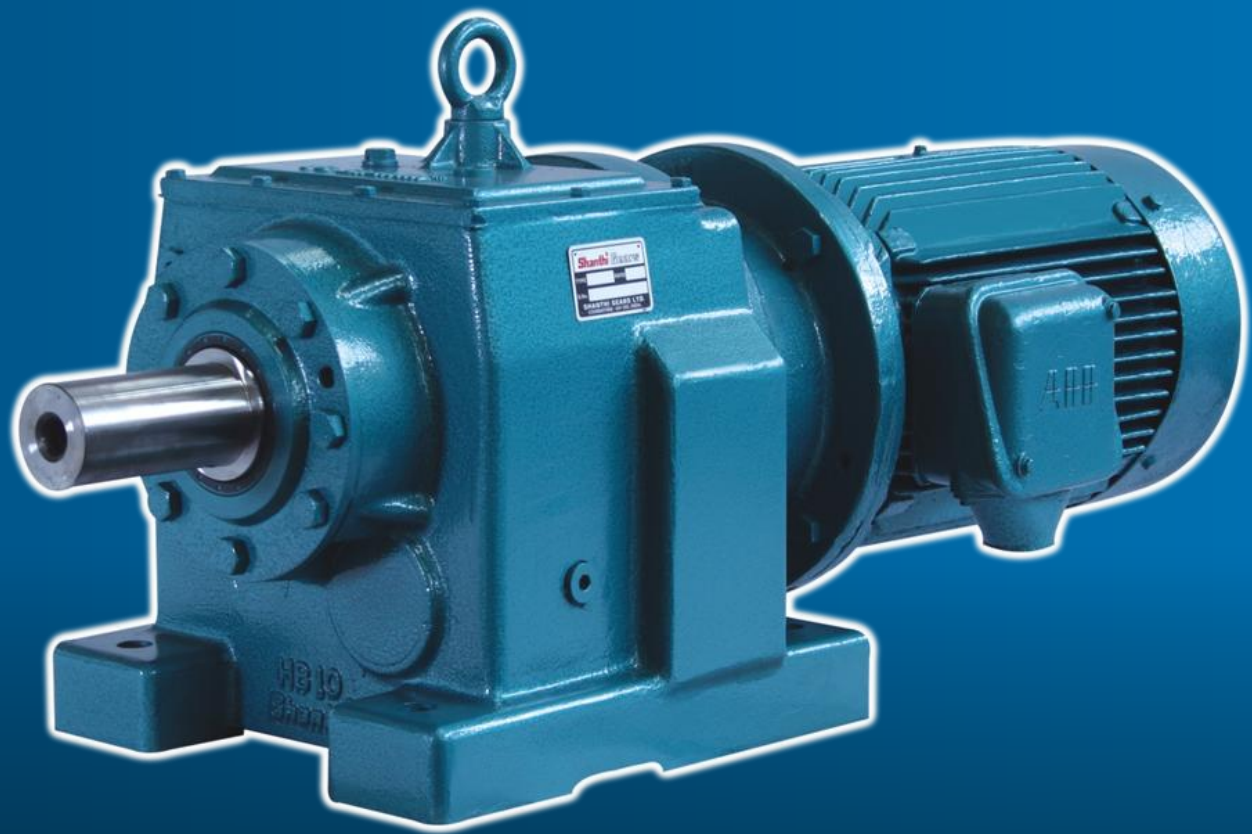


Shanthi **Gears**



GEARED MOTORS

OUR PRODUCTS



HELICAL GEAR BOXES



BEVEL HELICAL GEAR BOXES



EXTRUDER GEAR BOXES



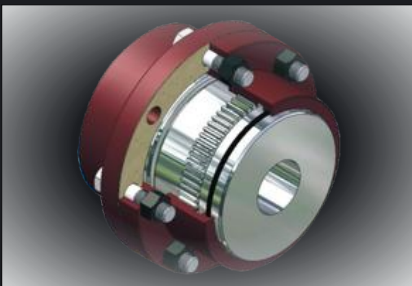
UNIVERSAL
WORM GEAR BOXES



WORM
GEAR BOXES



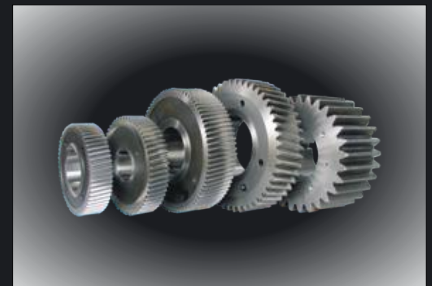
SHAFT MOUNTED
GEAR BOXES



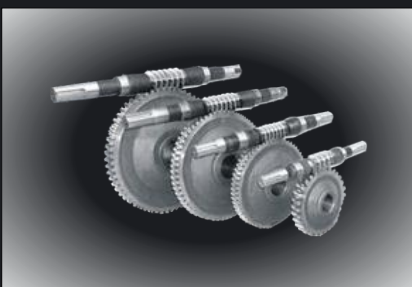
GEAR COUPLINGS WITH
MULTI CROWN TOOTH FORM



RIGHT ANGLE
BEVEL GEAR BOXES



HARDENED AND
GROUND GEARS



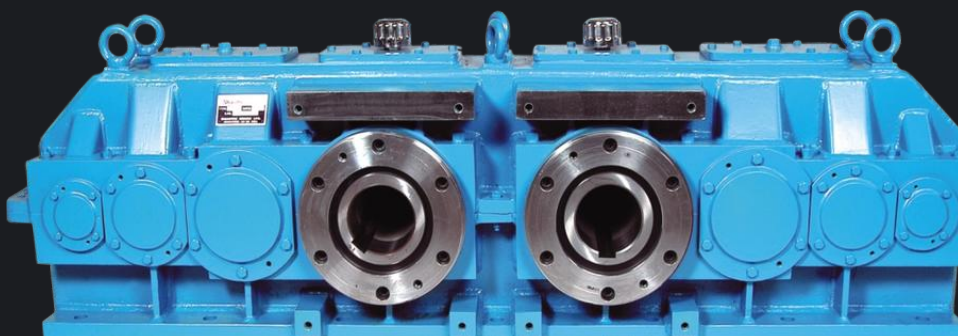
WORM GEAR PAIRS



SPIRAL BEVEL GEARS



STRAIGHT BEVEL GEARS



CUSTOM BUILT GEAR BOXES

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Helical Geared Motors / Gear Units

Introduction and Design features

Introduction

"Shanthi" NEW series of Helical Geared Motors and Gear Units take advantage of our many years of accumulated expertise and experience in designing and manufacturing of transmission products. The end result is a series of speed reducing sizes offering high load carrying capacities, high efficiency, quiet running and reliability. These sizes are compact and available in two, three, four, five and six gear reduction stages.

Design of these gear units, made with gearing details following addendum modification based on the latest findings of gear design with the help of latest computer software programmes, has been finalised keeping the most favourable ratio distribution and the no. of teeth, module, helix angle, face width combination in order to achieve the optimum evenly distributed power rating in various stages.

Range

Sizes	:	Twelve sizes 02 to 13
Rated output torque	:	140 Nm to 20,000 Nm
Power	:	0.12 kW to 90 kW
Reduction ratios	:	3.426 to 294.93 in Single Casing 196.24 to 18137 in Tandem Casing
Efficiency	:	98% to 94% depending on no. of reduction stages

Design features

Gears

- Single helical gears are made out of high grade case hardening alloy steel.
- Designed to transmit high torque and power. Gear geometry & rating details confirm to relevant ISO/DIN Standards.
- Profile ground with the latest technique for tip relief & face crowning, ensuring smooth and silent running under all types of abnormal conditions.

Casing

- The sturdy gear casings are made of high grade Cast-iron (except the smallest size 02, which is made of Aluminium alloy die casting)
- Made in ' **Mono Bloc** ' design without any split or location joints in order to ensure maximum rigidity, thus reducing noise & vibration.
- Created using latest 3D modelling technique to present and attractive aesthetic appearance.
- Provision is given at the top for viewing gear contacts of all stages, when required.
- Designed to suit various mounting positions.

Shafts

- Made out of medium carbon steel, hardened & tempered.
- Tapped centre hole at shaft extension to facilitate retaining or removal of connection element.
- Plunge ground oil seal seating portion to prevent oil leakage.

Bearings

- Anti-Friction bearings to ensure smooth operation and longer life and to withstand high overhung loads.

Seals

- Radial lip type oil seals for effective sealing of lubricant.
- Double lip oil seals can be provided for dusty atmosphere, if specified.

Electric Motor

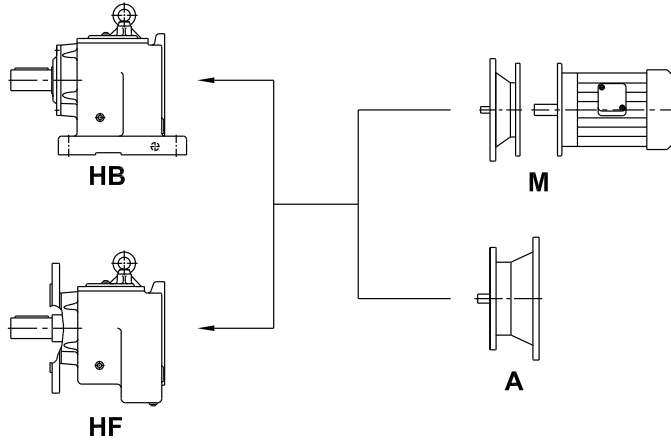
- Squirrel cage TEFC induction motors conforming to latest IEC/IS standards.
- Suitable for 3 Phase AC supply.
- Class F Insulation.
- IP 55 Protection and use of lip type seal at driving end of shaft extension.
- Other special motors are supplied, on request.

Painting & Protection

- Shaft extension & other machined surfaces are coated with rust preventive compound.
- External surface, painted with synthetic enamel paint of hammer tone finish with Dark Grey Colour. Special painting and protection methods, on request.

Nomenclature

Single Casing



H B 08 3 - M 132S / 4

Type of Geared Motors / Gear Units

H - Helical

Type of mounting

B = Base (Foot) mounted

F = Flange mounted

Size of Gear Units

(02 - 13)

No. of Stages

2 - 2 Stage

3 - 3 Stage

No. of Poles

(4, 6 etc.,)

Frame size of Electric Motor

(63 - 280M)

M - with Adaptor Flange & Electric motor

(3 Phase AC Sq. Cage TEFC B Type Flange mounted Electric motor to IS/IEC Standards, used)

- A 132

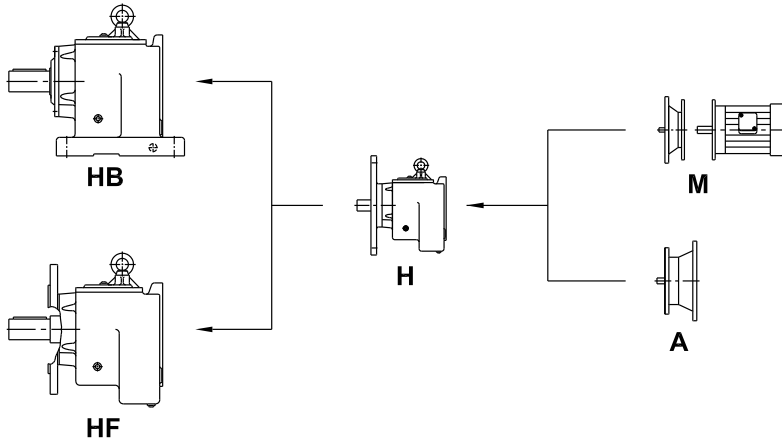
Frame size of Electric Motor

(63 - 280)

A - with only Adaptor Flange

(B Type Flange mounted motor with dimension as per IS/IEC Standards, to be used)

Tandem Casing



H B 11 2 H 07 2 - M 90L / 4

Type of Geared Motors / Gear Units

H - Helical

Type of mounting

B = Base (Foot) mounted

F = Flange mounted

Size of Gear Units

(02 - 13)

No. of Stages

2 - 2 Stage

3 - 3 Stage

Type of Primary Gear Units

H - Helical

Size of Primary Gear Units

(03,05,07,09 & 10)

No. of Stages

2 - 2 Stage

3 - 3 Stage

No. of Poles

(4, 6 etc.,)

Frame size of Electric Motor

(63 - 132M)

M - with Adaptor Flange & Electric motor

(3 Phase AC Sq. Cage TEFC B Type Flange mounted Electric motor to IS/IEC Standards, used)

- A 90

Frame size of Electric Motor

(63 - 132)

A - with only Adaptor Flange

(B Type Flange mounted motor with dimension as per IS/IEC Standards, to be used)

Guidelines for Selection

Power rating table

Tables given from page nos 9 to 50, give the details of power rating, output speed / ratio, of all sizes of geared motors / gear units in our production range.

Service Factor

For deciding the proper size of gear unit portion of the geared motor, a suitable service factor is to be considered over the motor power. For finding out the service factor, mechanical service factor **f₁** and frequency starts factor **f₂**, as given in Table 1 & 2 respectively are taken into consideration. For deciding Mechanical service factor, the type of load of driven machine as given in Table 4 is considered.

Symbols used

- P_m** Motor power / input power / transmitted power [kW]
- n₁** Input speed / Motor speed [r/min]
- n₂** Output speed [r/min]
- i** Reduction ratio
- S F** Service Factor
- f₁** Mechanical service factor, refer Table 1
- f₂** Frequency starts factor, refer Table 2
- F_{Ra}** Allowable overhung load applied on middle of the output shaft extension [N]
- F** Equivalent / calculated overhung load [N]
- Wt.** Weight of geared motor / gear unit [kg.]
- k** Load factor for the type of overhung member, refer Table 3
- D** Pitch diameter of overhung load member [mm]

TABLE 1 - MECHANICAL SERVICE FACTOR - f₁

Duration of service (hours per day)	Load Classifications of Driven Machine		
	Uniform load U	Moderate shock load M	Heavy shock load H
upto 3	0.80	1.00	1.50
over 3 upto 10	1.00	1.25	1.75
over 10	1.25	1.50	2.00

TABLE 2 - FREQUENCY STARTS FACTOR - f₂

Starts per hour	Mechanical Service Factor - f ₁					
	0.8	1	1.25	1.5	1.75	2
1	1.00	1.00	1.00	1.00	1.00	1.00
2 to 20	1.20	1.10	1.08	1.07	1.07	1.06
21 to 40	1.30	1.20	1.17	1.16	1.15	1.08
41 to 80	1.50	1.40	1.25	1.23	1.18	1.10
81 to 160	1.60	1.50	1.35	1.30	1.20	1.10
161 to 320	2.00	1.80	1.70	1.60	1.50	1.40

Overhung Load

When a sprocket / gear etc., is used at the output shaft for transmitting the power / motion to the driven machine, the suitability of gear unit to take the resulting radial load (acting as overhung load) is to be decided. This can be checked using the following formula,

$$F = \frac{P_m \times 9550 \times k}{n_2 \times D} \times 2000 \text{ [N]}$$

The calculated equivalent overhung load, using the above formula is to be compared with the allowable overhung load values given in power rating table. Condition is, **F ≤ F_{Ra}**

Note: In the above, the calculated equivalent overhung load is taken as acting at the middle of output shaft extension. If the overhung load is acting at a distance other than middle of extension, refer the details to us. If the angle at which the overhung load is acting is known, the same may also be informed.

TABLE 3 - LOAD FACTOR

Overhung member	k
Chain sprocket	1.00
Spur / helical gear	1.25
Vee belt pulley	1.50
Flat belt pulley	2.00

Axial Thrust

The bearings of the output shaft are capable of taking certain amount of externally applied axial thrust loads also. If the output shaft of geared motor is to take axial thrust or combined radial overhung load and axial thrust load, refer the full details to us.

Data required for selection

For selecting the geared motor / gear units, following informations are required,

- Power to be transmitted or electric motor power, **P_m** in kW
- Required output speed, **n₂** in r/min, (if geared motor is to be chosen)
- Required ratio, **i** and required input speed / motor speed, **n₁** in r/min (if gear unit is to be chosen)
- Type of driven machine or nature of load on driven machine (i.e uniform, moderate shock, heavy shock load etc.,)
- Duration of service per day, hours
- Connection of output shaft (direct coupling, belt drive, chain / sprocket drive, gears etc.,)
- Starting frequency (no. of starts per hour)
- Type of geared motor / gear unit required
- Mounting position (see page no. 7)

Guidelines for Selection

TABLE 4 - LOAD CLASSIFICATION

Driven Machine	Type of Load	Driven Machine	Type of Load	Driven Machine	Type of Load	Driven Machine	Type of Load
Agitators		Dry dock cranes		small waste conveyor - chain	M	suction roll	M
pure liquids	U	main hoist	*	starting table	M	washers and thickeners	M
liquids and solids	M	auxiliary hoist	*	tipple hoist conveyor	M	winders	M
liquids - variable density	M	boom, luffing	*	tipple hoist drive	M	Printing presses	*
Blowers		rotating, swing or slew	*	transfer conveyors	M	Pullers	
centrifugal	U	tracking, drive wheels	*	transfer rolls	M	barge haul	H
lobe	M	Elevators		tray drive	M	Pumps	
vane	U	bucket - uniform load	U	trimmer feed	M	centrifugal	U
Brewing and distilling		bucket - heavy load	M	waste conveyor	M	proportioning	M
bottling machinery	U	bucket - continuous	U	Machine tools		reciprocating	
brew kettles - continuous duty	U	centrifugal discharge	U	bending roll	M	single acting, 3 or more cylinders	M
cookers - continuous duty	U	escalators	U	punch press - gear driven	H	double acting, 2 or more cylinders	M
mash tubs - continuous duty	U	freight	M	notching press - belt driven	*	single acting, 1 or two cylinders	*
scale hopper - frequent starts	M	gravity discharge	U	plate planers	H	double acting, single cylinder	*
Can filling machines	U	man lifts	*	tapping machine	H	rotary	
Cane knives	M	passenger lifts	*	other machine tools		gear type	U
Car dumpers	H	Fans		main drives	M	lobe, vane	U
Car pullers	M	centrifugal	U	auxiliary drives	U	Rubber and Plastic industries	
Clarifiers	U	cooling towers		Metal mills	M	crackers	H
Classifiers	M	induced draft	*	draw bench carriage and main drive	M	laboratory equipment	M
Clay working machinery		forced draft	*	pinch, dryer and scrubber		mixing mills	H
brick press	H	induced draft	M	rolls-reversing	*	refiners	M
briquette machine	H	large, mini etc.	M	slitters	M	rubber calendars	M
clay working machinery	M	large, industrial	M	table conveyors non-reversing		rubber mill - 2 on line	M
pug mill	M	light smaller diameter	U	group drives	H	rubber mill - 3 on line	U
Compressors		Feeders		individual drives	H	sheeter	M
centrifugal	U	apron	M	reversing	*	tyre building machines	*
lobe	M	belt	M	wire drawing and flattening machine	M	tyre and tube press openers	*
reciprocating		disc	U	wire winding machine	M	tubers and strainers	M
multi - cylinder	M	reciprocating	H	Mills - rotary type		warming mills	M
single - cylinder	H	screw	M	ball	M	Sand muller	M
Conveyors - uniformly loaded or fed		Food industry		cement kilns	M	Sewage disposal equipment	
apron	U	beef slicer	M	dryers and coolers	M	bar screens	U
assembly	U	cereal cooker	U	kilns - other than cement	M	chemical feeders	U
belt	U	dough mixer	M	pebble	*	collectors	U
bucket	U	meat grinders	M	rod		dewatering screws	M
chain	U	Generators - hot welding	U	plain	M	scum breakers	M
flight	U	Hammer mills	H	wedge bar	M	slow or rapid mixers	M
oven	U	Hoists		tumbling barrels	H	thickeners	M
screw	U	heavy duty	H	Mixers		vacuum filters	M
Conveyors - heavy duty not uniformly fed		medium duty	M	concrete mixers - continuous	M	Screens	
apron	M	skip hoist	M	concrete mixers - intermittent	M	air washing	U
assembly	M	Laundry washers reversing	M	constant density	U	rotary - stone or gravel	U
belt	M	Laundry tumblers	M	variable density	M	travelling water intake	M
bucket	M	Line shafts		Oil industry		Slab pushers	M
chain	M	driving processing equipment	M	chillers	M	Steering gear	*
flight	M	light	U	oil well pumping	*	Stockers	U
live roll	*	other line shafts	U	paraffin filter press	M	Sugar industry	
oven	M	Lumber industry		rotary kilns	M	cane knives	M
reciprocating	H	barkers - hydraulic - mechanical	M	Paper mills		crushers	M
screw	M	burner conveyor	M	agitators (mixers)	M	mills	M
shaker	H	chain saw and drag saw	H	barker - auxiliaries - hydraulic	M	Textile industry	
Cranes		chain transfer	H	barker - mechanical	H	batchers	M
main hoists	U	craneway transfer	H	barker - drum	H	calenders	M
bridge travel	*	de-barking drum	H	beater and pulper	M	cards	M
trolley travel	*	edger feed	M	bleacher	U	dry cans	M
Crusher		gang feed	M	calenders	M	dryers	M
ore	H	green chain	M	calenders - super	H	dyeing machinery	M
stone	H	live rolls	H	converting machine,		knitting machines	*
sugar	M	log deck	H	except cutters - platers	M	looms	M
Dredges		log haul - incline	H	conveyors	U	mangles	M
cable reels	M	log haul - well type	H	couch	H	nappers	M
conveyors	M	log turning device	H	cutters - platers	H	pads	M
cutter head drives	H	main log conveyor	H	cylinders	M	range drives	*
jig drives	H	off bearing rolls	M	dryers	M	slashers	M
maneuvering winches	M	planer feed chains	M	felt stretcher	M	soapers	M
pumps	M	planer floor chains	M	felt whipper	H	spinners	M
screen drive	H	planer tilting hoist	M	jordans	M	tenter frames	M
stackers	M	re-saw merry-go-round conveyor	M	log haul	H	washers	M
utility winches	M	roll cases	H	presses	M	winders	M
		slab conveyor	H	pulp machine reel	M	Windlass	*
		small waste conveyor - belt	U	stock chest	M		

U - Uniform Load

M - Moderate Shock Load

H - Heavy Shock Load

* - Refer to "Shanthi Gears"

Guidelines for Selection

Example of Selection

Requirement is for helical geared motor alternatively helical gear unit without electric motor

Electric motor power,	P_m	-	5.5 kW
Output speed,	n_2	-	95 r/min (or $i = 15$, $n_1 = 1440$ r/min for requirement of gear unit)
No of starts per hour		-	10
Duration of service per day		-	24 hours
Driven machine		-	Individual drives of non reversing table conveyors in Rolling Mill
Connection of output shaft		-	through chain sprocket drive, sprocket dia=110 mm
Type		-	Base (Foot) mounted
Mounting		-	Horizontal shaft, floor mounting, B3

Step 1

From Table 4, the type of load is found to be **H** for the above driven equipment. Mechanical service factor f_1 , as per Table 1 is 2.00 for type of load **H** and 24 hours service per day. For 10 starts per hour, factor f_2 is 1.06 (from Table 2) Thus, service factor, required = $2.00 \times 1.06 = 2.12$.

Step 2

Refer to power rating table against 5.5 kW motor power and look for the listed output speed, n_2 , near to the required value of 95 r/min,

We get Geared motor size HB062 - M132S/4 with $n_2 = 96.0$ r/min, with S F = 1.08 which is less than the required S F of 2.12.

Next, we can select size HB072 - M132S/4 having $n_2 = 91.3$ r/min but the S F available is 1.44 only.

We find that size **HB082 - M132S/4** with $n_2 = 95.0$ r/min with S F = 2.6 is the right size of Geared Motor.

Step 3

Check for suitability of overhung load:

$$F = \frac{5.5 \times 9550 \times 1.0 \times 2000}{95 \times 110} = 10,052 \text{ N}$$

Allowable F_{Ra} from power rating table for selected size, HB082 - M132S/4 is 15,200 N.

Thus, condition $F \leq F_{Ra}$ is satisfied.

Note: The calculated overhung load $F = 10,052$ N is considered acting at the middle of output shaft extension length, $l = 100$ mm

The Size of Geared Motor to be ordered is, **HB082 - M132S/4**, 95.0 r/min, $i = 15.16$ fitted with 5.5 kW, 4 pole motor, frame size 132S/4, Mounting Position of Geared Motor - B3, Dimensional details - Refer to page no. 54 / leaflet no.104

Alternatively, if gear unit is only required and electric motor is not to be included in our scope of supply, the size designation is to be changed as **HB082 - A132** and Dimensional details, as per page no. 74 / leaflet no.114.

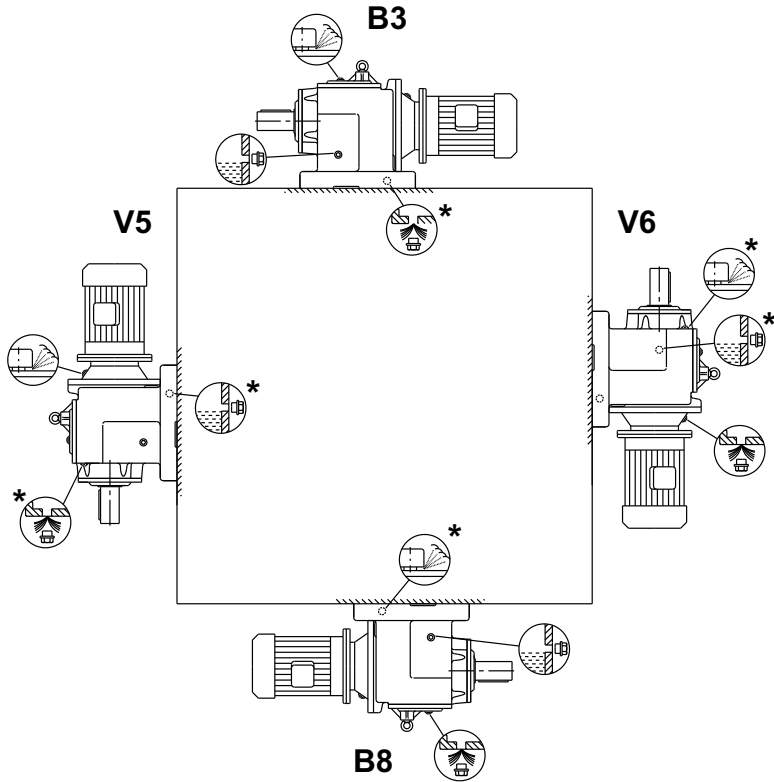
(The customer will have to use 5.5 kW, 4 pole, flange mounted motor in frame size 132S with flange and shaft dimensions confirming to IS:1231/ IS:2223 / IEC:72)

We shall be pleased to advice on drives involving special operating condition / details, namely,

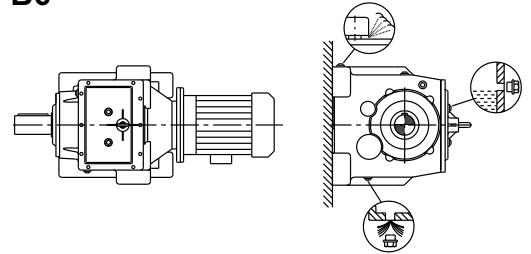
- Shorttime or intermittent operation
- Applications involving Starts / Stops / Reversals
- Application involving reverse current braking (plugging)
- Abnormal ambient temperature
- Variable motor speed
- Geared motor using other special motors like flame proof motor, brake motor, motor using VFD etc.,

**Mounting positions of Geared Motor
(Also applicable for Gear Unit)**

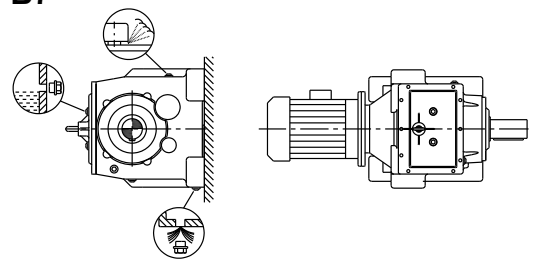
Base (Foot) mounted



B6



B7



Oil Drain Plug

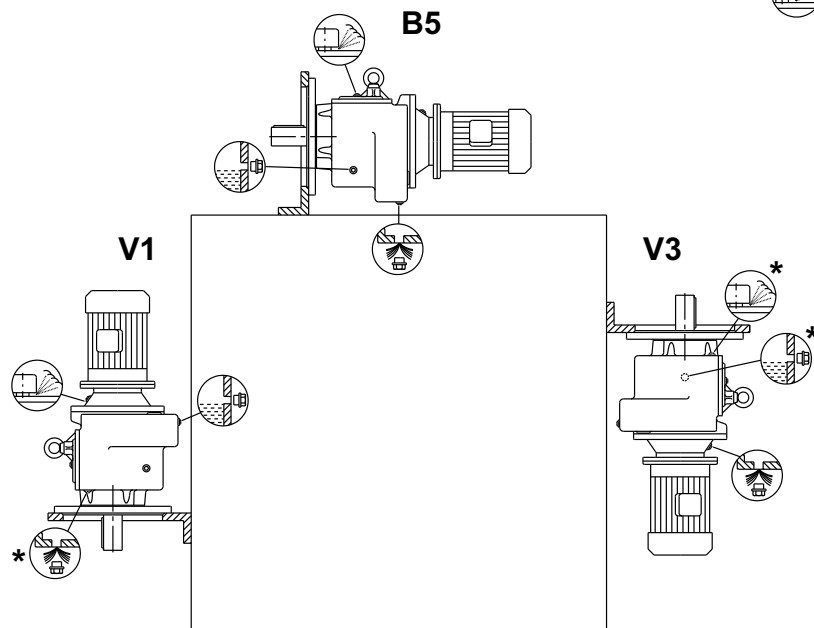


Oil Level Plug



Breather / Filler Plug

Flange mounted



* Plug on Opposite Side

Lubrication

Geared motors / Gear units are supplied without oil. Before putting into operation, ensure that the gear units are filled to correct oil level with proper grade of lubricating oil. (All bearings of electric motors and the bearings used at the output shaft extension end and in the adaptor flange at the input side are grease filled at our factory and need not require any further grease filling at the time of commissioning). **We recommend the use of mineral oil with viscosity ISO - VG 320 to our gear units when used in the ambient temperature range of 0 to 50°C**. Details of oil grades of popular brands are given below. The appropriate oil quantity for different sizes and mounting positions are also given in the accompanying table. (The actual required quantity may vary and customers are advised to pour the required quantity of oil until the oil flows out of the oil level plug hole)

Manufacturer	Bharat Petroleum	Castrol	Hindustan Petroleum	Indian Oil Corporation	Klüber	EXXON MOBIL	OKS	Shell
Brand	MAK Amocam 320	Castrol Alpha SP 320	PARTHAN EP 320/EE 320	Servomesh SP 320/EE 320	Klüberoil GEM 1-320	Mobilgear 600XP 320 or SPARTAN EP 320	Mo _x - Active 320	Shell Omala 320

- Note :
- 1) For more detailed information about lubrication, refer to the Operating & Maintenance Instructions manual supplied along with the geared motor / gear units.
 - 2) For other extreme ambient conditions / service conditions, use of oil with different viscosity grade or use of synthetic lubricants may become necessary. Customers are requested to refer such specific cases to us along with all relevant details.

Oil quantity (in litres)

Size	Mounting positions								
	B3	B6	B7	B8	V5	V6	B5	V1	V3
022	0.43	0.72	0.65	0.96	0.91	0.79	0.59	1.0	0.92
023	0.42	0.71	0.64	0.95	0.90	0.78	0.58	1.0	0.91
032	0.34	0.74	0.67	0.76	0.94	0.82	0.35	0.97	0.85
033	0.33	0.73	0.66	0.75	0.93	0.81	0.34	0.96	0.84
042	0.58	1.2	1.2	1.3	1.6	1.3	0.61	1.6	1.3
043	0.52	1.1	1.1	1.2	1.5	1.2	0.55	1.5	1.3
052	0.64	1.5	1.2	1.6	1.8	1.7	0.68	1.8	1.7
053	0.60	1.4	1.2	1.5	1.7	1.6	0.64	1.8	1.6
062	0.76	1.8	1.5	2.0	2.4	2.1	0.80	2.5	2.1
063	0.80	1.9	1.8	2.1	2.5	2.1	0.84	2.5	2.1
072	1.1	2.6	2.3	2.8	3.2	2.9	1.2	3.3	3.0
073	1.0	2.6	2.3	2.7	3.1	2.8	1.1	3.2	2.9
082	2.4	5.9	5.3	6.5	7.0	6.6	2.5	7.2	6.8
083	2.2	5.8	5.2	6.4	6.9	6.5	2.5	7.1	6.6
092	5.6	11.3	11.1	10.9	14.3	12.9	5.8	14.5	13.1
093	5.2	9.6	9.4	9.3	12.5	11.3	5.5	12.8	11.5
102	6.0	13.5	12.6	16.1	17.7	15.9	6.2	17.9	16.2
103	5.8	13.4	12.4	16.0	17.5	15.7	6.0	17.7	16.0
112	12.4	21.8	22.7	24.2	30.5	27.1	13.1	31.1	27.8
113	12.2	21.6	22.5	23.9	30.2	26.7	12.9	30.9	27.4
122	17.9	36.5	35.7	39.0	48.7	42.5	18.5	49.4	43.1
123	16.9	35.5	34.7	38.0	47.7	41.4	17.5	48.4	42.1
132	32.0	68.9	68.0	74.1	92.3	83.4	33.9	94.2	85.3
133	31.4	68.3	67.5	74.2	91.7	83.5	33.3	93.6	85.4

0.12 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.	
0.12	1330	388	3.426	1950	30				
		333	4.000	2100	28				
		311	4.271	2150	26				
		272	4.886	2250	25				
		236	5.625	2300	23				
		204	6.528	2450	21				
		174	7.625	2550	19				
		164	8.098	2600	19		HB022 - M63/4	12.0	51
		141	9.455	2700	17		HF022 - M63/4	12.5	61
		132	10.09	2800	16				
		115	11.55	2900	14		HB022 - A63	6.7	71
		100	13.30	3020	12		HF022 - A63	7.5	82
		86.2	15.43	3170	11				
		73.8	18.02	3320	9.2				
		69.0	19.28	3390	8.6				
		59.8	22.25	3540	7.5				
		51.2	26.00	3710	6.4				
		47.0	28.28	3800	5.9				
		40.9	32.53	4000	5.2				
		36.1	36.86	4150	4.5				
		33.8	39.32	4200	4.3				
		29.6	44.99	4400	3.7				
		27.6	48.27	4490	3.5				
		24.6	54.17	4700	3.1		HB023 - M63/4	12.0	51
		21.8	61.10	4770	2.7		HF023 - M63/4	13.0	61
		19.2	69.24	4700	2.4				
		18.0	73.86	4700	2.3		HB023 - A63	7.0	71
		15.7	84.50	4700	1.98		HF023 - A63	7.9	82
		14.7	90.66	4700	1.85				
		12.6	105.15	4700	1.59				
		10.8	123.50	4700	1.36				
		9.88	134.64	4700	1.24				
		19.2	69.33	6500	3.8				
18.0	73.96	6570	3.6		HB033 - M63/4	17.5	52		
15.7	84.61	6540	3.1		HF033 - M63/4	18.0	62		
14.7	90.77	6520	2.9						
12.6	105.28	6460	2.5		HB033 - A63	12.5	72		
10.8	123.66	6380	2.1		HF033 - A63	13.0	83		
9.87	134.82	6320	1.95						
13.3	99.70	6730	3.9						
11.4	116.45	6720	3.4		HB043 - M63/4	23.0	52		
10.7	124.59	6710	3.2		HF043 - M63/4	24.0	62		
9.25	143.74	6670	2.7						
7.92	168.00	6570	2.4		HB043 - A63	18.0	72		
7.28	182.73	6500	2.2		HF043 - A63	19.0	83		
8.87	150.01	8700	3.8						
7.62	174.61	8700	3.3		HB053 - M63/4	28.0	53		
7.02	189.54	8700	3.0		HF053 - M63/4	28.5	63		
					HB053 - A63	23.0	73		
					HF053 - A63	23.5	84		
7.22	184.24	11400	4.1						
6.65	200.00	11300	3.8		HB063 - M63/4	35.0	53		
					HF063 - M63/4	34.5	63		
					HB063 - A63	30.0	73		
					HF063 - A63	29.5	84		
5.93	224.38	6230	1.78						
5.15	258.35	5990	1.54		HB042H032 - M63/4	32.0	57		
4.44	299.88	5600	1.33		HF042H032 - M63/4	33.0	67		
3.80	350.4	5100	1.14						
3.55	374.8	4800	1.06		HB042H032 - A63	27.0	77		
3.08	432.3	4000	0.92		HF042H032 - A63	28.0	88		
6.07	219.06	8720	2.6						
5.16	257.86	8660	2.2		HB052H032 - M63/4	36.5	58		
4.54	292.78	8620	2.0		HF052H032 - M63/4	37.0	68		
4.13	322.3	8560	1.78						
3.63	365.9	8500	1.57		HB052H032 - A63	31.5	78		
					HF052H032 - A63	32.0	89		
3.19	416.6	8300	1.39						
2.81	473.0	8100	1.23		HB052H033 - M63/4	37.0	58		
2.36	563.2	7200	1.03		HF052H033 - M63/4	37.5	68		
2.09	635.2	6400	0.91						
					HB052H033 - A63	32.0	78		
					HF052H033 - A63	32.5	89		

1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Helical Geared Motors with IS/IEC motors, Type : HB/HF. . - M . .
Helical Gear Units (without motor), Type : HB/HF. . - A . .
Power ratings

0.12 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt Dimensions	
							[kg.]	Page No.
0.12	1330	5.75	231.20	11300	3.3	HB062H032 - M63/4	43.5	58
		5.00	266.20	11200	2.9			
		4.30	309.0	11000	2.5	HF062H032 - M63/4	43.0	68
		3.68	361.0	10800	2.1	HB062H032 - A63	38.5	78
		3.44	386.2	10500	1.97			
		2.99	445.4	10930	1.71	HF062H032 - A63	38.0	89
		2.66	499.2	10760	1.54	HB062H033 - M63/4	44.0	58
		2.24	594.4	10370	1.30	HF062H033 - M63/4	43.0	68
		1.98	670.4	9200	1.15	HB062H033 - A63	39.0	78
		1.75	759.6	7100	1.01	HF062H033 - A63	38.0	89
		4.35	306.0	14000	3.4	HB072H032 - M63/4	53	58
		3.74	355.2	14100	2.9	HF072H032 - M63/4	55	68
		3.20	415.0	14000	2.5	HB072H032 - A63	48.0	78
		3.00	443.9	13970	2.3			
		2.60	512.0	13860	2.0	HF072H032 - A63	50	89
		2.49	533.9	13600	1.97	HB072H033 - M63/4	53	58
		2.32	573.8	13800	1.83			
		1.95	683.3	13500	1.54	HF072H033 - M63/4	55	68
		1.73	770.6	13400	1.37	HB072H033 - A63	48.0	78
		1.52	873.2	13200	1.20			
		1.43	931.6	12400	1.13	HF072H033 - A63	50	89
		1.25	1066	10800	0.99			
		1.16	1144	9100	0.92			
		2.87	463.3	25000	4.4	HB082H052 - M63/4	92	59
2.48	536.9	25000	3.8	HF082H052 - M63/4	96	69		
				HB082H052 - A63	87	79		
				HF082H052 - A63	91	90		
2.33	569.7	22000	3.6					
2.04	653.6	22000	3.2					
1.77	753.4	22000	2.8	HB082H053 - M63/4	93	59		
1.64	811.0	22000	2.6					
1.41	944.9	22000	2.2	HF082H053 - M63/4	97	69		
1.30	1024	22000	2.0	HB082H053 - A63	88	79		
1.12	1187	22000	1.75					
1.04	1280	21000	1.62	HF082H053 - A63	92	90		
0.944	1409	22000	1.47					
0.885	1503	21700	1.38					
0.757	1756	21200	1.18					
0.699	1902	19600	1.09					
0.603	2205	14800	0.94					
1.49	891.8	31200	4.3					
1.39	960.0	31200	4.0					
1.19	1119	31000	3.4					
1.10	1212	31200	3.2	HB092H053 - M63/4	132	59		
0.878	1515	31100	2.5					
0.797	1668	31000	2.3	HF092H053 - M63/4	135	69		
0.748	1779	30800	2.2	HB092H053 - A63	127	79		
0.640	2079	30600	1.85					
0.591	2252	30400	1.71	HF092H053 - A63	130	90		
0.510	2610	27000	1.48					
0.472	2815	29800	1.37					
0.429	3100	28700	1.24					
0.351	3788	21600	1.02					
0.843	1577	41500	3.9					
0.796	1671	41500	3.7					
0.718	1852	41500	3.4	HB102H073 - M63/4	210	59		
0.632	2103	41100	3.0	HF102H073 - M63/4	215	69		
0.601	2214	41000	2.8	HB102H073 - A63	205	80		
0.496	2684	40800	2.3					
0.433	3070	40500	2.0	HF102H073 - A63	210	91		
0.391	3402	40300	1.83					
0.334	3987	39800	1.56					
0.543	2451	66500	4.2					
0.474	2808	66600	3.7					
0.409	3255	66200	3.2	HB112H073 - M63/4	295	70		
0.384	3467	66000	3.0	HF112H073 - A63	290	80		
0.335	3965	65500	2.6	HB112H073 - A63	290	91		
0.286	4647	64500	2.2					

1) n₁ values will vary slightly as per the make of Electric motor.
 2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Helical Geared Motors with IS/IEC motors, Type : HB/HF. . - M . .

Helical Gear Units (without motor), Type : HB/HF. . - A . .

Power ratings
0.12 - 0.18 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.		
0.12	1330	0.263	5055	66200	2.1					
		0.241	5510	66200	1.88	HB113H073 - M63/4	305	60		
		0.194	6843	65300	1.51	HF113H073 - M63/4	305	70		
		0.178	7459	65300	1.39	HB113H073 - A63	300	80		
		0.152	8760	64200	1.19	HF113H073 - A63	300	91		
		0.129	10287	62000	1.01					
		0.313	4244	81000	4.2					
		0.266	4995	80500	3.5					
		0.234	5673	81200	3.1					
		0.204	6504	81000	2.7					
		0.183	7248	80700	2.4	HB123H073 - M63/4	445	60		
		0.158	8409	80400	2.1	HF123H073 - M63/4	445	70		
		0.138	9664	79400	1.83	HB123H073 - A63	440	81		
		0.125	10679	78700	1.66	HF123H073 - A63	440	92		
		0.110	12125	77700	1.46					
		0.093	14340	76600	1.23					
		0.084	15859	74600	1.12					
		0.073	18137	72200	0.97					
		0.18	1350	394	3.426	1950	20			
				338	4.000	2100	19			
				316	4.271	2150	18			
				276	4.886	2250	17			
				240	5.625	2300	16			
				207	6.528	2450	14			
177	7.625			2550	13					
167	8.098			2600	13	HB022 - M63/4	12.0	51		
143	9.455			2700	11	HF022 - M63/4	12.5	61		
134	10.09			2800	11	HB022 - A63	6.7	71		
117	11.55			2900	9.7	HF022 - A63	7.5	82		
102	13.30			3020	8.5					
87.5	15.43			3170	7.3					
74.9	18.02			3320	6.2					
70.0	19.28			3390	5.8					
60.7	22.25			3540	5.0					
51.9	26.00			3710	4.3					
47.7	28.28			3800	4.0					
46.8	28.84			3820	3.9					
41.5	32.53			3970	3.5					
36.6	36.86			4110	3.1					
34.3	39.32			4190	2.9					
30.0	44.99			4350	2.5	HB023 - M63/4	12.0	51		
28.0	48.27			4440	2.4	HF023 - M63/4	13.0	61		
24.9	54.17			4500	2.1					
22.1	61.10			4500	1.86	HB023 - A63	7.0	71		
19.5	69.24			4500	1.64	HF023 - A63	7.9	82		
18.3	73.86			4500	1.54					
16.0	84.50			4500	1.34					
14.9	90.66			4500	1.25					
12.8	105.15			4500	1.07					
10.9	123.50			4150	0.92					
29.1	46.36			6400	3.8					
27.1	49.74			6550	3.6					
23.4	57.68			6530	3.1					
22.1	61.18			6510	2.9	HB033 - M63/4	17.5	52		
19.5	69.33			6450	2.6	HF033 - M63/4	18.0	62		
18.3	73.96			6420	2.4					
16.0	84.61			6330	2.1	HB033 - A63	12.5	72		
14.9	90.77			6280	1.97	HF033 - A63	13.0	83		
12.8	105.28			6130	1.69					
10.9	123.66			5900	1.44					
10.0	134.82			5750	1.32					
22.1	61.09			6700	4.4					
20.7	65.23			6700	4.1					
18.1	74.63			6710	3.6					
15.7	85.91			6680	3.1	HB043 - M63/4	23.0	52		
14.6	92.44			6660	2.9	HF043 - M63/4	24.0	62		
13.5	99.70	6640	2.7							
11.6	116.45	6550	2.3	HB043 - A63	18.0	72				
10.8	124.59	6490	2.1	HF043 - A63	19.0	83				
9.39	143.74	6320	1.86							
8.04	168.00	6070	1.59							
7.39	182.73	5900	1.46							

 1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Helical Geared Motors with IS/IEC motors, Type : HB/HF. . - M . .
 Helical Gear Units (without motor), Type : HB/HF. . - A . .
 Power ratings

0.18 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	FRa [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.
0.18	1350	13.1	103.38	8700	3.7			
		12.1	111.49	8700	3.4			
		11.0	122.77	8700	3.1	HB053 - M63/4	28.0	53
		10.3	130.95	8600	2.9	HF053 - M63/4	28.5	63
		9.00	150.01	8600	2.6	HB053 - A63	23.0	73
		7.73	174.61	8500	2.2	HF053 - A63	23.5	84
		7.12	189.54	8500	2.0			
		11.5	117.65	11400	4.3	HB063 - M63/4	35.0	53
		10.4	129.55	11300	3.9	HF063 - M63/4	34.5	63
		9.77	138.18	11300	3.7			
8.53	158.29	11200	3.2	HB063 - A63	30.0	73		
7.33	184.24	11100	2.8	HF063 - A63	29.5	84		
6.75	200.00	11100	2.6					
						HB073 - M63/4	45.0	54
						HF073 - M63/4	47.0	64
	8.25	163.56	14300	4.3				
	7.04	191.69	14100	3.6	HB073 - A63	40.0	74	
						HF073 - A63	42.0	85
						HB042H032 - M63/4	32.0	57
						HF042H032 - M63/4	33.0	67
	6.88	196.24	5700	1.38				
	6.02	224.38	5300	1.20	HB042H032 - A63	27.0	77	
	5.23	258.35	4700	1.05	HF042H032 - A63	28.0	88	
						HB052H032 - M63/4	36.5	58
						HF052H032 - M63/4	37.0	68
	6.16	219.06	8520	2.4				
	5.24	257.86	8380	2.0	HB052H032 - A63	31.5	78	
	4.61	292.78	8280	1.76	HF052H032 - A63	32.0	89	
	4.19	322.3	8110	1.60				
	3.69	365.9	7500	1.41				
						HB062H032 - M63/4	43.5	58
						HF062H032 - M63/4	43.0	68
	5.84	231.20	11000	2.2				
	5.07	266.20	10910	1.94	HB062H032 - A63	38.5	78	
	4.37	309.0	10780	1.67	HF062H032 - A63	38.0	89	
	3.74	361.0	10310	1.43				
	3.50	386.2	10070	1.34				
	3.03	445.4	9500	1.16				
						HB072H032 - M63/4	53	58
						HF072H032 - M63/4	55	68
	6.20	217.65	13800	3.2				
	5.81	232.43	13800	3.0	HB072H032 - A63	48.0	78	
	5.08	265.76	13900	2.6	HF072H032 - A63	50	89	
	4.41	306.0	13800	2.3				
	3.80	355.2	13600	1.98				
	3.25	415.0	13300	1.69				
	3.04	443.9	13300	1.58				
	2.64	512.0	12980	1.38				
						HB072H033 - M63/4	53	58
						HF072H033 - M63/4	55	68
	2.53	533.9	12500	1.33				
	2.35	573.8	12500	1.24	HB072H033 - A63	48.0	78	
	1.98	683.3	11500	1.04	HF072H033 - A63	50	89	
	1.75	770.6	9200	0.92				
						HB082H052 - M63/4	92	59
						HF082H052 - M63/4	96	69
	5.41	249.35	22500	5.6				
	4.45	303.3	23000	4.6				
	3.79	356.0	23000	3.9	HB082H052 - A63	87	79	
	3.34	404.2	23000	3.4	HF082H052 - A63	91	90	
	2.91	463.3	23000	3.0				
	2.51	536.9	23000	2.6				
						HB082H053 - M63/4	93	59
						HF082H053 - M63/4	97	69
	2.37	569.7	22000	2.5				
	2.07	653.6	22000	2.2				
	1.79	753.4	22000	1.86				
	1.66	811.0	22000	1.73	HB082H053 - A63	88	79	
	1.43	944.9	21700	1.49	HF082H053 - A63	92	90	
	1.32	1024	21100	1.37				
	1.14	1187	20400	1.19				
	1.05	1280	19600	1.09				
	0.958	1409	16900	1.00				
	0.898	1503	14500	0.93				
						HB092H052 - M63/4	132	59
						HF092H052 - M63/4	134	69
	2.46	548.4	31000	4.7				
	2.12	635.5	31500	4.0	HB092H052 - A63	127	79	
						HF092H052 - A63	129	90

1) n₁ values will vary slightly as per the make of Electric motor.
 2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Helical Geared Motors with IS/IEC motors, Type : HB/HF. . - M . .

Helical Gear Units (without motor), Type : HB/HF. . - A . .

Power ratings

0.18 - 0.25 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	FRa [N]	S F	TYPE / SIZE	Approx.Wt Dimensions	
							[kg.]	Page No.
0.18	1350	2.00	674.4	31500	3.9			
		1.74	773.7	31200	3.4			
		1.51	891.8	31100	2.9			
		1.41	960.0	31000	2.7			
		1.21	1119	30800	2.3	HB092H053 - M63/4	132	59
		1.11	1212	30600	2.1	HF092H053 - M63/4	135	69
		0.891	1515	30200	1.72			
		0.809	1668	29700	1.56	HB092H053 - A63	127	79
		0.759	1779	29100	1.46	HF092H053 - A63	130	90
		0.649	2079	28000	1.25			
		0.599	2252	26600	1.16			
		0.517	2610	20000	1.00			
		0.480	2815	15000	0.93			
		1.47	919.4	41500	4.6			
		1.28	1051	41000	4.0			
		1.15	1174	41100	3.6			
		0.949	1423	41000	3.0			
		0.856	1577	40900	2.7	HB102H073 - M63/4	210	59
		0.808	1671	40900	2.5	HF102H073 - M63/4	215	69
		0.729	1852	40500	2.3			
		0.642	2103	40100	2.0	HB102H073 - A63	205	80
		0.610	2214	39800	1.91	HF102H073 - A63	210	91
		0.503	2684	38900	1.57			
		0.440	3070	37500	1.37			
		0.397	3402	36000	1.24			
		0.339	3987	31000	1.06			
		0.863	1565	65500	4.4			
		0.734	1838	67000	3.8			
		0.625	2159	66500	3.2	HB112H073 - M63/4	295	60
		0.551	2451	66000	2.8	HF112H073 - M63/4	295	70
		0.481	2808	66200	2.5			
		0.415	3255	65800	2.1	HB112H073 - A63	290	80
		0.389	3467	65600	2.0	HF112H073 - A63	290	91
		0.340	3965	65100	1.75			
		0.291	4647	64100	1.50			
		0.267	5055	63600	1.39	HB113H073 - M63/4	305	60
		0.245	5510	63100	1.27	HF113H073 - M63/4	305	70
		0.197	6843	61000	1.02	HB113H073 - A63	300	80
		0.181	7459	60000	0.94	HF113H073 - A63	300	91
		0.491	2748	81500	4.3			
		0.458	2945	81000	4.1			
		0.408	3307	81100	3.6			
		0.345	3910	80900	3.1			
		0.318	4244	80600	2.8	HB123H073 - M63/4	445	60
		0.270	4995	80000	2.4	HF123H073 - M63/4	445	70
		0.238	5673	79700	2.1			
		0.208	6504	78900	1.84	HB123H073 - A63	440	81
		0.186	7248	77900	1.65	HF123H073 - A63	440	92
		0.161	8409	76600	1.42			
		0.140	9664	74000	1.24			
0.126	10679	71700	1.12					
0.111	12125	68700	0.98					
0.25	1370	400	3.426	1940	15			
		343	4.000	2050	14			
		321	4.271	2100	13			
		280	4.886	2200	12			
		244	5.625	2280	11			
		210	6.528	2390	10			
		180	7.625	2510	9.5	HB022 - M71/4	13.5	51
		169	8.098	2560	9.2	HF022 - M71/4	14.0	61
		145	9.455	2680	8.3			
		136	10.09	2760	7.8	HB022 - A71	7.3	71
		119	11.55	2890	7.1	HF022 - A71	8.1	82
		103	13.30	3000	6.2			
		88.8	15.43	3140	5.3			
		76.0	18.02	3280	4.5			
		71.1	19.28	3350	4.3			
		61.6	22.25	3490	3.7			
		52.7	26.00	3660	3.2			
		48.4	28.28	3750	2.9			

- 1) n₁ values will vary slightly as per the make of Electric motor.
- 2) Other output speeds are available using 2 & 8 pole motors; Consult us.

0.25 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.	
0.25	1370	56.6	24.22	3590	3.4				
		47.5	28.84	3760	2.9				
		42.1	32.53	3890	2.5				
		37.2	36.86	4030	2.2				
		34.8	39.32	4100	2.1				
		30.5	44.99	4250	1.84		HB023 - M71/4	13.5	51
		28.4	48.27	4300	1.72		HF023 - M71/4	14.5	61
		25.3	54.17	4300	1.53		HB023 - A71	7.6	71
		22.4	61.10	4300	1.35		HF023 - A71	8.5	82
		19.8	69.24	4300	1.20				
		18.5	73.86	4300	1.12				
		16.2	84.50	4300	0.98				
		15.1	90.66	4150	0.91				
		46.1	29.72	5400	4.4				
		40.9	33.52	5750	3.9				
		36.1	37.98	5990	3.4				
		33.8	40.52	6090	3.2				
		29.6	46.36	6330	2.8				
		27.5	49.74	6450	2.6		HB033 - M71/4	19.0	52
		23.8	57.68	6380	2.3		HF033 - M71/4	20.0	62
		22.4	61.18	6320	2.1				
		19.8	69.33	6210	1.88		HB033 - A71	13.0	72
		18.5	73.96	6140	1.76		HF033 - A71	14.0	83
		16.2	84.61	5960	1.54				
		15.1	90.77	5850	1.43				
		13.0	105.28	5530	1.23				
		11.1	123.66	4560	1.05				
		10.2	134.82	2600	0.97				
		26.3	52.19	6100	3.7				
		24.5	55.84	6690	3.5				
		22.4	61.09	6670	3.2				
		21.0	65.23	6650	3.0				
		18.4	74.63	6620	2.6		HB043 - M71/4	25.0	52
		15.9	85.91	6540	2.3		HF043 - M71/4	26.0	62
		14.8	92.44	6470	2.1				
		13.7	99.70	6380	2.0		HB043 - A71	19.0	72
		11.8	116.45	6170	1.68		HF043 - A71	20.0	83
		11.0	124.59	6040	1.57				
		9.53	143.74	5720	1.36				
		8.15	168.00	5220	1.16				
		7.50	182.73	4880	1.07				
		19.4	70.47	8700	4.0				
		16.6	82.32	8700	3.4				
15.4	89.19	8700	3.2						
13.3	103.38	8600	2.7		HB053 - M71/4	30.0	53		
12.3	111.49	8600	2.5		HF053 - M71/4	30.0	63		
11.2	122.77	8500	2.3						
10.5	130.95	8500	2.2		HB053 - A71	24.0	73		
9.13	150.01	8400	1.87		HF053 - A71	24.0	84		
7.85	174.61	8300	1.61						
7.23	189.54	8200	1.48						
875	7.13	122.77	8300	1.46		HB053 - M71/6	31.0	53	
6.68	130.95	8200	1.37		HF053 - M71/6	31.0	63		
5.83	150.01	8000	1.20						
5.01	174.61	7200	1.03		HB053 - A71	24.0	73		
4.62	189.54	6800	0.95		HF053 - A71	24.0	84		
1370	14.6	94.12	11300	4.0					
12.6	109.09	11300	3.4						
11.6	117.65	11200	3.2		HB063 - M71/4	37.0	53		
10.6	129.55	11100	2.9		HF063 - M71/4	36.0	63		
9.91	138.18	11100	2.7						
8.66	158.29	10900	2.4		HB063 - A71	31.0	73		
7.44	184.24	10600	2.0		HF063 - A71	30.0	84		
6.85	200.00	10400	1.86						
875	6.75	129.55	10500	1.84		HB063 - M71/6	38.0	53	
6.33	138.18	10400	1.72		HF063 - M71/6	37.0	63		
5.53	158.29	10050	1.50						
4.75	184.24	9440	1.29		HB063 - A71	31.0	73		
4.38	200.00	9000	1.19		HF063 - A71	30.0	84		
1370	11.8	115.86	14000	4.4		HB073 - M71/4	45.5	54	
10.2	134.29	14100	3.8		HF073 - M71/4	47.5	64		
9.58	143.02	14100	3.6						
8.38	163.56	14000	3.1		HB073 - A71	39.5	74		
7.15	191.69	13800	2.7		HF073 - A71	41.5	85		

1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Helical Geared Motors with IS/IEC motors, Type : HB/HF. . - M . .

Helical Gear Units (without motor), Type : HB/HF. . - A . .

Power ratings
0.25 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.		
0.25	875	6.52	134.29	13500	2.4	HB073 - M71/6	46.5	54		
		6.12	143.02	13700	2.3	HF073 - M71/6	48.5	64		
		5.35	163.56	13500	1.99	HB073 - A71	39.5	74		
		4.56	191.69	13000	1.69	HF073 - A71	41.5	85		
		<hr/>								
	1370	1370	4.43	309.0	9270	1.22	HB062H032 - M71/4	45.0	58	
			3.80	361.0	7900	1.04	HF062H032 - M71/4	44.5	68	
			3.55	386.2	6450	0.98	HB062H032 - A71	39.0	78	
							HF062H032 - A71	38.5	89	
		<hr/>								
		4.48	306.0	13000	1.68	HB072H032 - M71/4	55	58		
				12600	1.45	HF072H032 - M71/4	56	68		
				11900	1.24					
				11900	1.16	HB072H032 - A71	48.5	78		
		2.68	512.0	11100	1.01	HF072H032 - A71	50	89		
		<hr/>								
		5.49	249.35	22000	4.1	HB082H052 - M71/4	94	59		
				22500	3.4	HF082H052 - M71/4	98	69		
				22500	2.9					
				22500	2.5	HB082H052 - A71	88	79		
22000				2.2	HF082H052 - A71	92	90			
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2.40		569.7	22000	1.80	HB082H053 - M71/4	94	59			
			21300	1.57	HF082H053 - M71/4	99	69			
			20500	1.36						
	20400		1.27	HB082H053 - A71	88	79				
	19100		1.09	HF082H053 - A71	93	90				
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3.61	380.0	31500	5.0	HB092H052 - M71/4	133	59				
		31500	4.5	HF092H052 - M71/4	135	69				
		31500	3.9							
		30500	3.4	HB092H052 - A71	127	79				
		31000	3.0	HF092H052 - A71	129	90				
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2.03	674.4	31000	2.8							
		30900	2.5							
		30600	2.1	HB092H053 - M71/4	134	59				
		30300	1.99	HF092H053 - M71/4	136	69				
		30000	1.69							
		29200	1.57	HB092H053 - A71	128	79				
		26000	1.26	HF092H053 - A71	130	90				
		25500	1.14							
		24200	1.07							
		14800	0.92							
		<hr/>								
		1.69	809.0	41100	3.8					
				41000	3.4					
40500	2.9									
40500	2.6									
40200	2.2			HB102H073 - M71/4	210	59				
39900	1.95			HF102H073 - M71/4	215	69				
39900	1.84									
38500	1.66			HB102H073 - A71	205	80				
38000	1.46			HF102H073 - A71	210	91				
38000	1.39									
35000	1.15									
25900	1.00									
17000	0.91									
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1.28	1071	67000	4.7							
		67100	4.0							
		66800	3.5							
		65000	3.2	HB112H073 - M71/4	295	60				
		66500	2.8	HF112H073 - M71/4	295	70				
		66100	2.4							
		65600	2.1	HB112H073 - A71	290	80				
		64700	1.81	HF112H073 - A71	290	91				
		63900	1.56							
		63400	1.46							
		62100	1.28							
		60000	1.09							

 1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

0.25 - 0.37 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.		
0.25	1370					HB123H072 - M71/4	445	60		
		0.695	1972	81000	4.4	HF123H072 - M71/4	445	70		
		0.624	2197	81000	3.9					
		0.537	2549	81000	3.4	HB123H072 - A71	440	81		
						HF123H072 - A71	440	92		
				0.499	2748	81000	3.2			
				0.465	2945	80600	3.0			
				0.414	3307	80100	2.6			
				0.350	3910	79600	2.2	HB123H073 - M71/4	445	60
				0.323	4244	78800	2.1	HF123H073 - M71/4	445	70
				0.274	4995	77700	1.75			
				0.241	5673	76700	1.54	HB123H073 - A71	440	81
				0.211	6504	74900	1.34	HF123H073 - A71	440	92
				0.189	7248	72800	1.20			
				0.163	8409	69400	1.04			
				0.142	9664	53000	0.90			
		0.37	1380	403	3.426	1900	10			
				345	4.000	2000	9.3			
				323	4.271	2050	8.9			
				282	4.886	2150	8.5			
245	5.625			2200	7.7					
211	6.528			2300	7.1					
181	7.625			2400	6.4					
170	8.098			2450	6.2	HB022 - M71/4	14.5	51		
146	9.455			2550	5.6	HF022 - M71/4	15.0	61		
137	10.09			2650	5.3					
119	11.55			2750	4.8	HB022 - A71	7.3	71		
104	13.30			2880	4.2	HF022 - A71	8.1	82		
89.4	15.43			3020	3.6					
76.6	18.02			3140	3.1					
71.6	19.28			3210	2.9					
62.0	22.25			3340	2.5					
53.1	26.00			3480	2.1					
48.8	28.28			3500	1.97					
				57.0	24.22	3420	2.3			
				47.9	28.84	3570	1.96			
				42.4	32.53	3680	1.73	HB023 - M71/4	14.5	51
				37.4	36.86	3800	1.53	HF023 - M71/4	15.5	61
				35.1	39.32	3860	1.43			
				30.7	44.99	3980	1.25	HB023 - A71	7.6	71
				28.6	48.27	4040	1.17	HF023 - A71	8.5	82
				25.5	54.17	4180	1.04			
				22.6	61.10	4200	0.92			
				62.0	22.27	4950	3.9	HB032 - M71/4	19.5	52
				53.0	26.03	5180	3.4	HF032 - M71/4	20.5	62
				48.7	28.32	5310	3.1	HB032 - A71	12.5	72
								HF032 - A71	13.5	83
				55.3	24.96	5080	3.5			
				46.4	29.72	5330	3.0			
				41.2	33.52	5510	2.6			
				36.3	37.98	5700	2.3			
				34.1	40.52	5810	2.2	HB033 - M71/4	20.0	52
				29.8	46.36	6020	1.91	HF033 - M71/4	21.0	62
				27.7	49.74	6140	1.78			
				23.9	57.68	6080	1.53	HB033 - A71	13.0	72
				22.6	61.18	5950	1.45	HF033 - A71	14.0	83
				19.9	69.33	5700	1.28			
				18.7	73.96	5390	1.20			
				16.3	84.61	4500	1.05			
				15.2	90.77	3910	0.98			
				45.4	30.40	5660	4.3	HB042 - M71/4	25.5	52
				41.8	33.00	5790	4.0	HF042 - M71/4	26.5	62
								HB042 - A71	18.5	72
								HF042 - A71	19.5	83

1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

0.37 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.		
0.37	1380	35.8	38.50	5950	3.4					
		33.3	41.43	6210	3.2					
		30.9	44.68	6400	3.0					
		26.4	52.19	6580	2.5					
		24.7	55.84	6580	2.4					
		22.6	61.09	6500	2.2		HB043 - M71/4	26.0	52	
		21.2	65.23	6440	2.0		HF043 - M71/4	27.0	62	
		18.5	74.63	6260	1.78					
		16.1	85.91	6020	1.55		HB043 - A71	19.0	72	
		14.9	92.44	5850	1.43		HF043 - A71	20.0	83	
		13.8	99.70	5660	1.33					
		11.9	116.45	5170	1.15					
		11.1	124.59	4870	1.07					
		9.60	143.74	3830	0.92					
		28.8	48.00	8100	4.0					
		24.8	55.64	8300	3.4					
		23.0	60.00	8500	3.2					
		20.9	66.07	8700	2.9					
		19.6	70.47	8600	2.7					
		16.8	82.32	8600	2.3		HB053 - M71/4	31.0	53	
		15.5	89.19	8500	2.1		HF053 - M71/4	31.0	63	
		13.3	103.38	8500	1.84		HB053 - A71	24.0	73	
		12.4	111.49	8400	1.72		HF053 - A71	24.0	84	
		11.2	122.77	8300	1.55					
		10.5	130.95	8300	1.46					
		9.20	150.01	8100	1.27					
		7.90	174.61	7500	1.09					
		7.28	189.54	7200	1.01					
		19.9	69.26	11300	3.7					
		18.5	74.55	11300	3.4					
		15.9	86.87	11200	2.9					
		14.7	94.12	11100	2.7		HB063 - M71/4	38.0	53	
		12.7	109.09	11000	2.3		HF063 - M71/4	37.0	63	
		11.7	117.65	10900	2.2					
		10.7	129.55	10700	2.0		HB063 - A71	31.0	73	
		9.99	138.18	10500	1.84		HF063 - A71	30.0	84	
		8.72	158.29	10200	1.60					
		7.49	184.24	9700	1.38					
		6.90	200.00	9300	1.27					
		910						HB063 - M80/6	42.5	53
			7.02	129.55	9300	1.23		HF063 - M80/6	42.0	63
			6.59	138.18	9000	1.15				
			5.75	158.29	8000	1.01		HB063 - A80	32.5	73
								HF063 - A80	32.0	84
1380										
	15.5	89.05	14000	3.9						
	13.6	101.11	14100	3.4		HB073 - M71/4	46.5	54		
	11.9	115.86	14000	3.0		HF073 - M71/4	48.5	64		
	10.3	134.29	13800	2.6						
	9.65	143.02	13800	2.4		HB073 - A71	39.5	74		
	8.44	163.56	13600	2.1		HF073 - A71	41.5	85		
	7.20	191.69	13300	1.81						
910										
	7.85	115.86	13000	1.97		HB073 - M80/6	53	54		
	6.78	134.29	13000	1.70		HF073 - M80/6	54	64		
	6.36	143.02	12800	1.60						
	5.56	163.56	12300	1.40		HB073 - A80	42.5	74		
						HF073 - A80	44.0	85		
	9.37	97.11	21000	4.6						
	8.47	107.50	21000	4.2						
	7.80	116.70	21000	3.9						
	7.16	127.13	22000	3.6		HB083 - M80/6	82	54		
	6.25	145.67	22000	3.1		HF083 - M80/6	87	64		
	5.81	156.57	22000	2.9						
	4.98	182.75	22000	2.5		HB083 - A80	72	74		
	4.32	210.86	22000	2.1		HF083 - A80	77	85		
	4.19	216.97	22000	2.1						
	3.69	246.88	22000	1.83						
	5.07	179.44	31100	4.7						
	4.14	220.01	31200	3.8		HB093 - M80/6	125	55		
	3.87	235.43	31100	3.6		HF093 - M80/6	127	65		
	3.61	252.33	31000	3.3						
	3.13	290.89	30900	2.9		HB093 - A80	115	75		
						HF093 - A80	117	86		

1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

0.37 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	FRa [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.
0.37	1380					HB062H032 - M71/4	46.0	58
						HF062H032 - M71/4	45.5	68
		5.97	231.20	8900	1.11	HB062H032 - A71	39.0	78
		5.18	266.20	6300	0.96	HF062H032 - A71	38.5	89
		6.34	217.65	13200	1.61	HB072H032 - M71/4	56	58
		5.94	232.43	13200	1.51	HF072H032 - M71/4	57	68
		5.19	265.76	12700	1.32	HB072H032 - A71	48.5	78
		4.51	306.0	11500	1.14	HF072H032 - A71	50	89
		3.89	355.2	10400	0.99			
		5.53	249.35	22000	2.8	HB082H052 - M71/4	95	59
		4.55	303.3	22000	2.3	HF082H052 - M71/4	99	69
		3.88	356.0	22000	1.94	HB082H052 - A71	88	79
		3.41	404.2	22000	1.71	HF082H052 - A71	92	90
		2.98	463.3	21300	1.49			
		2.57	536.9	20500	1.29			
		2.42	569.7	20100	1.23	HB082H053 - M71/4	95	59
		2.11	653.6	19000	1.07	HF082H053 - M71/4	100	69
		1.83	753.4	14000	0.93	HB082H053 - A71	88	79
						HF082H053 - A71	93	90
		3.84	359.1	31200	3.6	HB092H052 - M71/4	134	59
		3.63	380.0	31100	3.4	HF092H052 - M71/4	136	69
		3.27	421.4	31000	3.0	HB092H052 - A71	127	79
		2.88	478.5	31000	2.7	HF092H052 - A71	129	90
		2.52	548.4	30000	2.3			
		2.17	635.5	30400	2.0			
		2.05	674.4	30400	1.92	HB092H053 - M71/4	135	59
		1.78	773.7	30100	1.67	HF092H053 - M71/4	137	69
		1.55	891.8	29500	1.45	HB092H053 - A71	128	79
		1.44	960.0	28200	1.35	HF092H053 - A71	130	90
		1.23	1119	26700	1.15			
		1.14	1212	24300	1.07			
		2.41	571.7	40500	3.7	HB102H073 - M71/4	210	59
		2.25	612.6	40500	3.4	HF102H073 - M71/4	215	69
		2.02	684.2	40500	3.1	HB102H073 - A71	205	80
		1.71	809.0	40700	2.6	HF102H073 - A71	210	91
		1.50	919.4	40300	2.3			
		1.31	1051	40000	1.99			
		1.18	1174	39400	1.79			
		0.970	1423	38000	1.47			
		0.875	1577	36800	1.33			
		0.826	1671	35000	1.25			
		0.745	1852	34000	1.13			
		0.656	2103	26500	1.00			
		0.623	2214	21000	0.95			
		1.65	837.0	67000	4.1			
		1.51	912.2	66900	3.8			
		1.29	1071	66700	3.2			
		1.09	1267	66500	2.7	HB112H073 - M71/4	295	60
		0.961	1436	66200	2.4	HF112H073 - M71/4	295	70
		0.882	1565	64500	2.2	HB112H073 - A71	290	80
		0.751	1838	65300	1.88	HF112H073 - A71	290	91
		0.639	2159	64200	1.60			
		0.563	2451	63300	1.41			
		0.491	2808	61600	1.23			
		0.424	3255	59700	1.06			
		0.398	3467	58800	1.00			
		1.01	1363	81000	4.3	HB123H072 - M71/4	445	60
		0.873	1581	80500	3.7	HF123H072 - M71/4	445	70
		0.789	1750	80000	3.4	HB123H072 - A71	440	81
		0.700	1972	80000	3.0	HF123H072 - A71	440	92
		0.628	2197	80000	2.7			
		0.541	2549	80000	2.3			

1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

0.37 - 0.55 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt Dimensions			
							[kg.]	Page No.		
0.37	1380	0.502	2748	80000	2.2					
		0.469	2945	79000	2.0					
		0.417	3307	78200	1.80	HB123H073 - M71/4	445	60		
		0.353	3910	77000	1.52	HF123H073 - M71/4	445	70		
		0.325	4244	75300	1.40	HB123H073 - A71	440	81		
		0.276	4995	73000	1.19	HF123H073 - A71	440	92		
		0.243	5673	70700	1.05					
		0.212	6504	66400	0.91					
0.55	1405	410	3.426	1870	6.8					
		351	4.000	1960	6.3					
		329	4.271	2010	6.1					
		288	4.886	2100	5.8					
		250	5.625	2170	5.3					
		215	6.528	2270	4.8					
		184	7.625	2370	4.4	HB022 - M80/4	19.0	51		
		173	8.098	2420	4.3	HF022 - M80/4	20.0	61		
		149	9.455	2510	3.9	HB022 - A80	8.8	71		
		139	10.09	2600	3.6	HF022 - A80	9.6	82		
		122	11.55	2710	3.3					
		106	13.30	2800	2.9					
		91.1	15.43	2920	2.5					
		78.0	18.02	3030	2.1					
		72.9	19.28	3090	1.98					
		63.1	22.25	3200	1.72					
				58.0	24.22	3260	1.59	HB023 - M80/4	19.0	51
				48.7	28.84	3380	1.34	HF023 - M80/4	20.0	61
				43.2	32.53	3470	1.19			
				38.1	36.86	3560	1.05	HB023 - A80	9.1	71
				35.7	39.32	3600	0.98	HF023 - A80	10.0	82
				90.9	15.45	4360	3.9	HB032 - M80/4	24.0	52
				77.8	18.05	4550	3.3	HF032 - M80/4	25.0	62
				72.8	19.31	4640	3.1	HB032 - A80	14.0	72
				63.1	22.27	4820	2.7	HF032 - A80	15.0	83
				56.3	24.96	4950	2.4			
				47.3	29.72	5170	2.0			
				41.9	33.52	5320	1.81	HB033 - M80/4	24.5	52
				37.0	37.98	5480	1.60	HF033 - M80/4	25.5	62
				34.7	40.52	5570	1.50			
				30.3	46.36	5750	1.31	HB033 - A80	14.5	72
				28.2	49.74	5450	1.22	HF033 - A80	15.5	83
				24.4	57.68	4550	1.05			
				23.0	61.18	4070	0.99			
				72.4	19.41	4800	4.6	HB042 - M80/4	30.5	52
				65.7	21.38	5000	4.2	HF042 - M80/4	31.5	62
				61.6	22.80	5090	3.9	HB042 - A80	20.5	72
				53.8	26.12	5300	3.4	HF042 - A80	21.5	83
				51.3	27.38	5200	3.3			
				48.1	29.23	5460	3.1			
				42.0	33.44	5690	2.7			
				36.5	38.50	5780	2.4			
				33.9	41.43	6010	2.2			
				31.4	44.68	6190	2.0	HB043 - M80/4	31.0	52
				26.9	52.19	6230	1.74	HF043 - M80/4	32.0	62
				25.2	55.84	6120	1.63			
				23.0	61.09	5940	1.49	HB043 - A80	21.0	72
				21.5	65.23	5780	1.39	HF043 - A80	22.0	83
				18.8	74.63	5390	1.22			
				16.4	85.91	4500	1.06			
		15.2	92.44	3600	0.98					
		14.1	99.70	4000	0.91					

 1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

0.55 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.		
0.55	1405	45.9	30.64	6500	4.3					
		39.8	35.32	7200	3.7					
		37.0	38.02	7300	3.4					
		31.7	44.30	7600	3.0					
		29.3	48.00	7900	2.7					
		25.3	55.64	8100	2.4		HB053 - M80/4	36.0	53	
		23.4	60.00	8200	2.2		HF053 - M80/4	36.0	63	
		21.3	66.07	8500	1.99					
		19.9	70.47	8400	1.86		HB053 - A80	26.0	73	
		17.1	82.32	8300	1.59		HF053 - A80	26.0	84	
		15.8	89.19	8200	1.47					
		13.6	103.38	8100	1.27					
		12.6	111.49	7900	1.17					
		11.4	122.77	7200	1.06					
		10.7	130.95	7200	1.00					
				33.7	41.63	11100	4.2			
				31.1	45.11	11200	3.8			
				26.9	52.29	11100	3.3			
				24.9	56.39	11200	3.1			
				23.4	60.08	11100	2.9			
				20.3	69.26	11000	2.5	HB063 - M80/4	42.5	53
				18.8	74.55	10900	2.3	HF063 - M80/4	42.0	63
				16.2	86.87	10700	2.0	HB063 - A80	32.5	73
				14.9	94.12	10400	1.84	HF063 - A80	32.0	84
				12.9	109.09	10200	1.60			
				11.9	117.65	9900	1.47			
				10.8	129.55	9400	1.34			
				10.2	138.18	9100	1.26			
				8.88	158.29	8100	1.10			
		21.8	64.57	14100	3.7					
		18.5	75.83	14000	3.1					
		17.5	80.31	14000	3.0	HB073 - M80/4	53	54		
		15.8	89.05	13800	2.7	HF073 - M80/4	54	64		
		13.9	101.11	13700	2.3					
		12.1	115.86	13400	2.0	HB073 - A80	42.5	74		
		10.5	134.29	13000	1.77	HF073 - A80	44.0	85		
		9.82	143.02	12900	1.66					
		8.59	163.56	12400	1.45					
	915	7.90	115.86	12000	1.33	HB073 - M80/6	54	54		
		6.81	134.29	11000	1.15	HF073 - M80/6	55	64		
		6.40	143.02	11000	1.08	HB073 - A80	42.5	74		
		5.59	163.56	10000	0.94	HF073 - A80	44.0	85		
	1405	13.1	107.50	21000	4.4					
		12.0	116.70	21000	4.0					
		11.1	127.13	21000	3.7	HB083 - M80/4	82	54		
		9.65	145.67	21000	3.2	HF083 - M80/4	87	64		
		8.97	156.57	21000	3.0					
		7.69	182.75	21000	2.6	HB083 - A80	72	74		
		6.66	210.86	21000	2.2	HF083 - A80	77	85		
		6.48	216.97	21000	2.2					
		5.69	246.88	21000	1.90					
	915	5.01	182.75	21000	1.67	HB083 - M80/6	83	54		
		4.34	210.86	20500	1.45	HF083 - M80/6	88	64		
		4.22	216.97	20000	1.41	HB083 - A80	72	74		
		3.71	246.88	19000	1.24	HF083 - A80	77	85		
	1405	7.83	179.44	31100	4.8	HB093 - M80/4	125	55		
		6.39	220.01	31200	4.0	HF093 - M80/4	127	65		
		5.97	235.43	31100	3.7					
		5.57	252.33	31000	3.4	HB093 - A80	115	75		
		4.83	290.89	30900	3.0	HF093 - A80	117	86		
	915	4.16	220.01	30800	2.6	HB093 - M80/6	126	55		
		3.89	235.43	30500	2.4	HF093 - M80/6	128	65		
		3.63	252.33	30400	2.2	HB093 - A80	115	75		
		3.15	290.89	30100	1.95	HF093 - A80	117	86		

1) n₁ values will vary slightly as per the make of Electric motor.
2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Helical Geared Motors with IS/IEC motors, Type : HB/HF. . - M . .
Helical Gear Units (without motor), Type : HB/HF. . - A . .
Power ratings

0.55 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.	
0.55	1405					HB072H032 - M80/4	60	58	
						HF072H032 - M80/4	62	68	
			6.04	232.43	10700	1.03	HB072H032 - A80	50	78
			5.29	265.76	4900	0.90	HF072H032 - A80	52	89
			5.63	249.35	21000	1.90	HB082H052 - M80/4	99	59
			4.63	303.3	21600	1.56	HF082H052 - M80/4	104	69
			3.95	356.0	20400	1.33			
			3.48	404.2	19500	1.17	HB082H052 - A80	89	79
			3.03	463.3	17400	1.02	HF082H052 - A80	94	90
			3.33	421.4	30300	2.1	HB092H052 - M80/4	139	59
			2.94	478.5	30100	1.84	HF092H052 - M80/4	141	69
			2.56	548.4	29300	1.60	HB092H052 - A80	129	79
			2.21	635.5	28000	1.38	HF092H052 - A80	131	90
			2.08	674.4	28000	1.31	HB092H053 - M80/4	140	59
			1.82	773.7	26000	1.15	HF092H053 - M80/4	142	69
			1.58	891.8	20500	1.00	HB092H053 - A80	130	79
			1.46	960.0	15000	0.92	HF092H053 - A80	132	90
			4.37	321.7	41000	4.4	HB102H072 - M80/4	215	59
			3.62	388.3	41000	3.7	HF102H072 - M80/4	220	69
			3.26	431.5	40000	3.3			
			2.94	478.2	38000	3.0	HB102H072 - A80	205	80
			2.52	558.1	37500	2.5	HF102H072 - A80	210	91
			2.46	571.7	40200	2.5			
			2.29	612.6	40200	2.3			
	2.05	684.2	39800	2.1	HB102H073 - M80/4	215	59		
	1.74	809.0	39000	1.78	HF102H073 - M80/4	220	69		
	1.53	919.4	37800	1.56					
	1.34	1051	35900	1.37	HB102H073 - A80	205	80		
	1.20	1174	33200	1.23	HF102H073 - A80	210	91		
	0.987	1423	24000	1.01					
	0.891	1577	17000	0.91					
	2.45	574.2	65000	4.1					
	2.23	631.2	66500	3.8					
	1.90	738.4	67000	3.2					
	1.68	837.0	66500	2.8					
	1.54	912.2	66100	2.6	HB112H073 - M80/4	300	60		
	1.31	1071	65600	2.2	HF112H073 - M80/4	300	70		
	1.11	1267	65200	1.87					
	0.978	1436	64400	1.65	HB112H073 - A80	290	80		
	0.898	1565	63600	1.51	HF112H073 - A80	290	91		
	0.764	1838	62100	1.29					
	0.651	2159	60500	1.10					
	0.573	2451	56300	0.96					
	1.53	916.4	80500	4.4					
	1.35	1039	80000	3.9					
	1.20	1171	80900	3.4	HB123H072 - M80/4	450	60		
	1.03	1363	80600	3.0	HF123H072 - M80/4	450	70		
	0.889	1581	80000	2.5					
	0.803	1750	79600	2.3	HB123H072 - A80	440	81		
	0.712	1972	78600	2.0	HF123H072 - A80	440	92		
	0.640	2197	77600	1.83					
	0.551	2549	76200	1.58					
	0.511	2748	75000	1.48	HB123H073 - M80/4	450	60		
	0.477	2945	74800	1.38	HF123H073 - M80/4	450	70		
	0.425	3307	72400	1.23					
	0.359	3910	69100	1.04	HB123H073 - A80	440	81		
	0.331	4244	59200	0.96	HF123H073 - A80	440	92		
	1.07	1318	132000	4.3					
	0.929	1513	132000	3.7	HB133H092 - M80/4	770	60		
	0.818	1718	132000	3.3	HF133H092 - M80/4	770	70		
	0.725	1938	132000	2.9					
	0.635	2211	132000	2.5	HB133H092 - A80	760	81		
	0.594	2365	132000	2.4	HF133H092 - A80	760	92		
	0.512	2742	132000	2.1					

1) n₁ values will vary slightly as per the make of Electric motor.
 2) Other output speeds are available using 2 & 8 pole motors; Consult us.

0.55 - 0.75 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.		
0.55	1405	0.491	2860	132000	1.99					
		0.435	3227	132000	1.76	HB133H093 - M80/4	775	60		
		0.390	3607	132000	1.58	HF133H093 - M80/4	775	70		
		0.355	3956	132000	1.44					
		0.307	4572	132000	1.24	HB133H093 - A80	765	81		
		0.254	5541	132000	1.03	HF133H093 - A80	765	92		
		0.225	6252	123000	0.91					
0.75	1405	410	3.426	1800	5.0					
		351	4.000	1900	4.7					
		329	4.271	1900	4.5					
		288	4.886	2050	4.3					
		250	5.625	2120	3.9					
		215	6.528	2210	3.6					
		184	7.625	2290	3.2	HB022 - M80/4	20.0	51		
		173	8.098	2340	3.1	HF022 - M80/4	20.5	61		
		149	9.455	2430	2.8					
		139	10.09	2510	2.7	HB022 - A80	8.8	71		
		122	11.55	2610	2.4	HF022 - A80	9.6	82		
		106	13.30	2690	2.1					
		91.1	15.43	2800	1.82					
		78.0	18.02	2890	1.56					
		72.9	19.28	2930	1.45					
		63.1	22.25	3000	1.26					
								HB023 - M80/4	20.0	51
								HF023 - M80/4	21.0	61
			58.0	24.22	3080	1.17				
			48.7	28.84	3160	0.98				
								HB023 - A80	9.1	71
								HF023 - A80	10.0	82
				139	10.11	3760	4.2			
				122	11.56	3920	3.8	HB032 - M80/4	25.0	52
				106	13.31	4050	3.3	HF032 - M80/4	26.0	62
				90.9	15.45	4230	2.8			
				77.8	18.05	4410	2.4	HB032 - A80	14.0	72
				72.8	19.31	4480	2.3	HF032 - A80	15.0	83
				63.1	22.27	4650	1.98			
				56.3	24.96	4750	1.78	HB033 - M80/4	25.5	52
				47.3	29.72	4930	1.50	HF033 - M80/4	26.5	62
				41.9	33.52	5070	1.33			
				37.0	37.98	5210	1.17	HB033 - A80	14.5	72
				34.7	40.52	4850	1.10	HF033 - A80	15.5	83
				30.3	46.36	3750	0.96			
				98.0	14.33	4250	4.0			
		90.5	15.53	4470	3.9	HB042 - M80/4	31.5	52		
		78.1	18.00	4590	3.7	HF042 - M80/4	32.5	62		
		72.4	19.41	4690	3.4					
		65.7	21.38	4860	3.1	HB042 - A80	20.5	72		
		61.6	22.80	4930	2.9	HF042 - A80	21.5	83		
		53.8	26.12	5120	2.5					
		51.3	27.38	5120	2.4					
		48.1	29.23	5280	2.3					
		42.0	33.44	5470	2.0	HB043 - M80/4	32.0	52		
		36.5	38.50	5560	1.73	HF043 - M80/4	33.0	62		
		33.9	41.43	5760	1.61					
		31.4	44.68	5900	1.49	HB043 - A80	21.0	72		
		26.9	52.19	5530	1.28	HF043 - A80	22.0	83		
		25.2	55.84	5330	1.20					
		23.0	61.09	4950	1.09					
		21.5	65.23	4020	1.02					
		64.7	21.72	6000	4.4	HB052 - M80/4	36.0	53		
		55.8	25.17	6200	3.8	HF052 - M80/4	36.0	63		
		52.4	26.81	6300	3.5					
		45.8	30.66	6200	3.1	HB052 - A80	25.0	73		
						HF052 - A80	25.0	84		
	925	55.4	16.69	5600	3.7	HB052 - M90S/6	39.5	53		
		48.8	18.95	5800	3.3	HF052 - M90S/6	40.0	63		
		42.6	21.72	6100	2.9					
		36.8	25.17	6400	2.5	HB052 - A90	25.5	73		
		34.5	26.81	6400	2.3	HF052 - A90	26.0	84		

 1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Helical Geared Motors with IS/IEC motors, Type : HB/HF. . - M . .

Helical Gear Units (without motor), Type : HB/HF. . - A . .

Power ratings
0.75 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.		
0.75	1405	39.8	35.32	7000	2.7					
		37.0	38.02	7100	2.5					
		31.7	44.30	7400	2.2					
		29.3	48.00	7600	2.0		HB053 - M80/4	37.0	53	
		25.3	55.64	7700	1.73		HF053 - M80/4	37.0	63	
		23.4	60.00	7900	1.60					
		21.3	66.07	8100	1.46		HB053 - A80	26.0	73	
		19.9	70.47	8100	1.36		HF053 - A80	26.0	84	
		17.1	82.32	7900	1.17					
		15.8	89.19	7700	1.08					
		13.6	103.38	6700	0.93					
				42.3	33.20	11200	3.8			
				39.3	35.73	11000	3.6			
				33.7	41.63	11000	3.1			
				31.1	45.11	11100	2.8			
				26.9	52.29	11000	2.4			
				24.9	56.39	10900	2.3	HB063 - M80/4	43.5	53
				23.4	60.08	10700	2.1	HF063 - M80/4	43.0	63
				20.3	69.26	10500	1.84			
				18.8	74.55	10300	1.70	HB063 - A80	32.5	73
				16.2	86.87	9900	1.47	HF063 - A80	32.0	84
				14.9	94.12	9400	1.35			
				12.9	109.09	8900	1.17			
				11.9	117.65	8400	1.08			
				10.8	129.55	4440	0.98			
				10.2	138.18	5000	0.92			
		31.8	44.20	14100	3.9					
		26.9	52.26	14100	3.3					
		23.7	59.24	14000	2.9					
		21.8	64.57	13900	2.7					
		18.5	75.83	13700	2.3	HB073 - M80/4	54	54		
		17.5	80.31	13000	2.2	HF073 - M80/4	55	64		
		15.8	89.05	13400	1.96					
		13.9	101.11	13000	1.72	HB073 - A80	42.5	74		
		12.1	115.86	12500	1.50	HF073 - A80	44.0	85		
		10.5	134.29	11800	1.30					
		9.82	143.02	11500	1.22					
		8.59	163.56	10400	1.06					
		21.8	64.56	21000	5.3					
		19.0	74.04	21000	4.6					
		16.8	83.43	21000	4.1					
		14.5	97.11	21000	3.5					
		13.1	107.50	21000	3.2	HB083 - M80/4	83	54		
		12.0	116.70	21000	2.9	HF083 - M80/4	88	64		
		11.1	127.13	21000	2.7					
		9.65	145.67	21000	2.4	HB083 - A80	72	74		
		8.97	156.57	21000	2.2	HF083 - A80	77	85		
		7.69	182.75	21000	1.88					
		6.66	210.86	21000	1.63					
		6.48	216.97	21000	1.59					
		5.69	246.88	20000	1.39					
	925					HB083 - M90S/6	87	54		
		5.06	182.75	19000	1.24	HF083 - M90S/6	92	64		
		4.39	210.86	17700	1.07					
		4.26	216.97	17000	1.04	HB083 - A80	73	74		
						HF083 - A80	78	85		
	1405	9.44	148.79	30900	4.3					
		8.36	168.15	31100	3.8	HB093 - M80/4	126	55		
		7.83	179.44	31100	3.6	HF093 - M80/4	128	65		
		6.39	220.01	30900	2.9					
		5.97	235.43	30800	2.7	HB093 - A80	115	75		
		5.57	252.33	30600	2.5	HF093 - A80	117	86		
		4.83	290.89	30300	2.2					
	925					HB093 - M90S/6	129	55		
		4.20	220.01	30000	1.90	HF093 - M90S/6	130	65		
		3.93	235.43	29300	1.78					
		3.67	252.33	28800	1.66	HB093 - A90	114	75		
						HF093 - A90	116	86		
	1405					HB082H052 - M80/4	100	59		
		5.63	249.35	20700	1.39	HF082H052 - M80/4	105	69		
		4.63	303.3	19400	1.15					
		3.95	356.0	16500	0.98	HB082H052 - A80	89	79		
						HF082H052 - A80	94	90		

 1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

0.75 - 1.1 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.
0.75	1405	3.33	421.4	28800	1.53	HB092H052 - M80/4	140	59
		2.94	478.5	27700	1.35	HF092H052 - M80/4	142	69
		2.56	548.4	25700	1.17	HB092H052 - A80	129	79
		2.21	635.5	22000	1.01	HF092H052 - A80	131	90
		4.74	296.19	41500	3.5	HB102H072 - M80/4	215	59
		4.37	321.7	40900	3.2	HF102H072 - M80/4	220	69
		3.62	388.3	40800	2.7	HB102H072 - A80	205	80
		3.26	431.5	39500	2.4	HF102H072 - A80	210	91
		2.94	478.2	37500	2.2	HB102H072 - M80/4	215	59
		2.52	558.1	37000	1.87	HF102H072 - M80/4	220	69
		2.46	571.7	37000	1.84	HB102H073 - M80/4	220	69
		2.29	612.6	37000	1.72	HF102H073 - M80/4	205	80
		2.05	684.2	37000	1.54	HB102H073 - A80	210	91
		1.74	809.0	34800	1.30	HF102H073 - A80	300	60
		1.53	919.4	31700	1.15	HB112H072 - M80/4	300	70
		1.34	1051	18000	1.00	HF112H072 - M80/4	290	80
		1.20	1174	16000	0.90	HB112H072 - A80	290	91
		3.67	382.5	66500	4.5	HF112H072 - A80	290	91
		3.10	452.6	66500	3.8	HB112H072 - M80/4	300	70
		2.71	518.5	66500	3.3	HF112H072 - M80/4	290	80
		2.52	557.3	66000	3.1	HB112H072 - A80	290	91
		2.23	631.2	66000	2.8	HB112H073 - M80/4	300	60
		1.90	738.4	66100	2.3	HF112H073 - M80/4	300	70
		1.68	837.0	65500	2.1	HB112H073 - A80	290	80
1.54	912.2	64900	1.90	HF112H073 - A80	290	91		
1.31	1071	64000	1.62	HB123H072 - M80/4	450	60		
1.11	1267	62800	1.37	HF123H072 - M80/4	450	70		
0.978	1436	61700	1.21	HB123H072 - A80	440	81		
0.898	1565	60000	1.11	HF123H072 - A80	440	92		
0.764	1838	55900	0.94	HB123H072 - M80/4	450	60		
1.98	709.1	81000	4.2	HF123H072 - M80/4	450	70		
1.73	813.2	80000	3.6	HB123H072 - A80	440	81		
1.53	916.4	80000	3.2	HF123H072 - A80	440	92		
1.35	1039	79500	2.8	HB133H092 - M80/4	770	60		
1.20	1171	79900	2.5	HF133H092 - M80/4	770	70		
1.03	1363	79300	2.2	HB133H092 - A80	760	81		
0.889	1581	78300	1.87	HF133H092 - A80	760	92		
0.803	1750	77400	1.69	HB133H092 - M80/4	770	60		
0.712	1972	75600	1.50	HF133H092 - M80/4	770	70		
0.640	2197	73800	1.35	HB133H092 - A80	760	81		
0.551	2549	70800	1.16	HF133H092 - A80	760	92		
1.39	1008	132000	4.1	HB133H093 - M80/4	775	60		
1.22	1156	132000	3.6	HF133H093 - M80/4	775	70		
1.07	1318	132000	3.1	HB133H093 - A80	765	81		
0.929	1513	132000	2.7	HF133H093 - A80	765	92		
0.818	1718	132000	2.4	HB133H093 - M80/4	775	60		
0.725	1938	132000	2.1	HF133H093 - M80/4	775	70		
0.635	2211	132000	1.87	HB133H093 - A80	765	81		
0.594	2365	132000	1.75	HF133H093 - A80	765	92		
0.512	2742	132000	1.50	HB133H093 - M80/4	775	60		
0.491	2860	132000	1.46	HF133H093 - M80/4	775	70		
0.435	3227	132000	1.29	HB133H093 - A80	765	81		
0.390	3607	132000	1.16	HF133H093 - A80	765	92		
0.355	3956	132000	1.05	HB022 - M90S/4	23.0	51		
0.307	4572	132000	0.91	HF022 - M90S/4	24.0	61		
1.1	1415	413	3.426	1770	3.5	HB022 - M90S/4	23.0	51
		354	4.000	1850	3.2	HF022 - M90S/4	24.0	61
		331	4.271	1890	3.1	HB022 - A90	9.2	71
		290	4.886	1960	2.9	HF022 - A90	10.0	82
		252	5.625	2020	2.7	HB022 - M90S/4	23.0	51
		217	6.528	2110	2.4	HF022 - M90S/4	24.0	61
		186	7.625	2170	2.2	HB022 - A90	9.2	71
		175	8.098	2210	2.2	HF022 - A90	10.0	82
		150	9.455	2200	1.95	HB022 - M90S/4	23.0	51
		140	10.09	2370	1.82	HF022 - M90S/4	24.0	61
		123	11.55	2460	1.67	HB022 - A90	9.2	71
		106	13.30	2510	1.44	HF022 - A90	10.0	82
		91.7	15.43	2590	1.25	HB022 - M90S/4	23.0	51
		78.5	18.02	2650	1.07	HF022 - M90S/4	24.0	61
73.4	19.28	2670	1.00	HB022 - A90	9.2	71		

1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Helical Geared Motors with IS/IEC motors, Type : HB/HF. . - M . .
 Helical Gear Units (without motor), Type : HB/HF. . - A . .
 Power ratings

1.1 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.		
1.1	1415	315	4.496	2800	4.5					
		275	5.144	2970	4.2					
		239	5.921	3060	3.8					
		206	6.871	3210	3.4					
		175	8.108	3390	3.2		HB032 - M90S/4	28.5	52	
		149	9.467	3550	3.0		HF032 - M90S/4	29.5	62	
		140	10.11	3610	2.9					
		122	11.56	3770	2.6		HB032 - A90	14.5	72	
		106	13.31	3870	2.3		HF032 - A90	15.5	83	
		91.6	15.45	4020	1.96					
		78.4	18.05	4160	1.68					
		73.3	19.31	4220	1.57					
		935		70.2	13.31	3500	1.50	HB032 - M90L/6	31.5	52
				60.5	15.45	3400	1.29	HF032 - M90L/6	32.5	62
51.8	18.05			3100	1.11	HB032 - A90	14.5	72		
48.4	19.31			2900	1.03	HF032 - A90	15.5	83		
1415		56.7	24.96	4090	1.22	HB033 - M90S/4	29.0	52		
		47.6	29.72	3630	1.03	HF033 - M90S/4	30.0	62		
							HB033 - A90	15.0	72	
							HF033 - A90	16.0	83	
		188	7.517	3450	3.3					
		175	8.105	3560	3.8					
		164	8.640	3670	3.9					
		143	9.913	3790	3.5		HB042 - M90S/4	35.0	52	
		124	11.43	3940	3.3		HF042 - M90S/4	36.0	62	
		115	12.30	4010	3.1					
		98.7	14.33	4180	2.8		HB042 - A90	21.0	72	
		91.1	15.53	4300	2.7		HF042 - A90	22.0	83	
		78.6	18.00	4410	2.5					
		72.9	19.41	4480	2.3					
66.2	21.38	4630	2.1							
99.5		60.3	23.45	4710	2.0					
		51.7	27.38	4850	1.67	HB043 - M90S/4	36.0	52		
		48.4	29.23	4970	1.57	HF043 - M90S/4	37.0	62		
		42.3	33.44	5120	1.37					
		36.8	38.50	5190	1.19	HB043 - A90	22.0	72		
		34.2	41.43	5030	1.11	HF043 - A90	23.0	83		
		31.7	44.68	3850	1.03					
94.0		84.8	16.69	5500	3.9	HB052 - M90S/4	39.5	53		
		74.7	18.95	5600	3.4	HF052 - M90S/4	40.0	63		
		65.1	21.72	5900	3.0	HB052 - A90	25.5	73		
		56.2	25.17	6100	2.6	HF052 - A90	26.0	84		
		52.8	26.81	6200	2.4					
		46.2	30.64	6400	2.2					
		40.1	35.32	6600	1.87	HB053 - M90S/4	40.5	53		
		37.2	38.02	6700	1.73	HF053 - M90S/4	41.0	63		
31.9		29.5	44.30	6900	1.49					
		25.4	48.00	7100	1.38	HB053 - A90	26.5	73		
		23.6	55.64	7200	1.18	HF053 - A90	27.0	84		
		21.4	60.00	7300	1.10					
			66.07	7000	1.00					
70.8		61.7	20.00	10100	4.3	HB062 - M90S/4	46.5	53		
		53.3	22.92	10700	3.8	HF062 - M90S/4	46.0	63		
		50.0	26.56	11100	3.3	HB062 - A90	32.5	73		
			28.29	11200	3.1	HF062 - A90	32.0	84		
42.6		39.6	33.20	11100	2.6					
		34.0	35.73	10900	2.4					
		31.4	41.63	10800	2.1					
		27.1	45.11	10600	1.94	HB063 - M90S/4	47.5	53		
		25.1	52.29	10300	1.68	HF063 - M90S/4	47.0	63		
		23.6	56.39	10000	1.55					
		20.4	60.08	9800	1.46	HB063 - A90	33.5	73		
		19.0	69.26	9200	1.26	HF063 - A90	33.0	84		
		16.3	74.55	8800	1.17					
		15.0	86.87	7400	1.01					
			94.12	5000	0.93					

1) n₁ values will vary slightly as per the make of Electric motor.
 2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Helical Geared Motors with IS/IEC motors, Type : HB/HF. . - M . .
Helical Gear Units (without motor), Type : HB/HF. . - A . .
Power ratings

1.1 kW

Pm [kW]	n₁ [r / min]	n₂ [r / min]	i [Total]	FRa [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.		
1.1	1415	46.5	30.46	13700	3.9					
		41.0	34.53	14100	3.5					
		37.6	37.63	14100	3.2					
		32.0	44.20	13900	2.7					
		27.1	52.26	13700	2.3		HB073 - M90S/4	57	54	
		23.9	59.24	13600	2.0		HF073 - M90S/4	59	64	
		21.9	64.57	13300	1.85					
		18.7	75.83	12800	1.58		HB073 - A90	43.0	74	
		17.6	80.31	12600	1.49		HF073 - A90	45.0	85	
		15.9	89.05	11900	1.34					
		14.0	101.11	11300	1.18					
		12.2	115.86	9800	1.03					
				26.7	53.08	21000	4.5			
				24.6	57.62	21000	4.1			
				21.9	64.56	21000	3.7			
				19.1	74.04	21000	3.2			
				17.0	83.43	21000	2.8			
				14.6	97.11	21000	2.4	HB083 - M90S/4	87	54
				13.2	107.50	21000	2.2	HF083 - M90S/4	92	64
				12.1	116.70	21000	2.0			
				11.1	127.13	21000	1.85	HB083 - A90	73	74
				9.71	145.67	20500	1.62	HF083 - A90	78	85
				9.04	156.57	20000	1.51			
				7.74	182.75	19500	1.29			
				6.71	210.86	18500	1.12			
				6.52	216.97	17800	1.09			
				15.7	90.39	31100	4.9			
		14.3	99.13	31000	4.4					
		12.4	114.56	31100	3.8	HB093 - M90S/4	128	55		
		11.9	119.37	31100	3.7	HF093 - M90S/4	130	65		
		9.51	148.79	30900	2.9					
		8.42	168.15	30600	2.6	HB093 - A90	114	75		
		7.89	179.44	30500	2.4	HF093 - A90	116	86		
		6.43	220.01	30200	1.99					
		6.01	235.43	29800	1.86					
		5.61	252.33	29300	1.73					
	935	5.21	179.44	28400	1.61	HB093 - M90L/6	131	55		
		4.25	220.01	26600	1.31	HF093 - M90L/6	133	65		
		3.97	235.43	24800	1.23	HB093 - A90	114	75		
		3.71	252.33	23600	1.15	HF093 - A90	116	86		
	1415	3.94	359.1	27300	1.23	HB092H052 - M90S/4	144	59		
		3.72	380.0	25700	1.16	HF092H052 - M90S/4	146	69		
		3.36	421.4	22300	1.05	HB092H052 - A90	130	79		
		2.96	478.5	16000	0.92	HF092H052 - A90	132	90		
		5.29	267.66	40800	2.7					
		4.78	296.19	40400	2.4	HB102H072 - M90S/4	220	59		
		4.40	321.7	40200	2.2	HF102H072 - M90S/4	225	69		
		3.64	388.3	39800	1.84					
		3.28	431.5	39000	1.66	HB102H072 - A90	205	80		
		2.96	478.2	37200	1.50	HF102H072 - A90	210	91		
		2.54	558.1	35000	1.28					
		2.48	571.7	35700	1.27	HB102H073 - M90S/4	220	59		
		2.31	612.6	33200	1.18	HF102H073 - M90S/4	225	69		
		2.07	684.2	26000	1.06	HB102H073 - A90	205	80		
						HF102H073 - A90	210	91		
		4.77	296.94	67000	4.0					
		4.09	345.7	67000	3.4	HB112H072 - M90S/4	305	60		
		3.70	382.5	66000	3.1	HF112H072 - M90S/4	305	70		
		3.13	452.6	66000	2.6					
		2.73	518.5	66100	2.3	HB112H072 - A90	290	80		
		2.54	557.3	65600	2.1	HF112H072 - A90	290	91		
		2.24	631.2	65600	1.89					
		1.92	738.4	64300	1.62	HB112H073 - M90S/4	305	60		
		1.69	837.0	63200	1.42	HF112H073 - M90S/4	305	70		
		1.55	912.2	62500	1.30					
		1.32	1071	59600	1.11	HB112H073 - A90	290	80		
		1.12	1267	56300	0.94	HF112H073 - A90	290	91		

1) n₁ values will vary slightly as per the make of Electric motor.
 2) Other output speeds are available using 2 & 8 pole motors; Consult us.

1.1 - 1.5 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt Dimensions			
							[kg.]	Page No.		
1.1	1415	2.65	534.1	77500	3.8					
		2.28	621.7	80000	3.3					
		2.00	709.1	80500	2.9					
		1.74	813.2	79900	2.5					
		1.54	916.4	79400	2.2	HB123H072 - M90S/4	455	60		
		1.36	1039	78500	1.95	HF123H072 - M90S/4	455	70		
		1.21	1171	77400	1.73					
		1.04	1363	75900	1.49	HB123H072 - A90	440	81		
		0.895	1581	73800	1.28	HF123H072 - A90	440	92		
		0.809	1750	71700	1.16					
		0.718	1972	67800	1.03					
		0.644	2197	51400	0.92					
		1.85	764.8	132000	3.7					
		1.61	878.2	132000	3.2					
		1.40	1008	132000	2.8					
		1.22	1156	132000	2.4	HB133H092 - M90S/4	775	60		
		1.07	1318	132000	2.1	HF133H092 - M90S/4	775	70		
		0.935	1513	132000	1.87					
		0.824	1718	132000	1.65	HB133H092 - A90	760	81		
		0.730	1938	132000	1.46	HF133H092 - A90	760	92		
		0.640	2211	132000	1.28					
		0.598	2365	132000	1.20					
		0.516	2742	132000	1.03					
		1.5	1415	413	3.426	1710	2.5			
				354	4.000	1790	2.3			
				331	4.271	1810	2.2			
				290	4.886	1880	2.1			
252	5.625			1920	1.96	HB022 - M90L/4	26.0	51		
217	6.528			1990	1.79	HF022 - M90L/4	27.0	61		
186	7.625			2040	1.63					
175	8.098			2010	1.58	HB022 - A90	9.2	71		
150	9.455			2000	1.43	HF022 - A90	10.0	82		
140	10.09			2230	1.34					
123	11.55			2280	1.23					
106	13.30			2220	1.06					
91.7	15.43			1870	0.91					
392	3.606			2590	3.7					
336	4.211			2710	3.4					
315	4.496			2770	3.3					
275	5.144			2890	3.1					
239	5.921			2980	2.8	HB032 - M90L/4	31.5	52		
206	6.871			3110	2.5	HF032 - M90L/4	32.5	62		
175	8.108			3270	2.4					
149	9.467			3420	2.2	HB032 - A90	14.5	72		
140	10.11			3470	2.1	HF032 - A90	15.5	83		
122	11.56			3590	1.91					
106	13.31			3680	1.66					
91.6	15.45			3470	1.44					
78.4	18.05			3120	1.23					
73.3	19.31			2920	1.15					
298	4.753			3090	3.5					
268	5.280			3140	3.3					
234	6.058			3270	2.9					
203	6.984			3360	2.7					
188	7.517			3450	2.4					
175	8.105			3560	2.8	HB042 - M90L/4	38.0	52		
164	8.640			3670	2.8	HF042 - M90L/4	39.0	62		
143	9.913			3810	2.6					
124	11.43			3870	2.4	HB042 - A90	21.0	72		
115	12.30			4010	2.3	HF042 - A90	22.0	83		
98.7	14.33			4110	2.0					
91.1	15.53			4210	1.95					
78.6	18.00			4270	1.85					
72.9	19.41			4380	1.71					
66.2	21.38			4440	1.56					
60.3	23.45			4450	1.43	HB043 - M90L/4	39.0	52		
51.7	27.38			4550	1.23	HF043 - M90L/4	40.0	62		
48.4	29.23			4640	1.15	HB043 - A90	22.0	72		
42.3	33.44			4220	1.00	HF043 - A90	23.0	83		

1) n₁ values will vary slightly as per the make of Electric motor.
2) Other output speeds are available using 2 & 8 pole motors; Consult us.

1.5 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	FRa [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.		
1.5	1415	158	8.983	4400	4.6					
		139	10.20	4600	4.1					
		121	11.69	4800	3.7					
		99.5	14.22	5000	3.4	HB052 - M90L/4	42.5	53		
		94.0	15.05	5100	3.2	HF052 - M90L/4	43.0	63		
		84.8	16.69	5300	2.9					
		74.7	18.95	5400	2.5	HB052 - A90	25.5	73		
		65.1	21.72	5600	2.2	HF052 - A90	26.0	84		
		56.2	25.17	5800	1.90					
		52.8	26.81	5900	1.79					
		<hr/>								
				46.2	30.64	6000	1.58	HB053 - M90L/4	43.5	53
				40.1	35.32	6200	1.37	HF053 - M90L/4	44.0	63
				37.2	38.02	6300	1.27			
				31.9	44.30	6500	1.09	HB053 - A90	26.5	73
				29.5	48.00	6600	1.01	HF053 - A90	27.0	84
		<hr/>								
				111	12.77	8600	4.3			
				94.3	15.00	9000	3.9			
				89.0	15.89	9100	3.7	HB062 - M90L/4	49.5	53
				80.4	17.61	9600	3.6	HF062 - M90L/4	49.0	63
				70.8	20.00	9900	3.2			
				61.7	22.92	10400	2.8	HB062 - A90	32.5	73
				53.3	26.56	10800	2.4	HF062 - A90	32.0	84
		50.0	28.29	10900	2.2					
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		42.6	33.20	10700	1.93					
		39.6	35.73	10400	1.80					
		34.0	41.63	10200	1.54	HB063 - M90L/4	51	53		
		31.4	45.11	9700	1.42	HF063 - M90L/4	50	63		
		27.1	52.29	9200	1.23					
		25.1	56.39	8500	1.14	HB063 - A90	33.5	73		
		23.6	60.08	8000	1.07	HF063 - A90	33.0	84		
		20.4	69.26	5500	0.92					
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		75.8	18.67	12100	4.6	HB072 - M90L/4	59	54		
		66.2	21.39	12600	4.1	HF072 - M90L/4	61	64		
		61.5	22.99	12900	3.8					
		52.7	26.83	12900	3.0	HB072 - A90	41.5	74		
						HF072 - A90	43.5	85		
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	935					HB072 - M100L/6	68	54		
		50.1	18.67	11500	3.1	HF072 - M100L/6	70	64		
		43.7	21.39	12000	2.7					
		34.8	26.83	12000	2.0	HB072 - A100	45.5	74		
						HF072 - A100	47.5	85		
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	1415	54.3	26.04	13000	3.4					
		46.5	30.46	13700	2.9					
		41.0	34.53	13900	2.5					
		37.6	37.63	13800	2.3	HB073 - M90L/4	60	54		
		32.0	44.20	13500	1.98	HF073 - M90L/4	62	64		
		27.1	52.26	13000	1.68					
		23.9	59.24	12700	1.48	HB073 - A90	43.0	74		
		21.9	64.57	12200	1.36	HF073 - A90	45.0	85		
		18.7	75.83	11200	1.16					
		17.6	80.31	10800	1.09					
		15.9	89.05	9300	0.98					
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		38.7	36.56	20500	4.5					
		34.4	41.19	20500	4.1					
		29.5	47.95	20500	3.6					
		26.7	53.08	20500	3.3					
		24.6	57.62	21000	3.0					
		21.9	64.56	21000	2.7	HB083 - M90L/4	90	54		
		19.1	74.04	21000	2.3	HF083 - M90L/4	95	64		
		17.0	83.43	21000	2.1					
		14.6	97.11	21000	1.79	HB083 - A90	73	74		
		13.2	107.50	20500	1.61	HF083 - A90	78	85		
		12.1	116.70	20500	1.48					
		11.1	127.13	19500	1.36					
		9.71	145.67	19000	1.19					
		9.04	156.57	17800	1.11					
		7.74	182.75	12500	0.95					

1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Helical Geared Motors with IS/IEC motors, Type : HB/HF. . - M . .
Helical Gear Units (without motor), Type : HB/HF. . - A . .
Power ratings

1.5 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.		
1.5	1415	19.3	73.20	31000	4.4					
		17.8	79.52	30800	4.0					
		15.7	90.39	31100	3.6					
		14.3	99.13	31000	3.2					
		12.4	114.56	30800	2.8		HB093 - M90L/4	131	55	
		11.9	119.37	30600	2.7		HF093 - M90L/4	133	65	
		9.51	148.79	30300	2.2					
		8.42	168.15	30000	1.91		HB093 - A90	114	75	
		7.89	179.44	29400	1.79		HF093 - A90	116	86	
		6.43	220.01	28100	1.46					
		6.01	235.43	26700	1.36					
		5.61	252.33	25800	1.27					
			935					HB093 - M100L/6	142	55
				5.21	179.44	27000	1.18	HF093 - M100L/6	144	65
				4.25	220.01	18500	0.96	HB093 - A100	120	75
						HF093 - A100	122	86		
	1415	11.0	128.53	40500	4.0					
		10.2	138.06	40200	3.7					
		8.98	157.49	39900	3.3	HB103 - M90L/4	192	55		
		8.40	168.53	39700	3.1	HF103 - M90L/4	196	65		
		6.88	205.81	36000	2.5	HB103 - A90	175	75		
		6.03	234.65	35000	2.2	HF103 - A90	179	86		
		5.65	250.55	33500	2.1					
	935					HB103 - M100L/6	200	55		
		4.54	205.81	37800	1.67	HF103 - M100L/6	205	65		
		3.98	234.65	36100	1.46					
		3.73	250.55	34500	1.37	HB103 - A100	180	75		
						HF103 - A100	184	86		
	1415					HB102H072 - M90L/4	220	59		
		3.28	431.5	34800	1.22	HF102H072 - M90L/4	225	69		
		2.96	478.2	31300	1.10					
		2.54	558.1	22000	0.94	HB102H072 - A90	205	80		
						HF102H072 - A90	210	91		
		7.02	201.46	66500	4.3					
		6.16	229.77	66500	3.8					
		5.37	263.49	66000	3.3	HB112H072 - M90L/4	305	60		
		4.77	296.94	66000	2.9	HF112H072 - M90L/4	305	70		
		4.09	345.7	66300	2.5					
		3.70	382.5	65800	2.3	HB112H072 - A90	290	80		
		3.13	452.6	65500	1.91	HF112H072 - A90	290	91		
		2.73	518.5	64900	1.67					
		2.54	557.3	63900	1.55					
		2.24	631.2	63300	1.38	HB112H073 - M90L/4	305	60		
		1.92	738.4	61800	1.19	HF112H073 - M90L/4	305	70		
		1.69	837.0	58000	1.04	HB112H073 - A90	290	80		
		1.55	912.2	57900	0.96	HF112H073 - A90	290	91		
		4.12	343.5	77000	4.3					
		3.59	394.0	77000	3.8					
		3.19	444.0	78000	3.4					
		2.65	534.1	77000	2.8	HB123H072 - M90L/4	455	60		
		2.28	621.7	79600	2.4	HF123H072 - M90L/4	455	70		
		2.00	709.1	79000	2.1					
		1.74	813.2	78200	1.83	HB123H072 - A90	440	81		
		1.54	916.4	77000	1.62	HF123H072 - A90	440	92		
		1.36	1039	75200	1.43					
		1.21	1171	73100	1.27					
		1.04	1363	70200	1.09					
		0.895	1581	64400	0.94					
		2.88	491.8	132000	4.2					
		2.44	579.9	132000	3.6					
		2.18	647.6	132000	3.2					
		1.85	764.8	132000	2.7	HB133H092 - M90L/4	775	60		
		1.61	878.2	132000	2.4	HF133H092 - M90L/4	775	70		
		1.40	1008	132000	2.1					
		1.22	1156	132000	1.79	HB133H092 - A90	760	81		
		1.07	1318	132000	1.57	HF133H092 - A90	760	92		
		0.935	1513	132000	1.37					
		0.824	1718	132000	1.21					
		0.730	1938	132000	1.07					
		0.640	2211	131000	0.94					

1) n₁ values will vary slightly as per the make of Electric motor.
 2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Helical Geared Motors with IS/IEC motors, Type : HB/HF. . - M . .

Helical Gear Units (without motor), Type : HB/HF. . - A . .

Power ratings

2.2 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	FRa [N]	S F	TYPE / SIZE	Approx.Wt Dimensions			
							[kg.]	Page No.		
2.2	1430	390	3.667	2680	3.0					
		349	4.098	2780	2.7					
		301	4.753	2860	2.4					
		271	5.280	2970	2.3					
		236	6.058	3010	1.98					
		205	6.984	3120	1.88					
		190	7.517	3200	1.66	HB042 - M100L/4	47.0	52		
		176	8.105	3300	1.93	HF042 - M100L/4	48.0	62		
		166	8.640	3390	1.95					
		144	9.913	3470	1.77	HB042 - A100	25.0	72		
		125	11.43	3590	1.64	HF042 - A100	26.0	83		
		116	12.30	3640	1.55					
		99.8	14.33	3740	1.41					
		92.1	15.53	3800	1.34					
		79.4	18.00	3900	1.27					
		73.7	19.41	3900	1.18					
				317	4.506	3600	4.5			
				271	5.272	3700	4.2			
				239	5.977	3800	3.9			
				220	6.514	3900	3.8			
				187	7.650	4100	3.3			
				176	8.102	4200	3.2	HB052 - M100L/4	51	53
				159	8.983	4300	3.0	HF052 - M100L/4	52	63
				140	10.20	4550	2.8			
				122	11.69	4600	2.5	HB052 - A100	29.0	73
				101	14.22	4800	2.3	HF052 - A100	30.0	84
				95.0	15.05	4800	2.2			
				85.7	16.69	5000	1.98			
				75.5	18.95	5100	1.74			
				65.8	21.72	5200	1.52			
			935							
		62.1	15.05	4600	1.43	HB052 - M112M/6	68	53		
		56.0	16.69	4700	1.29	HF052 - M112M/6	69	63		
		49.3	18.95	4800	1.14	HB052 - A112	29.0	73		
						HF052 - A112	30.0	84		
	1430									
		53.5	26.71	5400	1.25	HB053 - M100L/4	53	53		
		46.7	30.64	5500	1.09	HF053 - M100L/4	53	63		
		40.5	35.32	5600	0.94	HB053 - A100	30.5	73		
						HF053 - A100	30.5	84		
		162	8.836	7600	3.6					
		138	10.34	7900	3.3					
		122	11.72	8300	3.1	HB062 - M100L/4	58	53		
		112	12.77	8500	3.0	HF062 - M100L/4	58	63		
		95.3	15.00	8900	2.7					
		90.0	15.89	9000	2.6	HB062 - A100	36.0	73		
		81.2	17.61	9300	2.5	HF062 - A100	35.5	84		
		71.5	20.00	9600	2.2					
		62.4	22.92	10000	1.91					
	935									
		58.8	15.89	8800	1.68	HB062 - M112M/6	75	53		
		53.1	17.61	9100	1.62	HF062 - M112M/6	75	63		
		46.8	20.00	9300	1.43	HB062 - A112	36.0	73		
						HF062 - A112	35.5	84		
	1430									
		49.7	28.80	10000	1.54	HB063 - M100L/4	59	53		
		43.1	33.20	9600	1.33	HF063 - M100L/4	59	63		
		40.0	35.73	8800	1.24					
		34.4	41.63	8300	1.06	HB063 - A100	37.0	73		
		31.7	45.11	6000	0.98	HF063 - A100	36.5	84		
		117	12.25	10500	4.5					
		100	14.26	10900	3.8					
		90.6	15.78	11200	3.6	HB072 - M100L/4	68	54		
		83.4	17.14	11600	3.4	HF072 - M100L/4	70	64		
		76.6	18.67	11800	3.2					
		66.9	21.39	12300	2.8	HB072 - A100	45.5	74		
		62.2	22.99	12500	2.6	HF072 - A100	47.5	85		
		53.3	26.83	12500	2.0					

1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Power ratings
2.2 kW

Pm [kW]	n₁ [r / min]	n₂ [r / min]	i [Total]	F_{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.	
2.2	935					HB072 - M112M/6	85	54	
						HF072 - M112M/6	87	64	
		50.1	18.67	11200	2.1	HB072 - A112	45.5	74	
		43.7	21.39	11000	1.83	HF072 - A112	47.5	85	
	1430	46.9	30.46	13300	1.98	HB073 - M100L/4	69	54	
		41.4	34.53	13000	1.75	HF073 - M100L/4	71	64	
		38.0	37.63	12900	1.60				
		32.4	44.20	12400	1.37				
		27.4	52.26	11300	1.16	HB073 - A100	47.0	74	
		24.1	59.24	10400	1.02	HF073 - A100	49.0	85	
		22.1	64.57	6000	0.93				
			60.3	23.73	18450	4.9	HB082 - M100L/4	99	54
			50.7	28.23	19000	4.2	HF082 - M100L/4	103	64
			44.6	32.06	18500	3.6	HB082 - A100	77	74
			39.2	36.46	20000	3.2	HF082 - A100	81	85
			34.7	41.19	20500	2.8			
			29.8	47.95	20500	2.5			
			26.9	53.08	20500	2.2			
		24.8	57.62	21000	2.1	HB083 - M100L/4	101	54	
		22.1	64.56	21000	1.84	HF083 - M100L/4	105	64	
		19.3	74.04	20500	1.61				
		17.1	83.43	20000	1.43	HB083 - A100	79	74	
		14.7	97.11	18500	1.23	HF083 - A100	83	85	
		13.3	107.50	18000	1.11				
		12.3	116.70	16700	1.03				
		11.2	127.13	10500	0.93				
		30.8	46.37	27800	4.8				
		27.5	52.03	28700	4.3				
		24.4	58.72	29700	3.8				
		21.4	66.74	30400	3.3				
		19.5	73.20	31000	3.0				
		18.0	79.52	30800	2.8	HB093 - M100L/4	142	55	
		15.8	90.39	30500	2.4	HF093 - M100L/4	144	65	
		14.4	99.13	30300	2.2	HB093 - A100	120	75	
		12.5	114.56	30000	1.93	HF093 - A100	122	86	
		12.0	119.37	29400	1.85				
		9.61	148.79	27800	1.49				
		8.50	168.15	26200	1.31				
		7.97	179.44	24700	1.23				
		6.50	220.01	7700	1.00				
		15.2	94.36	41000	3.8				
		13.8	103.25	40900	3.5				
		12.5	114.84	40700	3.1	HB103 - M100L/4	200	55	
		11.1	128.53	40500	2.8	HF103 - M100L/4	205	65	
		10.4	138.06	40200	2.6				
		9.08	157.49	39900	2.3	HB103 - A100	180	75	
		8.49	168.53	39700	2.1	HF103 - A100	184	86	
		6.95	205.81	38300	1.74				
		6.09	234.65	36800	1.52				
		5.71	250.55	35400	1.43				
	935					HB103 - M112M/6	220	55	
		5.55	168.53	34800	1.39	HF103 - M112M/6	225	65	
		4.54	205.81	30900	1.14	HB103 - A112	180	75	
						HF103 - A112	184	86	
	1430	7.10	201.46	66000	3.0				
		6.22	229.77	66000	2.6				
		5.43	263.49	65800	2.3	HB112H072 - M100L/4	315	60	
		4.82	296.94	65400	2.0	HF112H072 - M100L/4	315	70	
		4.14	345.7	64900	1.72				
		3.74	382.5	63900	1.56	HB112H072 - A100	295	80	
		3.16	452.6	62900	1.32	HF112H072 - A100	295	91	
		2.76	518.5	61400	1.15				
		2.57	557.3	59400	1.07				
			6.49	220.38	87000	4.6	HB122H082 - M100L/4	475	60
			5.31	269.11	86000	3.8	HF122H082 - M100L/4	475	70
			4.82	296.54	85000	3.4	HB122H082 - A100	455	81
							HF122H082 - A100	455	92

 1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

2.2 - 3.0 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.		
2.2	1430	4.16	343.5	76500	3.0					
		3.63	394.0	76500	2.6					
		3.22	444.0	77000	2.3		HB123H072 - M100L/4	465	60	
		2.68	534.1	78800	1.92		HF123H072 - M100L/4	465	70	
		2.30	621.7	76600	1.65					
		2.02	709.1	75300	1.45		HB123H072 - A100	445	81	
		1.76	813.2	73200	1.26		HF123H072 - A100	445	92	
		1.56	916.4	70600	1.12					
		1.38	1039	66300	0.99					
		4.28	334.4	132000	4.3					
		3.73	383.8	132000	3.7					
		3.34	428.2	132000	3.3					
		2.91	491.8	132000	2.9		HB133H092 - M100L/4	785	60	
		2.47	579.9	132000	2.5		HF133H092 - M100L/4	785	70	
		2.21	647.6	132000	2.2					
		1.87	764.8	132000	1.87		HB133H092 - A100	765	81	
		1.63	878.2	132000	1.63		HF133H092 - A100	765	92	
		1.42	1008	132000	1.42					
		1.24	1156	132000	1.24					
		1.08	1318	132000	1.08					
		0.945	1513	132000	0.95					
		3.0	1430	317	4.506	3500	3.3			
				271	5.272	3600	3.1			
				239	5.977	3700	2.9			
220	6.514			3800	2.8					
187	7.650			4000	2.5					
176	8.102			4000	2.3		HB052 - M100L/4	51	53	
159	8.983			4100	2.2		HF052 - M100L/4	52	63	
140	10.20			4300	2.0					
122	11.69			4400	1.85		HB052 - A100	29.0	73	
101	14.22			4500	1.71		HF052 - A100	30.0	84	
95.0	15.05			4500	1.61					
85.7	16.69			4600	1.45					
75.5	18.95			4700	1.28					
65.8	21.72			4800	1.11					
180	7.943			6900	2.6					
162	8.836			7400	2.7					
138	10.34			7700	2.4					
122	11.72			8000	2.3		HB062 - M100L/4	58	53	
112	12.77			8300	2.2		HF062 - M100L/4	58	63	
95.3	15.00			8600	2.0					
90.0	15.89			8700	1.88		HB062 - A100	36.0	73	
81.2	17.61			9000	1.82		HF062 - A100	35.5	84	
71.5	20.00			9200	1.60					
62.4	22.92			9600	1.40					
172	8.311			9300	4.2					
151	9.479			9500	3.6					
132	10.87			9900	3.4					
117	12.25			10200	3.1		HB072 - M100L/4	68	54	
100	14.26			10600	2.8		HF072 - M100L/4	70	64	
90.6	15.78			10900	2.6					
83.4	17.14			11300	2.5		HB072 - A100	45.5	74	
76.6	18.67			11500	2.3		HF072 - A100	47.5	85	
66.9	21.39			11800	2.0					
62.2	22.99			12200	1.91					
53.3	26.83			12200	1.50					
46.9	30.46			12700	1.45		HB073 - M100L/4	69	54	
41.4	34.53			12000	1.28		HF073 - M100L/4	71	64	
38.0	37.63			11500	1.18					
32.4	44.20			10100	1.00		HB073 - A100	47.0	74	
							HF073 - A100	49.0	85	
73.5	19.45			17100	4.1					
67.0	21.33			17700	3.9		HB082 - M100L/4	99	54	
60.3	23.73			18000	3.6		HF082 - M100L/4	103	64	
50.7	28.23			19000	3.1					
44.6	32.06			18000	2.6		HB082 - A100	77	74	
39.2	36.46			19500	2.3		HF082 - A100	81	85	
34.7	41.19			20000	2.1					
29.8	47.95			20300	1.82					
26.9	53.08			20000	1.65		HB083 - M100L/4	101	54	
24.8	57.62			20000	1.52		HF083 - M100L/4	105	64	
22.1	64.56			20000	1.35					
19.3	74.04			19000	1.18		HB083 - A100	79	74	
17.1	83.43			17000	1.05		HF083 - A100	83	85	
14.7	97.11			3990	0.90					

1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Helical Geared Motors with IS/IEC motors, Type : HB/HF. . - M . .
Helical Gear Units (without motor), Type : HB/HF. . - A . .
Power ratings

3.0 - 3.7 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.
3.0	1430	41.5	34.45	24600	4.5			
		38.9	36.78	25400	4.3			
		34.0	42.08	26400	3.9			
		30.8	46.37	27200	3.5			
		27.5	52.03	28100	3.1			
		24.4	58.72	29000	2.8	HB093 - M100L/4	142	55
		21.4	66.74	29700	2.4	HF093 - M100L/4	144	65
		19.5	73.20	30400	2.2			
		18.0	79.52	30000	2.04	HB093 - A100	120	75
		15.8	90.39	29400	1.79	HF093 - A100	122	86
		14.4	99.13	28400	1.63			
		12.5	114.56	27100	1.42			
		12.0	119.37	25900	1.36			
		9.61	148.79	17800	1.09			
		8.50	168.15	18500	0.96			
		24.3	58.91	36000	4.5			
		21.3	67.20	37000	3.9			
		19.9	71.91	38700	3.7			
		18.2	78.75	39400	3.3			
		15.2	94.36	40500	2.8			
		13.8	103.25	40300	2.5	HB103 - M100L/4	200	55
		12.5	114.84	39900	2.3	HF103 - M100L/4	205	65
		11.1	128.53	39600	2.0			
		10.4	138.06	38800	1.91	HB103 - A100	180	75
		9.08	157.49	37500	1.67	HF103 - A100	184	86
		8.49	168.53	36400	1.56			
		6.95	205.81	33200	1.28			
		6.09	234.65	29100	1.12			
		5.71	250.55	28000	1.05			
		7.10	201.46	65200	2.2			
6.22	229.77	65200	1.90	HB112H072 - M100L/4	315	60		
5.43	263.49	64400	1.66	HF112H072 - M100L/4	315	70		
4.82	296.94	63400	1.47					
4.14	345.7	62400	1.26	HB112H072 - A100	295	80		
3.74	382.5	60300	1.14	HF112H072 - A100	295	91		
3.16	452.6	55700	0.97					
6.49	220.38	85000	3.4	HB122H082 - M100L/4	475	60		
5.31	269.11	81000	2.8	HF122H082 - M100L/4	475	70		
4.82	296.54	80000	2.5	HB122H082 - A100	455	81		
				HF122H082 - A100	455	92		
4.16	343.5	76000	2.2					
3.63	394.0	76000	1.91	HB123H072 - M100L/4	465	60		
3.22	444.0	75000	1.69	HF123H072 - M100L/4	465	70		
2.68	534.1	72000	1.41					
2.30	621.7	71300	1.21	HB123H072 - A100	445	81		
2.02	709.1	68500	1.06	HF123H072 - A100	445	92		
1.76	813.2	57200	0.92					
5.79	247.04	132000	4.3					
5.04	283.50	132000	3.7					
4.84	295.29	132000	3.6					
4.28	334.4	132000	3.1					
3.73	383.8	132000	2.7	HB133H092 - M100L/4	785	60		
3.34	428.2	132000	2.5	HF133H092 - M100L/4	785	70		
2.91	491.8	132000	2.1					
2.47	579.9	132000	1.82	HB133H092 - A100	765	81		
2.21	647.6	132000	1.62	HF133H092 - A100	765	92		
1.87	764.8	132000	1.37					
1.63	878.2	132000	1.20					
1.42	1008	132000	1.04					
1.24	1156	125000	0.91					
3.7	1430	317	4.506	3300	2.7			
		271	5.272	3400	2.5			
		239	5.977	3600	2.3			
		220	6.514	3600	2.2	HB052 - M112M/4	72	53
		187	7.650	3800	2.0	HF052 - M112M/4	73	63
		176	8.102	3800	1.90			
		159	8.983	3900	1.81	HB052 - A112	29.0	73
		140	10.20	4000	1.66	HF052 - A112	30.0	84
		101	14.22	4100	1.39			
		95.0	15.05	4100	1.30			
		85.7	16.69	4200	1.18			
		75.5	18.95	3800	1.04			

 1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Helical Geared Motors with IS/IEC motors, Type : HB/HF. . - M . .
 Helical Gear Units (without motor), Type : HB/HF. . - A . .
 Power ratings

3.7 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.			
3.7	1430	180	7.943	6800	2.1						
		162	8.836	7200	2.2						
		138	10.34	7500	2.0		HB062 - M112M/4	79	53		
		122	11.72	7700	1.85		HF062 - M112M/4	79	63		
		112	12.77	7900	1.77						
		95.3	15.00	8200	1.59		HB062 - A112	36.0	73		
		90.0	15.89	8300	1.53		HF062 - A112	35.5	84		
		81.2	17.61	8500	1.48						
		71.5	20.00	8700	1.30						
		259	5.525	7900	4.2						
		226	6.336	8200	3.9						
		200	7.140	8500	3.8						
		172	8.311	8800	3.4						
		151	9.479	9300	3.0		HB072 - M112M/4	89	54		
		132	10.87	9600	2.7		HF072 - M112M/4	91	64		
	117	12.25	9900	2.5							
	100	14.26	10300	2.3		HB072 - A112	45.5	74			
	90.6	15.78	10500	2.1		HF072 - A112	47.5	85			
	83.4	17.14	10900	2.0							
	76.6	18.67	11100	1.90							
	66.9	21.39	11400	1.66							
	62.2	22.99	11600	1.54							
	950		60.2	15.78	9500	1.41	HB072 - M132S/6	113	54		
				18.67	10000	1.26	HF072 - M132S/6	115	64		
			50.9		15.78	9500	1.41	HB072 - A132	51	74	
18.67						10000	1.26	HF072 - A132	53	85	
54.9					26.04	11800	1.38	HB073 - M112M/4	90	54	
						11300	1.18	HF073 - M112M/4	92	64	
41.4	34.53	10000	1.04	HB073 - A112	47.0	74					
		9000	0.95	HF073 - A112	49.0	85					
1430		106	13.51	15000	4.2						
		94.3	15.16	15700	3.9						
		83.6	17.11	16100	3.6		HB082 - M112M/4	120	54		
		73.5	19.45	16700	3.3		HF082 - M112M/4	124	64		
		67.0	21.33	17200	3.2						
		60.3	23.73	17700	2.9		HB082 - A112	77	74		
		50.7	28.23	18000	2.5		HF082 - A112	81	85		
		44.6	32.06	17800	2.1						
		39.2	36.46	18500	1.88						
		34.7	41.19	17200	1.68		HB083 - M112M/4	122	54		
		29.8	47.95	16500	1.48		HF083 - M112M/4	126	64		
		26.9	53.08	16200	1.33						
		24.8	57.62	16200	1.23		HB083 - A112	79	74		
		22.1	64.56	16200	1.10		HF083 - A112	83	85		
		19.3	74.04	16200	0.96						
	51.5		27.79	22600	4.7	HB092 - M112M/4	159	55			
				23750	3.9	HF092 - M112M/4	162	65			
			43.3		33.03	23900	3.6	HB092 - A112	116	75	
						24700	3.5	HF092 - A112	119	86	
					34.45	23900	24700	3.5			
							25700	3.1			
					30.8	46.37	26400	2.8			
								27100	2.5	HB093 - M112M/4	163
					27.5	52.03	28000	2.2	HF093 - M112M/4	165	65
								28600	1.97		
21.4	66.74	29200	1.79	HB093 - A112	120	75					
			27900	1.65	HF093 - A112	122	86				
15.8	90.39	26500	1.45								
			24600	1.32							
14.4	99.13	24600	1.32								
			21700	1.15							
12.5	114.56	21700	1.15								
			119.37	1.10							

1) n₁ values will vary slightly as per the make of Electric motor.
 2) Other output speeds are available using 2 & 8 pole motors; Consult us.

3.7 - 4.0 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.		
3.7	1430	29.2	49.00	33400	4.3					
		26.1	54.84	34400	3.9					
		24.3	58.91	35500	3.6					
		21.3	67.20	36500	3.2					
		19.9	71.91	37600	3.0					
		18.2	78.75	38300	2.7	HB103 - M112M/4	225	55		
		15.2	94.36	39800	2.3	HF103 - M112M/4	230	65		
		13.8	103.25	39200	2.1					
		12.5	114.84	38000	1.86	HB103 - A112	180	75		
		11.1	128.53	36700	1.65	HF103 - A112	184	86		
		10.4	138.06	35000	1.55					
		9.08	157.49	32500	1.35					
		8.49	168.53	30200	1.26					
		6.95	205.81	29300	1.03					
		950		15.9	59.91	58700	3.9			
				14.3	66.38	58700	3.5			
				13.2	71.80	58700	3.2			
				11.9	79.64	58700	2.9			
				11.1	85.33	58700	2.7	HB113 - M132S/6	335	56
				9.17	103.62	58700	2.2	HF113 - M132S/6	335	66
8.22	115.52			58700	2.0					
7.42	128.00			58700	1.82	HB113 - A132	275	76		
6.73	141.18			58700	1.65	HF113 - A132	275	87		
5.98	158.79			58700	1.47					
5.36	177.16			58700	1.31					
5.02	189.43			58700	1.23					
4.19	226.88			58700	1.03					
1430				6.49	220.38	81000	2.7	HB122H082 - M112M/4	500	60
				5.31	269.11	80000	2.2	HF122H082 - M112M/4	500	70
		4.82	296.54	79000	2.0	HB122H082 - A112	455	81		
		4.30	332.8	78500	1.81	HF122H082 - A112	455	92		
		4.16	343.5	74500	1.77	HB123H072 - M112M/4	490	60		
		3.63	394.0	74500	1.55	HF123H072 - M112M/4	490	70		
		3.22	444.0	73900	1.37					
		2.68	534.1	70500	1.14	HB123H072 - A112	445	81		
2.30	621.7	47500	0.98	HF123H072 - A112	445	92				
5.79		5.79	247.04	132000	3.4					
		5.04	283.50	132000	3.0					
		4.84	295.29	132000	2.9					
		4.28	334.4	132000	2.6	HB133H092 - M112M/4	810	60		
		3.73	383.8	132000	2.2	HF133H092 - M112M/4	810	70		
		3.34	428.2	132000	1.99					
		2.91	491.8	132000	1.73	HB133H092 - A112	765	81		
		2.47	579.9	132000	1.47	HF133H092 - A112	765	92		
		2.21	647.6	132000	1.32					
		1.87	764.8	132000	1.11					
		1.63	878.2	125000	0.97					
		4.0	1430	317	4.506	3300	2.5			
				271	5.272	3400	2.3			
239	5.977			3600	2.1					
220	6.514			3600	2.1					
187	7.650			3800	1.84	HB052 - M112M/4	72	53		
176	8.102			3800	1.75	HF052 - M112M/4	73	63		
159	8.983			3900	1.67					
140	10.20			4000	1.53	HB052 - A112	29.0	73		
101	14.22			4100	1.28	HF052 - A112	30.0	84		
95.0	15.05			4100	1.21					
85.7	16.69			4200	1.09					
75.5	18.95			3800	0.96					
162	8.836			7200	2.0					
138	10.34			7500	1.82					
122	11.72			7700	1.71	HB062 - M112M/4	79	53		
112	12.77			7900	1.63	HF062 - M112M/4	79	63		
95.3	15.00			8200	1.47					
90.0	15.89			8300	1.41	HB062 - A112	36.0	73		
81.2	17.61			8500	1.37	HF062 - A112	35.5	84		
71.5	20.00			8700	1.20					

1) n₁ values will vary slightly as per the make of Electric motor.
2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Helical Geared Motors with IS/IEC motors, Type : HB/HF. . - M . .
Helical Gear Units (without motor), Type : HB/HF. . - A . .
Power ratings

4.0 - 5.5 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.	
4.0	1430	6.49	220.38	80000	2.5	HB122H082 - M112M/4	500	60	
		5.31	269.11	79300	2.1	HF122H082 - M112M/4	500	70	
		4.82	296.54	78500	1.88	HB122H082 - A112	455	81	
						HF122H082 - A112	455	92	
		4.16	343.5	74500	1.64	HB123H072 - M112M/4	490	60	
		3.63	394.0	74500	1.43	HF123H072 - M112M/4	490	70	
		3.22	444.0	73900	1.27				
		2.68	534.1	70500	1.06	HB123H072 - A112	445	81	
		2.30	621.7	47500	0.91	HF123H072 - A112	445	92	
		5.79	247.04	132000	3.2				
		5.04	283.50	132000	2.8				
		4.84	295.29	132000	2.7				
		4.28	334.4	132000	2.4	HB133H092 - M112M/4	810	60	
		3.73	383.8	132000	2.1	HF133H092 - M112M/4	810	70	
		3.34	428.2	132000	1.84				
		2.91	491.8	132000	1.60	HB133H092 - A112	765	81	
		2.47	579.9	132000	1.36	HF133H092 - A112	765	92	
		2.21	647.6	132000	1.22				
		1.87	764.8	132000	1.03				
		1.63	878.2	123000	0.90				
5.5	1440	326	4.418	5800	1.80				
		279	5.168	6000	1.65				
		246	5.859	6200	1.56				
		225	6.386	6400	1.52				
		192	7.500	6700	1.45	HB062 - M132S/4	103	53	
		181	7.943	6700	1.40	HF062 - M132S/4	103	63	
		163	8.836	6900	1.46				
		139	10.34	7100	1.33	HB062 - A132	41.0	73	
		123	11.72	7300	1.25	HF062 - A132	40.5	84	
		113	12.77	7400	1.20				
		96.0	15.00	7500	1.08				
		90.6	15.89	7200	1.03				
		261	5.525	7700	2.8				
		227	6.336	8000	2.6				
		202	7.140	8300	2.6				
		173	8.311	8600	2.3	HB072 - M132S/4	113	54	
		152	9.479	9000	2.0	HF072 - M132S/4	115	64	
		132	10.87	9200	1.85				
		118	12.25	9500	1.71	HB072 - A132	51	74	
		101	14.26	9800	1.54	HF072 - A132	53	85	
		91.3	15.78	10000	1.44				
		84.0	17.14	10300	1.37				
		77.1	18.67	10100	1.29				
		960					HB072 - M132M/6	130	54
			67.3	14.26	7800	1.03	HF072 - M132M/6	132	64
			60.8	15.78	7200	0.96	HB072 - A132	51	74
							HF072 - A132	53	85
		1440					HB073 - M132S/4	114	54
			55.3	26.04	9900	0.93	HF073 - M132S/4	116	64
							HB073 - A132	52	74
							HF073 - A132	54	85
		172	8.365	12950	4.2				
		153	9.441	13400	4.0				
		143	10.04	13500	3.5				
		117	12.26	14300	3.0	HB082 - M132S/4	144	54	
		107	13.51	14700	2.9	HF082 - M132S/4	149	64	
		95.0	15.16	15200	2.6				
		84.2	17.11	15700	2.5	HB082 - A132	82	74	
		74.0	19.45	16100	2.3	HF082 - A132	87	85	
		67.5	21.33	16700	2.1				
60.7	23.73	17000	1.96						
51.0	28.23	17000	1.68						
45.2	31.88	16100	1.38	HB083 - M132S/4	146	54			
39.4	36.56	18000	1.24	HF083 - M132S/4	151	64			
35.0	41.19	14200	1.14						
30.0	47.95	12500	1.00	HB083 - A132	84	74			
27.1	53.08	11150	0.90	HF083 - A132	89	85			

1) n₁ values will vary slightly as per the make of Electric motor.
 2) Other output speeds are available using 2 & 8 pole motors; Consult us.

5.5 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.
5.5	1440	83.7	17.21	19000	4.6			
		74.8	19.26	19600	4.2	HB092 - M132S/4	187	55
		69.6	20.69	20200	4.0	HF092 - M132S/4	189	65
		61.0	23.60	20900	3.6			
		57.0	25.25	21500	3.5	HB092 - A132	125	75
		51.8	27.79	22000	3.2	HF092 - A132	127	86
		43.6	33.03	22900	2.7			
		41.8	34.45	23200	2.4			
		39.2	36.78	23800	2.4			
		34.2	42.08	24700	2.1			
		31.1	46.37	25300	1.92	HB093 - M132S/4	190	55
		27.7	52.03	25900	1.71	HF093 - M132S/4	192	65
		24.5	58.72	26600	1.51			
		21.6	66.74	27000	1.34	HB093 - A132	128	75
		19.7	73.20	23900	1.22	HF093 - A132	130	86
		18.1	79.52	19300	1.12			
		15.9	90.39	19000	0.98			
		47.1	30.55	30000	4.7			
		39.7	36.27	29000	4.0			
		35.8	40.26	31000	3.6			
		29.4	49.00	32400	2.9			
		26.3	54.84	33300	2.6			
		24.4	58.91	34400	2.4			
		21.4	67.20	35300	2.1	HB103 - M132S/4	250	55
20.0	71.91	36100	2.0	HF103 - M132S/4	255	65		
18.3	78.75	36800	1.83					
15.3	94.36	36800	1.53	HB103 - A132	190	75		
13.9	103.25	35300	1.39	HF103 - A132	194	86		
12.5	114.84	32700	1.25					
11.2	128.53	29800	1.12					
10.4	138.06	28000	1.04					
9.14	157.49	20000	0.91					
24.0	59.91	66900	4.0					
21.7	66.38	66700	3.6					
20.1	71.80	66500	3.3					
18.1	79.64	66400	3.0					
16.9	85.33	66200	2.8	HB113 - M132S/4	335	56		
13.9	103.62	65600	2.3	HF113 - M132S/4	335	66		
12.5	115.52	65200	2.1					
11.3	128.00	64600	1.86	HB113 - A132	275	76		
10.2	141.18	64100	1.68	HF113 - A132	275	87		
9.07	158.79	63100	1.50					
8.13	177.16	62000	1.34					
7.60	189.43	61000	1.25					
6.35	226.88	58300	1.05					
960						HB113 - M132M/6	355	56
						HF113 - M132M/6	355	66
		6.80	141.18	59000	1.12			
		6.05	158.79	56700	1.00	HB113 - A132	275	76
						HF113 - A132	275	87
1440		15.1	95.58	77300	4.2			
		13.0	110.89	77300	3.6			
		12.0	119.92	77300	3.4	HB123 - M132S/4	480	56
		11.3	127.82	77300	3.2	HF123 - M132S/4	480	66
		10.2	140.53	77300	2.9			
		8.78	163.93	76100	2.5	HB123 - A132	420	76
		8.31	173.22	76000	2.3	HF123 - A132	420	87
		7.85	183.44	76000	2.2			
		7.39	194.73	76000	2.1			
960		6.83	140.53	77300	1.92	HB123 - M132M/6	500	56
		5.86	163.93	76100	1.64	HF123 - M132M/6	500	66
		5.54	173.22	75000	1.55			
		5.23	183.44	75000	1.47	HB123 - A132	420	76
		4.93	194.73	75000	1.38	HF123 - A132	420	87
1440						HB123H072 - M132S/4	510	60
						HF123H072 - M132S/4	510	70
		4.19	343.5	70000	1.20			
		3.65	394.0	65000	1.05			
						HB123H072 - A132	450	81
						HF123H072 - A132	450	92

1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Helical Geared Motors with IS/IEC motors, Type : HB/HF. . - M . .
 Helical Gear Units (without motor), Type : HB/HF. . - A . .
 Power ratings

5.5 - 7.5 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.		
5.5	1440	5.83	247.04	132000	2.3					
		5.08	283.50	132000	2.0					
		4.88	295.29	132000	1.96		HB133H092 - M132S/4	835	60	
		4.31	334.4	132000	1.73		HF133H092 - M132S/4	830	70	
		3.75	383.8	132000	1.50					
		3.36	428.2	132000	1.35		HB133H092 - A132	775	81	
		2.93	491.8	132000	1.17		HF133H092 - A132	770	92	
		2.48	579.9	132000	0.99					
7.5	1440	326	4.418	5600	1.32					
		279	5.168	5800	1.21					
		246	5.859	6000	1.14					
		225	6.386	6100	1.11		HB062 - M132M/4	114	53	
		192	7.500	6200	1.06		HF062 - M132M/4	114	63	
		181	7.943	6000	1.03		HB062 - A132	41.0	73	
		163	8.836	6500	1.07		HF062 - A132	40.5	84	
		139	10.34	6100	0.98					
		123	11.72	5300	0.92					
				261	5.525	7500	2.1			
				227	6.336	7800	1.92			
				202	7.140	8000	1.87			
				173	8.311	8300	1.67			
				152	9.479	8500	1.47	HB072 - M132M/4	124	54
				132	10.87	8800	1.35	HF072 - M132M/4	126	64
				118	12.25	8500	1.25	HB072 - A132	51	74
				101	14.26	7800	1.13	HF072 - A132	53	85
				91.3	15.78	7200	1.05			
				84.0	17.14	6200	1.01			
				77.1	18.67	5800	0.94			
				260	5.538	11200	4.2			
				213	6.766	11850	3.5			
				193	7.456	12200	3.4			
				172	8.365	12750	3.1			
				153	9.441	13000	2.9			
				143	10.04	13200	2.5	HB082 - M132M/4	155	54
				117	12.26	13800	2.2	HF082 - M132M/4	160	64
				107	13.51	14100	2.1	HB082 - A132	82	74
				95.0	15.16	13750	1.93	HF082 - A132	87	85
				84.2	17.11	15000	1.80			
				74.0	19.45	14900	1.66			
				67.5	21.33	14500	1.57			
				60.7	23.73	14000	1.44			
				51.0	28.23	12800	1.24			
								HB083 - M132M/4	157	54
								HF083 - M132M/4	162	64
		45.2	31.88	10400	1.01					
		39.4	36.56	8350	0.91	HB083 - A132	84	74		
						HF083 - A132	89	85		
		134	10.73	16500	4.5					
		113	12.74	17400	4.0					
		102	14.14	18200	3.8					
		83.7	17.21	18600	3.4	HB092 - M132M/4	198	55		
		74.8	19.26	19200	3.1	HF092 - M132M/4	200	65		
		69.6	20.69	19600	2.9					
		61.0	23.60	20200	2.7	HB092 - A132	125	75		
		57.0	25.25	20700	2.5	HF092 - A132	127	86		
		51.8	27.79	21200	2.3					
		43.6	33.03	22000	1.96					
		41.8	34.45	22200	1.79					
		39.2	36.78	22700	1.73	HB093 - M132M/4	200	55		
		34.2	42.08	23400	1.55	HF093 - M132M/4	205	65		
		31.1	46.37	23900	1.41					
		27.7	52.03	24400	1.26	HB093 - A132	128	75		
		24.5	58.72	21600	1.11	HF093 - A132	130	86		
		21.6	66.74	19000	0.98					
		69.2	20.80	25000	5.0	HB102 - M132M/4	255	55		
		62.8	22.94	25700	4.6	HF102 - M132M/4	260	65		
		55.8	25.80	26500	4.1					
		50.0	28.78	27100	3.6	HB102 - A132	183	75		
		46.8	30.78	28000	3.4	HF102 - A132	187	86		

1) n₁ values will vary slightly as per the make of Electric motor.
 2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Power ratings

7.5 - 9.3 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	FRa [N]	S F	TYPE / SIZE	Approx.Wt Dimensions			
							[kg.]	Page No.		
7.5	1440	39.7	36.27	29000	2.9					
		35.8	40.26	30000	2.6					
		29.4	49.00	31300	2.2					
		26.3	54.84	32100	1.93	HB103 - M132M/4	265	55		
		24.4	58.91	33000	1.79	HF103 - M132M/4	265	65		
		21.4	67.20	33600	1.57					
		20.0	71.91	34400	1.47	HB103 - A132	190	75		
		18.3	78.75	34400	1.34	HF103 - A132	194	86		
		15.3	94.36	30200	1.12					
		13.9	103.25	28000	1.02					
		12.5	114.84	20000	0.92					
				32.5	44.25	66600	3.9			
				29.1	49.42	66600	3.5			
				24.0	59.91	66400	2.9			
				21.7	66.38	66100	2.6			
				20.1	71.80	65700	2.4	HB113 - M132M/4	350	56
				18.1	79.64	65400	2.2	HF113 - M132M/4	350	66
				16.9	85.33	65000	2.0			
				13.9	103.62	64000	1.68	HB113 - A132	275	76
				12.5	115.52	63200	1.51	HF113 - A132	275	87
				11.3	128.00	62000	1.37			
				10.2	141.18	60700	1.23			
				9.07	158.79	59000	1.10			
				8.13	177.16	55800	0.98			
				7.60	189.43	49800	0.92			
				23.2	62.18	81000	4.8			
				21.6	66.62	80800	4.4			
				19.2	74.81	80600	4.0			
				16.8	85.77	80100	3.5			
				15.1	95.58	79600	3.1	HB123 - M132M/4	495	56
				13.0	110.89	78700	2.7	HF123 - M132M/4	495	66
				12.0	119.92	78100	2.5			
				11.3	127.82	77300	2.3	HB123 - A132	420	76
				10.2	140.53	72900	2.1	HF123 - A132	420	87
				8.78	163.93	70600	1.81			
				8.31	173.22	74000	1.71			
				7.85	183.44	74000	1.62			
				7.39	194.73	74000	1.52			
			960	6.83	140.53	72900	1.41	HB123 - M160M/6	530	56
				5.86	163.93	70600	1.21	HF123 - M160M/6	530	66
	5.54	173.22		68000	1.14					
	5.23	183.44		68000	1.08	HB123 - A160	430	76		
		4.93	194.73	68000	1.01	HF123 - A160	430	87		
		14.2	67.51	132000	4.1					
		13.3	72.33	132000	3.8					
		11.6	83.02	132000	3.3	HB133 - M160M/6	780	56		
		10.2	93.68	132000	3.0	HF133 - M160M/6	780	66		
		9.01	106.59	132000	2.6					
		7.83	122.53	132000	2.3	HB133 - A160	680	76		
		6.95	138.08	132000	2.0	HF133 - A160	680	87		
		6.26	153.34	132000	1.80					
		5.18	185.50	132000	1.49					
		4.44	216.02	132000	1.28					
	1440	5.83	247.04	132000	1.71	HB133H092 - M132M/4	850	60		
		5.08	283.50	132000	1.49	HF133H092 - M132M/4	845	70		
		4.88	295.29	132000	1.43					
		4.31	334.4	132000	1.27	HB133H092 - A132	775	81		
		3.75	383.8	132000	1.10	HF133H092 - A132	770	92		
		3.36	428.2	132000	0.99					
9.3	1450	262	5.525	7300	1.69					
		229	6.336	7600	1.56	HB072 - M160M/4	155	54		
		203	7.140	7300	1.52	HF072 - M160M/4	157	64		
		174	8.311	6900	1.36					
		153	9.479	7400	1.19	HB072 - A160	63	74		
		133	10.87	6900	1.10	HF072 - A160	65	85		
		118	12.25	6100	1.01					
		102	14.26	5200	0.92					

 1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

9.3 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt Dimensions			
							[kg.]	Page No.		
9.3	1450	262	5.538	11000	3.4					
		214	6.766	11600	2.8					
		194	7.456	11900	2.7					
		173	8.365	12500	2.5	HB082 - M160M/4	185	54		
		154	9.441	12850	2.4	HF082 - M160M/4	190	64		
		144	10.04	12800	2.1					
		118	12.26	13400	1.82	HB082 - A160	93	74		
		107	13.51	13500	1.70	HF082 - A160	98	85		
		95.6	15.16	13100	1.56					
		84.7	17.11	12600	1.46					
		74.6	19.45	11900	1.35					
		68.0	21.33	11200	1.27					
		960		78.3	12.26	11500	1.21	HB082 - M160L/6	210	54
				71.1	13.51	11200	1.13	HF082 - M160L/6	215	64
				63.3	15.16	10500	1.03	HB082 - A160	93	74
				56.1	17.11	9500	0.97	HF082 - A160	98	85
1450		173	8.381	15500	4.3					
		151	9.618	16000	4.0					
		135	10.73	16300	3.7	HB092 - M160M/4	225	55		
		114	12.74	16900	3.3	HF092 - M160M/4	230	65		
		103	14.14	17700	3.1					
		84.3	17.21	18100	2.7	HB092 - A160	134	75		
		75.3	19.26	18700	2.5	HF092 - A160	136	86		
		70.1	20.69	19100	2.4					
		61.4	23.60	19600	2.2					
		57.4	25.25	20100	2.1					
		52.8	27.47	20500	1.67					
		42.1	34.45	21300	1.46	HB093 - M160M/4	230	55		
		39.4	36.78	21700	1.40	HF093 - M160M/4	230	65		
		34.5	42.08	22300	1.26					
		31.3	46.37	22600	1.14	HB093 - A160	137	75		
		27.9	52.03	3600	1.02	HF093 - A160	139	86		
24.7	58.72	3600	0.90							
77.3	18.77	24000	4.5							
69.7	20.80	24400	4.1	HB102 - M160M/4	290	55				
63.2	22.94	25300	3.7	HF102 - M160M/4	290	65				
56.2	25.80	25800	3.3							
50.4	28.78	26600	3.0	HB102 - A160	196	75				
47.1	30.78	27300	2.8	HF102 - A160	200	86				
40.0	36.27	28200	2.4							
36.0	40.26	29000	2.1							
29.6	49.00	30200	1.75	HB103 - M160M/4	295	55				
26.4	54.84	30900	1.56	HF103 - M160M/4	300	65				
24.6	58.91	31600	1.46							
21.6	67.20	32300	1.28	HB103 - A160	205	75				
20.2	71.91	31400	1.20	HF103 - A160	205	86				
18.4	78.75	25600	1.09							
15.4	94.36	20000	0.91							
45.2	32.08	67000	4.4							
38.9	37.23	67000	3.8							
32.8	44.25	66500	3.2							
29.3	49.42	66300	2.9							
24.2	59.91	65800	2.4	HB113 - M160M/4	375	56				
21.8	66.38	65400	2.1	HF113 - M160M/4	375	66				
20.2	71.80	64900	1.97							
18.2	79.64	64300	1.77	HB113 - A160	285	76				
17.0	85.33	63600	1.66	HF113 - A160	285	87				
14.0	103.62	62200	1.37							
12.6	115.52	61000	1.23							
11.3	128.00	59100	1.10							
10.3	141.18	56500	1.00							
27.4	52.84	81000	4.5							
23.3	62.18	81000	3.9							
21.8	66.62	80800	3.6							
19.4	74.81	80600	3.2							
16.9	85.77	80100	2.8							
15.2	95.58	79600	2.5	HB123 - M160M/4	520	56				
13.1	110.89	78700	2.2	HF123 - M160M/4	520	66				
12.1	119.92	78100	2.0							
11.3	127.82	69100	1.88	HB123 - A160	430	76				
10.3	140.53	69100	1.71	HF123 - A160	430	87				
8.85	163.93	74500	1.47							
8.37	173.22	69000	1.39							
7.90	183.44	69000	1.31							
7.45	194.73	69000	1.24							

1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

9.3 - 11 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	FRa [N]	S F	TYPE / SIZE	Approx.Wt Dimensions	
							[kg.]	Page No.
9.3	960	18.6	51.69	132000	4.3			
		16.3	58.81	132000	3.8			
		14.2	67.51	132000	3.3			
		13.3	72.33	132000	3.1			
		11.6	83.02	132000	2.7	HB133 - M160L/6	800	56
		10.2	93.68	132000	2.4	HF133 - M160L/6	800	66
		9.01	106.59	132000	2.1			
		7.83	122.53	132000	1.82	HB133 - A160	680	76
		6.95	138.08	132000	1.61	HF133 - A160	680	87
		6.26	153.34	132000	1.45			
		5.18	185.50	132000	1.20			
		4.44	216.02	132000	1.03			
		11	1450	262	5.525	6600	1.43	
229	6.336			6200	1.32	HB072 - M160M/4	168	54
203	7.140			5700	1.28	HF072 - M160M/4	170	64
174	8.311			5000	1.15			
153	9.479			5500	1.01	HB072 - A160	63	74
133	10.87			4600	0.93	HF072 - A160	65	85
262	5.538			10900	2.9			
214	6.766			11400	2.4			
194	7.456			11850	2.3			
173	8.365			12200	2.1			
154	9.441			11900	2.0	HB082 - M160M/4	198	54
144	10.04			12500	1.75	HF082 - M160M/4	205	64
118	12.26			11900	1.54			
107	13.51			11500	1.44	HB082 - A160	93	74
95.6	15.16			10900	1.32	HF082 - A160	98	85
84.7	17.11			10000	1.23			
74.6	19.45			9050	1.14			
68.0	21.33			8100	1.08			
196	7.415			14500	4.2			
173	8.381			15200	3.6			
151	9.618			15700	3.3			
135	10.73			16000	3.1			
114	12.74			16600	2.8	HB092 - M160M/4	240	55
103	14.14			17200	2.6	HF092 - M160M/4	240	65
84.3	17.21			17700	2.3			
75.3	19.26			18200	2.1	HB092 - A160	134	75
70.1	20.69			18500	2.0	HF092 - A160	136	86
61.4	23.60			19000	1.82			
57.4	25.25			19400	1.75			
52.8	27.47			19800	1.41	HB093 - M160M/4	240	55
42.1	34.45			20400	1.23	HF093 - M160M/4	245	65
39.4	36.78			20700	1.19			
34.5	42.08			15900	1.07	HB093 - A160	137	75
31.3	46.37			4000	0.97	HF093 - A160	139	86
77.3	18.77			23400	3.8			
69.7	20.80			23900	3.5	HB102 - M160M/4	300	55
63.2	22.94			24700	3.1	HF102 - M160M/4	305	65
56.2	25.80			25400	2.8			
50.4	28.78			25900	2.5	HB102 - A160	196	75
47.1	30.78			26600	2.3	HF102 - A160	200	86
40.0	36.27			27500	2.0			
36.0	40.26			28200	1.80			
29.6	49.00			29200	1.48	HB103 - M160M/4	310	55
26.4	54.84			29800	1.32	HF103 - M160M/4	310	65
24.6	58.91			30300	1.23			
21.6	67.20			26000	1.08	HB103 - A160	205	75
20.2	71.91			25000	1.01	HF103 - A160	205	86
18.4	78.75	20000	0.92					
51.2	28.32	64000	4.2					
45.2	32.08	66700	3.7					
38.9	37.23	66500	3.2					
32.8	44.25	66200	2.7					
29.3	49.42	65700	2.4					
24.2	59.91	65100	1.99	HB113 - M160M/4	390	56		
21.8	66.38	64500	1.80	HF113 - M160M/4	390	66		
20.2	71.80	63000	1.67					
18.2	79.64	62900	1.50	HB113 - A160	285	76		
17.0	85.33	61900	1.40	HF113 - A160	285	87		
14.0	103.62	59800	1.15					
12.6	115.52	57900	1.04					
11.3	128.00	51500	0.93					

1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Helical Geared Motors with IS/IEC motors, Type : HB/HF. . - M . .
Helical Gear Units (without motor), Type : HB/HF. . - A . .
Power ratings
11 - 15 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.		
11	1450	30.6	47.41	81000	4.3					
		27.4	52.84	80900	3.8					
		23.3	62.18	80600	3.3					
		21.8	66.62	80300	3.1					
		19.4	74.81	80000	2.7					
		16.9	85.77	79300	2.4		HB123 - M160M/4	535	56	
		15.2	95.58	78500	2.1		HF123 - M160M/4	535	66	
		13.1	110.89	77300	1.84					
		12.1	119.92	76300	1.70		HB123 - A160	430	76	
		11.3	127.82	73300	1.59		HF123 - A160	430	87	
		10.3	140.53	73300	1.45					
		8.85	163.93	71100	1.24					
		8.37	173.22	69000	1.17					
		7.90	183.44	69000	1.11					
		7.45	194.73	69000	1.05					
				21.5	67.51	132000	4.2			
				20.0	72.33	132000	3.9			
				17.5	83.02	132000	3.4			
				15.5	93.68	132000	3.0	HB133 - M160M/4	785	56
				13.6	106.59	132000	2.7	HF133 - M160M/4	785	66
				11.8	122.53	132000	2.3			
				10.5	138.08	132000	2.1	HB133 - A160	680	76
				9.46	153.34	132000	1.86	HF133 - A160	680	87
				7.82	185.50	132000	1.53			
				6.71	216.02	132000	1.32			
			965					HB133 - M160L/6	810	56
				6.99	138.08	132000	1.37	HF133 - M160L/6	810	66
				6.29	153.34	132000	1.24			
				5.20	185.50	132000	1.02	HB133 - A160	680	76
								HF133 - A160	680	87
15	1450	262	5.525	4800	1.05	HB072 - M160L/4	195	54		
		229	6.336	4800	0.97	HF072 - M160L/4	197	64		
		203	7.140	4800	0.94	HB072 - A160	63	74		
							HF072 - A160	65	85	
				262	5.538	10300	2.1			
				214	6.766	9900	1.75			
				194	7.456	9550	1.69			
				173	8.365	9050	1.55	HB082 - M160L/4	225	54
				154	9.441	8400	1.48	HF082 - M160L/4	230	64
				144	10.04	9050	1.28			
				118	12.26	7700	1.13	HB082 - A160	93	74
				107	13.51	6800	1.06	HF082 - A160	98	85
				95.6	15.16	5700	0.97			
				84.7	17.11	4200	0.91			
				330	4.395	12500	4.2			
				288	5.043	13000	4.0			
				234	6.188	13600	3.5			
				196	7.415	14000	3.1			
				173	8.381	14700	2.7			
				151	9.618	15100	2.5	HB092 - M160L/4	265	55
				135	10.73	15400	2.3	HF092 - M160L/4	270	65
				114	12.74	15800	2.0			
				103	14.14	16300	1.90	HB092 - A160	134	75
				84.3	17.21	16700	1.69	HF092 - A160	136	86
				75.3	19.26	17100	1.55			
				70.1	20.69	17300	1.48			
				61.4	23.60	17700	1.33			
				57.4	25.25	17900	1.28			
								HB093 - M160L/4	270	55
								HF093 - M160L/4	270	65
		52.8	27.47	18100	1.04					
		42.1	34.45	4000	0.90	HB093 - A160	137	75		
						HF093 - A160	139	86		
		124	11.67	20000	4.2					
		105	13.86	20900	3.5					
		93.7	15.48	21600	3.4	HB102 - M160L/4	330	55		
		77.3	18.77	22400	2.8	HF102 - M160L/4	330	65		
		69.7	20.80	22900	2.5					
		63.2	22.94	23500	2.3	HB102 - A160	196	75		
		56.2	25.80	24000	2.0	HF102 - A160	200	86		
		50.4	28.78	24600	1.83					
		47.1	30.78	25000	1.71					

 1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

15 - 18.5 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	FRa [N]	S F	TYPE / SIZE	Approx.Wt Dimensions			
							[kg.]	Page No.		
15	1450	40.0	36.27	25700	1.47	HB103 - M160L/4	335	55		
		36.0	40.26	26200	1.32	HF103 - M160L/4	340	65		
		29.6	49.00	26900	1.09					
		26.4	54.84	25000	0.97	HB103 - A160	205	75		
		24.6	58.91	19000	0.90	HF103 - A160	205	86		
		75.8	19.13	66800	4.5	HB112 - M160L/4	405	56		
		65.8	22.05	66600	3.9	HF112 - M160L/4	405	66		
		59.8	24.24	66400	3.6	HB112 - A160	275	76		
		51.3	28.28	65800	3.1	HF112 - A160	275	87		
		45.2	32.08	66200	2.7					
		38.9	37.23	65700	2.4					
		32.8	44.25	65000	1.98	HB113 - M160L/4	415	56		
		29.3	49.42	64200	1.77	HF113 - M160L/4	415	66		
		24.2	59.91	63000	1.46					
		21.8	66.38	62000	1.32	HB113 - A160	285	76		
		20.2	71.80	60500	1.22	HF113 - A160	285	87		
		18.2	79.64	58800	1.10					
		17.0	85.33	56100	1.03					
		39.4	36.83	80500	4.1					
		35.1	41.36	80500	3.6					
		30.6	47.41	80500	3.1					
		27.4	52.84	80000	2.8					
		23.3	62.18	79400	2.4					
		21.8	66.62	78800	2.2	HB123 - M160L/4	560	56		
		19.4	74.81	78400	2.0	HF123 - M160L/4	560	66		
		16.9	85.77	77100	1.74	HB123 - A160	430	76		
		15.2	95.58	75600	1.56	HF123 - A160	430	87		
		13.1	110.89	73300	1.35					
		12.1	119.92	71500	1.25					
		11.3	127.82	71000	1.16					
		10.3	140.53	63100	1.06					
		8.85	163.93	39800	0.91					
		28.1	51.69	132000	4.0					
		24.7	58.81	132000	3.6					
		21.5	67.51	132000	3.1					
		20.0	72.33	132000	2.9	HB133 - M160L/4	810	56		
		17.5	83.02	132000	2.5	HF133 - M160L/4	810	66		
		15.5	93.68	132000	2.2					
		13.6	106.59	132000	1.96	HB133 - A160	680	76		
		11.8	122.53	132000	1.70	HF133 - A160	680	87		
		10.5	138.08	132000	1.51					
		9.46	153.34	132000	1.36					
		7.82	185.50	132000	1.13					
		6.71	216.02	132000	0.97					
		18.5	1460	264	5.538	8550	1.72			
				216	6.766	7750	1.43	HB082 - M180M/4	270	54
				196	7.456	7200	1.38	HF082 - M180M/4	275	64
				174	8.365	6400	1.26			
155	9.441			5450	1.21	HB082 - A180	92	74		
145	10.04			6050	1.05	HF082 - A180	97	85		
119	12.26			4100	0.92					
332	4.395			12200	3.4					
290	5.043			12700	3.2					
236	6.188			13300	2.8					
197	7.415			13800	2.5					
174	8.381			14400	2.2	HB092 - M180M/4	315	55		
152	9.618			14700	2.0	HF092 - M180M/4	315	65		
136	10.73			14800	1.87					
115	12.74			15100	1.67	HB092 - A180	134	75		
103	14.14			15600	1.54	HF092 - A180	136	86		
84.8	17.21			15900	1.38					
75.8	19.26			16100	1.27					
70.6	20.69			16300	1.21					
226	6.461			16900	4.3					
190	7.679			17100	3.6					
165	8.873			17900	4.5					
145	10.05			18900	4.0	HB102 - M180M/4	375	55		
125	11.67			19500	3.4	HF102 - M180M/4	380	65		
105	13.86			20300	3.1					
94.3	15.48			21000	2.8	HB102 - A180	196	75		
77.8	18.77			21600	2.3	HF102 - A180	200	86		
70.2	20.80			22100	2.1					
63.6	22.94			22600	1.87					

1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Helical Geared Motors with IS/IEC motors, Type : HB/HF. . - M . .

Helical Gear Units (without motor), Type : HB/HF. . - A . .

Power ratings

18.5 - 22 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt Dimensions	
							[kg.]	Page No.
18.5	1460					HB103 - M180M/4	385	55
		47.5	30.55	23600	1.22	HF103 - M180M/4	385	65
		40.0	36.27	24200	1.19			
		36.0	40.26	22200	1.07	HB103 - A180	205	75
						HF103 - A180	205	86
		86.4	16.90	66900	4.2	HB112 - M180M/4	455	56
		76.3	19.13	66800	3.7	HF112 - M180M/4	455	66
		66.2	22.05	66600	3.2			
		60.2	24.24	66400	2.9	HB112 - A180	275	76
		51.6	28.28	65800	2.5	HF112 - A180	275	87
45.5	32.08	65400	2.2					
39.2	37.23	64700	1.92	HB113 - M180M/4	465	56		
33.0	44.25	63800	1.62	HF113 - M180M/4	465	66		
29.5	49.42	62400	1.45					
24.4	59.91	60600	1.20	HB113 - A180	285	76		
22.0	66.38	59000	1.08	HF113 - A180	285	87		
20.3	71.80	55200	1.00					
18.3	79.64	42900	0.90					
49.8	29.32	81000	4.2					
39.6	36.83	80500	3.3					
35.3	41.36	80300	2.9					
30.8	47.41	79000	2.6					
27.6	52.84	79000	2.3	HB123 - M180M/4	610	56		
23.5	62.18	78100	1.96	HF123 - M180M/4	610	66		
21.9	66.62	77200	1.83					
19.5	74.81	76400	1.63	HB123 - A180	430	76		
17.0	85.77	74400	1.42	HF123 - A180	430	87		
15.3	95.58	62100	1.28					
13.2	110.89	68500	1.10					
12.2	119.92	62500	1.02					
11.4	127.82	61000	0.95					
36.6	39.91	132000	4.3					
31.9	45.80	132000	3.7					
28.2	51.69	132000	3.3					
24.8	58.81	132000	2.9					
21.6	67.51	132000	2.5	HB133 - M180M/4	860	56		
20.2	72.33	132000	2.4	HF133 - M180M/4	860	66		
17.6	83.02	132000	2.1					
15.6	93.68	132000	1.82	HB133 - A180	680	76		
13.7	106.59	132000	1.60	HF133 - A180	680	87		
11.9	122.53	132000	1.39					
10.6	138.08	132000	1.24					
9.52	153.34	132000	1.11					
22	1460	264	5.538	6800	1.44	HB082 - M180L/4	280	54
		216	6.766	5550	1.21	HF082 - M180L/4	285	64
		196	7.456	4780	1.16			
		175	8.365	3700	1.07	HB082 - A180	92	74
		155	9.441	2400	1.02	HF082 - A180	97	85
		332	4.395	11900	2.9			
		290	5.043	12500	2.7			
		236	6.188	13000	2.4			
		197	7.415	13500	2.1			
		174	8.381	14000	1.82	HB092 - M180L/4	325	55
152	9.618	14400	1.68	HF092 - M180L/4	325	65		
136	10.73	14300	1.57					
115	12.74	14500	1.40	HB092 - A180	134	75		
103	14.14	14900	1.30	HF092 - A180	136	86		
84.8	17.21	15000	1.16					
75.8	19.26	14100	1.07					
70.6	20.69	13000	1.02					
262	5.567	16200	4.2					
226	6.461	16900	3.6					
190	7.679	17700	3.0					
165	8.873	17700	3.8	HB102 - M180L/4	385	55		
145	10.05	18400	3.3	HF102 - M180L/4	390	65		
125	11.67	19000	2.9					
105	13.86	19800	2.6	HB102 - A180	196	75		
94.3	15.48	20300	2.3	HF102 - A180	200	86		
77.8	18.77	20900	1.93					
70.2	20.80	21000	1.74					
63.6	22.94	21500	1.58					

 1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

22 - 30 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.		
22	1460	47.5	30.55	22400	1.19	HB103 - M180L/4	395	55		
		40.0	36.27	18500	1.00	HF103 - M180L/4	395	65		
		36.0	40.26	18500	0.90	HB103 - A180	205	75		
							HF103 - A180	205	86	
				113	12.91	67100	4.6			
				98.6	14.80	66900	4.0	HB112 - M180L/4	465	56
				86.4	16.90	66700	3.5	HF112 - M180L/4	465	66
				76.3	19.13	66500	3.1			
				66.2	22.05	66200	2.7	HB112 - A180	275	76
				60.2	24.24	66000	2.5	HF112 - A180	275	87
				51.6	28.28	65200	2.1			
				45.5	32.08	64500	1.88	HB113 - M180L/4	475	56
				39.2	37.23	63600	1.62	HF113 - M180L/4	475	66
				33.0	44.25	62100	1.36			
				29.5	49.42	60200	1.22	HB113 - A180	285	76
				24.4	59.91	57000	1.01	HF113 - A180	285	87
				22.0	66.38	51500	0.91			
				59.8	24.42	80700	4.2			
				49.8	29.32	80700	3.5			
				39.6	36.83	80100	2.8			
				35.3	41.36	79600	2.5	HB123 - M180L/4	620	56
				30.8	47.41	78700	2.2	HF123 - M180L/4	620	66
				27.6	52.84	77800	1.94			
				23.5	62.18	76300	1.65	HB123 - A180	430	76
				21.9	66.62	75100	1.54	HF123 - A180	430	87
				19.5	74.81	74000	1.37			
				17.0	85.77	71000	1.19			
				15.3	95.58	67600	1.07			
				13.2	110.89	45400	0.93			
				42.0	34.77	132000	4.1			
				36.6	39.91	132000	3.6			
				31.9	45.80	132000	3.1			
				28.2	51.69	132000	2.8			
				24.8	58.81	132000	2.4	HB133 - M180L/4	870	56
				21.6	67.51	132000	2.1	HF133 - M180L/4	870	66
				20.2	72.33	132000	1.98			
				17.6	83.02	132000	1.73	HB133 - A180	680	76
				15.6	93.68	132000	1.53	HF133 - A180	680	87
				13.7	106.59	132000	1.34			
				11.9	122.53	132000	1.17			
				10.6	138.08	132000	1.04			
				9.52	153.34	132000	0.93			
		30	1465	333	4.395	11500	2.1			
				291	5.043	11900	2.0			
				237	6.188	12500	1.76	HB092 - M200L/4	410	55
				198	7.415	12800	1.55	HF092 - M200L/4	410	65
				175	8.381	13300	1.34			
				152	9.618	13500	1.23	HB092 - A200	143	75
137	10.73			12900	1.16	HF092 - A200	145	86		
115	12.74			11400	1.03					
104	14.14			9900	0.96					
				298	4.914	15000	3.4			
				263	5.567	15800	3.1			
				227	6.461	16300	2.6			
				191	7.679	17300	2.2	HB102 - M200L/4	470	55
				165	8.873	16900	2.8	HF102 - M200L/4	470	65
				146	10.05	17400	2.5			
				126	11.67	17900	2.1	HB102 - A200	205	75
				106	13.86	18400	1.93	HF102 - A200	205	86
				94.6	15.48	18800	1.72			
				78.1	18.77	19100	1.42			
				70.4	20.80	19300	1.28			
				195	7.500	56400	3.9			
				162	9.023	58600	4.7			
				137	10.73	62200	4.1	HB112 - M200L/4	550	56
				113	12.91	64200	3.4	HF112 - M200L/4	550	66
				99.0	14.80	65400	3.0			
				86.7	16.90	66100	2.6	HB112 - A200	285	76
				76.6	19.13	65700	2.3	HF112 - A200	285	87
				66.4	22.05	65100	1.99			
				60.4	24.24	64600	1.81			

1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

30 - 37 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.
30	1465	51.7	28.32	63600	1.56	HB113 - M200L/4	565	56
		45.7	32.08	62000	1.38	HF113 - M200L/4	565	66
		39.3	37.23	60100	1.19	HB113 - A200	300	76
		33.1	44.25	56300	1.00	HF113 - A200	300	87
		87.3	16.78	81400	4.2	HB122 - M200L/4	690	56
		76.7	19.09	81100	3.9	HF122 - M200L/4	690	66
		66.7	21.95	80900	3.4			
		59.2	24.73	80500	3.0	HB122 - A200	425	76
		53.4	27.46	80000	2.7	HF122 - A200	425	87
		50.0	29.32	79500	2.6			
		39.8	36.83	78500	2.1			
		35.4	41.36	77500	1.82	HB123 - M200L/4	705	56
		30.9	47.41	75900	1.59	HF123 - M200L/4	705	66
		27.7	52.84	74000	1.43			
		23.6	62.18	71100	1.21	HB123 - A200	440	76
		22.0	66.62	68700	1.13	HF123 - A200	440	87
		19.6	74.81	66400	1.01			
		62.5	23.44	132000	4.5			
		53.2	27.52	132000	3.8			
		42.1	34.77	132000	3.0			
		36.7	39.91	132000	2.6			
		32.0	45.80	132000	2.3	HB133 - M200L/4	955	56
		28.3	51.69	132000	2.0	HF133 - M200L/4	955	66
		24.9	58.81	132000	1.79			
21.7	67.51	132000	1.56	HB133 - A200	690	76		
20.3	72.33	132000	1.46	HF133 - A200	690	87		
17.6	83.02	132000	1.27					
15.6	93.68	132000	1.12					
13.7	106.59	132000	0.99					
37	1470	334	4.395	11500	1.73			
		291	5.043	12000	1.63	HB092 - M225S/4	500	55
		238	6.188	11800	1.43	HF092 - M225S/4	500	65
		198	7.415	10100	1.26			
		175	8.381	11500	1.09	HB092 - A225	162	75
		153	9.618	10700	1.01	HF092 - A225	164	86
		137	10.73	8300	0.94			
		299	4.914	14700	2.8			
		264	5.567	15400	2.5			
		228	6.461	15800	2.2			
		191	7.679	16500	1.80	HB102 - M225S/4	555	55
		166	8.873	16100	2.3	HF102 - M225S/4	560	65
		146	10.05	16600	1.99			
		126	11.67	16900	1.72	HB102 - A225	215	75
		106	13.86	17200	1.56	HF102 - A225	220	86
		95.0	15.48	17400	1.40			
		78.3	18.77	17700	1.15			
		70.7	20.80	17700	1.04			
		230	6.397	33100	3.7			
		196	7.500	57000	3.2			
		163	9.023	57800	3.9			
		137	10.73	59800	3.3	HB112 - M225S/4	640	56
		114	12.91	61300	2.8	HF112 - M225S/4	640	66
		99.3	14.80	62200	2.4			
		87.0	16.90	63000	2.1	HB112 - A225	300	76
		76.8	19.13	63500	1.86	HF112 - A225	300	87
		66.7	22.05	63800	1.62			
		60.6	24.24	63000	1.47			
		51.9	28.32	61400	1.27	HB113 - M225S/4	650	56
		45.8	32.08	58900	1.12	HF113 - M225S/4	650	66
		39.5	37.23	54300	0.97	HB113 - A225	310	76
						HF113 - A225	310	87
		98.9	14.87	81200	3.9			
		87.6	16.78	81000	3.5	HB122 - M225S/4	780	56
		77.0	19.09	80700	3.2	HF122 - M225S/4	785	66
		67.0	21.95	80300	2.8			
59.4	24.73	80000	2.5	HB122 - A225	440	76		
53.5	27.46	79100	2.2	HF122 - A225	445	87		

1) n₁ values will vary slightly as per the make of Electric motor.

2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Helical Geared Motors with IS/IEC motors, Type : HB/HF. . - M . .
 Helical Gear Units (without motor), Type : HB/HF. . - A . .
 Power ratings

37 - 45 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	F _{Ra} [N]	S F	TYPE / SIZE	Approx.Wt [kg.]	Dimensions Page No.		
37	1470	50.1	29.32	78200	2.1					
		39.9	36.83	76600	1.66	HB123 - M225S/4	800	56		
		35.5	41.36	75000	1.48	HF123 - M225S/4	800	66		
		31.0	47.41	72400	1.29					
		27.8	52.84	69500	1.16	HB123 - A225	460	76		
		23.6	62.18	59600	0.98	HF123 - A225	460	87		
		22.1	66.62	38500	0.92					
				77.4	19.00	132000	4.5	HB132 - M225S/4	1015	56
				64.8	22.70	132000	3.7	HF132 - M225S/4	1015	66
				58.0	25.36	132000	3.3	HB132 - A225	675	76
				47.8	30.77	132000	2.8	HF132 - A225	675	87
				62.7	23.44	132000	3.7			
				53.4	27.52	132000	3.1			
				42.3	34.77	132000	2.5			
				36.8	39.91	132000	2.2	HB133 - M225S/4	1045	56
				32.1	45.80	132000	1.87	HF133 - M225S/4	1045	66
				28.4	51.69	132000	1.66			
				25.0	58.81	132000	1.46	HB133 - A225	705	76
		21.8	67.51	132000	1.27	HF133 - A225	705	87		
		20.3	72.33	132000	1.18					
		17.7	83.02	132000	1.03					
		15.7	93.68	130000	0.92					
45	1470	334	4.395	11000	1.42	HB092 - M225M/4	530	55		
		291	5.043	10000	1.34	HF092 - M225M/4	530	65		
		238	6.188	7900	1.18					
		198	7.415	5300	1.03	HB092 - A225	162	75		
		175	8.381	6800	0.90	HF092 - A225	164	86		
				299	4.914	14400	2.3			
				264	5.567	14900	2.0			
				228	6.461	15400	1.77	HB102 - M225M/4	580	55
				191	7.679	15800	1.48	HF102 - M225M/4	585	65
				166	8.873	15400	1.86			
				146	10.05	15700	1.64	HB102 - A225	215	75
				126	11.67	15800	1.42	HF102 - A225	220	86
				106	13.86	16000	1.28			
				95.0	15.48	16000	1.15			
				78.3	18.77	16000	0.95			
				276	5.329	51300	3.6			
				230	6.397	53500	3.1			
				196	7.500	55200	2.6			
				163	9.023	55500	3.2	HB112 - M225M/4	665	56
				137	10.73	57000	2.7	HF112 - M225M/4	665	66
				114	12.91	58000	2.3			
				99.3	14.80	58500	1.98	HB112 - A225	300	76
				87.0	16.90	58700	1.74	HF112 - A225	300	87
				76.8	19.13	58600	1.53			
				66.7	22.05	58100	1.33			
				60.6	24.24	57600	1.21			
								HB113 - M225M/4	675	56
						HF113 - M225M/4	675	66		
		51.9	28.32	56300	1.05					
		45.8	32.08	45800	0.92	HB113 - A225	310	76		
						HF113 - A225	310	87		
		122	12.09	81100	4.0					
		98.9	14.87	80800	3.2	HB122 - M225M/4	805	56		
		87.6	16.78	80500	2.8	HF122 - M225M/4	810	66		
		77.0	19.09	80000	2.6					
		67.0	21.95	79400	2.3	HB122 - A225	440	76		
		59.4	24.73	79000	2.0	HF122 - A225	455	87		
		53.5	27.46	77500	1.82					
		50.1	29.32	76300	1.72	HB123 - M225M/4	825	56		
		39.9	36.83	73900	1.37	HF123 - M225M/4	825	66		
		35.5	41.36	71500	1.22					
		31.0	47.41	67400	1.06	HB123 - A225	460	76		
		27.8	52.84	48800	0.95	HF123 - A225	460	87		

1) n₁ values will vary slightly as per the make of Electric motor.
 2) Other output speeds are available using 2 & 8 pole motors; Consult us.

45 - 75 kW

Pm [kW]	n ₁ [r / min]	n ₂ [r / min]	i [Total]	FRa [N]	S F	TYPE / SIZE	Approx.Wt Dimensions			
							[kg.]	Page No.		
45	1470	90.0	16.33	132000	3.7	HB132 - M225M/4	1040	56		
		77.4	19.00	132000	3.7	HF132 - M225M/4	1040	66		
		64.8	22.70	132000	3.1					
		58.0	25.36	132000	2.8	HB132 - A225	675	76		
		47.8	30.77	132000	2.3	HF132 - A225	675	87		
			62.7	23.44	132000	3.0				
			53.4	27.52	132000	2.6				
			42.3	34.77	132000	2.0	HB133 - M225M/4	1070	56	
			36.8	39.91	132000	1.77	HF133 - M225M/4	1070	66	
			32.1	45.80	132000	1.54				
			28.4	51.69	132000	1.36	HB133 - A225	705	76	
			25.0	58.81	132000	1.20	HF133 - A225	705	87	
			21.8	67.51	132000	1.05				
			20.3	72.33	132000	0.97				
		55	1475	300	4.914	14000	1.89			
				265	5.567	14000	1.68			
				228	6.461	14000	1.45	HB102 - M250M/4	780	55
				192	7.679	14000	1.22	HF102 - M250M/4	785	65
				166	8.873	14000	1.53			
				147	10.05	15000	1.35	HB102 - A250	250	75
126	11.67			15500	1.16	HF102 - A250	255	86		
106	13.86			15500	1.05					
95.3	15.48			13000	0.94					
	277			5.329	49700	3.0				
	231			6.397	51500	2.5				
	197			7.500	52900	2.2	HB112 - M250M/4	870	56	
	163			9.023	52800	2.6	HF112 - M250M/4	870	66	
	137			10.73	53600	2.2				
	114			12.91	53900	1.86	HB112 - A250	340	76	
	99.7			14.80	53700	1.63	HF112 - A250	340	87	
	87.3			16.90	53300	1.42				
	77.1			19.13	52500	1.26				
	204			7.241	81600	3.8				
	177			8.351	80800	4.0				
	154			9.583	81100	4.1	HB122 - M250M/4	1005	56	
	122			12.09	80700	3.2	HF122 - M250M/4	1005	66	
	99.2			14.87	80300	2.6				
	87.9			16.78	79500	2.3	HB122 - A250	475	76	
	77.3			19.09	79000	2.1	HF122 - A250	475	87	
	67.2			21.95	78200	1.87				
	60.4			24.42	76500	1.70	HB123 - M250M/4	1025	56	
	50.3			29.32	73400	1.41	HF123 - M250M/4	1025	66	
	40.0			36.83	69600	1.12				
	35.7			41.36	64000	1.00	HB123 - A250	495	76	
							HF123 - A250	495	87	
	104			14.19	132000	3.5	HB132 - M250M/4	1255	56	
	90.3			16.33	132000	3.0	HF132 - M250M/4	1250	66	
	77.6			19.00	132000	3.0				
	65.0			22.70	132000	2.5	HB132 - A250	725	76	
	58.2			25.36	132000	2.3	HF132 - A250	720	87	
	62.9			23.44	132000	2.5				
	53.6			27.52	132000	2.1	HB133 - M250M/4	1285	56	
	42.4			34.77	132000	1.66	HF133 - M250M/4	1285	66	
	37.0			39.91	132000	1.45				
	32.2	45.80	132000	1.26	HB133 - A250	755	76			
	28.5	51.69	132000	1.12	HF133 - A250	755	87			
	25.1	58.81	132000	0.99						
75	1480	278	5.329	45000	2.2					
		231	6.397	45000	1.85					
		197	7.500	45000	1.58	HB112 - M280S/4	1025	56		
		164	9.023	45000	1.92	HF112 - M280S/4	1025	66		
		138	10.73	45000	1.65					
		115	12.91	45000	1.38	HB112 - A280	340	76		
		100	14.80	41000	1.20	HF112 - A280	340	87		
		87.6	16.90	44600	1.05					
		77.4	19.13	50000	0.93					

1) n₁ values will vary slightly as per the make of Electric motor.

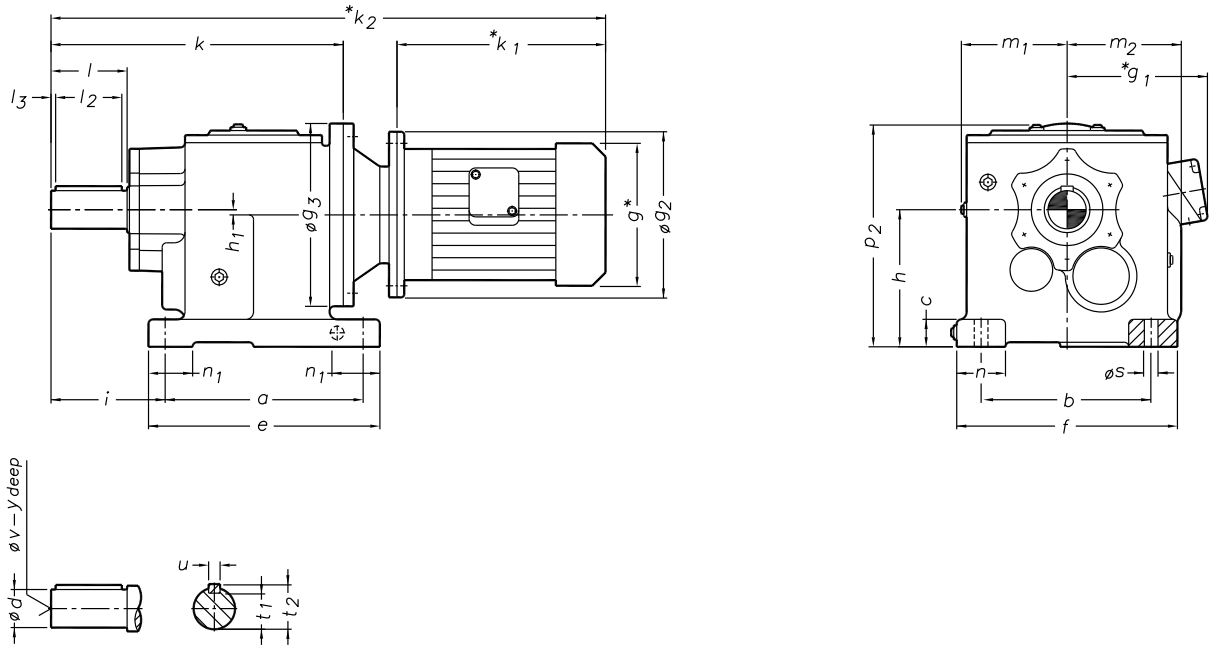
2) Other output speeds are available using 2 & 8 pole motors; Consult us.

Helical Geared Motor, Base (Foot) Mounted
Motor Dimensions to IS/IEC Standards

Type HB
Size 02

PRINCIPAL DIMENSIONS (mm)

101



Size	a	b	c	e f	h h ₁	i	k	k ₁	k ₂	g	g ₁	g ₂	g ₃	n n ₁	m ₁ m ₂	p ₂	s	d l	l ₂ l ₃	t ₁ t ₂	u	v y
HB023 -M63	130	110	18	152	90	75	193	202	441	124	114	140	120	32	70	147	9	25	45	21	8	M10
HB023 -M71				-0.5	231			477	139	120	160	27		75	50			1.5	28	24		
HB022 -M80				3.4	227			486	157	127	200											
HB022 -M90S/L					277			548	181	142	200											

- Gear unit portion is of "Shanthi" make. Make of Electric motors will be Bharat Bijlee, Crompton, Kirloskar, Siemens etc.,
- Electric motors will be of B Type flange and with dimensions as per IEC:72 / IS:1231 & IS:2223
- Asterick (*) marked dimensions g, g_1, k_1, k_2 and position of Terminal Box will vary with the make of the motor.

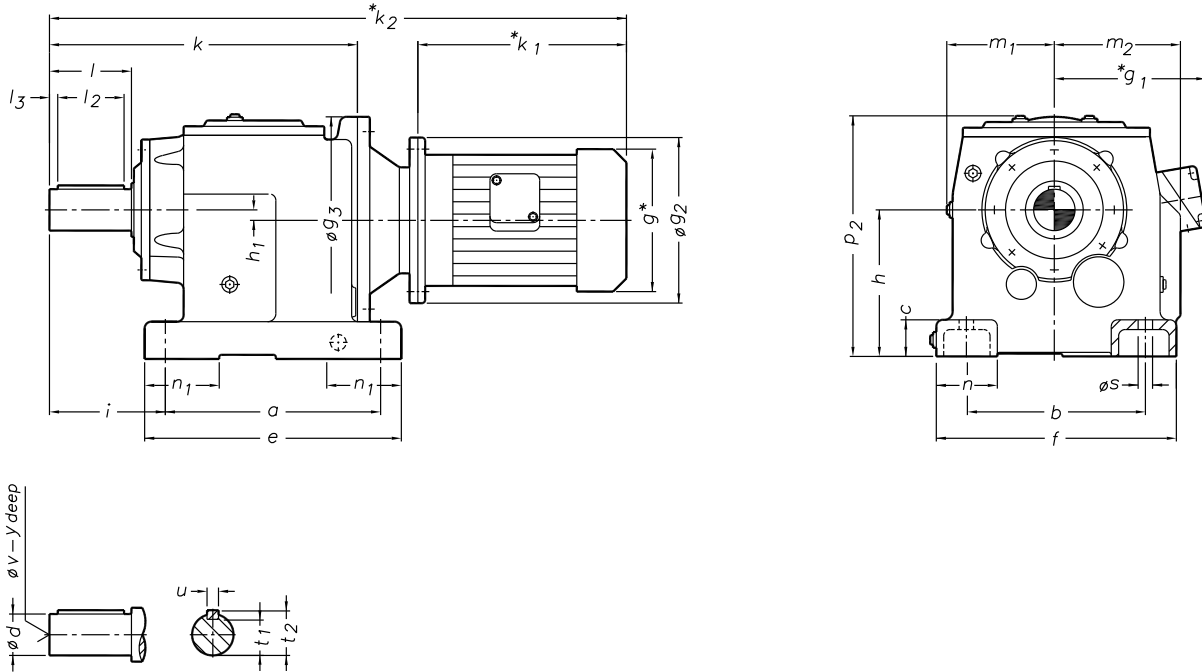
- Dimensions are subject to change. Get certified dimensional drawing while ordering.
- Special output extensions, on request.
- For weight details, see Rating sheets.

Helical Geared Motor, Base (Foot) Mounted
Motor Dimensions to IS/IEC Standards

Type **HB**
 Size **03 & 04**

PRINCIPAL DIMENSIONS (mm)

102



Size	a	b	c	e	h	i	k	k ₁	k ₂	g	g ₁	g ₂	g ₃	n	m ₁	p ₂	s	d	l ₂	t ₁	u	v
				f	h ₁									n ₁	m ₂			l	l ₃	t ₂		y
HB033 -M63	130	110	18	160	90	75	201	202	449	124	114	140	120	35	66.5	152	9	25	45	21	8	M10
								231	485	139	120	160										
								227	494	157	127	200										
								277	556	181	142	200										
HB032 -M71	130	110	18	145	10.1	75	201	202	449	124	114	140	120	35	66.5	152	9	25	45	21	8	M10
231								485	139	120	160											
227								494	157	127	200											
277								556	181	142	200											
HB043 -M80	165	135	24	195	115	90	235	202	486	124	114	140	160	42	76.5	186	13.5	30	55	26	8	M10
231								521	139	120	160											
227								532	157	127	200											
277								592	181	142	200											
306								641	202	162	250											
HB042 -M90S/L	165	135	24	170	14	90	235	202	486	124	114	140	160	42	76.5	186	13.5	30	55	26	8	M10
231								521	139	120	160											
227								532	157	127	200											
277								592	181	142	200											
306								641	202	162	250											
HB042 -M100L	165	135	24	170	14	90	235	202	486	124	114	140	160	42	76.5	186	13.5	30	55	26	8	M10
231								521	139	120	160											
227								532	157	127	200											
277								592	181	142	200											
306								641	202	162	250											

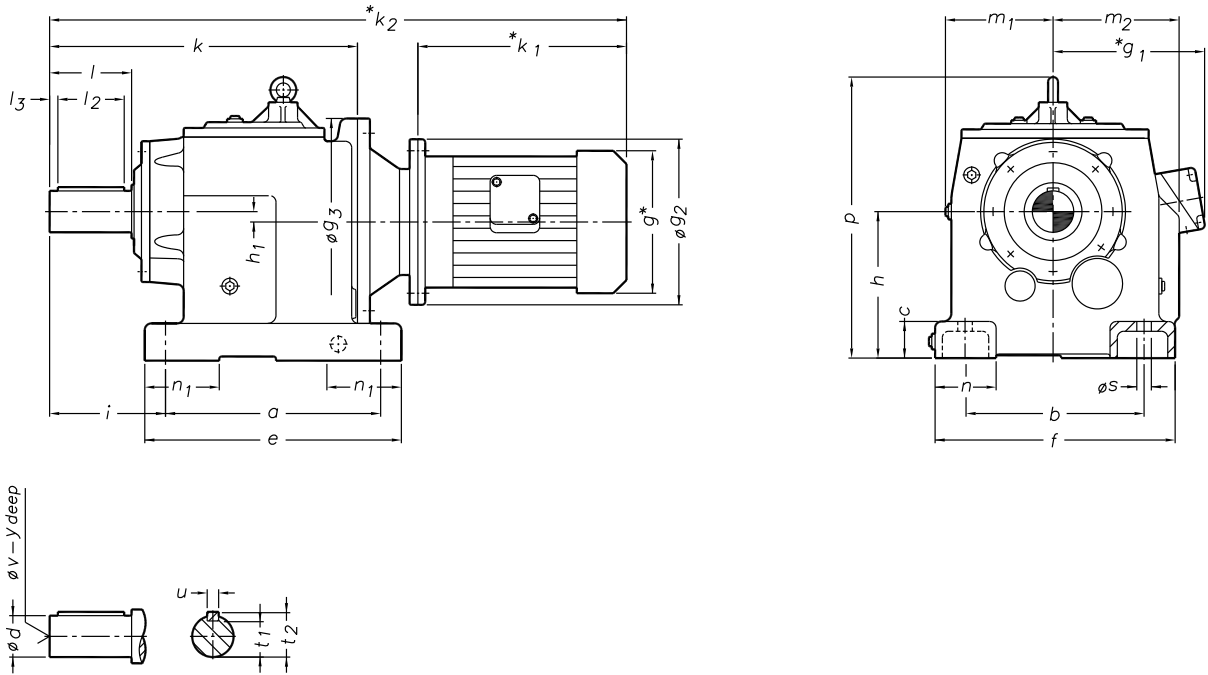
- Gear unit portion is of "Shanthi" make. Make of Electric motors will be Bharat Bijlee, Crompton, Kirloskar, Siemens etc.,
- Electric motors will be of B Type flange and with dimensions as per IEC:72 / IS:1231 & IS:2223
- Asterick (*) marked dimensions g, g_1, k_1, k_2 and position of Terminal Box will vary with the make of the motor.
- Dimensions are subject to change. Get certified dimensional drawing while ordering.
- Special output extensions, on request.

Helical Geared Motor, Base (Foot) Mounted
Motor Dimensions to IS/IEC Standards

Type **HB**
 Size **05 & 06**

PRINCIPAL DIMENSIONS (mm)

103



Size	a	b	c	e	h	i	k	k ₁	k ₂	g	g ₁	g ₂	g ₃	n	m ₁	p	s	d	l ₂	t ₁	u	v											
				f	h ₁									n ₁	m ₂			l	l ₃	t ₂		y											
-M63	165	135	24	200	115	100	257	202	508	124	114	140	160	55	86	239	13.5	35	65	30	10	28	M12										
-M71								231	543	139	120	160												70	1.5	38							
-M80								227	554	157	127	200																					
-M90S/L				195	150			30	190	11.2	100	280		277	614			181	142	200				60	102	264	14	70	1.5	38	10	28	M12
-M100L														306	663			202	162	250													
-M112M														328	685			227	182	250													
-M63	195	150	30	235	130	100	280	202	531	124	114	140	160	60	92	264	14	35	65	30	10	28	M12										
-M71								231	566	139	120	160												70	1.5			38					
-M80								227	577	157	127	200																					
-M90S/L				210	20.7			100	210	20.7	100	280		277	637			181	142	200				60	105	264	14	70	1.5	38	10	28	M12
-M100L														306	686			202	162	250													
-M112M														328	708			227	182	250													
-M132S	407	813	267	206	300	100	280	369	775	267	206	300	60	105	264	14	70	1.5	38	10	28	M12											
-M132M								407	813	267	206	300																					

- Gear unit portion is of "Shanthi" make. Make of Electric motors will be Bharat Bijlee, Crompton, Kirloskar, Siemens etc.,
- Electric motors will be of B Type flange and with dimensions as per IEC:72 / IS:1231 & IS:2223
- Asterick (*) marked dimensions g, g_1, k_1, k_2 and position of Terminal Box will vary with the make of the motor.

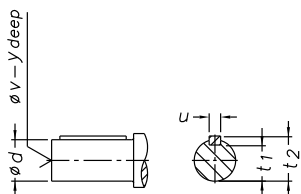
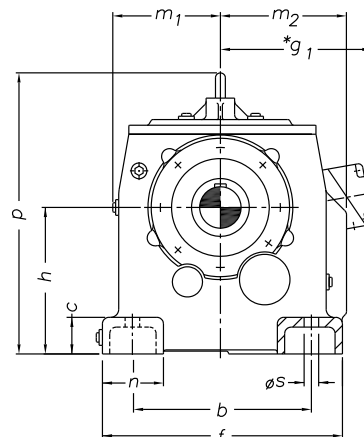
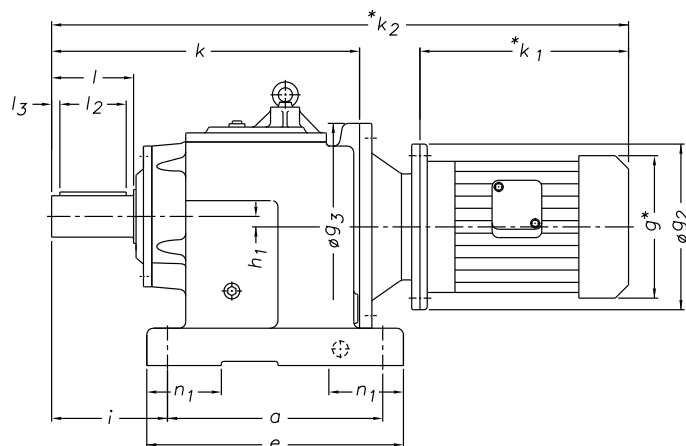
- Dimensions are subject to change. Get certified dimensional drawing while ordering.
- Special output extensions, on request.
- For weight details, see Rating sheets.

Helical Geared Motor, Base (Foot) Mounted
Motor Dimensions to IS/IEC Standards

Type **HB**
 Size **07 & 08**

PRINCIPAL DIMENSIONS (mm)

104



Size	a	b	c	e f	h h ₁	i	k	k ₁	k ₂	g	g ₁	g ₂	g ₃	n n ₁	m ₁ m ₂	p	s	d l	l ₂ l ₃	t ₁ t ₂	u	v y					
HB073 HB072	-M63	205	170	30	245	140	115	300	202	539	124	114	200	60	105	297	17.5	40	70	35	12	M16					
	-M71				-0.5	231			576	139	120	160															
	-M80				227	592			157	127	200																
	-M90S/L				277	654			181	142	200																
	-M100L				306	701			202	162	250																
	-M112M				328	723			227	182	250																
	-M132S				369	789			267	206	300																
	-M132M				407	827			267	206	300																
	-M160M				495	960			324	226	350																
	-M160L				539	1004			324	226	350	60											120	80	2.5	43	32
HB083 HB082	-M80	260	215	45	310	180	140	372	227	658	157	127	250	75	130	367	17.5	50	90	44.5	14	M16					
	-M90S/L				-0.5	277			722	181	142	200															
	-M100L				306	770			202	162	250																
	-M112M				328	792			227	182	250																
	-M132S				369	861			267	206	300																
	-M132M				407	899			267	206	300																
	-M160M				495	1027			324	226	350																
	-M160L				539	1071			324	226	350																
	-M180M/L				607	1139			369	282	350	90											150	100	2.5	53.5	32

- Gear unit portion is of "Shanthi" make. Make of Electric motors will be Bharat Bijlee, Crompton, Kirloskar, Siemens etc.,
- Electric motors will be of B Type flange and with dimensions as per IEC:72 / IS:1231 & IS:2223
- Asterick (*) marked dimensions g, g_1, k_1, k_2 and position of Terminal Box will vary with the make of the motor.

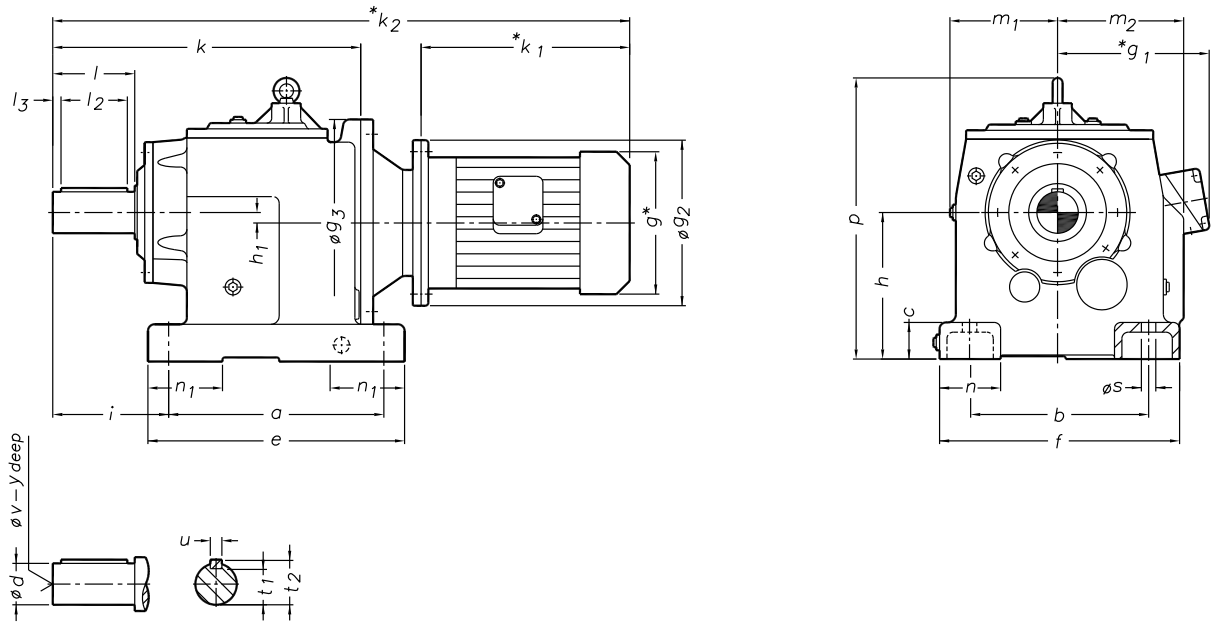
- Dimensions are subject to change. Get certified dimensional drawing while ordering.
- Special output extensions, on request.
- For weight details, see Rating sheets.

Helical Geared Motor, Base (Foot) Mounted
Motor Dimensions to IS/IEC Standards

Type HB
Size 09 & 10

105

PRINCIPAL DIMENSIONS (mm)



Size	a	b	c	e f	h h ₁	i	k	k ₁	k ₂	g	g ₁	g ₂	g ₃	n n ₁	m ₁ m ₂	p	s	d l	l ₂ l ₃	t ₁ t ₂	u	v y							
HB093 HB092	-M80	310	250	55	365	225 -0.5	160	440	227	715	157	127	200	90	156	449	22	60 m6	110	53	18	M20							
	-M90S/L								277	777	181	142	200																
	-M100L								306	831	202	162	250																
	-M112M								328	853	227	182	250																
	-M132S								369	924	267	206	300																
	-M132M								407	962	267	206	300																
	-M160M								495	1085	324	226	350																
	-M160L								539	1129	324	226	350																
	-M180M/L								607	1197	369	282	350																
	-M200L								683	1283	405	312	400																
	-M225S/M								690	1325	455	337	450										100	174	120	2.5	64	40	
HB103 HB102	-M90L	370	290	65	440	250 -0.5	185	495	277	832	181	142	200	110	180	505	26	70 m6	130	62.5	20	M20							
	-M100L								306	881	202	162	250																
	-M112M								328	903	227	182	250																
	-M132S								369	968	267	206	300																
	-M132M								407	1006	267	206	300																
	-M160M								495	1135	324	226	350																
	-M160L								539	1179	324	226	350																
	-M180M/L								607	1247	369	282	350																
	-M200L								683	1343	405	312	400																
	-M225S/M								690	1370	455	337	450										125	208	140	2.5	74.5	40	
	-M250M								775	1475	495	415	550																

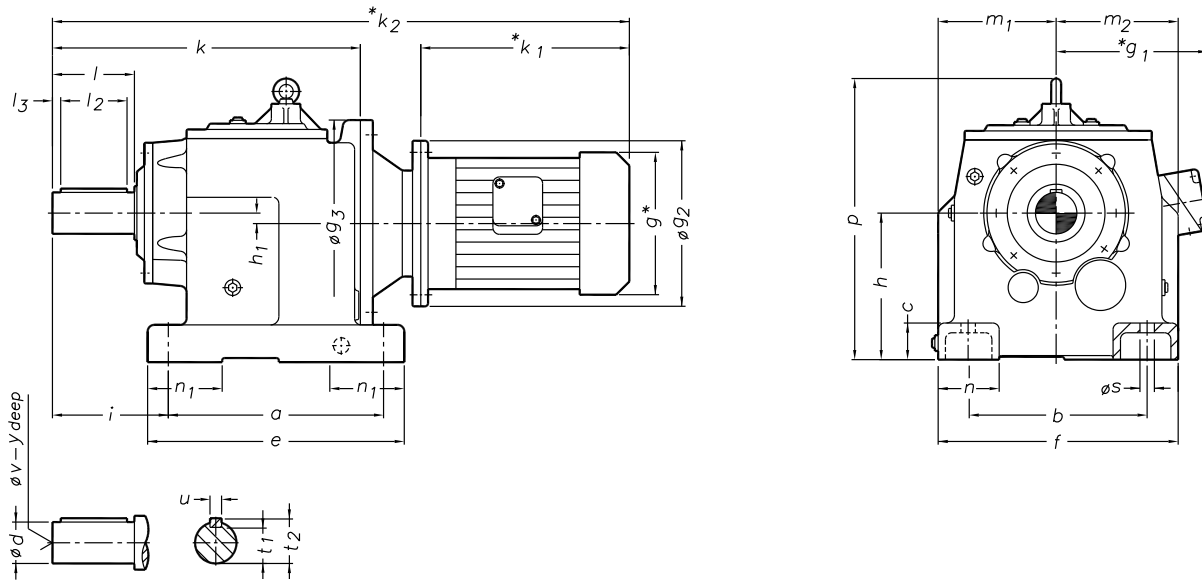
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- For weight details, see Rating sheets.

Helical Geared Motor, Base (Foot) Mounted
Motor Dimensions to IS/IEC Standards

Type HB
Size 11-13

PRINCIPAL DIMENSIONS (mm)

106



Size	a	b	c	e	h	i	k	k ₁	k ₂	g	g ₁	g ₂	g ₃	n	m ₁	p	s	d	l ₂	t ₁	u	v	
				f	h ₁									n ₁	m ₂			l	l ₃	t ₂		y	
HB113 HB112	-M132S	410	340	70	490	220	589	369	1053	267	206	300	400	110	225		33	90	160	81		25	M24
	-M132M							407	1091	267	206	300											
	-M160M							495	1219	324	226	350											
	-M160L				539			1263	324	226	350												
	-M180M/L				607			1331	369	282	350												
	-M200L				683			1416	405	312	400												
	-M225S/M				690			1454	455	337	450												
	-M250M				775			1571	495	415	550												
	-M280S/M				870			1666	544	445	550	130											
HB123 HB122	-M132S	500	380	80	590	260	695	369	1155	267	206	300	450	150	265		39	110	200	100		28	M24
	-M132M							407	1193	267	206	300											
	-M160M							495	1315	324	226	350											
	-M160L				539			1359	324	226	350												
	-M180M/L				607			1427	369	282	350												
	-M200L				683			1515	405	312	400												
	-M225S/M				690			1550	455	337	450												
	-M250M				775			1670	495	415	550												
	-M280S/M				870			1765	544	445	550	150											
HB133 HB132	-M160M	580	500	100	670	270	790	495	1403	324	226	350	550	160	330		39	120	200	109		32	M24
	-M160L							539	1447	324	226	350											
	-M180M/L							607	1515	369	282	350											
	-M200L				683			1605	405	312	400												
	-M225S/M				690			1640	455	337	450												
	-M250M				775			1755	495	415	550												
	-M280S/M				870			1850	544	445	550	160											

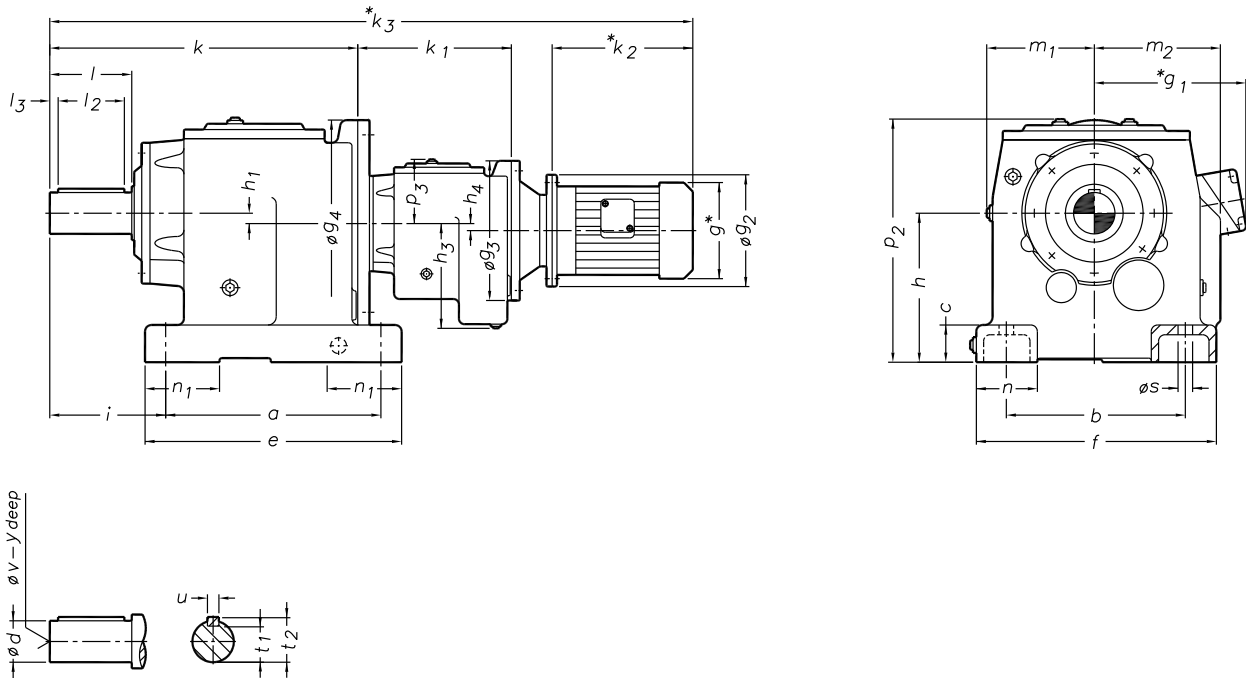
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2. Electric motors will be of B Type flange and with dimensions as per IEC:72 / IS:1231 & IS:2223
3. Asterick (*) marked dimensions g, g_1, k_1, k_2 and position of Terminal Box will vary with the make of the motor.
4. Dimensions are subject to change. Get certified dimensional drawing while ordering.
5. Special output extensions, on request.
6. For weight details, see Rating sheets.

**Helical Geared Motor, Tandem Casing, Base (Foot) Mounted
Motor Dimensions to IS/IEC Standards**

Type HB

PRINCIPAL DIMENSIONS (mm)

301



Size	a	c	e	h	h ₃	k	i	k ₂	k ₃	g	g ₁	g ₂	g ₃	n	m ₁	p ₂	d	l ₂	t ₁	u	v
	b	s	f	h ₁	h ₄	k ₁					g ₁ *	g ₂	g ₄	n ₁	m ₂	p ₃	l	l ₃	t ₂		y
HB042H032 -M63	165	24	195	115	98	235	90						120	42	76.5	186	30	55	26	8	M10
	135	13.5	170	14	10.1	165		202	648	124	114	140	160	50	89	62	60	1.5	33		24

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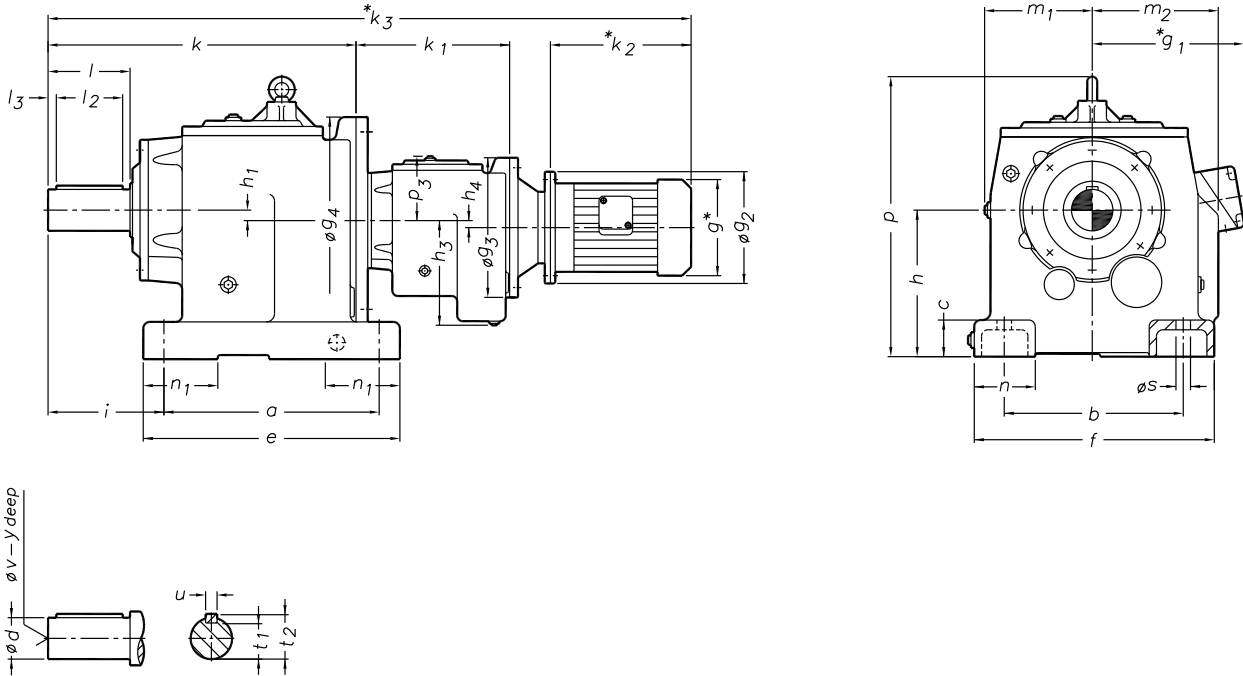
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Helical Geared Motor, Tandem Casing, Base (Foot) Mounted
Motor Dimensions to IS/IEC Standards

Type **HB**

PRINCIPAL DIMENSIONS (mm)

302



Size	a	c	e	h	h ₃	k	i	k ₂	k ₃	g	g ₁	g ₂	g ₃	n	m ₁	p	d	l ₂	t ₁	v		
	b	s	f	h ₁	h ₄	k ₁							g ₄	n ₁	m ₂	p ₃	l	l ₃	t ₂	u	y	
HB052H033 HB052H032 -M63	165	24	200	115	98	257	100						120	55	86	239	35 k6	65	30	10	M12	
	135	13.5	190	11.2	10.1	165		202	670	124	114	140	160	60	102	62	70	1.5	38		28	
HB062H033 HB062H032 -M63 -M71	195	30	235	130	98	280	100						120	60	92	264	35 k6	65	30	10	M12	
	150	14	210	20.7	10.1	165		231	729	139	120	160	160	60	105	62	70	1.5	38		28	
HB072H033 HB072H032 -M63 -M71 -M80	205	30	245	140	98	300	115						120	60	105	297	40 k6	70	35	12	M16	
				-0.5				202	705	124	114	140										
								231	741	139	120	160										
	170	17.5	230	15.9	10.1	157		227	750	157	127	200	200	60	120	62	80	2.5	43		32	

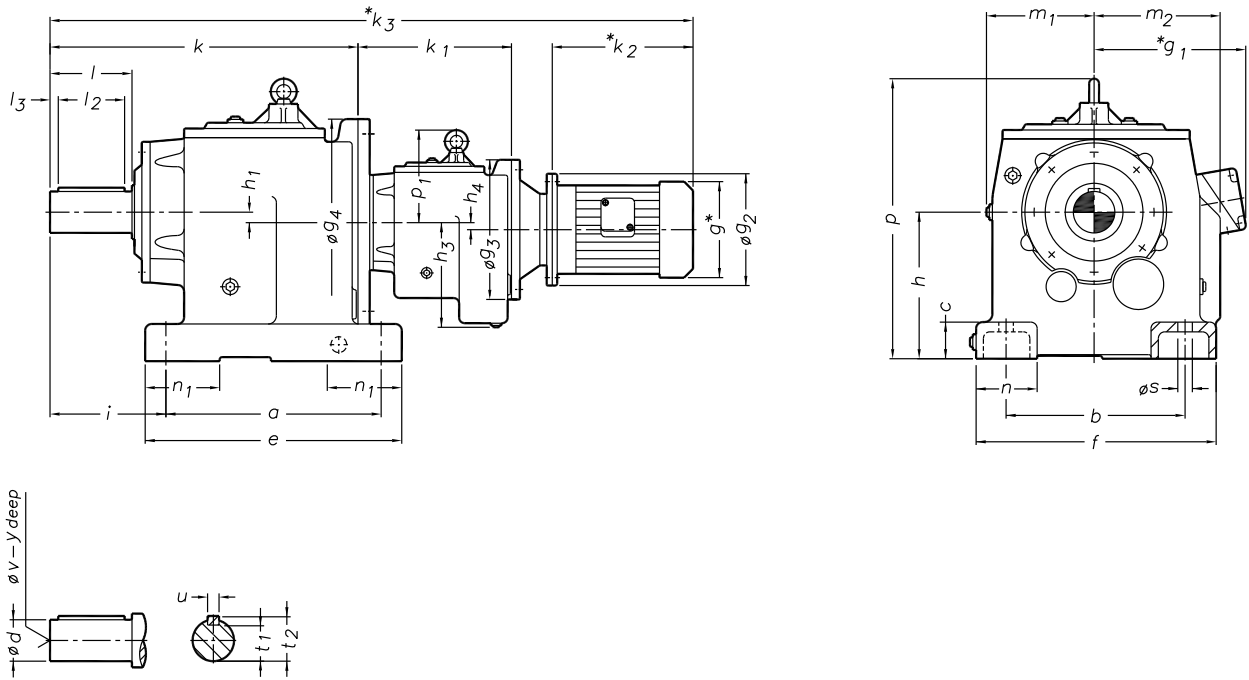
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Helical Geared Motor, Tandem Casing, Base (Foot) Mounted
Motor Dimensions to IS/IEC Standards

Type **HB**

PRINCIPAL DIMENSIONS (mm)

303



Size	a	c	e	h	h ₃	k	i	k ₂	k ₃	g	g ₁	g ₂	g ₃	n	m ₁	p	d	l ₂	t ₁	u	v
	b	s	f	h ₁	h ₄	k ₁							g ₄	n ₁	m ₂	p ₁	l	l ₃	t ₂		y
HB082H053 HB082H052	260	45	310	180 -0.5	122	372	140	202	839	124	114	140	160	75	130	367	50 k6	90	44.5	14	M16
								231	874	139	120	160									
								227	885	157	127	200									
	215	17.5	290	12.6	11.2	216							250	90	150	124	100	2.5	53.5		32
HB092H053 HB092H052	310	55	365	225 -0.5	122	440	160	202	902	124	114	140	160	90	156	449	60 m6	110	53	18	M20
								231	937	139	120	160									
								227	948	157	127	200									
								277	1008	181	142	200									
	250	22	340	10.2	11.2	211							300	100	174	124	120	2.5	64		40
HB102H073 HB102H072	370	65	440	250 -0.5	149	495	185	202	981	124	114	140	200	110	180	505	70 m6	130	62.5	20	M20
								231	1018	139	120	160									
								227	1034	157	127	200									
								277	1096	181	142	200									
	290	26	400	20.4	15.9	247							350	125	208	157	140	2.5	74.5		40

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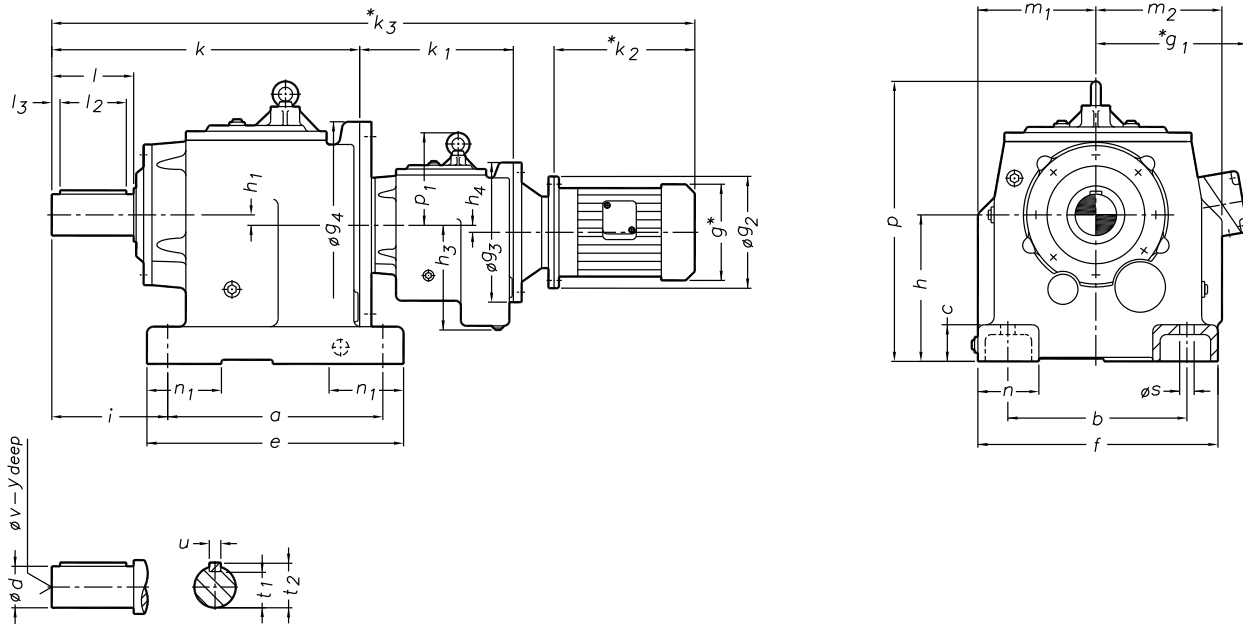
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Helical Geared Motor, Tandem Casing, Base (Foot) Mounted
Motor Dimensions to IS/IEC Standards

Type **HB**

PRINCIPAL DIMENSIONS (mm)

304



Size	a	c	e	h	h ₃	k	i	k ₂	k ₃	g	g ₁	g ₂	g ₃	n	m ₁	p	d	l ₂	t ₁	u	v					
	b	s	f	h ₁	h ₄	k ₁																g ₄	n ₁	m ₂	p ₁	l
HB113H073 HB112H073 HB112H072	-M63	410	70	490	315	149	589	220	202	1068	124	114	140	200	110	225	597	90	160	81	25	M24				
	-M71																						-1.0	139	120	160
	-M80																						157	127	200	
	-M90S/L	340	33	450	25.1	15.9	240		277	1183	181	142	200	400	130	225	157	170	2.5	95	50					
	-M100L								306	1230	202	162	250													
	-M112M								328	1252	227	182	250													
									328	1252	227	182	250													
HB123H073 HB123H072	-M63	500	80	590	355	149	695	260	202	1166	124	114	140	200	150	265	691	110	200	100	28	M24				
	-M71																						-1.0	139	120	160
	-M80																						157	127	200	
	-M90S/L	380	39	530	33.4	15.9	232		277	1281	181	142	200	450	150	265	157	210	2.5	116	50					
	-M100L								306	1328	202	162	250													
	-M112M								328	1350	227	182	250													
	-M132S								369	1416	267	206	300													
HB122H082	-M100L	500	80	590	355	189	695	260	306	1373	202	162	250	250	150	265	691	110	200	100	28	M24				
	-M112M								328	1395	227	182	250													
HB133H093 HB133H092	-M80	580	100	670	425	235	790	270	227	1390	157	127	200	300	160	330	828	120	200	109	32	M24				
	-M90S/L								277	1452	181	142	200													
	-M100L								306	1506	202	162	250													
	-M112M	328	1528	227	182	250	550		160	330	224	210	2.5	127	50											
	-M132S	369	1599	267	206	300																				
	-M132M	407	1637	267	206	300																				

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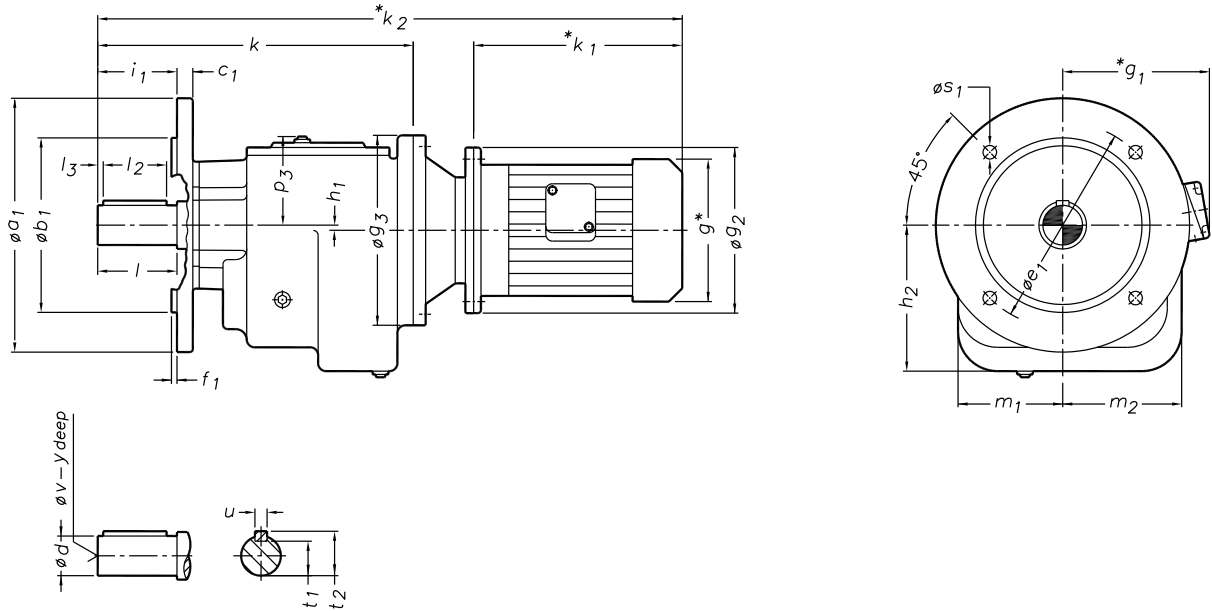
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- For weight details, see Rating sheets.

Helical Geared Motor, Flange Mounted
Motor Dimensions to IS/IEC Standards

Type **HF**
 Size **02**

201

PRINCIPAL DIMENSIONS (mm)



Size	a ₁	b ₁	c ₁	e ₁	f ₁	h ₁ h ₂	i ₁	k	k ₁	k ₂	g	g ₁	g ₂	m ₁ m ₂	p ₃ g ₃	s ₁	d l	l ₂ l ₃	t ₁ t ₂	u	v y
	HF023 -M63	160	110 j6	10	130	3.5	3.4	50	199	202	447	124	114	140	70	57	9	25 k6	45	21	8
HF023 -M71	231						483			139	120	160									
HF022 -M80	227						492			157	127	200									
HF022 -M90S/L	277						554			181	142	200	75	120	50	1.5	28	24			

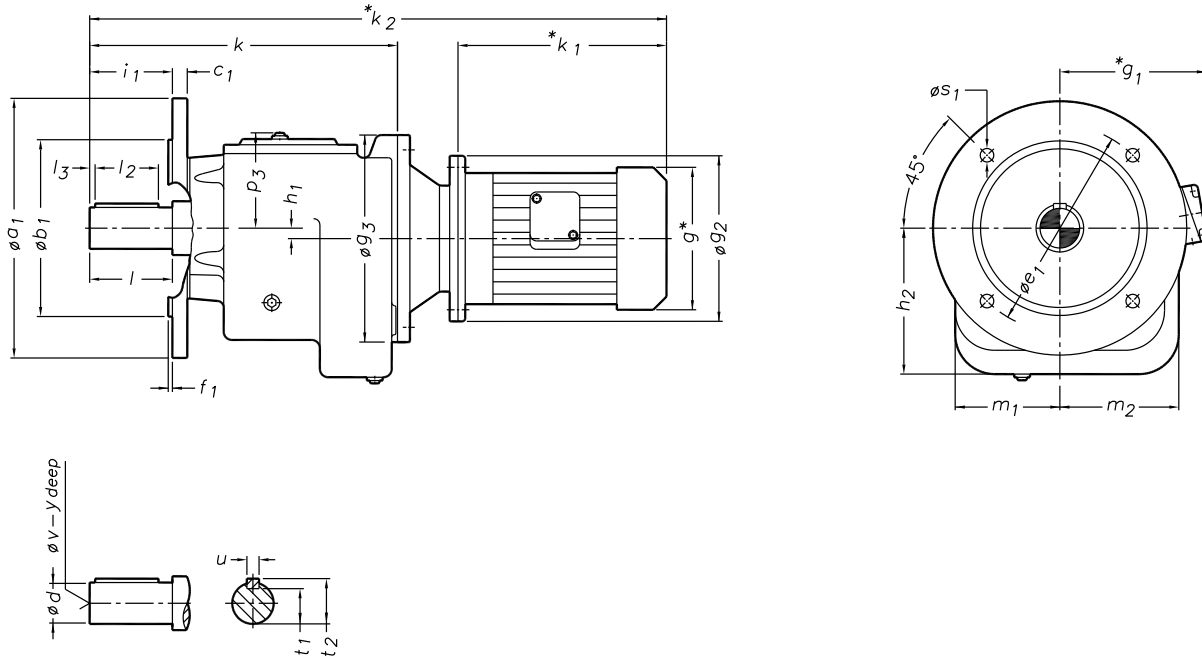
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Helical Geared Motor, Flange Mounted
Motor Dimensions to IS/IEC Standards

Type **HF**
 Size **03 & 04**

202

PRINCIPAL DIMENSIONS (mm)



Size	a ₁	b ₁	c ₁	e ₁	f ₁	h ₁ h ₂	i ₁	k	k ₁	k ₂	g	g ₁	g ₂	m ₁ m ₂	p ₃ g ₃	s ₁	d l	l ₂ l ₃	t ₁ t ₂	u	v y
	HF033 -M63	160	110 j ₆	10	130	3.5	10.1	50	207	202	455	124	114	140	66.5	62	9	25 k ₆	45	21	8
HF032 -M71	231									491	139	120	160								
HF032 -M80	227									500	157	127	200								
HF032 -M90S/L	277									562	181	142	200	82	120						
HF043 -M63	200	130 j ₆	12	165	3.5	14	60	235	202	486	124	114	140	76.5	71	11	30 k ₆	55	26	8	M10
HF042 -M71						231			521	139	120	160									
HF042 -M80						227			532	157	127	200									
HF042 -M90S/L						277			592	181	142	200	89	160							
HF042 -M100L						306			641	202	162	250	60	1.5	33						

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3. Asterick (*) marked dimensions g, g₁, k₁, k₂ and position of Terminal Box will vary with the make of the motor.

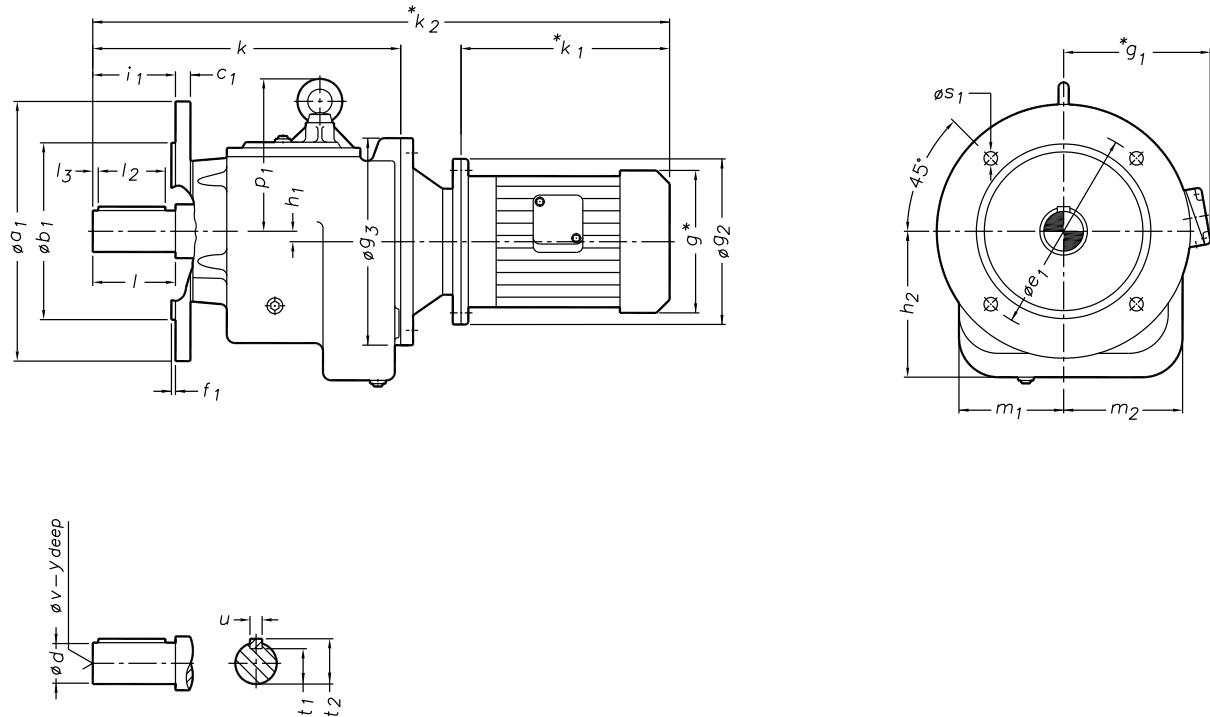
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6. For weight details, see Rating sheets.

Helical Geared Motor, Flange Mounted
Motor Dimensions to IS/IEC Standards

Type **HF**
 Size **05 & 06**

PRINCIPAL DIMENSIONS (mm)

203



Size	α_1	b_1	c_1	e_1	f_1	h_1	i_1	k	k_1	k_2	g	g_1	g_2	m_1	p_1	s_1	d	l_2	t_1	u	v	
						h_2								m_2	g_3		l	l_3	t_2		y	
HF053 HF052	-M63	200	130 j_6	12	165	3.5	11.2	70	257	202	508	124	114	140	86	124	11	35 k_6	65	30	10	M12
	-M71									231	543	139	120	160								
	-M80									227	554	157	127	200								
	-M90S/L									277	614	181	142	200								
	-M100L									306	663	202	162	250								
	-M112M									328	685	227	182	250								
HF063 HF062	-M63	200	130 j_6	12	165	3.5	20.7	70	280	202	531	124	114	140	92	134	11	35 k_6	65	30	10	M12
	-M71									231	566	139	120	160								
	-M80									227	577	157	127	200								
	-M90S/L									277	637	181	142	200								
	-M100L									306	686	202	162	250								
	-M112M									328	708	227	182	250								
	-M132S						369	775	267	206	300	105	160	70	1.5	38	28					
	-M132M						407	813	267	206	300											

- Gear unit portion is of "Shanthi" make. Make of Electric motors will be Bharat Bijlee, Crompton, Kirloskar, Siemens etc.,
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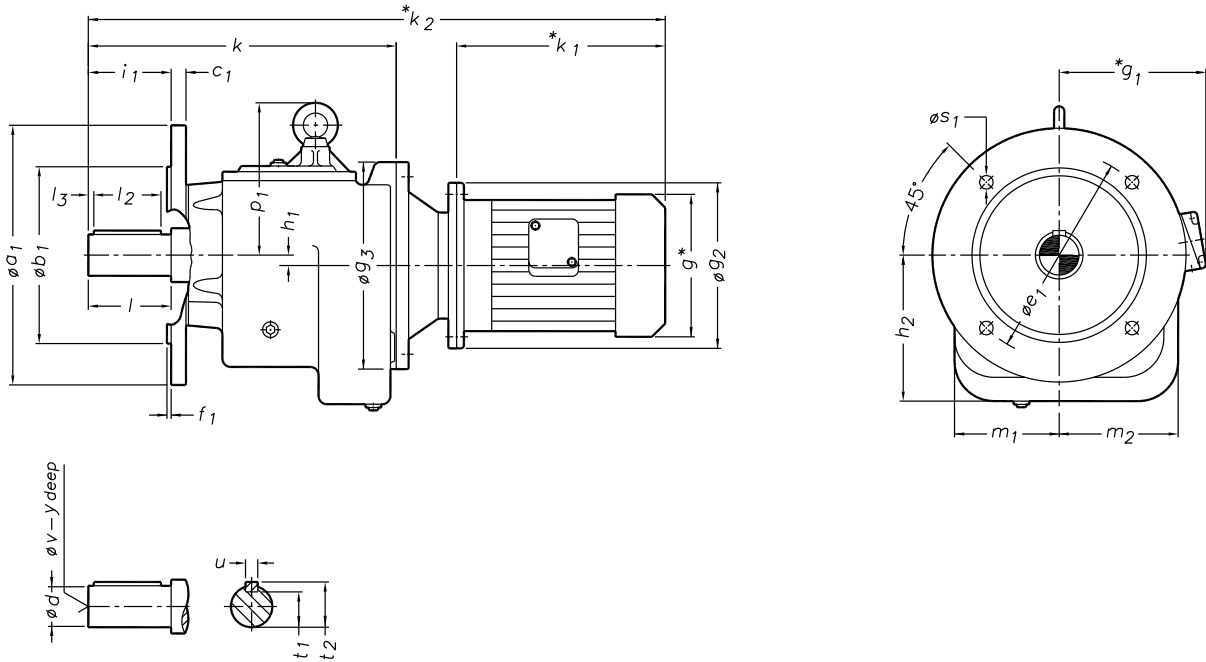
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Helical Geared Motor, Flange Mounted
Motor Dimensions to IS/IEC Standards

Type HF
Size 07 & 08

PRINCIPAL DIMENSIONS (mm)

204



Size	a ₁	b ₁	c ₁	e ₁	f ₁	h ₁ h ₂	i ₁	k	k ₁	k ₂	g	g ₁	g ₂	m ₁ m ₂	p ₁ g ₃	s ₁	d l	l ₂ l ₃	t ₁ t ₂	u	v y
	HF073 -M63	250	180 j ₆	15	215	4	15.9	80	300	202	539	124	114	140	105	157	13.5	40 k ₆	70	35	12
-M71	231						576			139	120	160									
-M80	227						592			157	127	200									
-M90S/L	277						654			181	142	200									
-M100L	306						701			202	162	250									
HF072 -M112M	328						723			227	182	250									
-M132S	369						789			267	206	300									
-M132M	407						827			267	206	300									
-M160M	495						960			324	226	350									
-M160L	539						1004			324	226	350									
HF083 -M80	350	250 h ₆	18	300	5	12.6	100	372	227	658	157	127	200	130	187	17.5	50 k ₆	90	44.5	14	M16
-M90S/L						277			722	181	142	200									
-M100L						306			770	202	162	250									
-M112M						328			792	227	182	250									
-M132S						369			861	267	206	300									
-M132M						407			899	267	206	300									
-M160M						495			1027	324	226	350									
-M160L						539			1071	324	226	350									
HF082 -M180M/L						607			1139	369	282	350									
						189															
														150	250		100	2.5	53.5		32

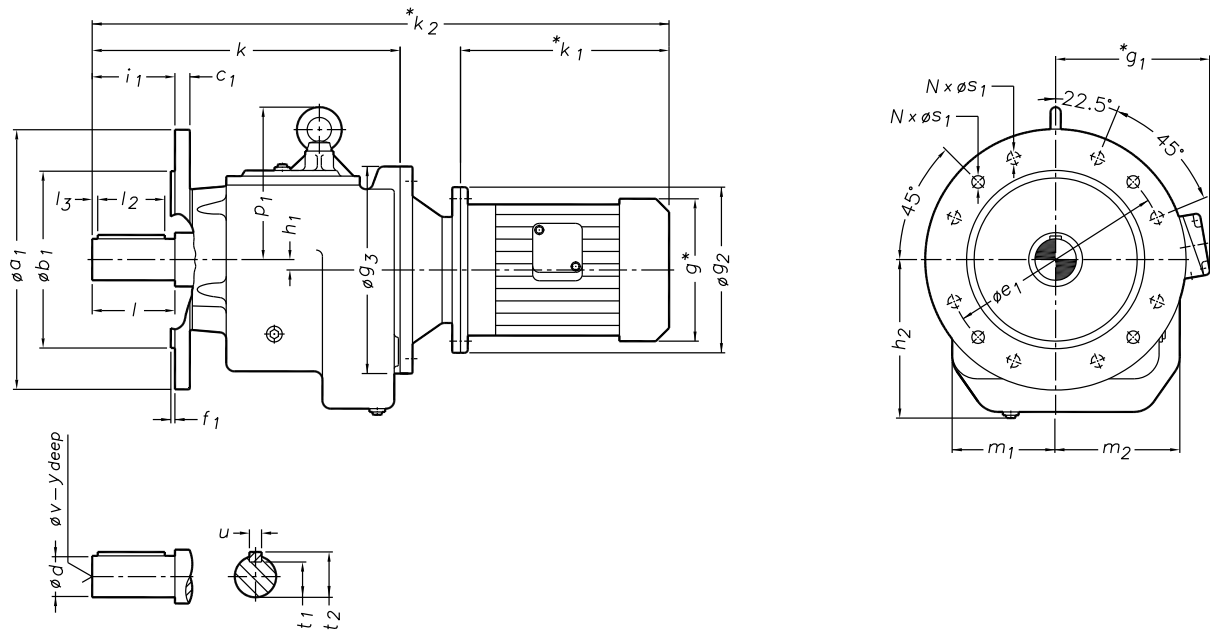
- Gear unit portion is of "Shanthi" make. Make of Electric motors will be Bharat Bijlee, Crompton, Kirloskar, Siemens etc.,
- Electric motors will be of B Type flange and with dimensions as per IEC:72 / IS:1231 & IS:2223
- Asterick (*) marked dimensions g, g₁, k₁, k₂ and position of Terminal Box will vary with the make of the motor.
- Dimensions are subject to change. Get certified dimensional drawing while ordering.
- Special output extensions, on request.
- For weight details, see Rating sheets.

**Helical Geared Motor, Flange Mounted
Motor Dimensions to IS/IEC Standards**

Type HF
Size 09 & 10

PRINCIPAL DIMENSIONS (mm)

205



Size	a ₁	b ₁	c ₁	e ₁	f ₁	h ₁ h ₂	i ₁	k	k ₁	k ₂	g	g ₁	g ₂	m ₁ m ₂	p ₁ p ₂	N	s ₁	d l	l ₂ l ₃	t ₁ t ₂	u	v y	
HF093 HF092	-M80	350	250 h ₆	18	300	5	120	440	227	715	157	127	200	156	224	4	nos.	17.5	60 m ₆	110	53	18	M20
	-M90S/L								277	777	181	142	200										
	-M100L								306	831	202	162	250										
	-M112M								328	853	227	182	250										
	-M132S								369	924	267	206	300										
	-M132M								407	962	267	206	300										
	-M160M								495	1085	324	226	350										
	-M160L								539	1129	324	226	350										
	-M180M/L								607	1197	369	282	350										
	-M200L								683	1283	405	312	400										
	-M225S/M								690	1325	455	337	450										
	HF103 HF102								-M90L	450	350 h ₆	22	400										
-M100L		306	881	202	162	250																	
-M112M		328	903	227	182	250																	
-M132S		369	968	267	206	300																	
-M132M		407	1006	267	206	300																	
-M160M		495	1135	324	226	350																	
-M160L		539	1179	324	226	350																	
-M180M/L		607	1247	369	282	350																	
-M200L		683	1343	405	312	400																	
-M225S/M		690	1370	455	337	450																	
-M250M		775	1475	495	415	550																	

1. Gear unit portion is of "Shanthi" make. Make of Electric motors will be Bharat Bijlee, Crompton, Kirloskar, Siemens etc.,
2. Electric motors will be of B Type flange and with dimensions as per IEC:72 / IS:1231 & IS:2223
3. Asterick (*) marked dimensions g, g₁, k₁, k₂ and position of Terminal Box will vary with the make of the motor.

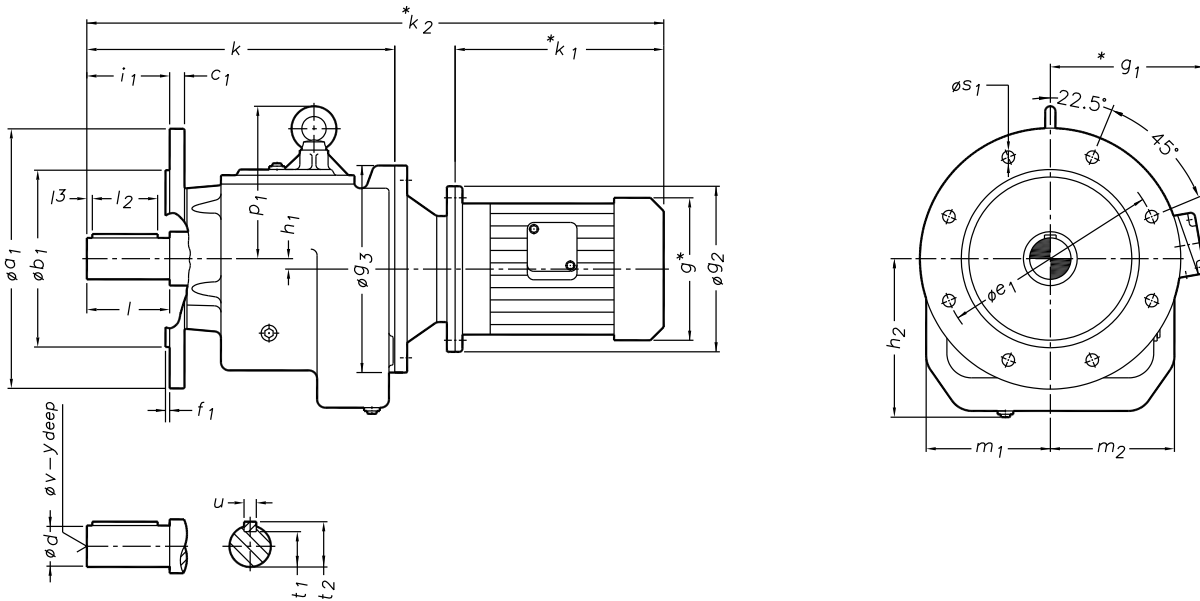
4. Dimensions are subject to change. Get certified dimensional drawing while ordering.
5. Special output extensions, on request.
6. For weight details, see Rating sheets.

Helical Geared Motor, Flange Mounted
Motor Dimensions to IS/IEC Standards

Type **HF**
 Size **11-13**

PRINCIPAL DIMENSIONS (mm)

206



Size	a ₁	b ₁	c ₁	e ₁	f ₁	h ₁ h ₂	i ₁	k	k ₁	k ₂	g	g ₁	g ₂	m ₁ m ₂	p ₁ g ₃	s ₁	d l	l ₂ l ₃	t ₁ t ₂	u	v y			
HF113 HF112	450	350 h ₆	22	400	5	25.1	170	589	369	1053	267	206	300	225	282	17.5	90 m ₆	160	81	25	M24			
									407	1091	267	206	300											
									495	1219	324	226	350											
						539			1263	324	226	350	225	400	170							2.5	95	50
						607			1331	369	282	350												
						683			1416	405	312	400												
						690			1454	455	337	450	225	400	170							2.5	95	50
						775			1571	495	415	550												
						870			1666	544	445	550												
HF123 HF122	550	450 h ₆	25	500	5	33.4	210	695	369	1155	267	206	300	265	336	17.5	110 m ₆	200	100	28	M24			
									407	1193	267	206	300											
									495	1315	324	226	350											
						539			1359	324	226	350	265	450	210							2.5	116	50
						607			1427	369	282	350												
						683			1515	405	312	400												
						690			1550	455	337	450	265	450	210							2.5	116	50
						775			1670	495	415	550												
						870			1765	544	445	550												
HF133 HF132	660	550 h ₆	28	600	6	59.9	210	790	495	1403	324	226	350	330	403	22	120 m ₆	200	109	32	M24			
									539	1447	324	226	350											
									607	1515	369	282	350											
						607			1515	369	282	350	330	550	210							2.5	127	50
						683			1605	405	312	400												
						690			1640	455	337	450												
						775			1755	495	415	550	330	550	210							2.5	127	50
870	1850	544	445	550																				

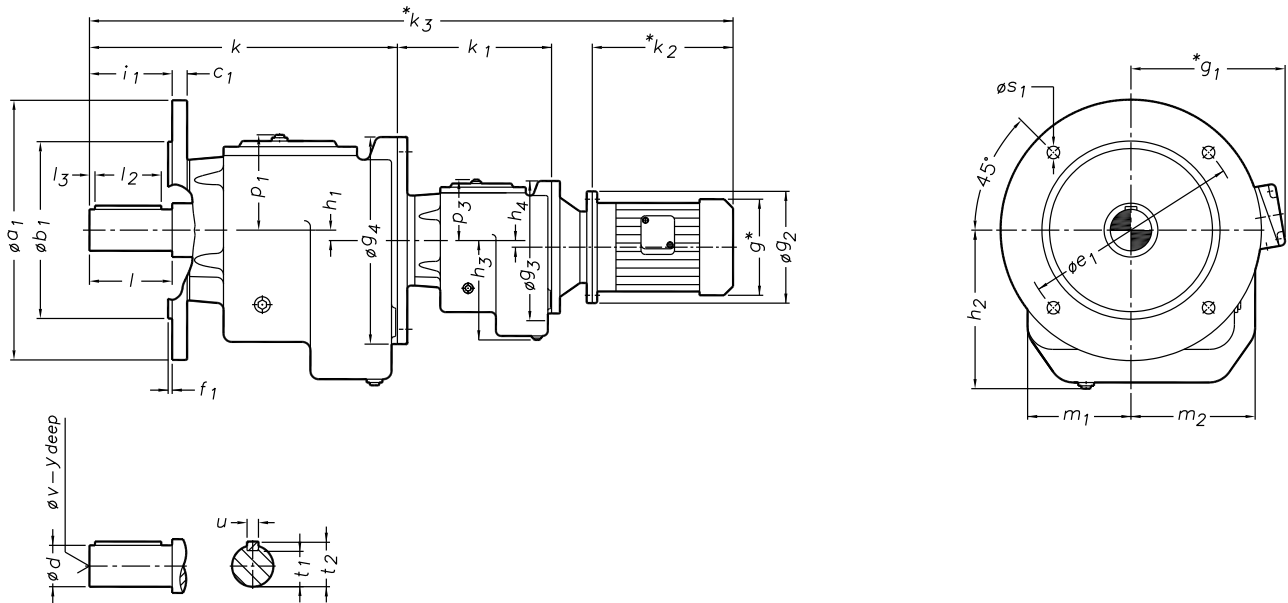
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- Dimensions are subject to change. Get certified dimensional drawing while ordering.
- Special output extensions, on request.
- For weight details, see Rating sheets.

Helical Geared Motor, Tandem Casing, Flange Mounted
Motor Dimensions to IS/IEC Standards

Type **HF**

PRINCIPAL DIMENSIONS (mm)

401



Size	a_1 i_1	b_1	c_1 s_1	e_1 f_1	h_1 h_2	h_3 h_4	k k_1	k_2	k_3	g	g_1	g_2	g_3 g_4	m_1 m_2	p_1 p_3	d l	l_2 l_3	t_1 t_2	u	v y
HF042H032 -M63	200	130 j_6	12	165	14	98	235						120	76.5	71	30 k6	55	26	8	M10
	60		11	3.5	122	10.1	165	202	648	124	114	140	160	89	62	60	1.5	33		24

- Gear unit portion is of "Shanthi" make. Make of Electric motors will be Bharat Bijlee, Crompton, Kirloskar, Siemens etc.,
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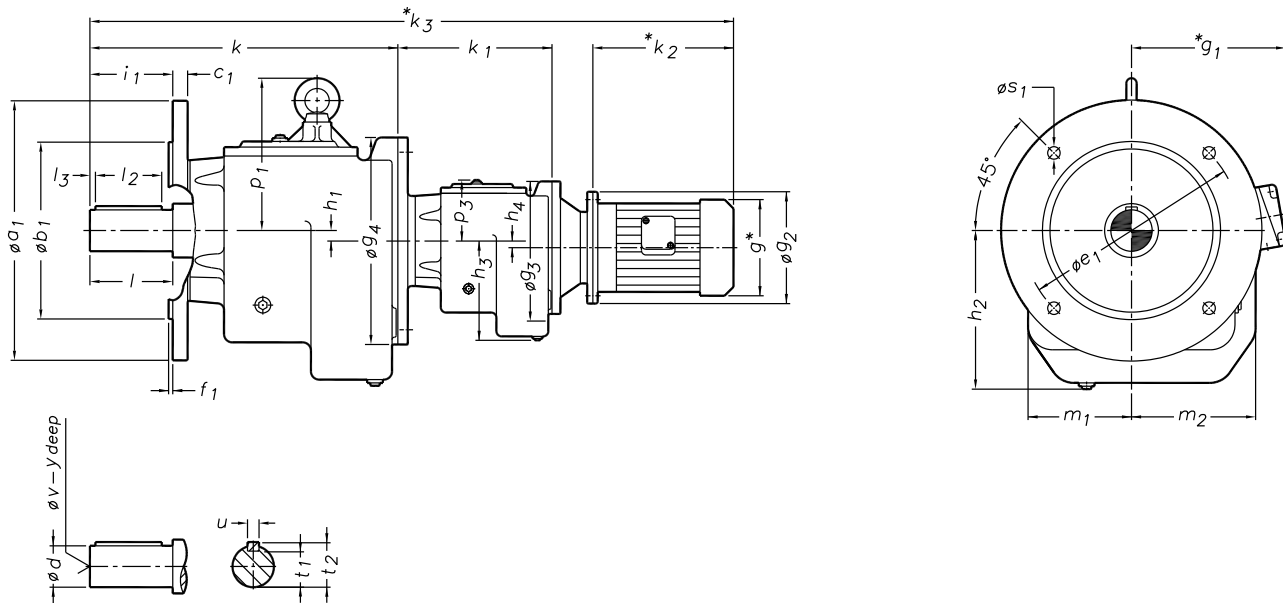
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Helical Geared Motor, Tandem Casing, Flange Mounted
Motor Dimensions to IS/IEC Standards

Type HF

PRINCIPAL DIMENSIONS (mm)

402



Size	a ₁ i ₁	b ₁	c ₁ s ₁	e ₁ f ₁	h ₁ h ₂	h ₃ h ₄	k k ₁	k ₂	k ₃	g	g ₁	g ₂	g ₃ g ₄	m ₁ m ₂	p ₁ p ₃	d l	l ₂ l ₃	t ₁ t ₂	u	v y	
HF052H033 HF052H032	-M63	200	130 j ₆	12	165	11.2	98	257													
		70		11	3.5	122	10.1	165	202	670	124	114	140	120	86	124	35 k ₆	65	30	10	M12
HF062H033 HF062H032	-M63	200	130 j ₆	12	165	20.7	98	280													
	-M71	70		11	3.5	138	10.1	165	202	693	124	114	140	120	92	134	35 k ₆	65	30	10	M12
HF072H033 HF072H032	-M63	250	180 j ₆	15	215	15.9	98	300													
	-M71								202	705	124	114	140	120	105	157	40 k ₆	70	35	12	M16
	-M80	80		13.5	4	149	10.1	157	227	750	157	127	200	200	120	62	80	2.5	43		32

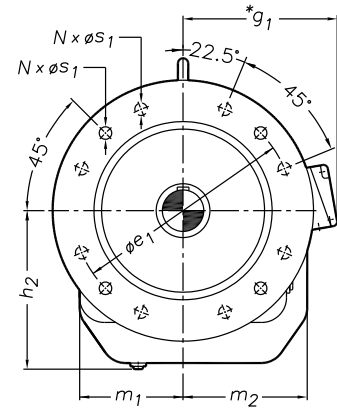
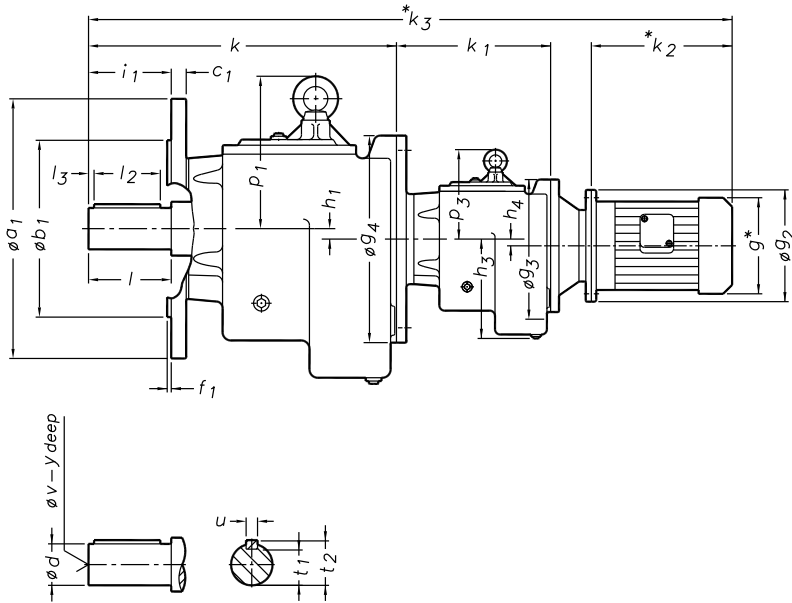
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Helical Geared Motor, Tandem Casing, Flange Mounted
Motor Dimensions to IS/IEC Standards

Type **HF**

PRINCIPAL DIMENSIONS (mm)

403



Size	a_1	b_1	c_1	e_1	h_1	h_3	k	k_2	k_3	g	g_1	g_2	g_3	N	m_1	p_1	d	l_2	t_1	u	v								
	i_1	b_1	s_1	f_1	h_2	h_4	k_1															g_4	m_2	p_3	l	l_3	t_2	y	
HF082H053 HF082H052	-M63	350	250 h6	18	300	12.6	122	372	202	839	124	114	140	160	4 nos.	130	187	50 k6	90	44.5	14	M16							
	-M71								231	874	139	120	160																
	-M80	100		17.5	5	189	11.2	216	227	885	157	127	200										250	150	124	100	2.5	53.5	32
HF092H053 HF092H052	-M63	350	250 h6	18	300	10.2	122	440	202	902	124	114	140	160	4 nos.	156	224	60 m6	110	53	18	M20							
	-M71								231	937	139	120	160																
	-M80	120		17.5	5	235	11.2	211	227	948	157	127	200										300	174	124	120	2.5	64	40
	-M90S								277	1008	181	142	200																
HF102H073 HF102H072	-M63	450	350 h6	22	400	20.4	149	495	202	981	124	114	140	200	8 nos.	180	255	70 m6	130	62.5	20	M20							
	-M71								231	1018	139	120	160																
	-M80	140		17.5	5	260	15.9	247	227	1034	157	127	200										350	208	157	140	2.5	74.5	40
	-M90S/L								277	1096	181	142	200																

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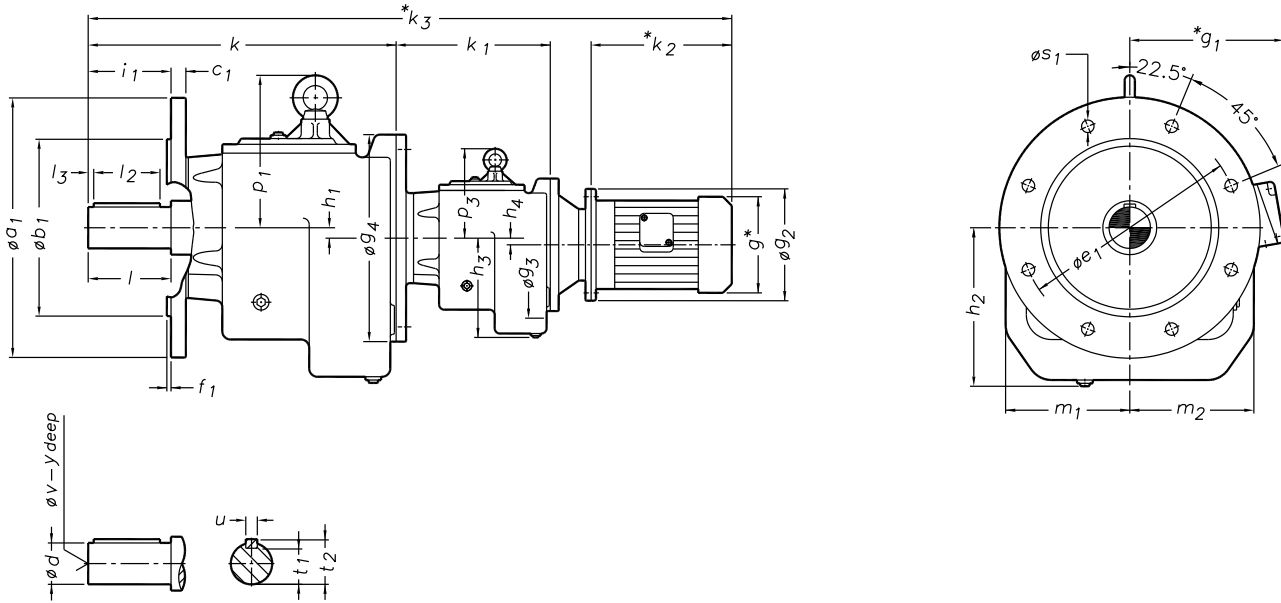
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5. Special output extensions, on request.
6. For weight details, see Rating sheets.

Helical Geared Motor, Tandem Casing, Flange Mounted
Motor Dimensions to IS/IEC Standards

Type **HF**

PRINCIPAL DIMENSIONS (mm)

404



Size	a_1 i_1	b_1	c_1 s_1	e_1 f_1	h_1 h_2	h_3 h_4	k k_1	k_2	k_3	g	g_1	g_2	g_3 g_4	m_1 m_2	p_1 p_3	d l	l_2 l_3	t_1 t_2	u	v y	
HF113H073 HF112H073 HF112H072	-M63 -M71	450	22	400	25.1	149	589	202	1068	124	114	140	200	225	282	90 m6	160	81	25	M24	
								231	1105	139	120	160									
								227	1121	157	127	200									
	-M80 -M90S/L -M100L -M112M	170	350 h6	17.5	5	326	15.9	240	306	1230	202	162	250	400	225	157	170	2.5	95	50	
									328	1252	227	182	250								
HF123H073 HF123H072	-M63 -M71	550	25	500	33.4	149	695	202	1166	124	114	140	200	265	336	110 m6	200	100	28	M24	
								231	1203	139	120	160									
								227	1219	157	127	200									
	-M80 -M90S/L -M100L -M112M -M132S	210	450 h6	17.5	5	367	15.9	232	306	1328	202	162	250	450	265	157	210	2.5	116	50	
									328	1350	227	182	250								
									369	1416	267	206	300								
HF122H082	-M100L -M112M	550	25	500	33.4	189	695	306	1373	202	162	250	250	265	336	110 m6	200	100	28	M24	
								328	1395	227	182	250									
HF133H093 HF133H092	-M80 -M90S/L	660	28	600	59.9	235	790	227	1390	157	127	200	300	330	403	120 m6	200	109	32	M24	
								277	1452	181	142	200									
								306	1506	202	162	250									
	-M100L -M112M -M132S -M132M	210	550 h6	22	6	436	10.2	325	328	1528	227	182	250	550	330	224	210	2.5	127	50	
									369	1599	267	206	300								
									407	1637	267	206	300								

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- Electric motors will be of B Type flange and with dimensions as per IEC:72 / IS:1231 & IS:2223
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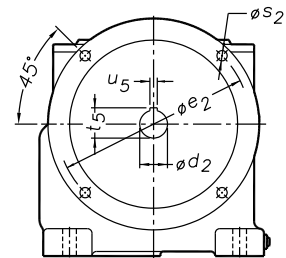
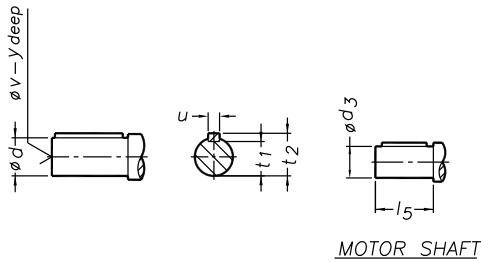
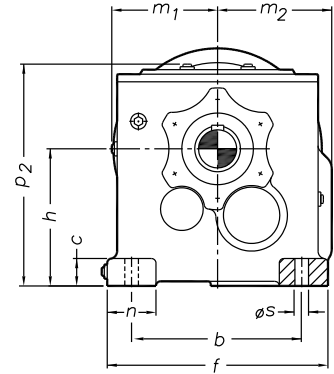
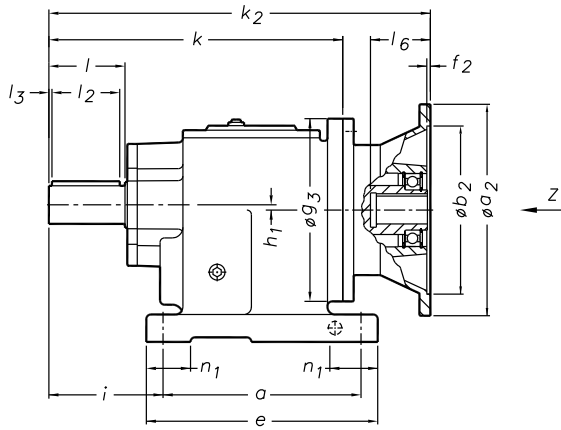
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- Special output extensions, on request.
- For weight details, see Rating sheets.

**Helical Gear Unit, Base (Foot) Mounted with Input Adaptor Flange
for Flange Mounted Motor to IS/IEC Standards**

Type HB
Size 02

PRINCIPAL DIMENSIONS (mm)

111



VIEW-Z

Size	a	c	e	h	i	k ₂	a ₂	b ₂	e ₂	f ₂	d ₂	d ₃	l ₅	l ₆	t ₅	u ₅	s ₂	n	m ₁	p ₂	d	l ₂	t ₁	u	v																			
	b	s	f	h ₁	k	α ₂	(H7)	(G7)							(Js9)	n ₁	m ₂	g ₃	l	l ₃	t ₂		y																					
HB023	-A63	130	18	152	90	75	239	140	95	115	3.5	11	11	23	25	12.8	4	9	32	70	147	25	45	21	8	M10																		
	-A71																																											
HB022	-A80																										110	9	145	3.4	193	259	200	130	165	4	19	19	40	42	21.8	6	11	27
	-A90																																											

1. Electric motor to be used should be of B type flange with dimensions as per IEC:72 / IS:1231 & IS:2223 and complete with key on the shaft extension.
2. Dimensions are subject to change. Get certified dimensional drawing while ordering.

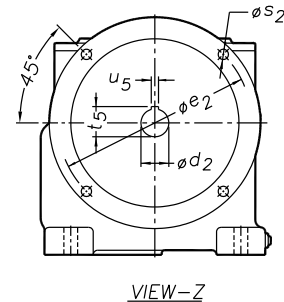
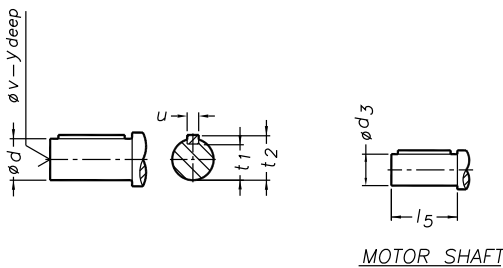
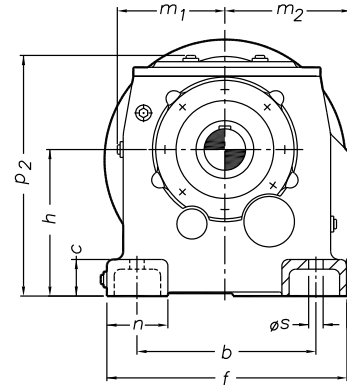
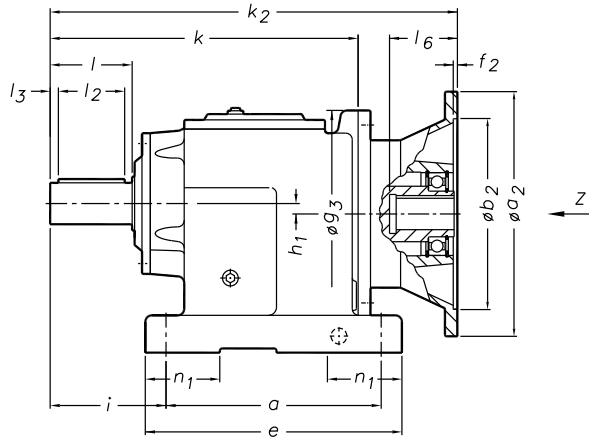
3. Special output extensions, on request.
4. For weight details, see Rating sheets.
5. Our supply includes the required screws, nuts & washers to fix the motor on to the input adaptor flange.

**Helical Gear Unit, Base (Foot) Mounted with Input Adaptor Flange
for Flange Mounted Motor to IS/IEC Standards**

Type **HB**
Size **03 & 04**

PRINCIPAL DIMENSIONS (mm)

112



Size	a	c	e	h	i	k ₂	α ₂	b ₂	e ₂	f ₂	d ₂	d ₃	l ₅	l ₆	t ₅	u ₅	s ₂	n	m ₁	p ₂	d	l ₂	t ₁	u	v													
	b	s	f	h ₁	k	k ₂	(H7)	e ₂	f ₂	(G7)	d ₃	l ₅	l ₆	t ₅	(Js9)	s ₂	n ₁	m ₂	g ₃	l	l ₃	t ₂	t ₂	u	y													
HB033	-A63	130	18	160	90	75	247	140	95	115	3.5	11	11	23	25	12.8	4	9	35	66.5	152	25	45	21	8	M10												
	-A71																										-0.5	254	160	110	130	4	14	14	30	32	16.3	5
HB032	-A80	110	9	145	10.1	201	267	200	130	165	4	19	19	40	42	21.8	6	11	40	82	120	50	1.5	28	8	24												
	-A90																										279	200	130	165	4	24	24	50	52	27.3	8	11
HB043	-A63	165	24	195	115	90	284	140	95	115	3.5	11	11	23	25	12.8	4	9	42	76.5	186	30	55	26	8	M10												
	-A71																										-0.5	290	160	110	130	4	14	14	30	32	16.3	5
HB042	-A80	135	13.5	170	14	235	305	200	130	165	4	19	19	40	42	21.8	6	11	50	89	160	60	1.5	33	8	24												
	-A90																										315	200	130	165	4	24	24	50	52	27.3	8	11
	-A100																										335	250	180	215	5	28	28	60	62	31.3	8	13.5

1. Electric motor to be used should be of B type flange with dimensions as per IEC:72 / IS:1231 & IS:2223 and complete with key on the shaft extension.
2. Dimensions are subject to change. Get certified dimensional drawing while ordering.

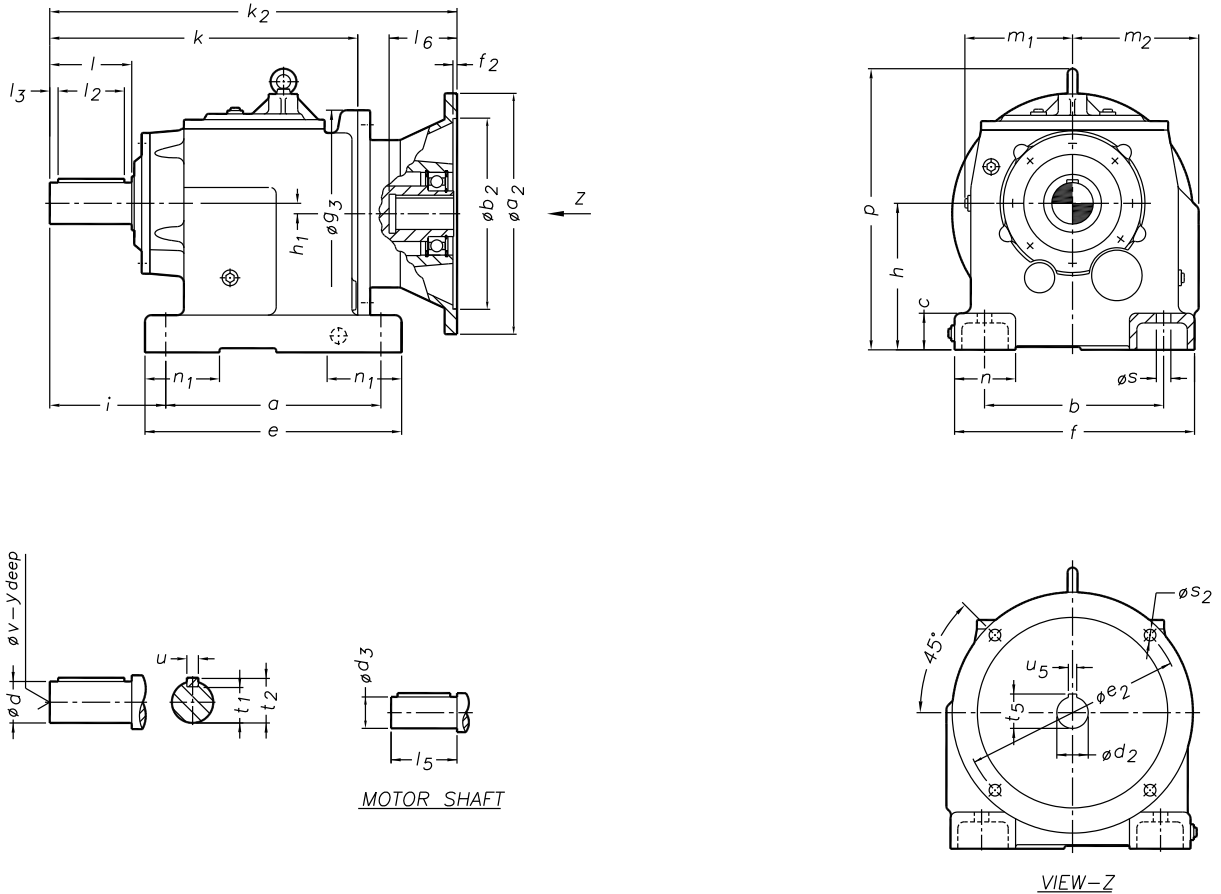
3. Special output extensions, on request.
4. For weight details, see Rating sheets.
5. Our supply includes the required screws, nuts & washers to fix the motor on to the input adaptor flange.

**Helical Gear Unit, Base (Foot) Mounted with Input Adaptor Flange
for Flange Mounted Motor to IS/IEC Standards**

Type **HB**
Size **05 & 06**

113

PRINCIPAL DIMENSIONS (mm)



Size	a	c	e	h	i	k	a ₂	b ₂	e ₂	f ₂	d ₂	d ₃	l ₅	l ₆	t ₅	u ₅	s ₂	n	m ₁	p	d	l ₂	t ₁	u	v	
	b	s	f	h ₁	k	k ₂	(H7)	(H7)	e ₂	f ₂	(G7)	d ₃	l ₅	l ₆	t ₅	(Js9)	s ₂	n ₁	m ₂	g ₃	l	l ₃	t ₂	u	y	
HB053	-A63	165	24	200	115	100	306	140	95	115	3.5	11	11	23	25	12.8	4	9	55	86	239	35	65	30	10	M12
	-A71						312	160	110	130	4	14	14	30	32	16.3	5	9								
	-A80						327	200	130	165	4	19	19	40	42	21.8	6	11								
HB052	-A90	135	13.5	190	11.2	257	337	200	130	165	4	24	24	50	52	27.3	8	11	60	102	160	70	1.5	38	28	
	-A100/112						357	250	180	215	5	28	28	60	62	31.3	8	13.5								
HB063	-A63	195	30	235	130	100	329	140	95	115	3.5	11	11	23	25	12.8	4	9	60	92	264	35	65	30	10	M12
	-A71						335	160	110	130	4	14	14	30	32	16.3	5	9								
	-A80						350	200	130	165	4	19	19	40	42	21.8	6	11								
HB062	-A90	150	14	210	20.7	280	360	200	130	165	4	24	24	50	52	27.3	8	11	60	105	160	70	1.5	38	28	
	-A100/112						380	250	180	215	5	28	28	60	62	31.3	8	13.5								
	-A132						406	300	230	265	5	38	38	80	82	41.3	10	13.5								

- Electric motor to be used should be of B type flange with dimensions as per IEC:72 / IS:1231 & IS:2223 and complete with key on the shaft extension.
- Dimensions are subject to change. Get certified dimensional drawing while ordering.

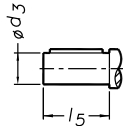
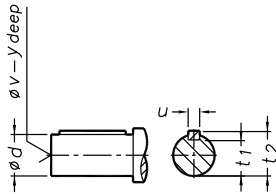
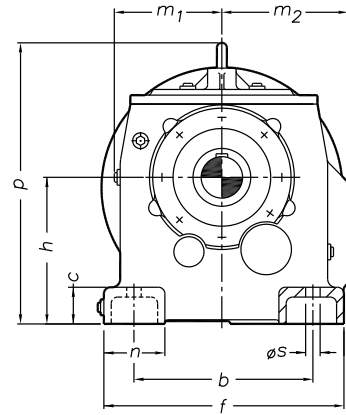
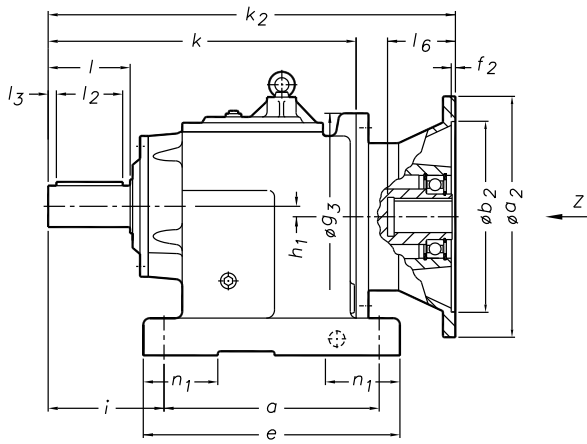
- Special output extensions, on request.
- For weight details, see Rating sheets.
- Our supply includes the required screws, nuts & washers to fix the motor on to the input adaptor flange.

**Helical Gear Unit, Base (Foot) Mounted with Input Adaptor Flange
for Flange Mounted Motor to IS/IEC Standards**

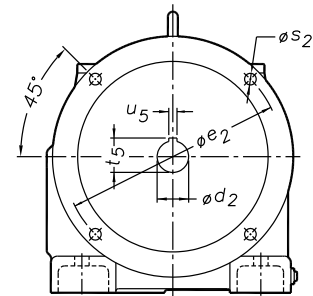
Type **HB**
Size **07 & 08**

PRINCIPAL DIMENSIONS (mm)

114



MOTOR SHAFT



VIEW-Z

Size	a	c	e	h	i	k ₂	a ₂	b ₂	e ₂	f ₂	d ₂	d ₃	l ₅	l ₆	t ₅	u ₅	s ₂	n	m ₁	p	d	l ₂	t ₁	u	v	
	b	s	f	h ₁	k		(H7)			(G7)					(Js9)		n ₁	m ₂	g ₃	l	l ₃	t ₂		y		
HB073 HB072	-A63	205	30	245	140	115	337	140	95	115	3.5	11	11	23	25	12.8	4	9	60	105	297	40	70	35	M16	
	-A71						345	160	110	130	4	14	14	30	32	16.3	5	9								k ₆
	-A80						365	200	130	165	4	19	19	40	42	21.8	6	11								
	-A90	170	17.5	230	15.9	300	377	200	130	165	4	24	24	50	52	27.3	8	11	60	120	200	80	2.5	43	32	
	-A100/112						395	250	180	215	5	28	28	60	62	31.3	8	13.5								
	-A132						420	300	230	265	5	38	38	80	82	41.3	10	13.5								
	-A160						465	350	250	300	6	42	42	110	112	45.3	12	17.5								
HB083 HB082	-A80	260	45	310	180	140	431	200	130	165	4	19	19	40	42	21.8	6	11	75	130	367	50	90	44.5	M16	
	-A90						445	200	130	165	4	24	24	50	52	27.3	8	11								k ₆
	-A100/112						464	250	180	215	5	28	28	60	62	31.3	8	13.5								
	-A132	215	17.5	290	12.6	372	492	300	230	265	5	38	38	80	82	41.3	10	13.5	90	150	250	100	2.5	53.5	32	
	-A160						532	350	250	300	6	42	42	110	112	45.3	12	17.5								
	-A180						532	350	250	300	6	48	48	110	112	51.8	14	17.5								

- Electric motor to be used should be of B type flange with dimensions as per IEC:72 / IS:1231 & IS:2223 and complete with key on the shaft extension.
- Dimensions are subject to change. Get certified dimensional drawing while ordering.

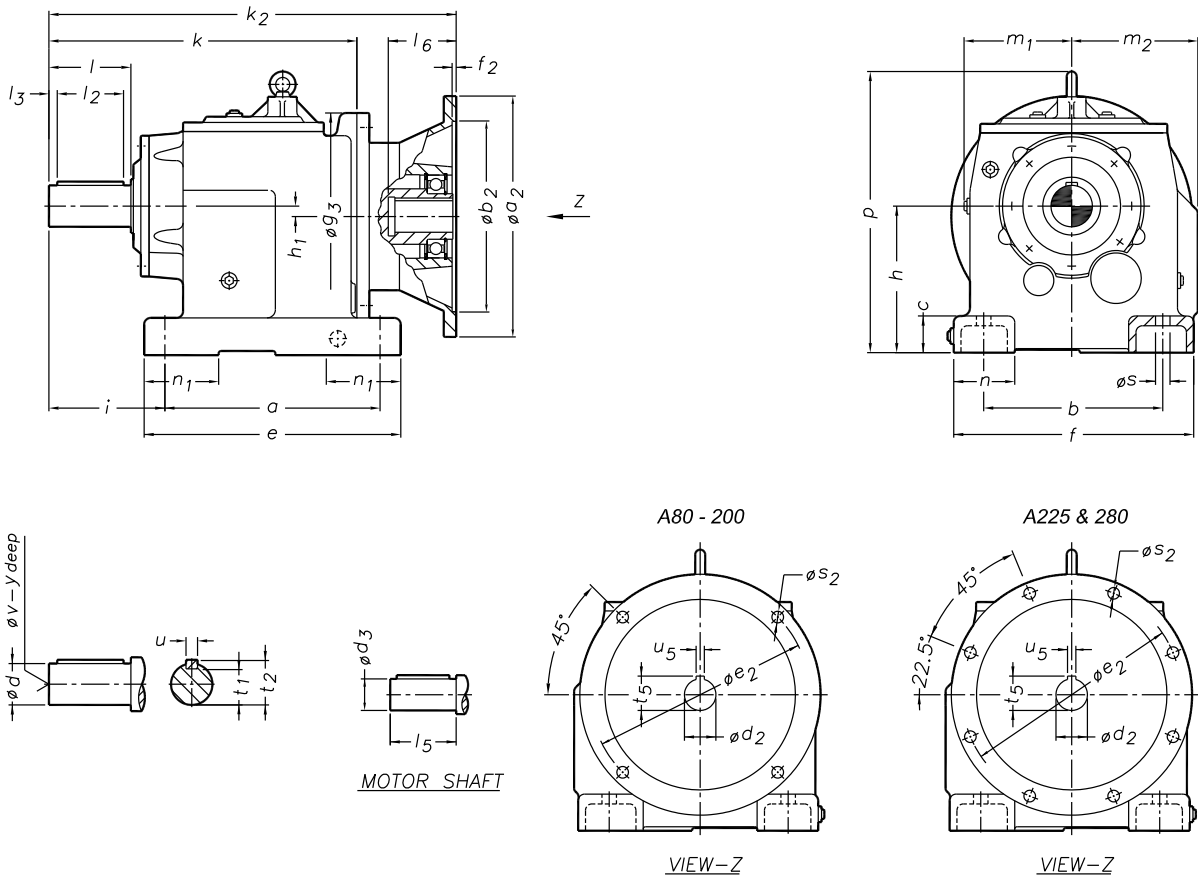
- Special output extensions, on request.
- For weight details, see Rating sheets.
- Our supply includes the required screws, nuts & washers to fix the motor on to the input adaptor flange.

**Helical Gear Unit, Base (Foot) Mounted with Input Adaptor Flange
for Flange Mounted Motor to IS/IEC Standards**

Type **HB**
Size **09 & 10**

PRINCIPAL DIMENSIONS (mm)

115



Size	a	c	e	h	i	k ₂	a ₂	b ₂ (H7)	e ₂	f ₂	d ₂ (G7)	d ₃	l ₅	l ₆	t ₅	u ₅ (Js9)	s ₂	n	m ₁	p	d	l ₂	t ₁	u	v		
	b	s	f	h ₁	k											(Js9)		n ₁	m ₂	g ₃	l	l ₃	t ₂		y		
HB093 HB092	-A80	310	55	365	225 -0.5	160	488	200	130	165	4	19	19	40	42	21.8	6	11	90	156	449	60 m6	110	53	18	M20	
	-A90						500	200	130	165	4	24	24	50	52	27.3	8	11									
	-A100/112						525	250	180	215	5	28	28	60	62	31.3	8	13.5									
	-A132						555	300	230	265	5	38	38	80	82	41.3	10	13.5									
	-A160	250	22	340	10.2	440	590	350	250	300	6	42	42	110	112	45.3	12	17.5	100	174	300	120	2.5	64			40
	-A180						590	350	250	300	6	48	48	110	112	51.8	14	17.5									
	-A200						600	400	300	350	6	55	55	110	112	59.3	16	17.5									
	-A225						635	450	350	400	6	60	60	140	142	64.4	18	17.5									
HB103 HB102	-A90	370	65	440	250 -0.5	185	555	200	130	165	4	24	24	50	52	27.3	8	11	110	180	505	70 m6	130	62.5	20	M20	
	-A100/112						575	250	180	215	5	28	28	60	62	31.3	8	13.5									
	-A132						599	300	230	265	5	38	38	80	82	41.3	10	13.5									
	-A160						640	350	250	300	6	42	42	110	112	45.3	12	17.5									
	-A180	290	26	400	20.4	495	640	350	250	300	6	48	48	110	112	51.8	14	17.5	125	208	350	140	2.5	74.5			40
	-A200						660	400	300	350	6	55	55	110	112	59.3	16	17.5									
	-A225						680	450	350	400	6	60	60	140	142	64.4	18	17.5									
	-A250						700	550	450	500	6	65	65	140	143	69.4	18	17.5									

1. Electric motor to be used should be of B type flange with dimensions as per IEC:72 / IS:1231 & IS:2223 and complete with key on the shaft extension.

2. Dimensions are subject to change. Get certified dimensional drawing while ordering.

3. Special output extensions, on request.

4. For weight details, see Rating sheets.

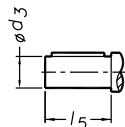
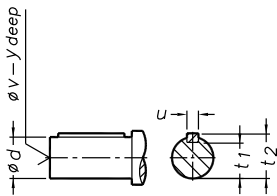
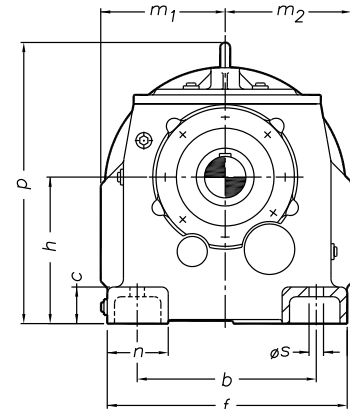
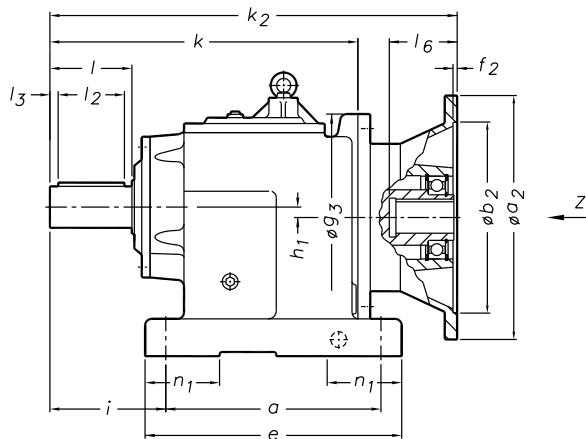
5. Our supply includes the required screws, nuts & washers to fix the motor on to the input adaptor flange.

**Helical Gear Unit, Base (Foot) Mounted with Input Adaptor Flange
for Flange Mounted Motor to IS/IEC Standards**

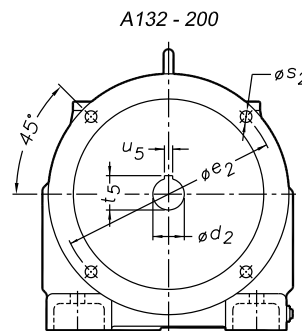
Type HB
Size 11-13

PRINCIPAL DIMENSIONS (mm)

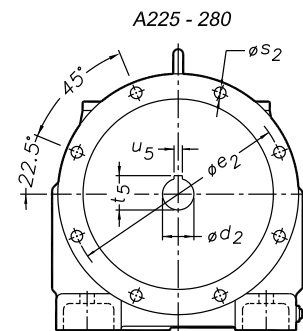
116



MOTOR SHAFT



VIEW-Z



VIEW-Z

Size	a	c	e	h	i	k ₂	a ₂	b ₂	e ₂	f ₂	d ₂	d ₃	l ₅	l ₆	t ₅	u ₅	s ₂	n	m ₁	p	d	l ₂	t ₁	u	v	
	b	s	f	h ₁	k		(H7)			(G7)				(Js9)	n ₁	m ₂	g ₃	l	l ₃	t ₂	y					
HB113 HB112	-A132	410	70	490	315 -1.0	220	684	300	230	265	5	38	38	80	82	41.3	10	13.5	110	225	597	90 m6	160	81	25	M24
	-A160						724	350	250	300	6	42	42	110	112	45.3	12	17.5								
	-A180						724	350	250	300	6	48	48	110	112	51.8	14	17.5								
	-A200	340	33	450	25.1	589	733	400	300	350	6	55	55	110	112	59.3	16	17.5	130	225	400	170	2.5	95	50	
	-A225						764	450	350	400	6	60	60	140	142	64.4	18	17.5								
	-A250						796	550	450	500	6	65	65	140	143	69.4	18	17.5								
	-A280						796	550	450	500	6	75	75	140	143	79.9	20	17.5								
HB123 HB122	-A132	500	80	590	355 -1.0	260	786	300	230	265	5	38	38	80	82	41.3	10	13.5	150	265	691	110 m6	200	100	28	M24
	-A160						820	350	250	300	6	42	42	110	112	45.3	12	17.5								
	-A180						820	350	250	300	6	48	48	110	112	51.8	14	17.5								
	-A200	380	39	530	33.4	695	832	400	300	350	6	55	55	110	112	59.3	16	17.5	150	265	450	210	2.5	116	50	
	-A225						860	450	350	400	6	60	60	140	142	64.4	18	17.5								
	-A250						895	550	450	500	6	65	65	140	143	69.4	18	17.5								
	-A280						895	550	450	500	6	75	75	140	143	79.9	20	17.5								
HB133 HB132	-A160	580	100	670	425 -1.0	270	908	350	250	300	6	42	42	110	112	45.3	12	17.5	160	330	828	120 m6	200	109	32	M24
	-A180						908	350	250	300	6	48	48	110	112	51.8	14	17.5								
	-A200						922	400	300	350	6	55	55	110	112	59.3	16	17.5								
	-A225	500	39	660	59.9	790	950	450	350	400	6	60	60	140	142	64.4	18	17.5	160	330	550	210	2.5	127	50	
	-A250						980	550	450	500	6	65	65	140	143	69.4	18	17.5								
	-A280						980	550	450	500	6	75	75	140	143	79.9	20	17.5								

1. Electric motor to be used should be of B type flange with dimensions as per IEC:72 / IS:1231 & IS:2223 and complete with key on the shaft extension.
2. Dimensions are subject to change. Get certified dimensional drawing while ordering.

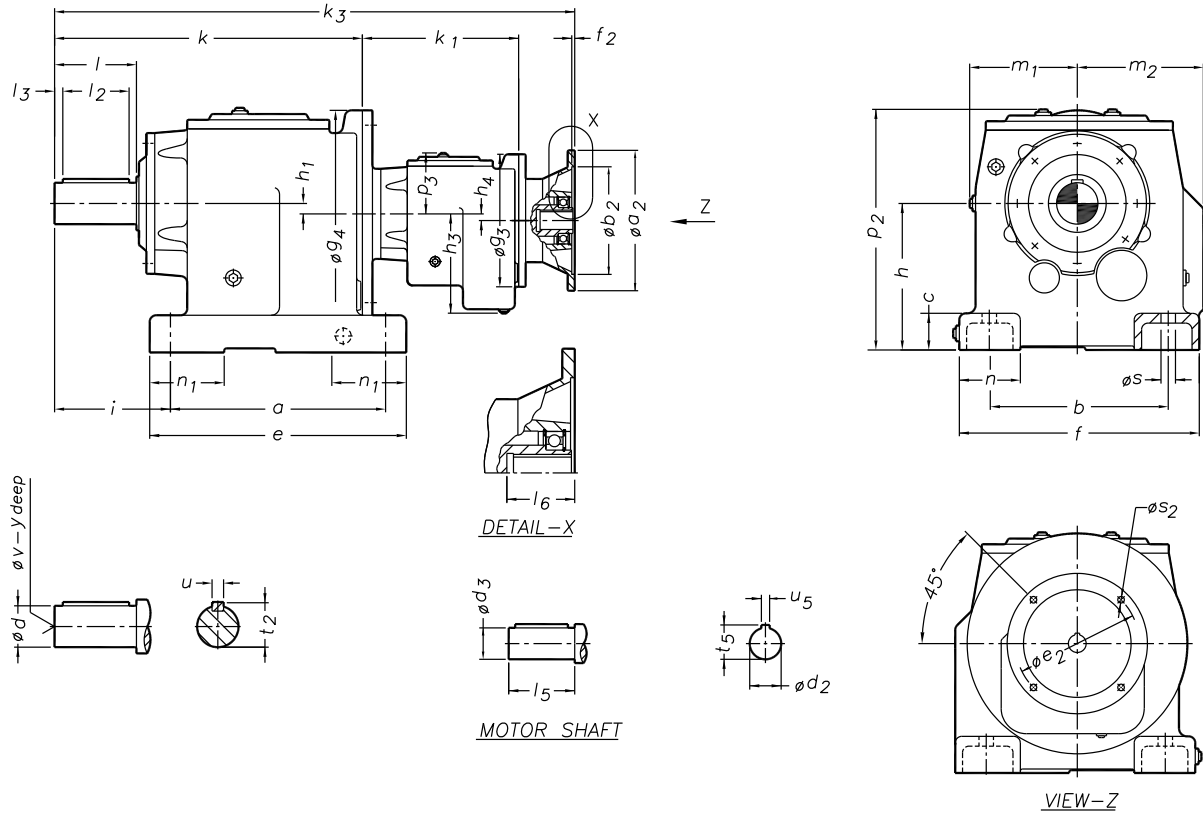
3. Special output extensions, on request.
4. For weight details, see Rating sheets.
5. Our supply includes the required screws, nuts & washers to fix the motor on to the input adaptor flange.

Helical Gear Unit, Tandem Casing, Base (Foot) Mounted with Input Adaptor Flange for Flange Mounted Motor to IS/IEC Standards

Type **HB**

PRINCIPAL DIMENSIONS (mm)

311



Size	a	c	e	h	h ₃	i	k	k ₃	a ₂	b ₂	e ₂	f ₂	d ₂	d ₃	l ₅	l ₆	t ₅	u ₅	s ₂	g ₃	n	m ₁	p ₂	d	l ₂	u	v
	b	s	f	h ₁	h ₄		k ₁			(H7)			(G7)					(Js9)		g ₄	n ₁	m ₂	p ₃	l	l ₃	t ₂	y
HB042H032 -A63	165	24	195	115 -0.5	98	90	235													120	42	76.5	186	30 k ₆	55	8	M10
	135	13.5	170	14	10.1		165	446	140	95	115	3.5	11	11	23	25	12.8	4	9	160	50	89	62	60	1.5	33	24

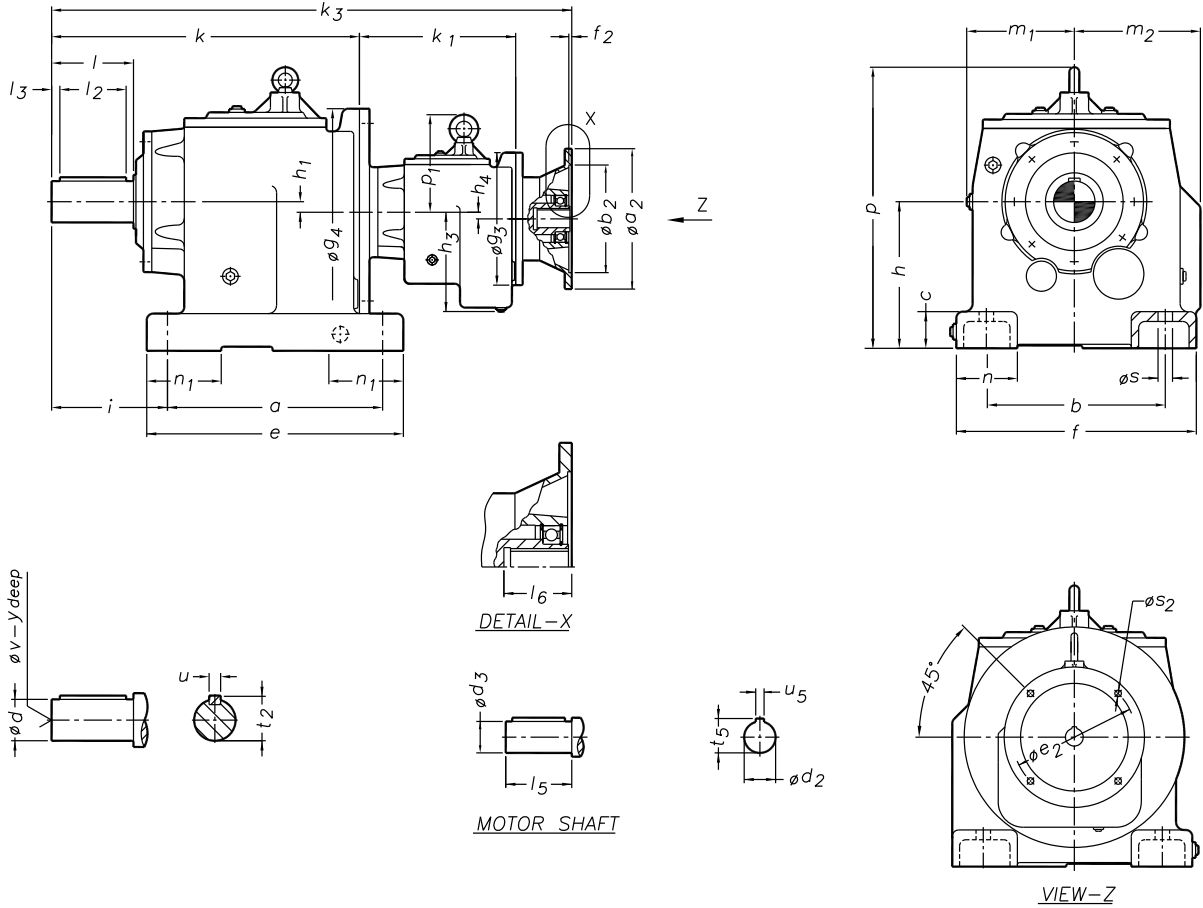
1. Electric motor to be used should be of B type flange with dimensions as per IEC:72 / IS:1231 & IS:2223 and complete with key on the shaft extension.
2. Dimensions are subject to change. Get certified dimensional drawing while ordering.
3. Special output extensions, on request.
4. For weight details, see Rating sheets.
5. Our supply includes the required screws, nuts & washers to fix the motor on to the input adaptor flange.

Helical Gear Unit, Tandem Casing, Base (Foot) Mounted with Input Adaptor Flange for Flange Mounted Motor to IS/IEC Standards

Type **HB**

PRINCIPAL DIMENSIONS (mm)

313



Size	a	c	e	h	h ₃	i	k	k ₃	a ₂	b ₂	e ₂	f ₂	d ₂	d ₃	l ₅	l ₆	t ₅	u ₅	s ₂	g ₃	n	m ₁	p	d	l ₂	u	v	
	b	s	f	h ₁	h ₄		k ₁		(H7)			(G7)					(Js9)	g ₄	n ₁	m ₂	p ₁	l	l ₃	t ₂	y			
HB082H053 HB082H052	-A63	260	45	310	180	122	140	372	637	140	95	115	3.5	11	11	23	25	12.8	4	9	160	75	130	367	50	90	14	M16
	-A71				-0.5				643	160	110	130	4	14	14	30	32	16.3	5	9				k ₆				
	-A80	215	17.5	290	12.6	11.2		216	658	200	130	165	4	19	19	40	42	21.8	6	11	250	90	150	124	100	2.5	53.5	32
HB092H053 HB092H052	-A63	310	55	365	225	122	160	440	700	140	95	115	3.5	11	11	23	25	12.8	4	9	160	90	156	449	60	110	18	M20
	-A71				-0.5				706	160	110	130	4	14	14	30	32	16.3	5	9				m ₆				
	-A80	250	22	340	10.2	11.2		211	721	200	130	165	4	19	19	40	42	21.8	6	11	300	100	174	124	120	2.5	64	40
	-A90								731	200	130	165	4	24	24	50	52	27.3	8	11								

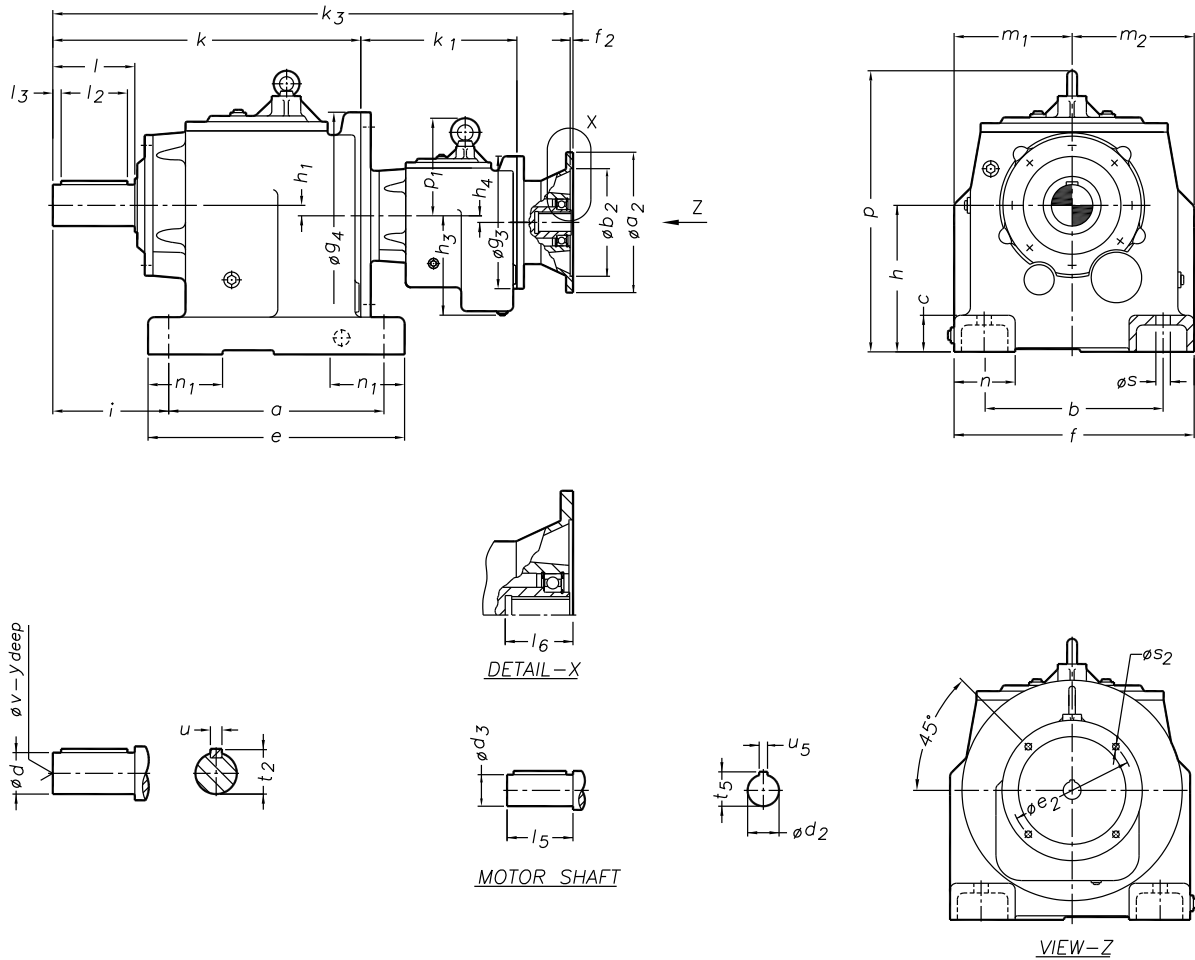
1. Electric motor to be used should be of B type flange with dimensions as per IEC:72 / IS:1231 & IS:2223 and complete with key on the shaft extension.
2. Dimensions are subject to change. Get certified dimensional drawing while ordering.
3. Special output extensions, on request.
4. For weight details, see Rating sheets.
5. Our supply includes the required screws, nuts & washers to fix the motor on to the input adaptor flange.

Helical Gear Unit, Tandem Casing, Base (Foot) Mounted with Input Adaptor Flange for Flange Mounted Motor to IS/IEC Standards

Type HB

PRINCIPAL DIMENSIONS (mm)

314



Size	a	c	e	h	h ₃	i	k	k ₃	a ₂	b ₂	e ₂	f ₂	d ₂	d ₃	l ₅	l ₆	t ₅	u ₅	s ₂	g ₃	n	m ₁	p	d	l ₂	u	v	
	b	s	f	h ₁	h ₄		k ₁		(H7)	(G7)						(Js9)	g ₄	n ₁	m ₂	p ₁	l	l ₃	t ₂	y				
HB102H073 HB102H072	-A63	370	65	440	250	149	185	495	779	140	95	115	3.5	11	11	23	25	12.8	4	9	200	110	180	505	70	130	20	M20
	-A71								787	160	110	130	4	14	14	30	32	16.3	5	9								
	-A80	290	26	400	20.4	15.9		247	807	200	130	165	4	19	19	40	42	21.8	6	11	350	125	208	157	140	2.5	74.5	40
	-A90								819	200	130	165	4	24	24	50	52	27.3	8	11								
HB113H073 HB112H073 HB112H072	-A63	410	70	490	315	149	220	589	866	140	95	115	3.5	11	11	23	25	12.8	4	9	200	110	225	597	90	160	25	M24
	-A71								874	160	110	130	4	14	14	30	32	16.3	5	9								
	-A80								894	200	130	165	4	19	19	40	42	21.8	6	11								
	-A90								906	200	130	165	4	24	24	50	52	27.3	8	11								
	-A100	340	33	450	25.1	15.9		240	924	250	180	215	5	28	28	60	62	31.3	8	13.5	400	130	225	157	170	2.5	95	50
	-A112								924	250	180	215	5	28	28	60	62	31.3	8	13.5								

- Electric motor to be used should be of B type flange with dimensions as per IEC:72 / IS:1231 & IS:2223 and complete with key on the shaft extension.
- Dimensions are subject to change. Get certified dimensional drawing while ordering.

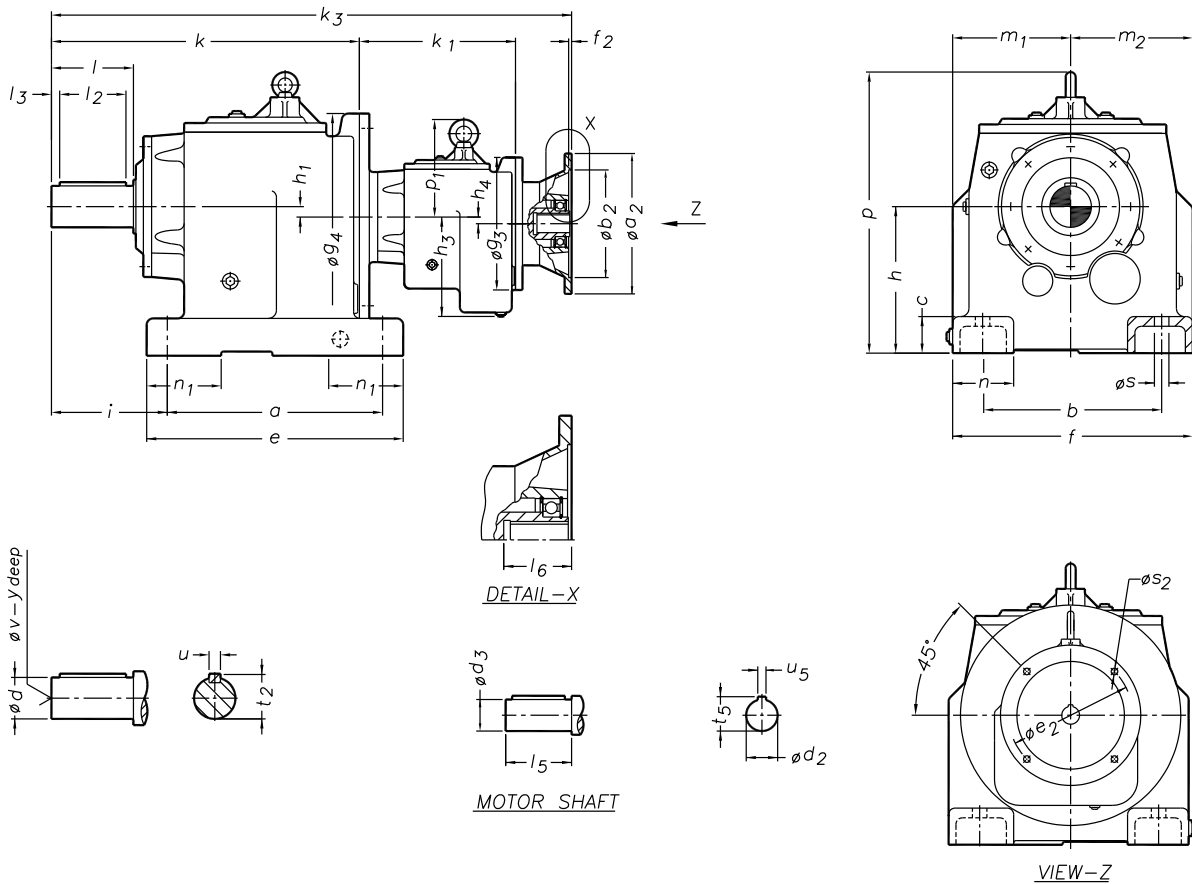
- Special output extensions, on request.
- For weight details, see Rating sheets.
- Our supply includes the required screws, nuts & washers to fix the motor on to the input adaptor flange.

Helical Gear Unit, Tandem Casing, Base (Foot) Mounted with Input Adaptor Flange for Flange Mounted Motor to IS/IEC Standards

Type HB

PRINCIPAL DIMENSIONS (mm)

315



Size	a	c	e	h	h ₃	i	k	k ₃	a ₂	b ₂	e ₂	f ₂	d ₂	d ₃	l ₅	l ₆	t ₅	u ₅	s ₂	g ₃	n	m ₁	p	d	l ₂	u	v	
	b	s	f	h ₁	h ₄		k ₁		(H7)	(G7)							(Js9)		g ₄	n ₁	m ₂	p ₁	l	l ₃	t ₂	y		
HB123H073 HB123H072	-A63	500	80	590	355 -1.0	149	260	695	964	140	95	115	3.5	11	11	23	25	12.8	4	9	200	150	265	691	110 m6	200	28	M24
	-A71								972	160	110	130	4	14	14	30	32	16.3	5	9								
	-A80								992	200	130	165	4	19	19	40	42	21.8	6	11								
	-A90								1004	200	130	165	4	24	24	50	52	27.3	8	11								
	-A100								1022	250	180	215	5	28	28	60	62	31.3	8	13.5								
	-A112	1022	250	180	215	5	28	28	60	62	31.3	8	13.5															
	-A132	1047	300	230	265	5	38	38	80	82	41.3	10	13.5	450	150	265	157	210	2.5	116	50							
HB122H082	-A100	500	80	590	355 -1.0	189	260	695	1067	250	180	215	5	28	28	60	62	31.3	8	13.5	250	150	265	691	110 m6	200	28	M24
	-A112	380	39	530	33.4	12.6	280	1067	250	180	215	5	28	28	60	62	31.3	8	13.5	450	150	265	187	210	2.5	116	50	
HB133H093 HB133H092	-A80	580	100	670	425 -1.0	235	270	790	1163	200	130	165	4	19	19	40	42	21.8	6	11	300	160	330	828	120 m6	200	32	M24
	-A90								1175	200	130	165	4	24	24	50	52	27.3	8	11								
	-A100								1200	250	180	215	5	28	28	60	62	31.3	8	13.5								
	-A112	500	39	660	59.9	10.2	325	1200	250	180	215	5	28	28	60	62	31.3	8	13.5	550	160	330	224	210	2.5	127	50	
	-A132							1230	300	230	265	5	38	38	80	82	41.3	10	13.5									

- Electric motor to be used should be of B type flange with dimensions as per IEC:72 / IS:1231 & IS:2223 and complete with key on the shaft extension.
- Dimensions are subject to change. Get certified dimensional drawing while ordering.

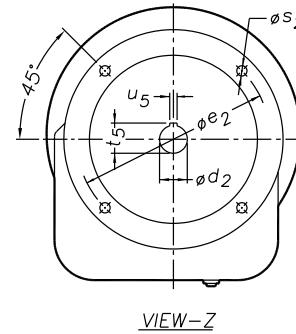
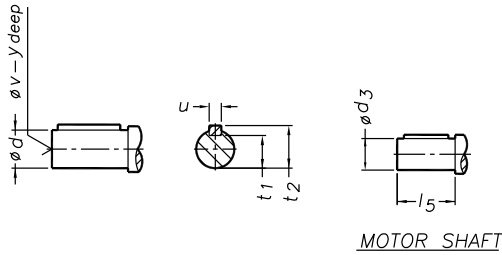
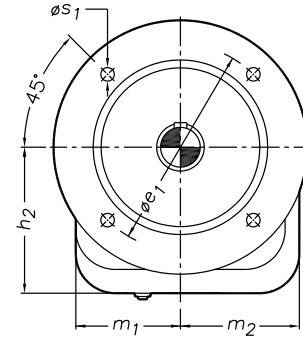
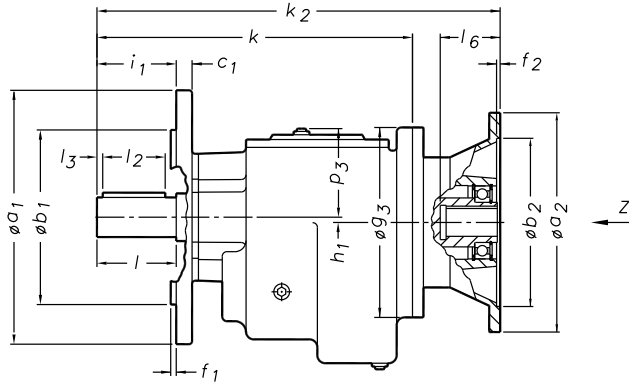
- Special output extensions, on request.
- For weight details, see Rating sheets.
- Our supply includes the required screws, nuts & washers to fix the motor on to the input adaptor flange.

**Helical Gear Unit, Flange Mounted with Input Adaptor Flange
for Flange Mounted Motor to IS/IEC Standards**

Type **HF**
Size **02**

211

PRINCIPAL DIMENSIONS (mm)



Size	a ₁	b ₁	e ₁	h ₁	i ₁	k ₂	a ₂	b ₂	e ₂	f ₂	d ₂	d ₃	l ₅	l ₆	t ₅	u ₅	s ₂	s ₁	m ₁	p ₃	d	l ₂	t ₁	u	v	
	c ₁	j ₆	f ₁	h ₂	k		(H7)	e ₂	(G7)	(Js9)	m ₂	g ₃	l	l ₃	t ₂	y										
HF023	-A63	160	110	130	3.4	50	245	140	95	115	3.5	11	11	23	25	12.8	4	9	9	70	57	25	45	21	8	M10
	-A71						252	160	110	130	4	14	14	30	32	16.3	5	9		k ₆						
HF022	-A80	10	3.5	96	199	265	200	130	165	4	19	19	40	42	21.8	6	11	75	120	50	1.5	28			24	
	-A90					277	200	130	165	4	24	24	50	52	27.3	8	11									

1. Electric motor to be used should be of B type flange with dimensions as per IEC:72 / IS:1231 & IS:2223 and complete with key on the shaft extension.
2. Dimensions are subject to change. Get certified dimensional drawing while ordering.

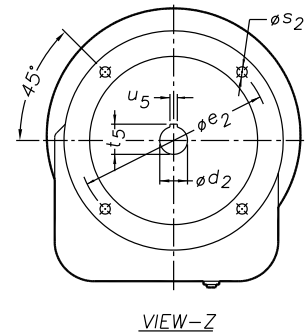
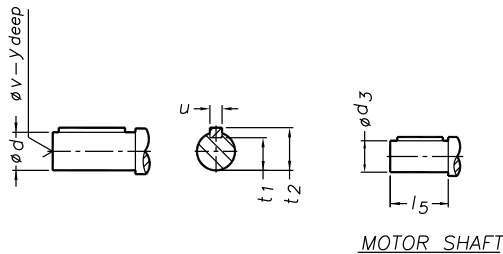
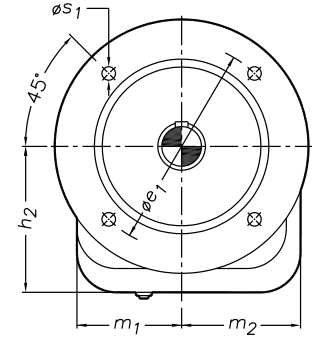
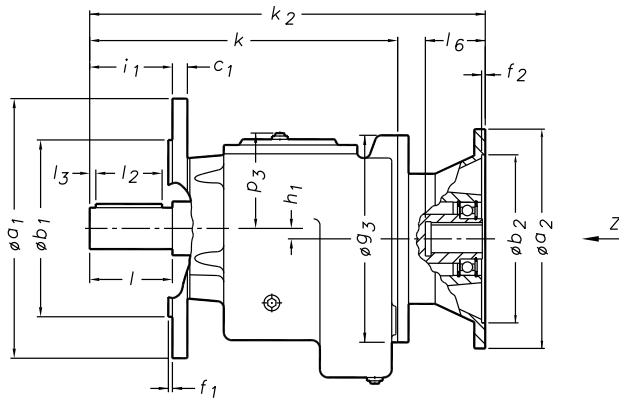
3. Special output extensions, on request.
4. For weight details, see Rating sheets.
5. Our supply includes the required screws, nuts & washers to fix the motor on to the input adaptor flange.

**Helical Gear Unit, Flange Mounted with Input Adaptor Flange
for Flange Mounted Motor to IS/IEC Standards**

Type HF
Size 03 & 04

212

PRINCIPAL DIMENSIONS (mm)



Size	a_1	b_1	e_1	h_1	i_1	k_2	a_2	b_2	e_2	f_2	d_2	d_3	l_5	l_6	t_5	u_5	s_2	s_1	m_1	p_3	d	l_2	t_1	u	v	
	c_1	j_6	f_1	h_2	k		(H7)	g_3	l	(G7)	d_3	l_5	l_6	t_5	(Js9)		m_2	g_3	l	l_3	t_2	y				
HF033	-A63	160	110	130	10.1	50	253	140	95	115	3.5	11	11	23	25	12.8	4	9	9	66.5	62	25	45	21	8	M10
	-A71	160	110	130	10.1	50	260	160	110	130	4	14	14	30	32	16.3	5	9		82	120	50	1.5	28		
HF032	-A80	10		3.5	98	207	273	200	130	165	4	19	19	40	42	21.8	6	11	11	82	120	50	1.5	28		24
	-A90	10		3.5	98	207	285	200	130	165	4	24	24	50	52	27.3	8	11		82	120	50	1.5	28		24
HF043	-A63	200	130	165	14	60	284	140	95	115	3.5	11	11	23	25	12.8	4	9	11	76.5	71	30	55	26	8	M10
	-A71	200	130	165	14	60	290	160	110	130	4	14	14	30	32	16.3	5	9		89	160	60	1.5	33		24
HF042	-A80	12		3.5	122	235	305	200	130	165	4	19	19	40	42	21.8	6	11	11	89	160	60	1.5	33		24
	-A90	12		3.5	122	235	315	200	130	165	4	24	24	50	52	27.3	8	11		89	160	60	1.5	33		24
	-A100	12		3.5	122	235	335	250	180	215	5	28	28	60	62	31.3	8	13.5	89	160	60	1.5	33		24	

1. Electric motor to be used should be of B type flange with dimensions as per IEC:72 / IS:1231 & IS:2223 and complete with key on the shaft extension.
2. Dimensions are subject to change. Get certified dimensional drawing while ordering.

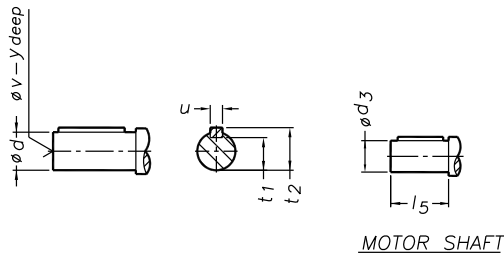
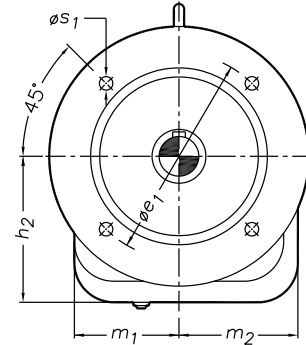
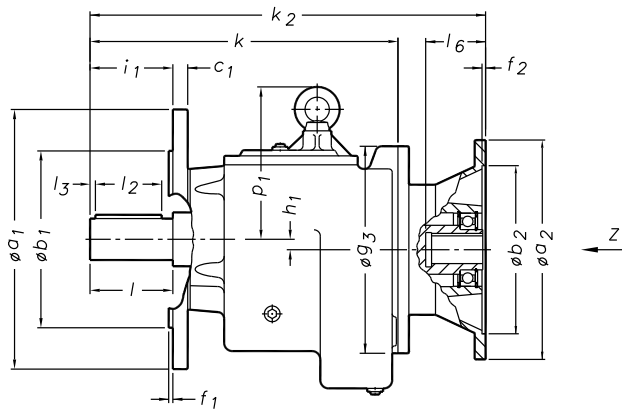
3. Special output extensions, on request.
4. For weight details, see Rating sheets.
5. Our supply includes the required screws, nuts & washers to fix the motor on to the input adaptor flange.

**Helical Gear Unit, Flange Mounted with Input Adaptor Flange
for Flange Mounted Motor to IS/IEC Standards**

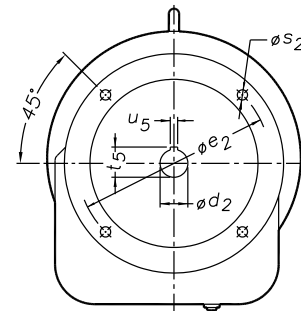
Type HF
Size 05 & 06

PRINCIPAL DIMENSIONS (mm)

213



MOTOR SHAFT



VIEW-Z

Size	a ₁	b ₁	e ₁	h ₁	i ₁	k	k ₂	a ₂	b ₂	e ₂	f ₂	d ₂	d ₃	l ₅	l ₆	t ₅	u ₅	s ₂	s ₁	m ₁	p ₁	d	l ₂	t ₁	u	v
	c ₁	j ₆	f ₁	h ₂	k				(H7)			(G7)					(Js9)			m ₂	g ₃	l	l ₃	t ₂		y
HF053 HF052	-A63	200	130	165	11.2	70	306	140	95	115	3.5	11	11	23	25	12.8	4	9	11	86	124	35	65	30	10	M12
	-A71						312	160	110	130	4	14	14	30	32	16.3	5	9								
	-A80						327	200	130	165	4	19	19	40	42	21.8	6	11								
	-A90	12		3.5	122	257	337	200	130	165	4	24	24	50	52	27.3	8	11	102	160	70	1.5	38			
	-A100/112						357	250	180	215	5	28	28	60	62	31.3	8	13.5								
HF063 HF062	-A63	200	130	165	20.7	70	329	140	95	115	3.5	11	11	23	25	12.8	4	9	11	92	134	35	65	30	10	M12
	-A71						335	160	110	130	4	14	14	30	32	16.3	5	9								
	-A80						350	200	130	165	4	19	19	40	42	21.8	6	11								
	-A90	12		3.5	138	280	360	200	130	165	4	24	24	50	52	27.3	8	11	105	160	70	1.5	38			
	-A100/112						380	250	180	215	5	28	28	60	62	31.3	8	13.5								
	-A132						406	300	230	265	5	38	38	80	82	41.3	10	13.5								

1. Electric motor to be used should be of B type flange with dimensions as per IEC:72 / IS:1231 & IS:2223 and complete with key on the shaft extension.
2. Dimensions are subject to change. Get certified dimensional drawing while ordering.

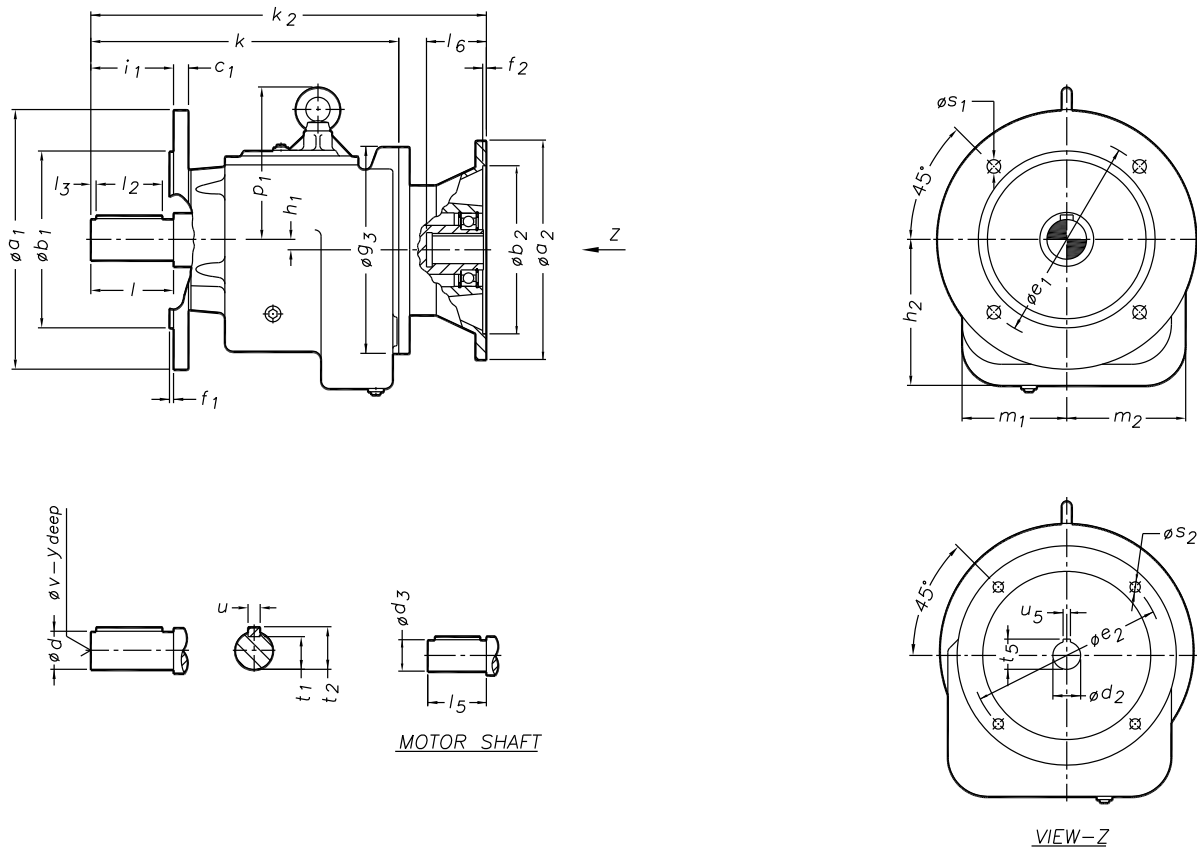
3. Special output extensions, on request.
4. For weight details, see Rating sheets.
5. Our supply includes the required screws, nuts & washers to fix the motor on to the input adaptor flange.

**Helical Gear Unit, Flange Mounted with Input Adaptor Flange
for Flange Mounted Motor to IS/IEC Standards**

Type **HF**
Size **07 & 08**

PRINCIPAL DIMENSIONS (mm)

214



Size	a ₁	b ₁	e ₁	h ₁	i ₁	k ₂	a ₂	b ₂	e ₂	f ₂	d ₂	d ₃	l ₅	l ₆	t ₅	u ₅	s ₂	s ₁	m ₁	p ₁	d	l ₂	t ₁	u	v	
	c ₁		f ₁	h ₂	k		(H7)				(G7)				(Js9)			m ₂	g ₃	l	l ₃	t ₂		y		
HF073 HF072	-A63	250	180	215	15.9	80	337	140	95	115	3.5	11	11	23	25	12.8	4	9	13.5	105	157	40	70	35	12	M16
	-A71						345	160	110	130	4	14	14	30	32	16.3	5	9								
	-A80						365	200	130	165	4	19	19	40	42	21.8	6	11								
	-A90	15	4	149	300	377	200	130	165	4	24	24	50	52	27.3	8	11	17.5	120	200	80	2.5	43	32		
	-A100/112					395	250	180	215	5	28	28	60	62	31.3	8	13.5									
	-A132					420	300	230	265	5	38	38	80	82	41.3	10	13.5									
	-A160					465	350	250	300	6	42	42	110	112	45.3	12	17.5									
HF083 HF082	-A80	350	250	300	12.6	100	431	200	130	165	4	19	19	40	42	21.8	6	11	17.5	130	187	50	90	44.5	14	M16
	-A90						445	200	130	165	4	24	24	50	52	27.3	8	11								
	-A100/112						464	250	180	215	5	28	28	60	62	31.3	8	13.5								
	-A132	18	5	189	372	492	300	230	265	5	38	38	80	82	41.3	10	13.5	17.5	150	250	100	2.5	53.5	32		
	-A160					532	350	250	300	6	42	42	110	112	45.3	12	17.5									
	-A180					532	350	250	300	6	48	48	110	112	51.8	14	17.5									

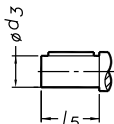
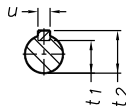
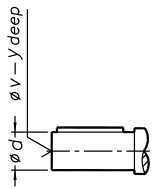
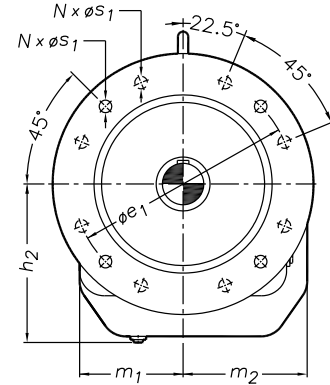
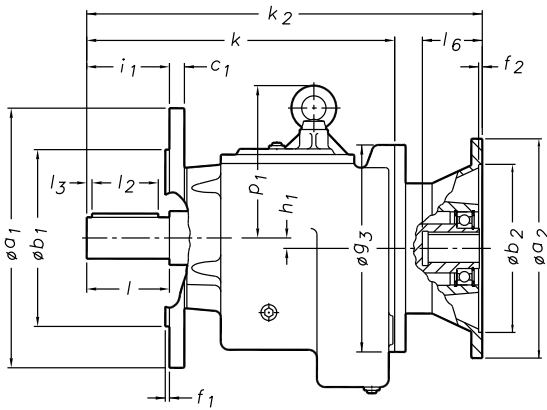
- Electric motor to be used should be of B type flange with dimensions as per IEC:72 / IS:1231 & IS:2223 and complete with key on the shaft extension.
- Dimensions are subject to change. Get certified dimensional drawing while ordering.
- Special output extensions, on request.
- For weight details, see Rating sheets.
- Our supply includes the required screws, nuts & washers to fix the motor on to the input adaptor flange.

**Helical Gear Unit, Flange Mounted with Input Adaptor Flange
for Flange Mounted Motor to IS/IEC Standards**

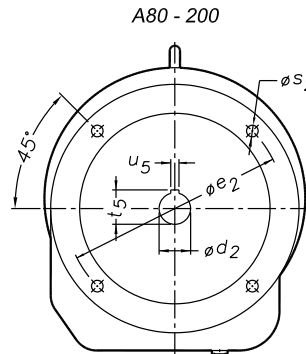
Type **HF**
Size **09 & 10**

PRINCIPAL DIMENSIONS (mm)

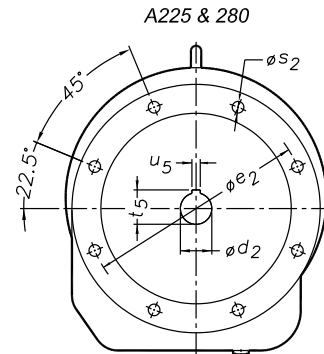
215



MOTOR SHAFT



VIEW-Z



VIEW-Z

Size	a ₁ c ₁	b ₁	e ₁ f ₁	h ₁ h ₂	i ₁ k	k ₂	a ₂	b ₂ (H7)	e ₂	f ₂	d ₂ (G7)	d ₃	l ₅	l ₆	t ₅	u ₅ (Js9)	s ₂	N s ₁	m ₁ m ₂	p ₁ g ₃	d l	l ₂ l ₃	t ₁ t ₂	u	v y
HF093 -A80	350	250 h ₆	300	10.2	120	488	200	130	165	4	19	19	40	42	21.8	6	11	4 nos.	156	224	60 m ₆	110	53	18	40
-A90						500	200	130	165	4	24	24	50	52	27.3	8	11								
-A100/112						525	250	180	215	5	28	28	60	62	31.3	8	13.5								
-A132						555	300	230	265	5	38	38	80	82	41.3	10	13.5								
HF092 -A160						590	350	250	300	6	42	42	110	112	45.3	12	17.5								
-A180						590	350	250	300	6	48	48	110	112	51.8	14	17.5								
-A200						600	400	300	350	6	55	55	110	112	59.3	16	17.5								
-A225	635	450	350	400	6	60	60	140	142	64.4	18	17.5	17.5	174	300	120	2.5	64	40						
HF103 -A90	450	350 h ₆	400	20.4	140	555	200	130	165	4	24	24	50	52	27.3	8	11	8 nos.	180	255	70 m ₆	130	62.5	20	40
-A100/112						575	250	180	215	5	28	28	60	62	31.3	8	13.5								
-A132						599	300	230	265	5	38	38	80	82	41.3	10	13.5								
HF102 -A160						640	350	250	300	6	42	42	110	112	45.3	12	17.5								
-A180						640	350	250	300	6	48	48	110	112	51.8	14	17.5								
-A200						660	400	300	350	6	55	55	110	112	59.3	16	17.5								
-A225						680	450	350	400	6	60	60	140	142	64.4	18	17.5								
-A250	700	550	450	500	6	65	65	140	143	69.4	18	17.5	17.5	208	350	140	2.5	74.5	40						

1. Electric motor to be used should be of B type flange with dimensions as per IEC:72 / IS:1231 & IS:2223 and complete with key on the shaft extension.

2. Dimensions are subject to change. Get certified dimensional drawing while ordering.

3. Special output extensions, on request.

4. For weight details, see Rating sheets.

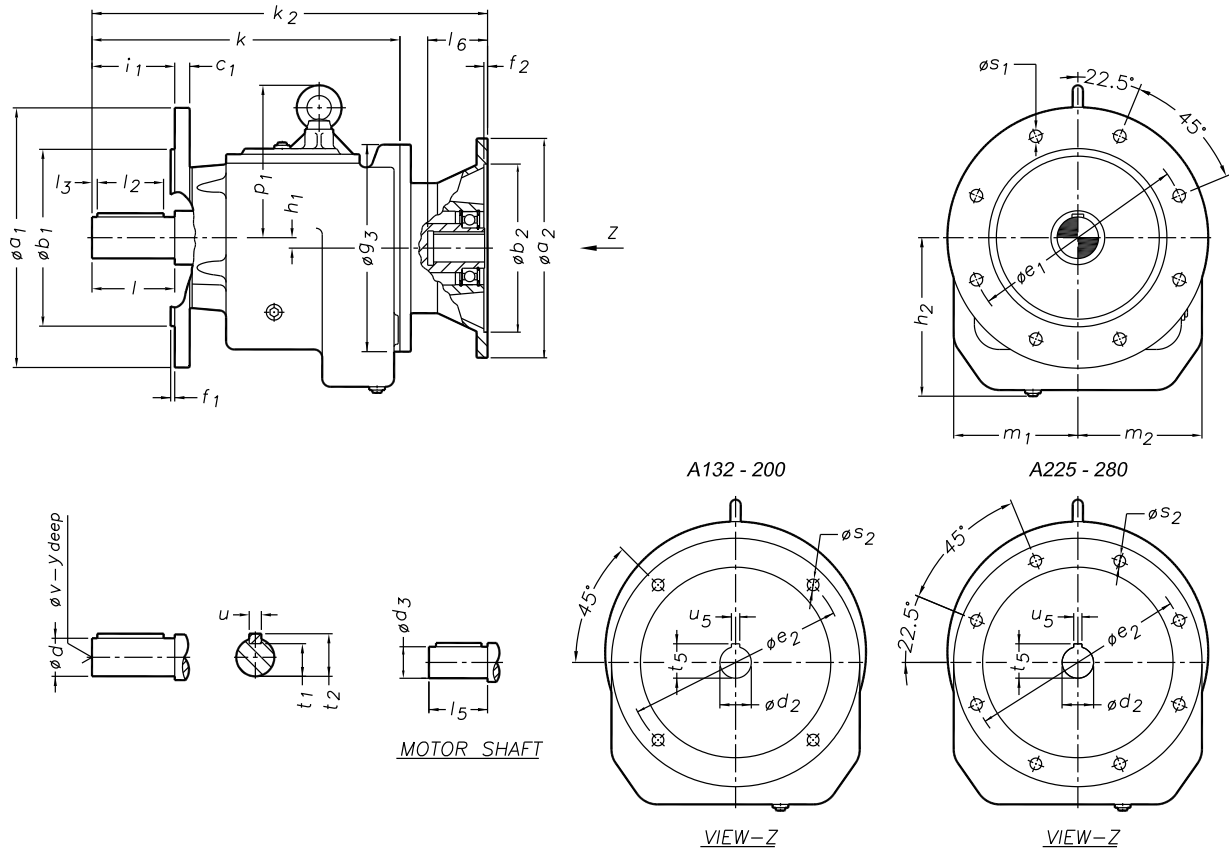
5. Our supply includes the required screws, nuts & washers to fix the motor on to the input adaptor flange.

**Helical Gear Unit, Flange Mounted with Input Adaptor Flange
for Flange Mounted Motor to IS/IEC Standards**

Type HF
Size 11-13

PRINCIPAL DIMENSIONS (mm)

216



Size	a ₁ c ₁	b ₁	e ₁ f ₁	h ₁ h ₂	i ₁ k	k ₂	a ₂	b ₂ (H7)	e ₂	f ₂	d ₂ (G7)	d ₃	l ₅	l ₆	t ₅	u ₅ (Js9)	s ₂	s ₁	m ₁ m ₂	p ₁ g ₃	d l	l ₂ l ₃	t ₁ t ₂	u	v y	
HF113 HF112	-A132	450	350 h ₆	400	25.1	170	684	300	230	265	5	38	38	80	82	41.3	10	13.5	17.5	225	282	90 m ₆	160	81	25	M24
	-A160							350	250	300	6	42	42	110	112	45.3	12	17.5								
	-A180							350	250	300	6	48	48	110	112	51.8	14	17.5								
	-A200							400	300	350	6	55	55	110	112	59.3	16	17.5								
	-A225							450	350	400	6	60	60	140	142	64.4	18	17.5								
	-A250							550	450	500	6	65	65	140	143	69.4	18	17.5								
	-A280	550	450	500	6	75	75	140	143	79.9	20	17.5														
HF123 HF122	-A132	550	450 h ₆	500	33.4	210	786	300	230	265	5	38	38	80	82	41.3	10	13.5	17.5	265	336	110 m ₆	200	100	28	M24
	-A160							350	250	300	6	42	42	110	112	45.3	12	17.5								
	-A180							350	250	300	6	48	48	110	112	51.8	14	17.5								
	-A200							400	300	350	6	55	55	110	112	59.3	16	17.5								
	-A225							450	350	400	6	60	60	140	142	64.4	18	17.5								
	-A250							550	450	500	6	65	65	140	143	69.4	18	17.5								
	-A280	550	450	500	6	75	75	140	143	79.9	20	17.5														
HF133 HF132	-A160	660	550 h ₆	600	59.9	210	908	350	250	300	6	42	42	110	112	45.3	12	17.5	22	330	403	120 m ₆	200	109	32	M24
	-A180						350	250	300	6	48	48	110	112	51.8	14	17.5									
	-A200						400	300	350	6	55	55	110	112	59.3	16	17.5									
	-A225						450	350	400	6	60	60	140	142	64.4	18	17.5									
	-A250						550	450	500	6	65	65	140	143	69.4	18	17.5									
	-A280						550	450	500	6	75	75	140	143	79.9	20	17.5									

1. Electric motor to be used should be of B type flange with dimensions as per IEC:72 / IS:1231 & IS:2223 and complete with key on the shaft extension.

2. Dimensions are subject to change. Get certified dimensional drawing while ordering.

3. Special output extensions, on request.

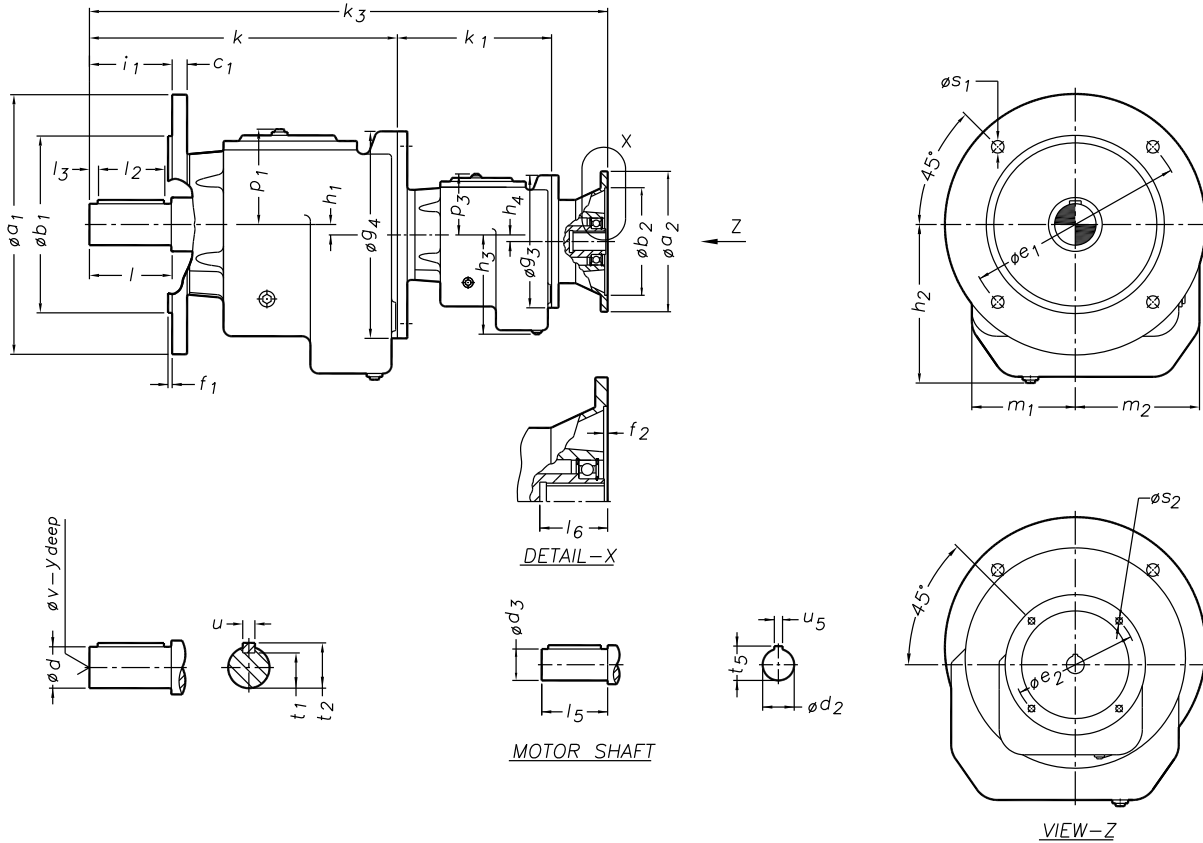
4. For weight details, see Rating sheets.

5. Our supply includes the required screws, nuts & washers to fix the motor on to the input adaptor flange.

Type HF

411

PRINCIPAL DIMENSIONS (mm)



Size	a ₁	b ₁	c ₁	e ₁	h ₁	h ₃	k	k ₃	a ₂	b ₂	e ₂	f ₂	d ₂	d ₃	l ₅	l ₆	t ₅	u ₅	s ₂	m ₁	g ₃	p ₁	d	l ₂	t ₁	u	v
	i ₁	s ₁	f ₁	h ₂	h ₄	k ₁	a ₂	(H7)	e ₂	f ₂	(G7)	l ₅	l ₆	t ₅	(Js9)	m ₂	g ₄	p ₃	l	l ₃	t ₂	u	y				
HF042H032 -A63	200	130 j ₆	12	165	14	98	235	446	140	95	115	3.5	11	11	23	25	12.8	4	9	76.5	120	71	30 k ₆	55	26	8	M10
	60		11	3.5	122	10.1	165		140	95	115	3.5	11	11	23	25	12.8	4	9	89	160	62	60	1.5	33		24

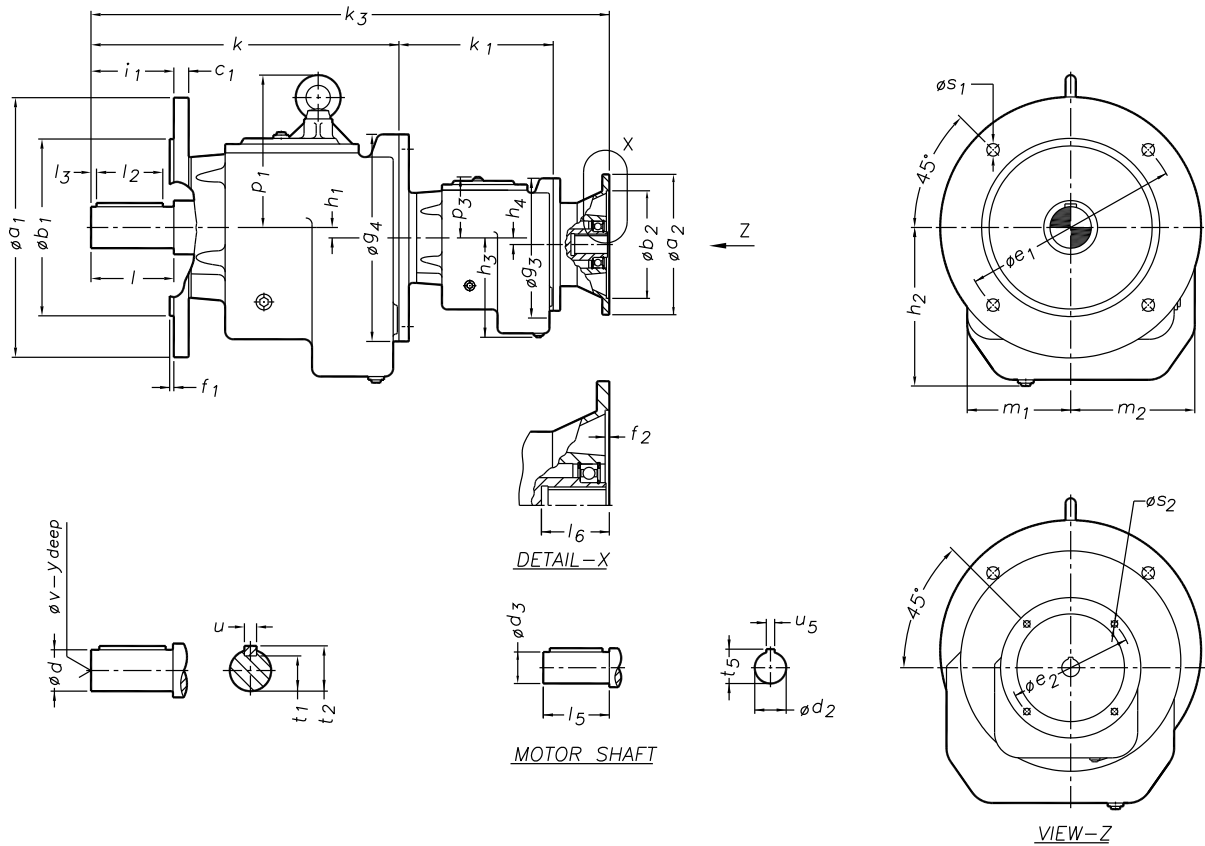
1. Electric motor to be used should be of B type flange with dimensions as per IEC:72 / IS:1231 & IS:2223 and complete with key on the shaft extension.
2. Dimensions are subject to change. Get certified dimensional drawing while ordering.

3. Special output extensions, on request.
4. For weight details, see Rating sheets.
5. Our supply includes the required screws, nuts & washers to fix the motor on to the input adaptor flange.

Type HF

412

PRINCIPAL DIMENSIONS (mm)



Size	a ₁ i ₁	b ₁	c ₁ s ₁	e ₁ f ₁	h ₁ h ₂	h ₃ h ₄	k k ₁	k ₃	a ₂	b ₂ (H7)	e ₂	f ₂	d ₂ (G7)	d ₃	l ₅	l ₆	t ₅	u ₅ (Js9)	s ₂	m ₁ m ₂	g ₃ g ₄	p ₁ p ₃	d l	l ₂ l ₃	t ₁ t ₂	u	v y	
HF052H033 HF052H032 -A63	200	130 j ₆	12	165	11.2	98	257	468	140	95	115	3.5	11	11	23	25	12.8	4	9	86	120	124	35 k ₆	65	30	10	M12	
	70		11	3.5	122	10.1	165		140	95	115	3.5	11	11	23	25	12.8	4	9	102	160	62	70	1.5	38	28		
HF062H033 HF062H032 -A63 -A71	200	130 j ₆	12	165	20.7	98	280	491	140	95	115	3.5	11	11	23	25	12.8	4	9	92	120	134	35 k ₆	65	30	10	M12	
	70		11	3.5	138	10.1	165		498	160	110	130	4	14	14	30	32	16.3	5	9	105	160	62	70	1.5	38	28	
HF072H033 HF072H032 -A63 -A71 -A80	250	180 j ₆	15	215	15.9	98	300	503	140	95	115	3.5	11	11	23	25	12.8	4	9	105	120	157	40 k ₆	70	35	12	M16	
									510	160	110	130	4	14	14	30	32	16.3	5	9								
	80		13.5	4	149	10.1	157		523	200	130	165	4	19	19	40	42	21.8	6	11	120	200	62	80	2.5	43	32	

1. Electric motor to be used should be of B type flange with dimensions as per IEC:72 / IS:1231 & IS:2223 and complete with key on the shaft extension.
2. Dimensions are subject to change. Get certified dimensional drawing while ordering.

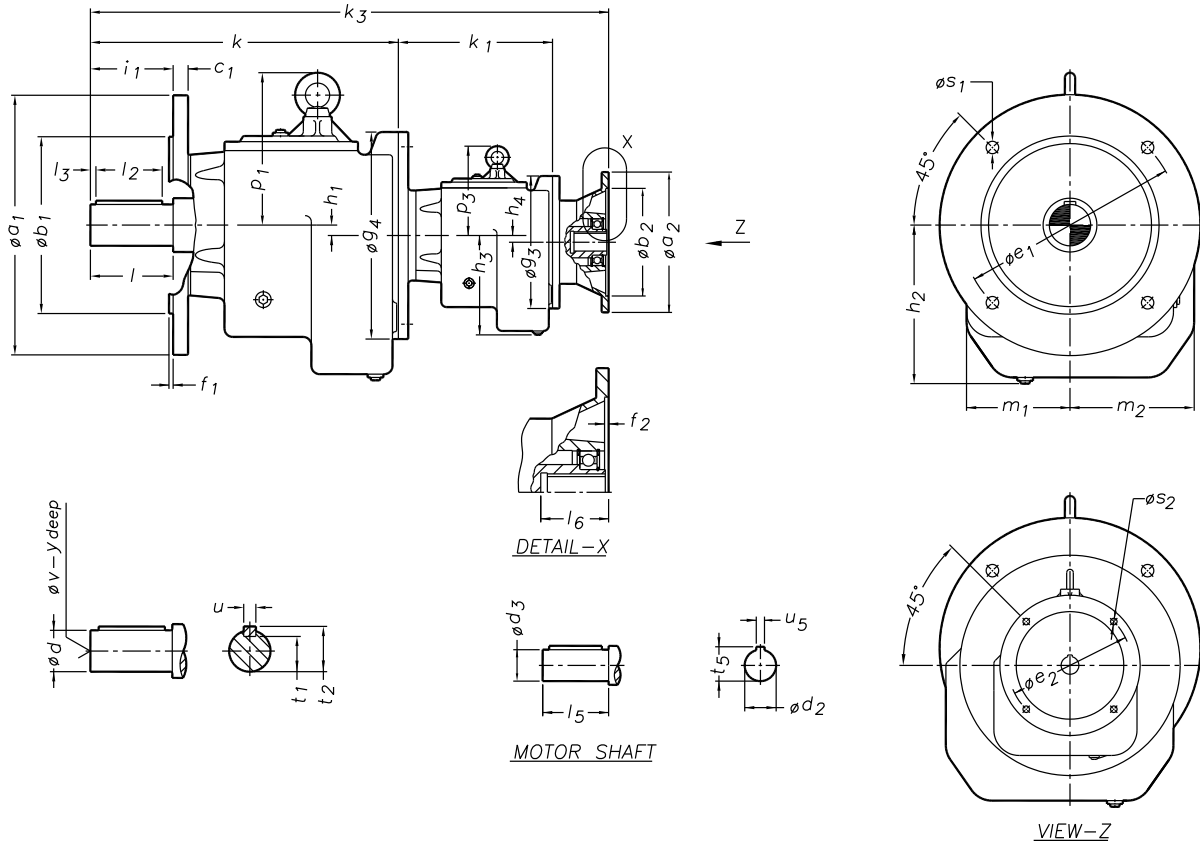
3. Special output extensions, on request.
4. For weight details, see Rating sheets.
5. Our supply includes the required screws, nuts & washers to fix the motor on to the input adaptor flange.

Helical Gear Unit, Tandem Casing, Flange Mounted with Input Adaptor Flange for Flange Mounted Motor to IS/IEC Standards

Type HF

413

PRINCIPAL DIMENSIONS (mm)



Size	a ₁	b ₁	c ₁	e ₁	h ₁	h ₃	k	k ₃	a ₂	b ₂	e ₂	f ₂	d ₂	d ₃	l ₅	l ₆	t ₅	u ₅	s ₂	m ₁	g ₃	p ₁	d	l ₂	t ₁	u	v	
	i ₁	b ₁	s ₁	f ₁	h ₂	h ₄	k ₁		(H7)	e ₂	(G7)	(G7)	(Js9)	m ₂	g ₄	p ₃	l	l ₃	t ₂	y								
HF082H053 HF082H052	-A63	350	250 _{h6}	18	300	12.6	122	372	637	140	95	115	3.5	11	11	23	25	12.8	4	9	130	160	187	50 _{k6}	90	44.5	14	M16
	-A71								643	160	110	130	4	14	14	30	32	16.3	5	9								
	-A80	100		17.5	5	189	11.2	216	658	200	130	165	4	19	19	40	42	21.8	6	11	150	250	124	100	2.5	53.5		32
HF092H053 HF092H052	-A63	350	250 _{h6}	18	300	10.2	122	440	700	140	95	115	3.5	11	11	23	25	12.8	4	9	156	160	224	60 _{k6}	110	53	18	M20
	-A71								706	160	110	130	4	14	14	30	32	16.3	5	9								
	-A80	120		17.5	5	235	11.2	211	721	200	130	165	4	19	19	40	42	21.8	6	11	174	300	124	120	2.5	64		40
	-A90								731	200	130	165	4	24	24	50	52	27.3	8	11								

- Electric motor to be used should be of B type flange with dimensions as per IEC:72 / IS:1231 & IS:2223 and complete with key on the shaft extension.
- Dimensions are subject to change. Get certified dimensional drawing while ordering.

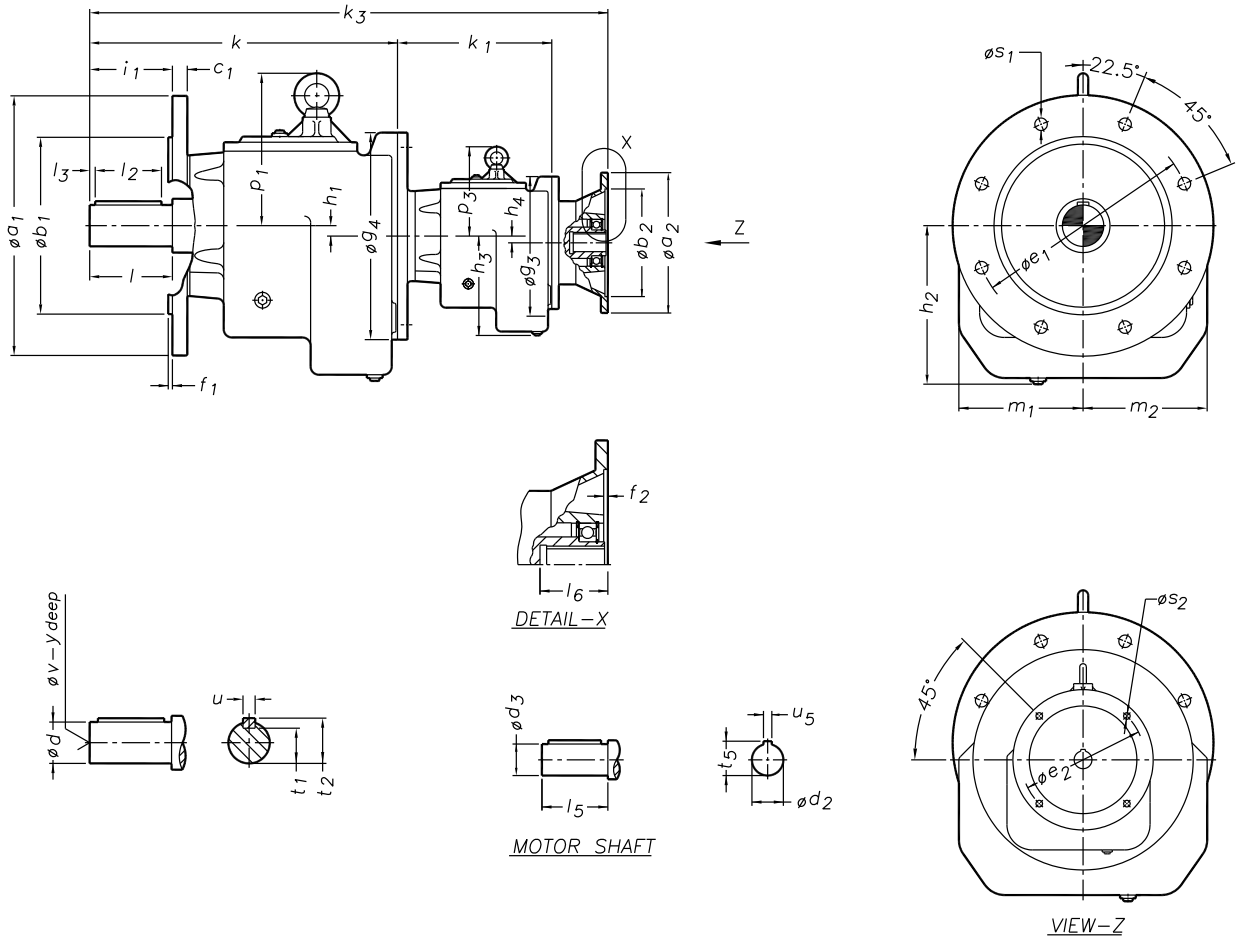
- Special output extensions, on request.
- For weight details, see Rating sheets.
- Our supply includes the required screws, nuts & washers to fix the motor on to the input adaptor flange.

Helical Gear Unit, Tandem Casing, Flange Mounted with Input Adaptor Flange for Flange Mounted Motor to IS/IEC Standards

Type HF

PRINCIPAL DIMENSIONS (mm)

414



Size	α_1	b_1	c_1	e_1	h_1	h_3	k	k_3	a_2	b_2	e_2	f_2	d_2	d_3	l_5	l_6	t_5	u_5	s_2	m_1	g_3	p_1	d	l_2	t_1	u	v	
	i_1		s_1	f_1	h_2	h_4	k_1			(H7)			(G7)				(Js9)		m_2	g_4	p_3	l	l_3	t_2	y			
HF102H073 HF102H072	-A63	450	350 _{h6}	22	400	20.4	149	495	779	140	95	115	3.5	11	11	23	25	12.8	4	9	180	200	255	70 _{m6}	130	62.5	20	M20
	-A71								787	160	110	130	4	14	14	30	32	16.3	5	9								
	-A80	140	17.5	5	260	15.9	247	807	200	130	165	4	19	19	40	42	21.8	6	11	208	350	157	140	2.5	74.5	40		
	-A90							819	200	130	165	4	24	24	50	52	27.3	8	11									
HF113H073 HF112H073 HF112H072	-A63	450	350 _{h6}	22	400	25.1	149	589	866	140	95	115	3.5	11	11	23	25	12.8	4	9	225	200	282	90 _{m6}	160	81	25	M24
	-A71								874	160	110	130	4	14	14	30	32	16.3	5	9								
	-A80	170	17.5	5	326	15.9	240	894	200	130	165	4	19	19	40	42	21.8	6	11	225	400	157	170	2.5	95	50		
	-A90							906	200	130	165	4	24	24	50	52	27.3	8	11									
	-A100	924	250	180	215	5	28	28	60	62	31.3	8	13.5															
	-A112	924	250	180	215	5	28	28	60	62	31.3	8	13.5															

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2. Dimensions are subject to change. Get certified dimensional drawing while ordering.

3. Special output extensions, on request.

4. For weight details, see Rating sheets.

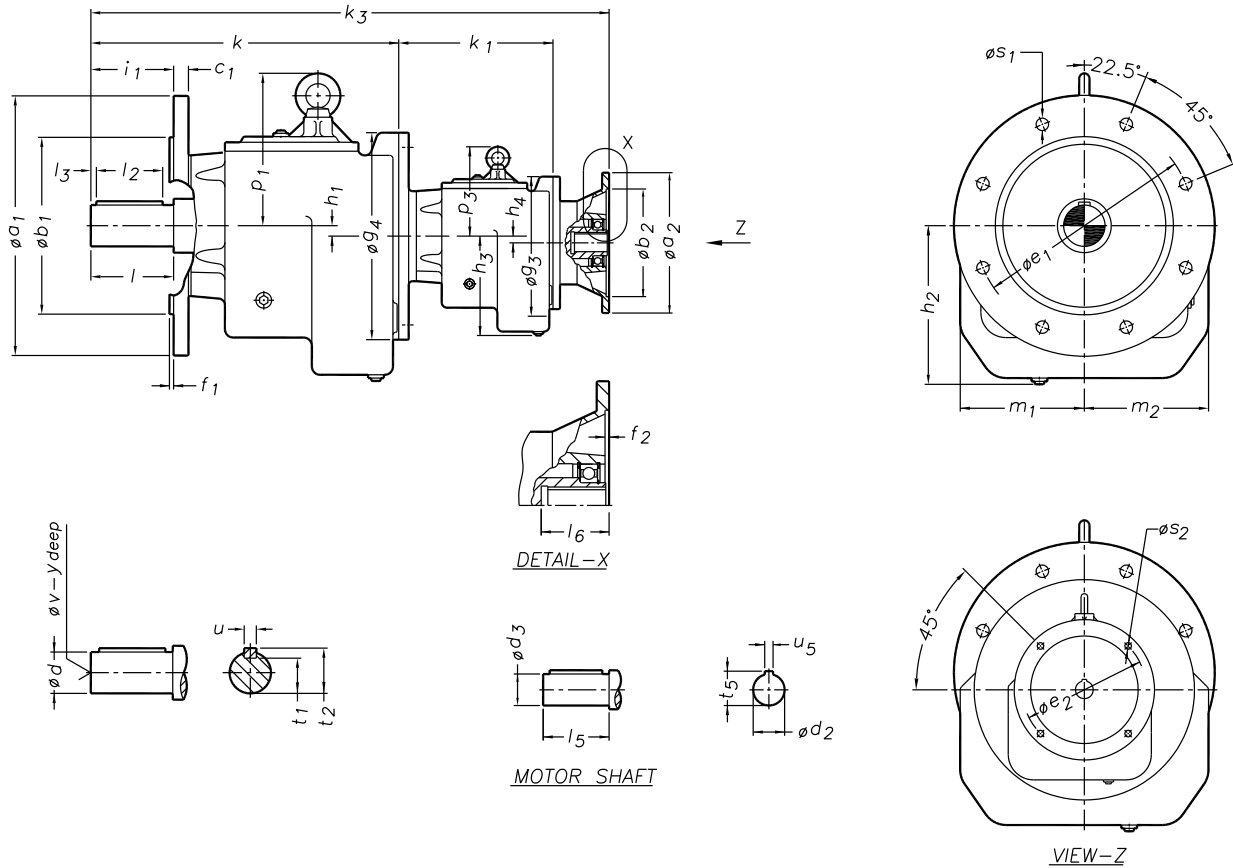
5. Our supply includes the required screws, nuts & washers to fix the motor on to the input adaptor flange.

**Helical Gear Unit, Tandem Casing, Flange Mounted with Input
Adaptor Flange for Flange Mounted Motor to IS/IEC Standards**

Type **HF**

PRINCIPAL DIMENSIONS (mm)

415



Size	a_1	b_1	c_1	e_1	h_1	h_3	k	k_3	a_2	b_2	e_2	f_2	d_2	d_3	l_5	l_6	t_5	u_5	s_2	m_1	g_3	p_1	d	l_2	t_1	u	v	
	i_1		s_1	f_1	h_2	h_4	k_1			(H7)			(G7)					(Js9)		m_2	g_4	p_3	l	l_3	t_2	y		
HF123H073 HF123H072	-A63	550	25	500	33.4	149	695	964	140	95	115	3.5	11	11	23	25	12.8	4	9	265	200	336	110 m6	200	100	28	M24	
	-A71							972	160	110	130	4	14	14	30	32	16.3	5	9									
	-A80							992	200	130	165	4	19	19	40	42	21.8	6	11									
	-A90	450 h6	17.5	5	367	15.9	232	1004	200	130	165	4	24	24	50	52	27.3	8	11	265	450	157	210	2.5	116	50	M24	
	-A100							1022	250	180	215	5	28	28	60	62	31.3	8	13.5									
	-A112							1022	250	180	215	5	28	28	60	62	31.3	8	13.5									
	-A132							1047	300	230	265	5	38	38	80	82	41.3	10	13.5									
HF122H082	-A100	550	450 h6	25	500	33.4	189	695	1067	250	180	215	5	28	28	60	62	31.3	8	13.5	265	250	336	110 m6	200	100	28	M24
	-A112	210		17.5	5	367	12.6	280	1067	250	180	215	5	28	28	60	62	31.3	8	13.5								
HF133H093 HF133H092	-A80	660	28	600	59.9	235	790	1163	200	130	165	4	19	19	40	42	21.8	6	11	330	300	403	120 m6	200	109	32	M24	
	-A90							1175	200	130	165	4	24	24	50	52	27.3	8	11									
	-A100							1200	250	180	215	5	28	28	60	62	31.3	8	13.5									
	-A112	210	22	6	436	10.2	325	1200	250	180	215	5	28	28	60	62	31.3	8	13.5	330	550	224	210	2.5	127	50	M24	
	-A132							1230	300	230	265	5	38	38	80	82	41.3	10	13.5									

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E-mail : info@shanthigears.com Website : www.shanthigears.com

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