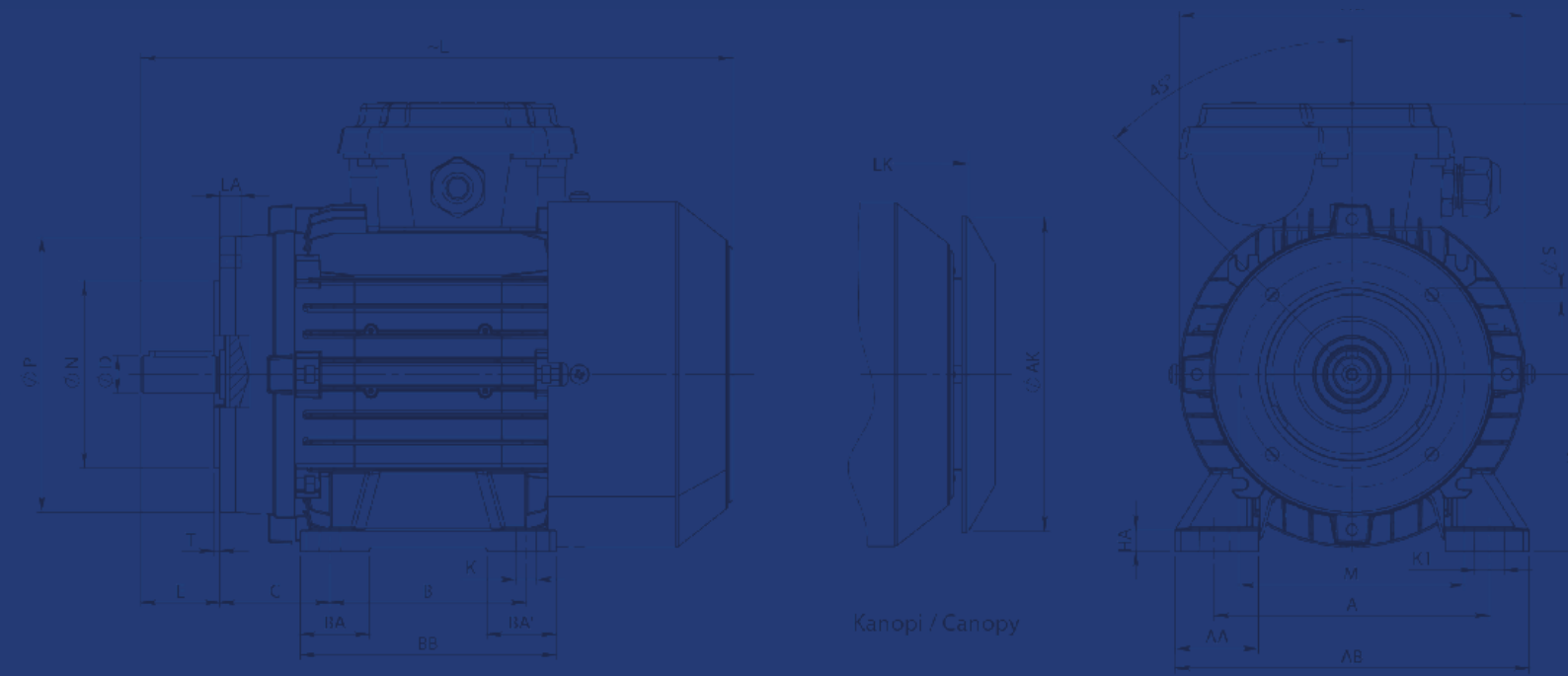
GAMAK
Power to Energize Life

USER WASTE PRODUCT DISPOSAL INFORMATION



GAMAK | THREE-PHASE SPARE PARTS LIST

GAMAK | SINGLE-PHASE SPARE PARTS LIST

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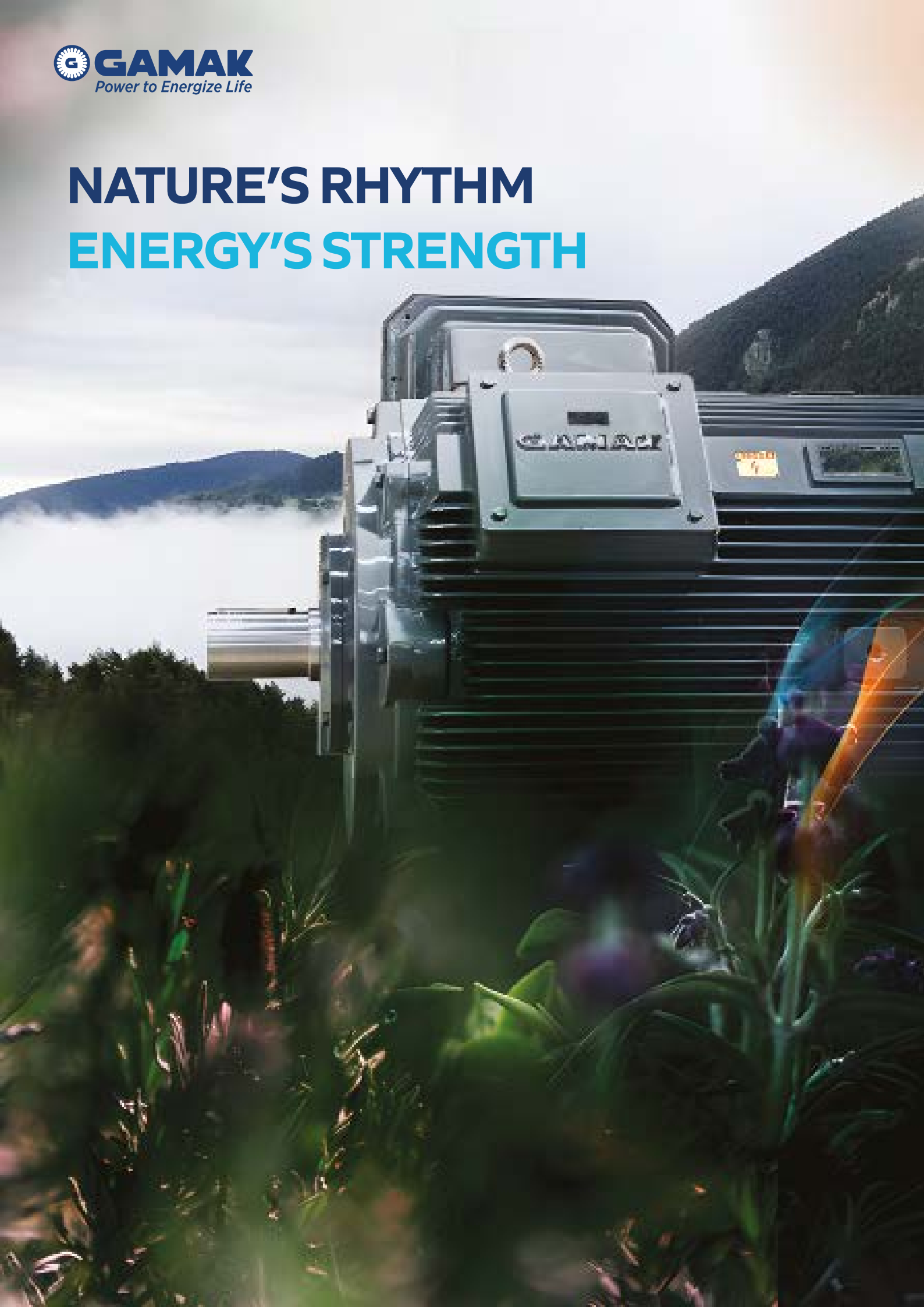
NATURE'S RHYTHM
ENERGY'S STRENGTH



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GENERAL INFORMATION

This document is intended to guide end-users in the environmentally safe and legally compliant disposal of IEC 56 to 450 frame size three-phase and single-phase motors.

Electric motors should be classified as Waste Electrical and Electronic Equipment (WEEE). The metallic components of motors (steel, copper, aluminium) are recyclable. Insulating materials, plastics, and oils can be harmful to the environment and should therefore be disposed of as part of a hazardous waste disposal procedure. Motors should never be disposed of with household waste.

2. ELECTRIC MOTORS

Structurally, electric motors are primarily manufactured from ferrous metals (steel, cast iron), non-ferrous metals (copper, aluminum), and plastics. At the end of their service life, they must be disposed of in accordance with local regulations.

Exploded views of the main components of GAMAK three-phase and single-phase motors are shown in Figures 1 and 2. Descriptions of the main components are provided in Table 1 and Table 2.

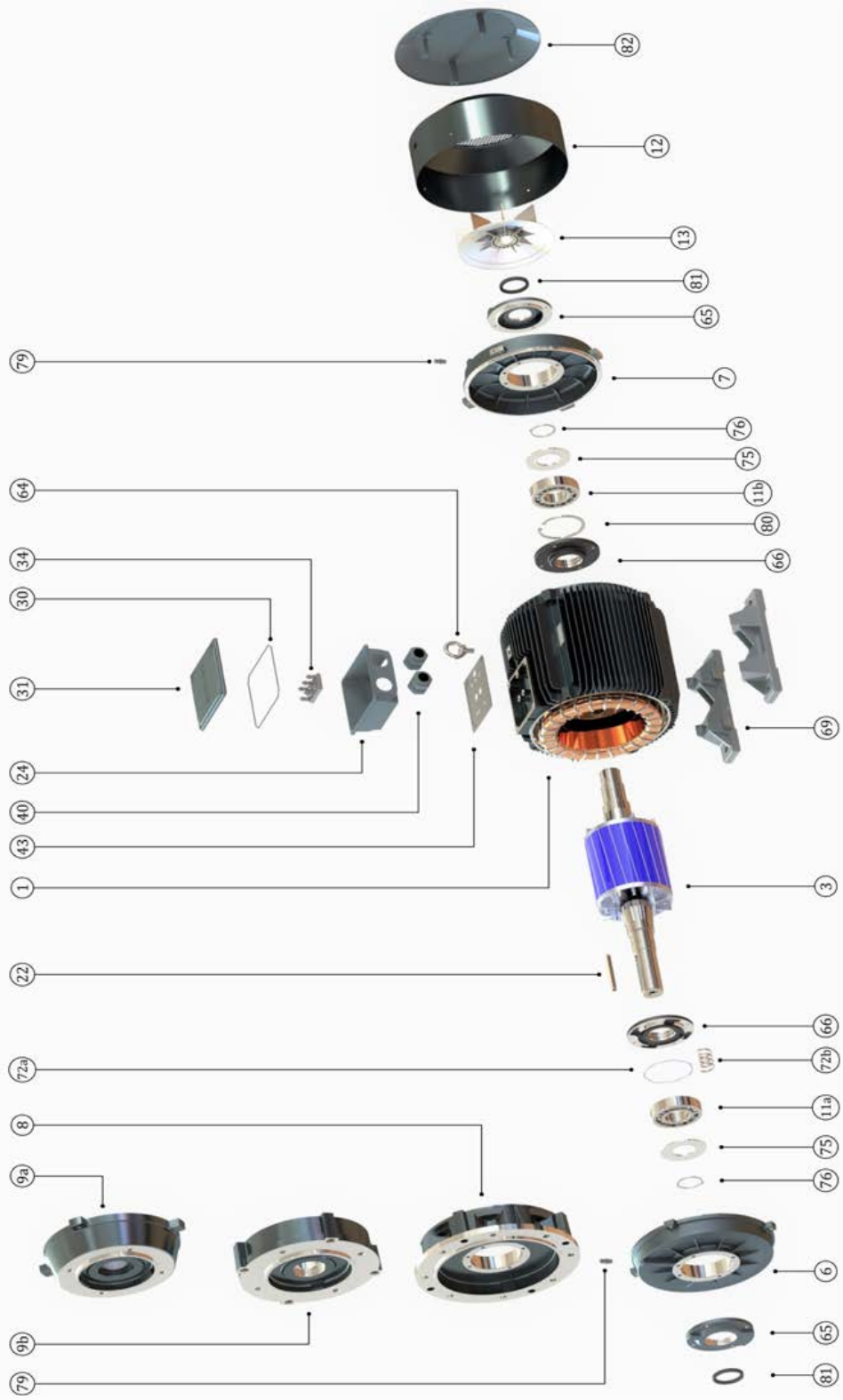

Figure 1 – Main Components of a Three-Phase Asynchronous Electric Motor

TABLE 1 | THREE-PHASE SPARE PARTS LIST

Number	Component	Material
1	Stator with complete windings: Varnished and installed to the body	Steel / Brass / Plastic
3	Complete rotor: Balanced, shafted, machined (excluding keys)	Aluminium / Steel
6	Front cover	Aluminium / Cast iron
7	Rear cover	Aluminium / Cast iron
8	Flange (Form A - 'FF'): B5	Aluminium / Cast iron
9a	Flange (Form C - "FT"): B14	Aluminium / Cast iron
9b	Flange (Form - "FT", Large type): B14/2	Aluminium / Cast iron
11a	Front bearing (Ball or cylindrical bearing)	Steel / Rubber
11b	Rear bearing	Steel / Rubber
12	Fan housing bowl	Steel
13	Cooling Fan	Plastic / Aluminium
22	Shaft end key	Steel
24	End terminal box	Plastic / Aluminium
30	Seal (Between terminal box and cover)	Rubber
31	Terminal box cover	Plastic / Aluminium
34	End plate - Terminal (including bridge, nuts and washers)	"Terminal: Plastic | Bridge: Brass | Loaves:Steel"
40	Cable entry gland	Plastic / Steel
43	Seal (Between end terminal box and motor frame)	Rubber
64	Lifting eye (200..450)	Steel
65	Bearing holder outer cover (for motors with lubrication nipple)	Aluminium / Cast iron
66	Bearing holder inner cover (for motors with lubrication nipple)	Aluminium / Cast iron
69	Attachable feet (only aluminium frame)	Aluminium
72a	Disc spring (56...280)	Steel
72b	Coil Spring (315..450)	Steel
75	Oil retaining disc (for motors with lubrication nipple)	Steel
76	Outer snap ring; For fixing the bearing and oil holding disc (For motors with lubrication nipple at the front and rear, 160. 280 at the rear)	Steel
79	Grease nipple spacer	Steel
80	Inner snap ring For fixing the rear bearing on the cover (160..280)	Steel
81	Rubber dust seal (V-ring) or optional oil seal	Rubber
82	Canopy	Steel

2. ELECTRIC MOTORS

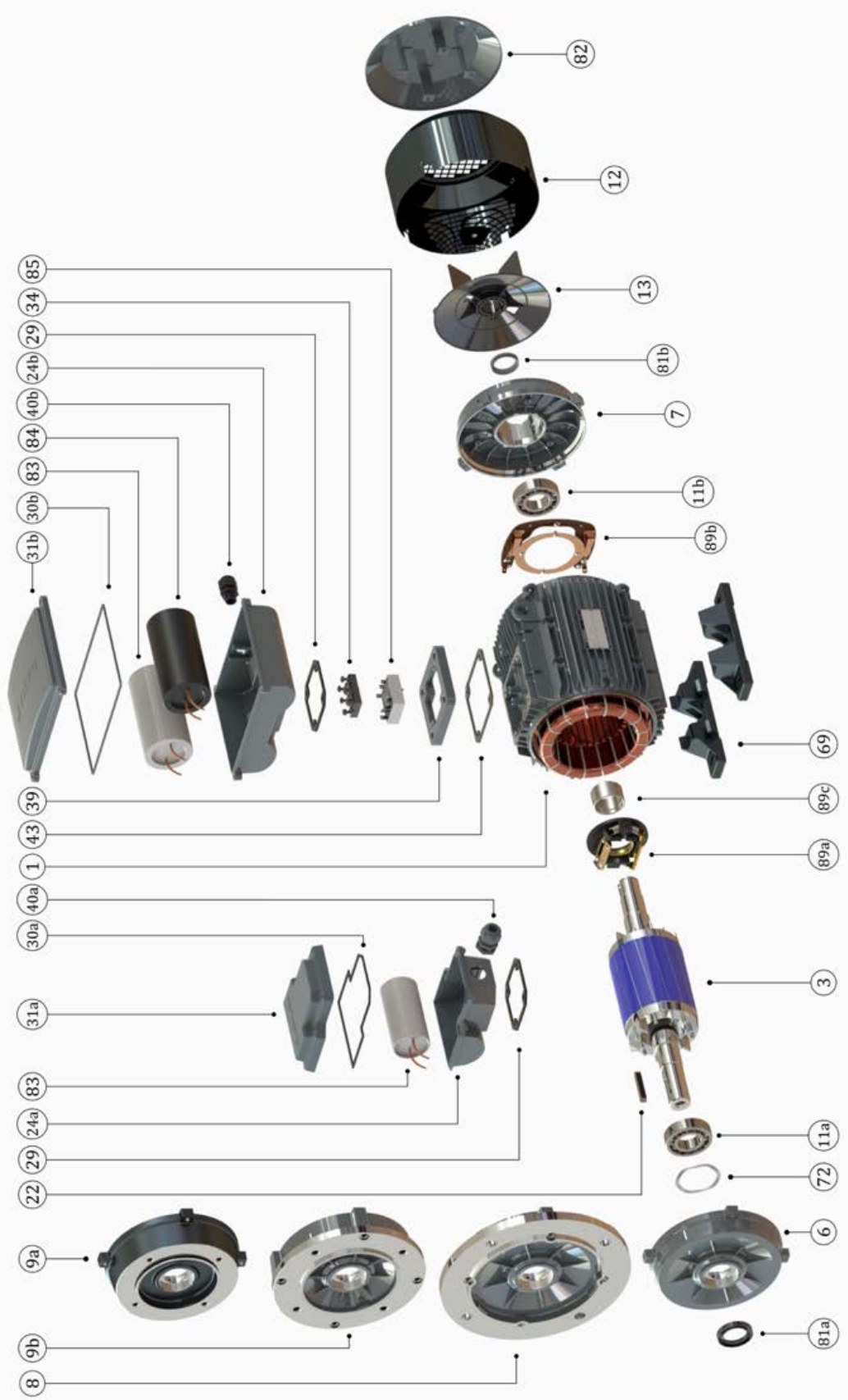

Figure 2 – Main Components of a Single-Phase Asynchronous Electric Motor

TABLE 2 | SINGLE-PHASE SPARE PARTS LIST

Number	Component	Material
1	Stator with complete windings: Varnished and installed to the body	Steel / Brass / Plastic
3	Complete Rotor: With balanced, shaft, machined (excluding keys)	Aluminium / Steel
6	Front cover	Aluminium
7	Rear cover	Aluminium
8	Flange (Form A) B5	Aluminium
9a	Flange (Form C - "FT"): B14	Aluminium
9b	Flange (Form C - "FT", Large type): B14/2	Aluminium
11a	Front bearing	Steel / Rubber
11b	Rear bearing	Steel / Rubber
12	Fan housing bowl	Steel
13	Cooling fan	Plastic
22	Shaft end key	Steel
24a	End terminal box - Permanent circuit capacitor design	Plastic
24b	End terminal box - Start-up+permanent circuit capacitor design	Plastic
29	Seal- Between end terminal box and motor frame	Rubber
30a	Seal (Between terminal box and cover) Permanent circuit capacitor design	Rubber
30b	Seal (Between terminal box and cover) Start-up+permanent circuit capacitor design	Rubber
31a	End terminal box cover - Permanent circuit capacitor design	Plastic
31b	End terminal box cover - Start-up+permanent circuit capacitor design	Plastic
34	Klemens	Plastic
39	Connecting piece (100 frame)	Aluminium
40a&b	Cable entry gland	Plastic
43	Seal- Between end terminal box and motor frame (100-112)	Rubber
69	Attachable feet	Aluminium
72	Disc spring	Steel
81a	Oil seal	Rubber
81b	Rubber dust seal (V-ring)	Rubber
82	Canopy	Steel
83	Permanent circuit capacitor	Plastic
84	Start-up (first movement) capacitor	Plastic
85	Electronic start-up relay (Start-up+permanent circuit condenser motors)	Plastic
89a	Centrifugal spring (rotor)	Plastic
89b	Centrifugal contact (stator)	Fiber
89c	Centrifuge component	Steel

3. PACKAGING

The packaging of electric motors is made of cardboard, plastic, or wood. These materials must be disposed of in compliance with the Packaging Waste Regulation.

4. LEGAL REGULATIONS

1.Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE)
2. European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste
3. EU Directive 2012/19/EU

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