967
Motor Diameter ΦE (mm)				198	198	232	232	266	266	266	266	315	315	315	315	315	315	360	360	360	360

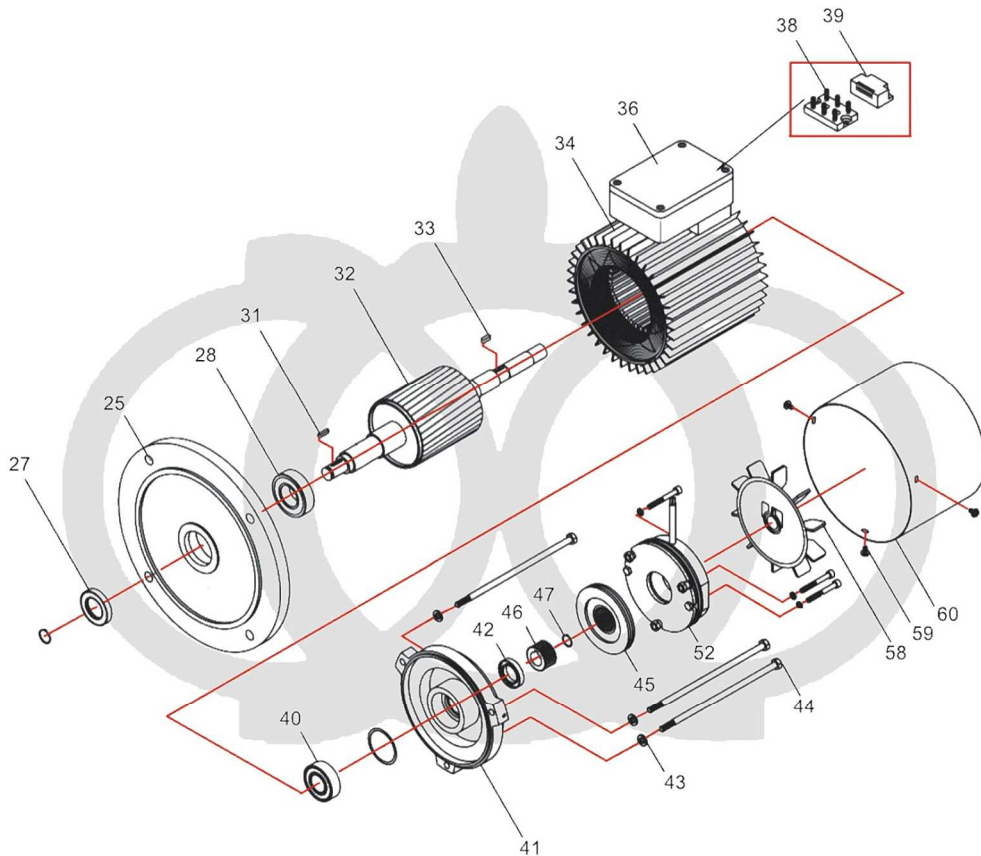
Type : **SM7** Two Speed

Gear box Type	Gear Ratio	Output Speed @ 50 Hz (rpm)		Service Factor														
				2.2/0.75Kw		3.75/1.25Kw		5.5/1.85Kw		7.5/2.5Kw	3.75/0.9Kw		5.5/1.4Kw		7.5/1.8Kw			
		4/12P	2/8P	4/12P				2/8P										
SM7-45	44.2	33.2/11.1							3.5									
SM7-56	55.9	26.2/8.7							2.8									
SM7-71	71.6	20.6/6.9							3.0	2.2								
SM7-90	90.5	16.2/5.4	32.2/8.1						2.4	1.7							3.5	
SM7-112	111.4	13.2/4.4	26.2/6.6					2.8	1.9	1.4							2.8	
SM7-140	139.5	10.5/3.5	20.9/5.2		3.9			2.2	1.5					4.5		3.1	2.3	
SM7-180	180.3	8.1/2.7	16.2/4.0		3.0			1.7						3.5		2.4	1.8	
SM7-224	226.0	6.4/2.1	12.9/3.2		2.4			1.4						2.7		1.9		
Motor Length, L (mm)				625	697			797	797	697	797							797
Motor Diameter ΦE (mm)				232	266			315	315	266	315							315

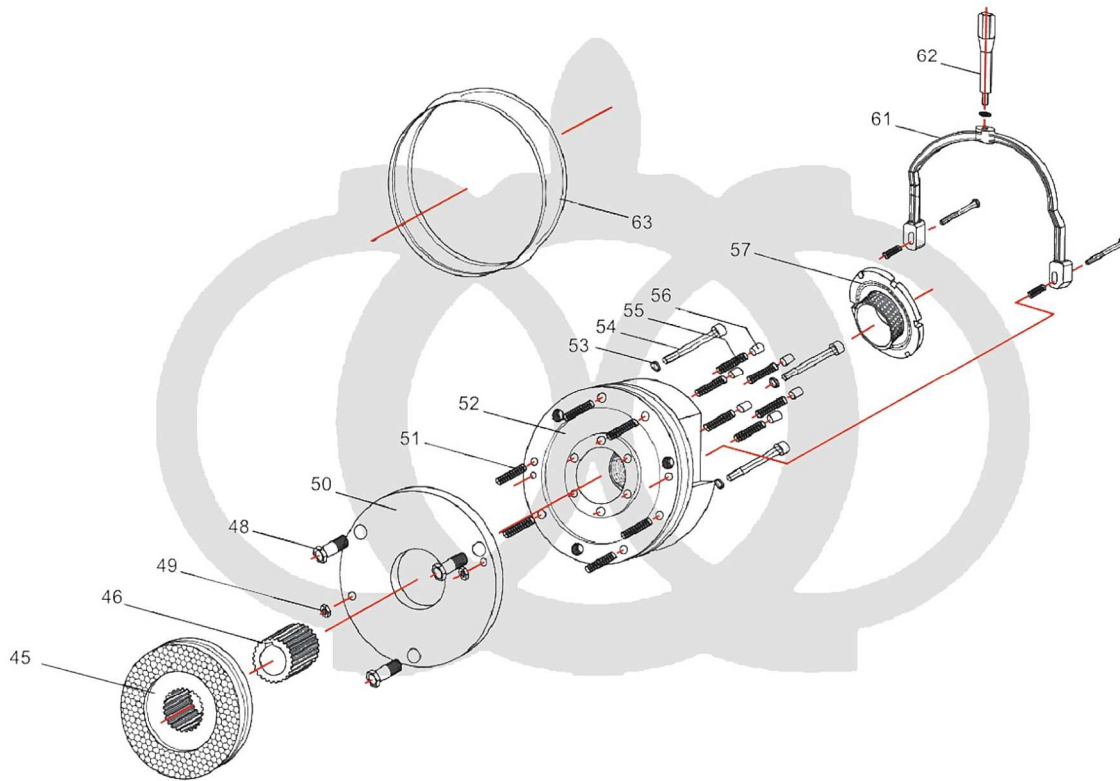
Exploded View of Gear Motor



Exploded View of Motor



Exploded View of Brake



ITEM	DESCRIPTION	Q'TY	ITEM	DESCRIPTION	Q'TY	ITEM	DESCRIPTION	Q'TY
1	Gear Housing-A	1	22	Washer	4	44	Hex-Socket Cap Bolt	4
2	Oil Seal	2	23	Torque Arm Blot (Hex)	1	45	Brake Lining	1
3	Oil Seal	2	25	Flange	1	46	Brake Rotor Hub	1
4	Oil Level Nipple	5	26	Connecting Fixed Bolt (Cap)	4	47	Shaft Retaining Ring	1
5	Anti-Frication Ball Bearing	2	27	Oil Seal	1	48	Adjuster Air Gap Tube Screw	3
6	Hollow Shaft	1	28	Anti-Frication Ball Bearing	1	49	Nut	3
7	Steel Needle	2	29	Motor Pinion	1	50	Armature Plate	1
8	Parallel Key	1	30	Parallel Key	1	51	Compression Spring	6
9	Output Gear	1	31	Motor Shaft Pin	1	52	Stator With Coil	1
10	Anti-Frication Ball Bearing	2	32	Motor Shaft And Rotor	1	53	Spring Wash	3
11	2nd Gear	1	33	Double Round Key	1	54	Connecting Fixed Bolt	3
12	Parallel Key	1	34	Motor Housing	1	55	Compression Spring	6
13	2nd Gear	1	36	Steel Cover	1	56	Round Bar	6
14	Anti-Frication Ball Bearing	2	38	Terminal Plate	1	57	Adjuster Torque Nut	1
15	1st Pinion	1	39	Rectifier	1	58	Plastic Fan	1
17	1st Gear	1	40	Ball Bearing	1	59	Hex-Head Bolt (With Washer)	4
18	Gear Housing-B	1	41	Motor End Cap For Brake	1	60	Motor Fan Cover	1
19	Connecting Fixed Bolt (Cap.)	1	42	Oil Seal	1			
21	Rubber Bumper	2	43	Spring Lock Washer	4			

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Distributor

Spec listed for reference only, it may not contain the latest changes, please make a final confirmation with our distributor before you order.

JAN.2013