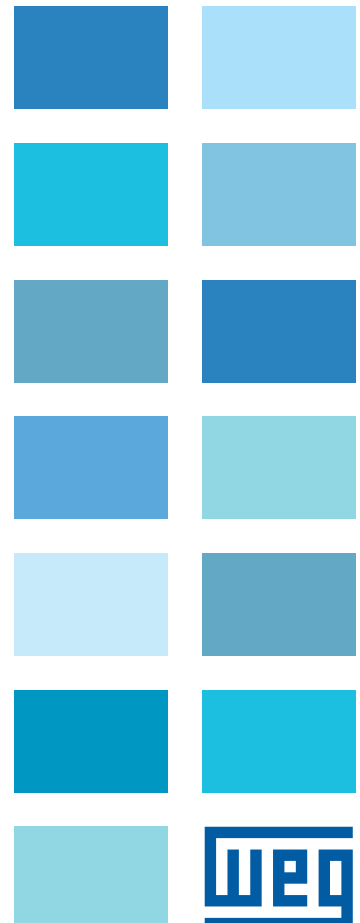
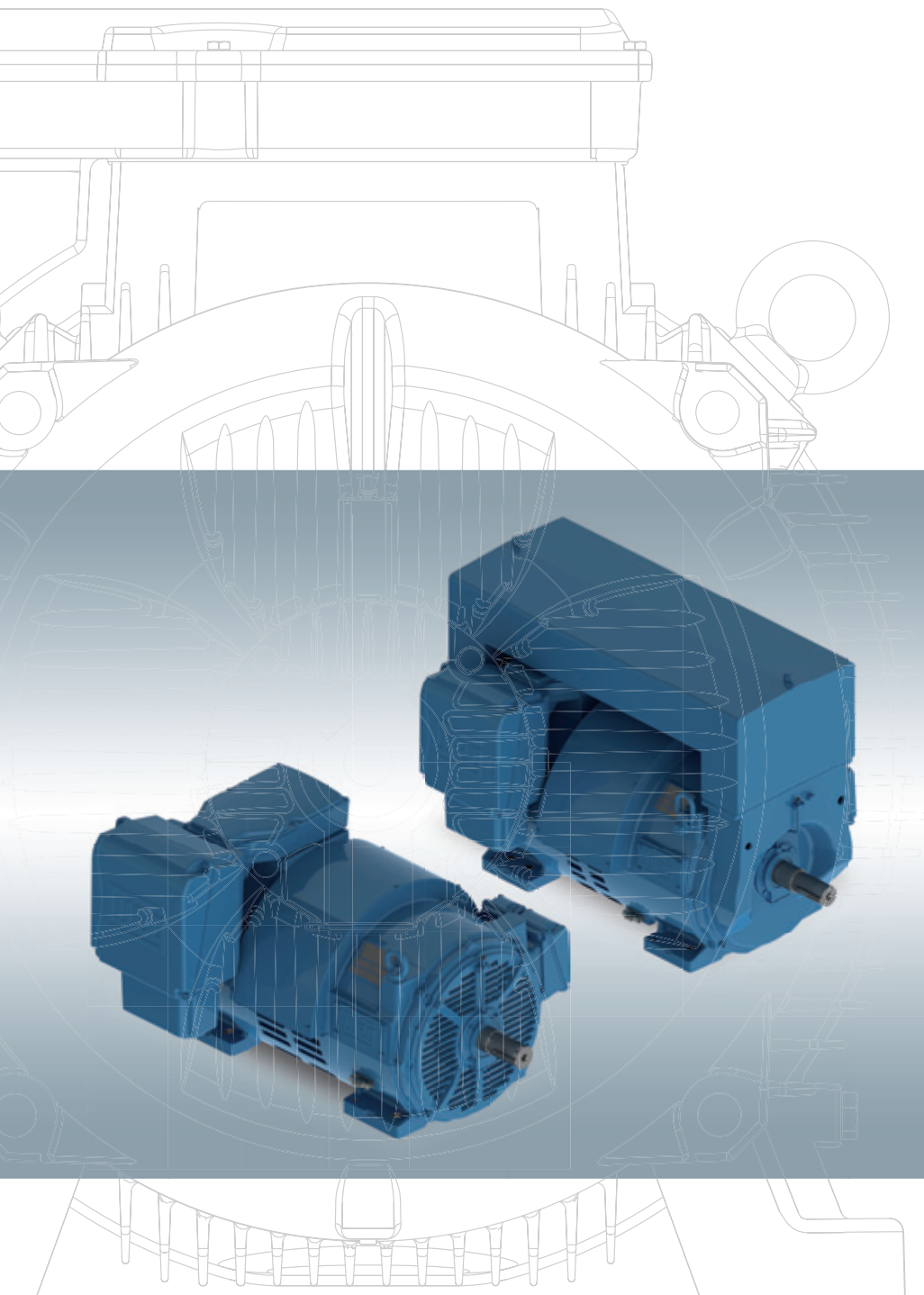


# W40

## High Voltage Open Induction Motors



## W40 High Voltage Induction Motors

The W40 motor is a general purpose line designed for environments where dirt and moisture are minimal. The W40 cast iron frame is designed to provide maximum ventilation and heat dissipation, offering low vibration levels, high mechanical stiffness and durability. Widely used in applications as compressors, pumps, fans and blowers, the W40 line meets or exceeds the efficiency levels determined by the International Standards and the minimum efficiency level programs in force worldwide.

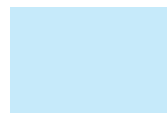


### Standard Features

- Rated output: 220kW to 1400kW
- Number of poles: 2 and 4
- Frame sizes IEC 400 J/H to 450 K/J
- Frequency: 50 Hz
- Voltage: 1.2kV to 11kV
- Insulation class F (DT 80K)
- Degree of protection: IP23
- Cooling method: IC-01 according to DIN EN 60034-6
- Mounting: B3
- Enclosure material: FC-200 cast iron
- Endshields material: FC-200 cast iron
- Terminal box material: FC-200 cast iron
- Terminal block or flying leads for motor connection
- Ball bearings
- Accessories terminal box (standard for medium and high voltage motors)
- Thermistors (PTC), one per phase in windings for frame size IEC 315G/F and up.
- Degree of protection ODP (IP23) for frames IEC 315G/F to 400J/H.
- Degree of protection IP24 for frame size 450K/J.

### Optional Features

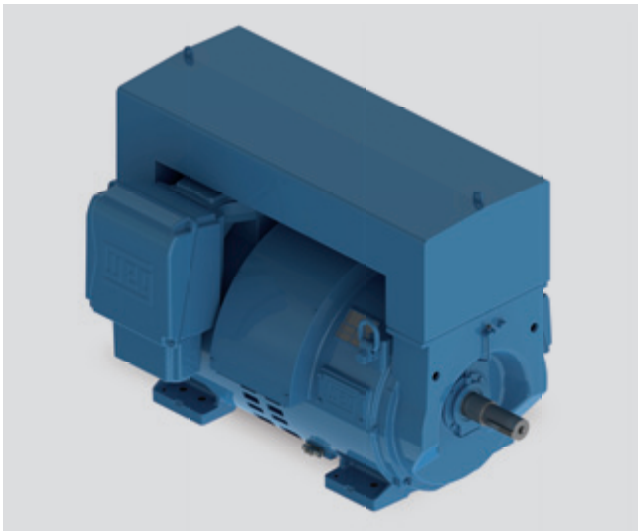
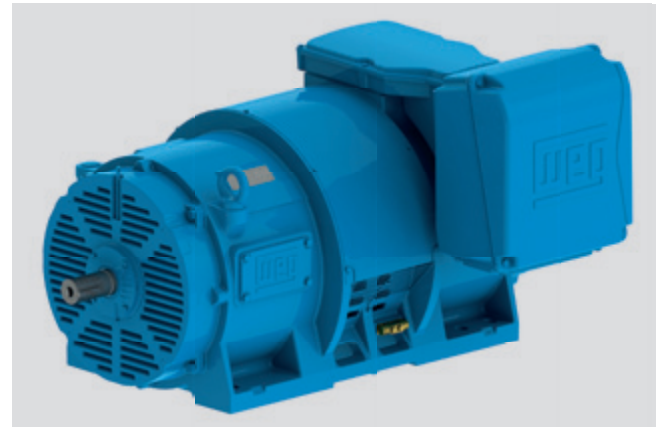
- Number of poles: 6
- Other mounting configurations, including vertical and flanged motors
- Thermal protections: Thermostats or Thermoresistances (Pt-100) on windings or bearings
- Class H insulation
- Space heaters
- Cable glands
- Roller bearings
- Sleeve bearings for frames IEC 400 and above



## Features and Benefits

### New W40 ODP IEC 400 J/H and 450 K/J Frame Size

WEG is now introducing frames sizes 355, 400 and 450 (NEMA L5010, L5810, L6808/09) in W40 portfolio, the W40 IEC 450 K/J frame. This represents an important improvement in the offered rated output, from the previous 355 kW to 1,120 kW in 50 Hz. This new frame features an entirely new concept, offering low noise levels, improved mechanical stiffness and heat dissipation. The introduction of the design allowed WEG to offer the W40 ODP motors in medium and high voltage ratings, being available up to 11 kV.



### New W40 WPI IEC 400 and 450 K/J Frame Size

Suited for applications that require lower noise levels and also additional protection against particles ingress on the motor.

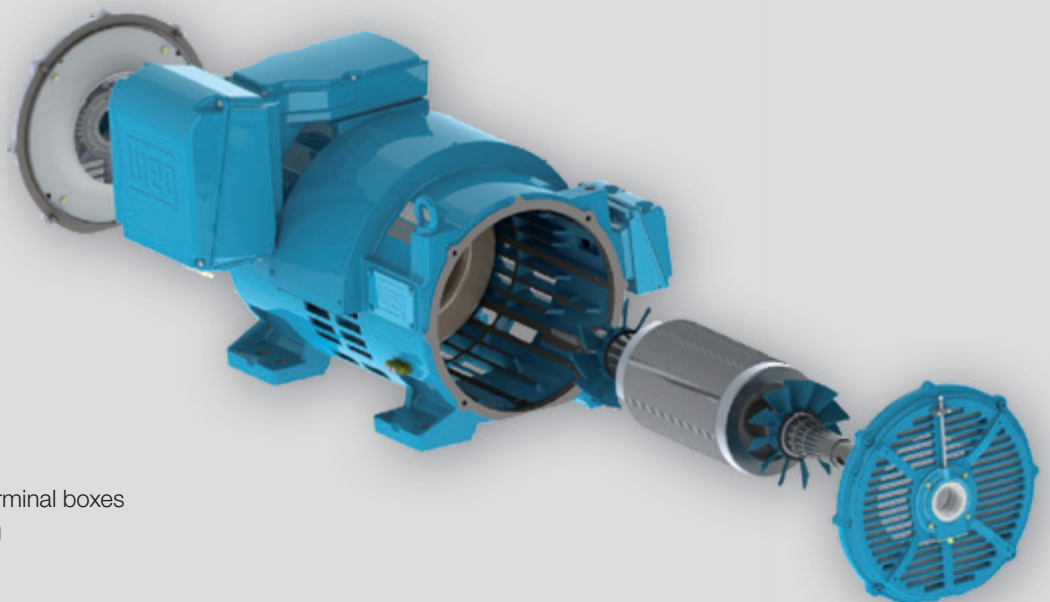
### Low Noise Levels

The innovative design of the new fans system combined with the new frame concept, ensure to the W40 motors maximum air flow with reduced noise levels.

### Modular Construction

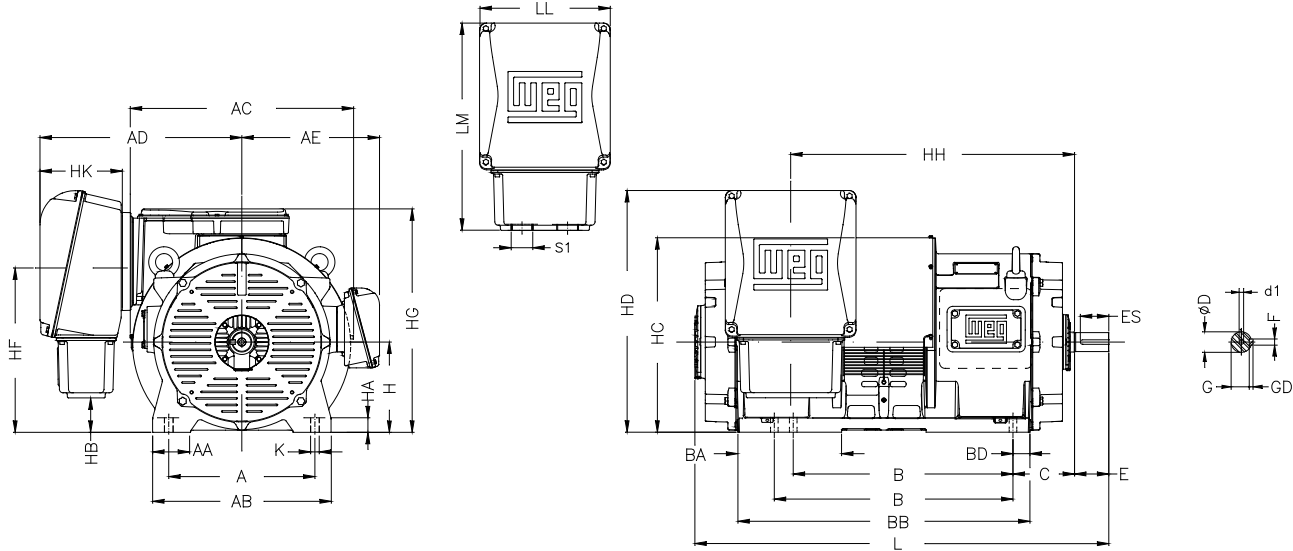
Easy and quick transformation among all possible configurations.

- Roller bearings available as optional feature
- Sleeve bearings available as optional feature
- Suitable for a wide range of accessories, such as:
  - RTD's
  - Additional accessories terminal boxes
  - Insulated bearing housing
  - Vibration detectors
  - Air filters
  - Flanges



# Mechanical Data (Dimension in mm)

## IP23 IEC Frame 315G/F to 400J/H - High Voltage

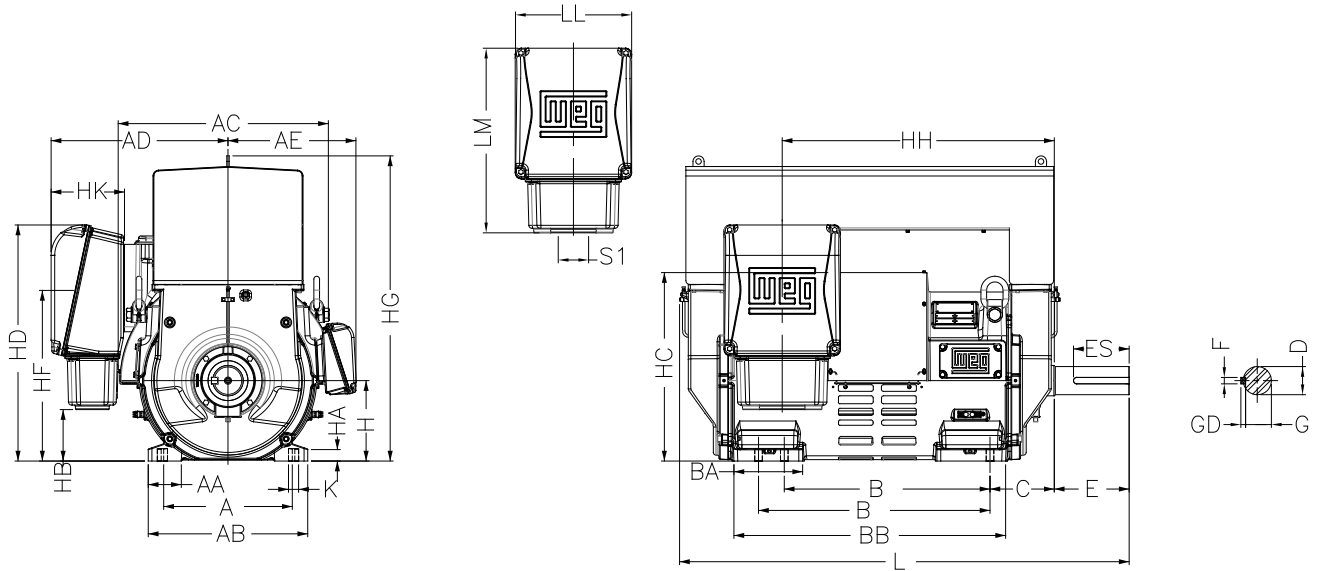


Frame	A	AA	AB	AC	AD	AE	B	BA	BB	C	D	D1	E	ES	F	G	GD
315G/F	508	133	628	779	745	466	800/900	365	1,028	216	65m6 <sup>1)</sup>	DM20 <sup>1)</sup>	140 <sup>1)</sup>	125 <sup>1)</sup>	18 <sup>1)</sup>	58 <sup>1)</sup>	11 <sup>1)</sup>
											90m6	DM24	170	140	25	81	14
355J/H	610	190	750	866	660	462	800/900	265	1,065	254	80m6 <sup>1)</sup>	DM20 <sup>1)</sup>	170 <sup>1)</sup>	140 <sup>1)</sup>	22 <sup>1)</sup>	69.7 <sup>1)</sup>	14 <sup>1)</sup>
											110m6	DM24	210	155	28	98.7	16
400J/H	686	190	840	1,015	700	555	900/1,000	271	1,183	280	85m6 <sup>1)</sup>	DM20 <sup>1)</sup>	170 <sup>1)</sup>	140 <sup>1)</sup>	22 <sup>1)</sup>	76 <sup>1)</sup>	14 <sup>1)</sup>
											130m6	DM24	250	200	32	119	18

Frame	H	HA	HB	HC	HD	HF	HG	HH	HK	K	L	LL	LM	S1	Bearings	
															Drive end	Non-drive end
315G/F	315	48	92.5	687	848 <sup>2)</sup>	598	784	998	286	28	1,467 <sup>1)</sup>	460	730	1xM63x1.5	6314 C3 <sup>1)</sup>	6314 C3 <sup>1)</sup>
					1,052 <sup>3)</sup>						1,497				6319 C3	6314 C3
355J/H	355	48	240	787	970 <sup>2)</sup>	730	927	1,037	286	28	1,520 <sup>1)</sup>	460	730	1xM63x1.5	6218 C3 <sup>1)</sup>	6218 C3 <sup>1)</sup>
					1,150 <sup>3)</sup>						1,560				6224 C3	6218 C3
400J/H	400	50	325	907	1,055 <sup>2)</sup>	795	1,012	1,190	286	36	1,690 <sup>1)</sup>	460	730	1xM63x1.5	6220 C3 <sup>1)</sup>	6220 C3 <sup>1)</sup>
					1,235 <sup>3)</sup>						1,770				6228 C3	6220 C3

Note: 1) Only for 2-pole motors.  
 2) For side mounted terminal box only.  
 3) For top mounted terminal box only.

**IP24 - IEC Frame 355B/C to 450K/J - High Voltage**



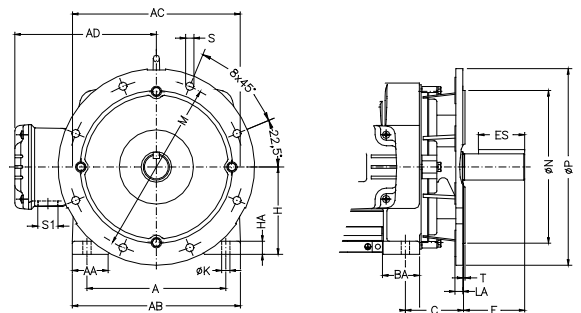
Frame	A	AA	AB	AC	AD	AE	B	BA	BB	C	D	D1	E	ES	F	G	GD
355B/C	610	190	750	866	660	462	800/900	265	1,065	254	80m6 <sup>1)</sup>	DM20 <sup>1)</sup>	170 <sup>1)</sup>	140 <sup>1)</sup>	22 <sup>1)</sup>	69,7 <sup>1)</sup>	14 <sup>1)</sup>
											110m6	DM24	210	155	28	98,7	16
400J/H	686	190	840	1,015	700	555	900/1,000	271	1,183	315	85m6 <sup>1)</sup>	DM20 <sup>1)</sup>	170 <sup>1)</sup>	140 <sup>1)</sup>	22 <sup>1)</sup>	76 <sup>1)</sup>	14 <sup>1)</sup>
											130m6	DM24	250	200	32	119	18
450K/J	750	250	960	1,235	804	625	900/1,000	274	1,188	315	95m6 <sup>1)</sup>	DM20 <sup>1)</sup>	170 <sup>1)</sup>	140 <sup>1)</sup>	25 <sup>1)</sup>	85 <sup>1)</sup>	14 <sup>1)</sup>
											130m6	DM24	250	200	32	119	18

Frame	H	HA	HB	HC	HD	HF	HG	HH	HK	K	L	LL	LM	S1	Bearings	
															Drive end	Non-drive end
355B/C	355	48	240	787	970 <sup>2)</sup>	730	1,243	1,075	286	28	1,650 <sup>1)</sup>	460	730	1xM63x1.5	6218 C3 <sup>1)</sup>	6218 C3 <sup>1)</sup>
					1,150 <sup>3)</sup>						1,690				6224 C3	6218 C3
400J/H	400	50	325	907	1,055 <sup>2)</sup>	795	1,340	1,225	286	36	1,838 <sup>1)</sup>	460	730	1xM63x1.5	6220 C3 <sup>1)</sup>	6220 C3 <sup>1)</sup>
					1,235 <sup>3)</sup>						1,918				6228 C3	6220 C3
450K/J	450	50	455	1,000	1,184 <sup>2)</sup>	890	1,453	1,237	286	36	1,838 <sup>1)</sup>	460	730	1xM63x1.5	6220 C3 <sup>1)</sup>	6220 C3 <sup>1)</sup>
					1,367 <sup>3)</sup>						1,918				6228 C3	6220 C3

Notes: 1) Dimension applicable to 2 pole motors.  
 2) Dimension applicable to side mounted terminal box.  
 3) Dimension applicable to top mounted terminal box.

**“FF” Flange**

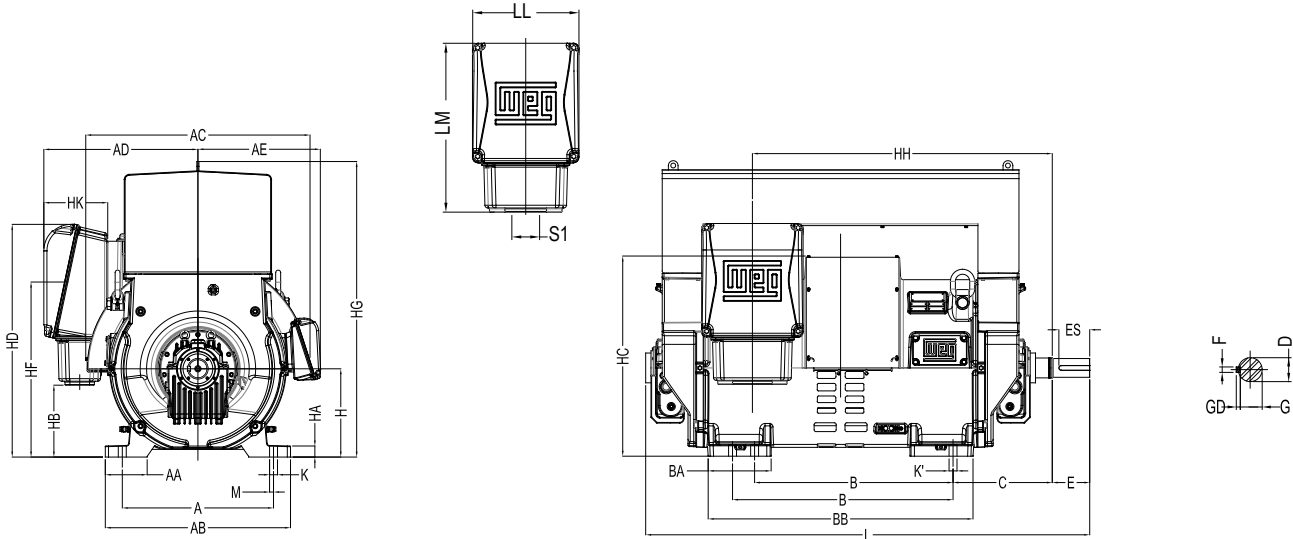
Frame	Flange	LA	M	N	P	S	T	α	Nº of holes
400 J/H	FF-940	35	940	880	1000	28	6	22°30"	8
450 K/J	FF-1080	35	1080	1000	1150	28	6	22°30"	8





## Mechanical Data (Dimension in mm)

### Sleeve Bearings IP24 IEC Frame 400J/H to 450K/J High Voltage



Frame	A	AA	AB	AC	AD	AE	B	BA	BB	C	D	D1	E	ES	F	G	GD
400 J/H	686	190	840	1015	700	555	900/1000	271	1183	450	85m6 <sup>1)</sup>	DM20 <sup>1)</sup>	170 <sup>1)</sup>	140 <sup>1)</sup>	22 <sup>1)</sup>	76 <sup>1)</sup>	14 <sup>1)</sup>
450 K/J	750	201	950	1240	804	625	900/1000	268	1181	450	95m6 <sup>1)</sup>	DM20 <sup>1)</sup>	170 <sup>1)</sup>	140 <sup>1)</sup>	25 <sup>1)</sup>	85 <sup>1)</sup>	14 <sup>1)</sup>

Frame	H	HA	HB	HC	HD	HF	HG	HH	HK	K	L	LL	LM	S1	Sleeve bearings	
															Drive end	Non-drive end
400 J/H	400	50	325	907	1055 <sup>2)</sup>	815	1340	1360	290	36	1988	460	730	M80x2.0	9_80	9_80
450 K/J	450	50	455	1022	1184 <sup>2)</sup>	935	1471	1370	290	36	1988	460	730	M80x2.0	9_80	9_80

## Noise Level

The performance of the W40 motors regarding to their no-load noise levels are represented in the table below. Data refer to motors operating at 50 Hz. Please contact WEG for noise levels in 8P or higher polarities.

Frame	Noise level dB (A)	
	ODP	WPI
315G/F	85	N/A
355J/H	85	82
400 B/C	90	82
450 A/B	N/A	On request

The sound pressure levels shown in the tables above are valid for motors operating with no load and sine-wave power supply. Under load, standard IEC 60034-9 provides for an increase in sound pressure levels according to table 2.

Frame	2 poles	4 poles	6 poles
H = 315	2	3	5
355 ≤ H	2	2	4

Table 2 - Maximum increase expected in the sound pressure level for motors operated with load.



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