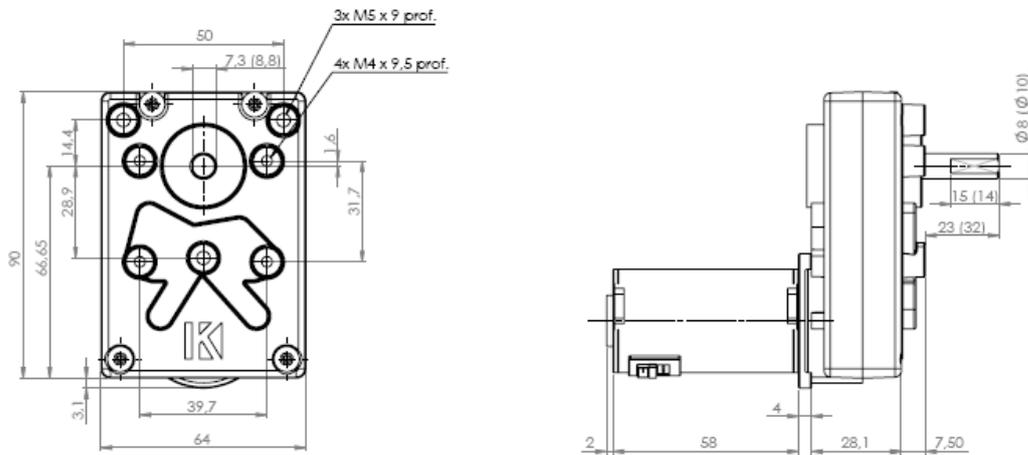


# Gearbox + Motor **K55-BG32**



K55

## TECHNICAL CHARACTERISTICS

High endurance gearbox for heavy duty continuous workload in any position, at room temperature from -15 to 50°C, with **torque load up to 5.5 Nm, steady load.**

- **Box.** Made of die-cast Zamak. Frontal mounting by four M4 threaded holes (the same as K31 gearbox).
- **Gear set.** Hobbed spur gear set with steel pinions and gear wheels, with case superficial heat anti-friction treatment. The intermediate gears turn on rectified hardened steel shafts, which are fixed to the box.
- **Output shaft.** Ø8 mm. steel shaft, 23 mm usable length, with a flat. Incorporates and turns on ball bearings.
- **Output shaft load:**

|                                     |                |
|-------------------------------------|----------------|
| Axial direction, pull or push       | 400 N ≈ 40 Kg. |
| Radial direction, at 10 mm from box | 250 N ≈ 25 Kg. |
- **Lubrication.** Lithium grade 2 grease.
- **Weight.** With maximal number of stages: 0.91 Kg

### MOTOR COUPLING:

- **Direct C.:** Dunker BG32 type, 12 or 24V.

### ■ OPTIONAL:

- Frontal mounting by three M5 threaded holes (the same as K80 gearbox).
- Ø10 mm output shaft, 32 mm usable length, with a flat.
- **DW 8/10:** Ø8 mm or Ø10 mm shaft with double output (both sides), without flat.
- Speed regulation with electronic controller.

**Avoid** impacts on the output shaft when assembling or disassembling parts on it, this could damage the gearbox.

**Your special requests are welcome.**

| BRUSHLESS DC MOTORS<br>MODEL Dunker BG32 |        |               |                                    |                                    |                         |                                    |                                    |                         |                                    |                                    |                         |                                    |                                    |                         |
|--|--------|---------------|------------------------------------|------------------------------------|-------------------------|------------------------------------|------------------------------------|-------------------------|------------------------------------|------------------------------------|-------------------------|------------------------------------|------------------------------------|-------------------------|
|  |        |               | BG32x10 24V                        |                                    |                         | BG32x20 24V                        |                                    |                         | BG32x10KI 12V                      |                                    |                         | BG32x20KI 24V                      |                                    |                         |
| Reduction ratio<br>$i = X:1$             | Stages | Torque factor | No load speed<br>$n_0$<br>(r.p.m.) | Nominal Speed<br>$n_N$<br>(r.p.m.) | Nominal Torque<br>(N.m) | No load speed<br>$n_0$<br>(r.p.m.) | Nominal Speed<br>$n_N$<br>(r.p.m.) | Nominal Torque<br>(N.m) | No load speed<br>$n_0$<br>(r.p.m.) | Nominal Speed<br>$n_N$<br>(r.p.m.) | Nominal Torque<br>(N.m) | No load speed<br>$n_0$<br>(r.p.m.) | Nominal Speed<br>$n_N$<br>(r.p.m.) | Nominal Torque<br>(N.m) |
| 10,52                                    | 3      | 7,67          | 544,68                             | 365,02                             | 0,21                    | 471,48                             | 342,21                             | 0,37                    | 553,23                             | 372,62                             | 0,20                    | 485,74                             | 365,97                             | 0,35                    |
| 14,89                                    | 3      | 10,85         | 384,82                             | 257,89                             | 0,29                    | 333,11                             | 241,77                             | 0,52                    | 390,87                             | 263,26                             | 0,28                    | 343,18                             | 258,56                             | 0,49                    |
| 31,59                                    | 3      | 23,03         | 181,39                             | 121,56                             | 0,62                    | 157,01                             | 113,96                             | 1,11                    | 184,24                             | 124,09                             | 0,60                    | 161,76                             | 121,87                             | 1,04                    |
| 61,75                                    | 3      | 45,02         | 92,79                              | 62,19                              | 1,22                    | 80,32                              | 58,30                              | 2,16                    | 94,25                              | 63,48                              | 1,17                    | 82,75                              | 62,35                              | 2,03                    |
| 91,28                                    | 4      | 59,89         | 62,77                              | 42,07                              | 1,62                    | 54,34                              | 39,44                              | 2,87                    | 63,76                              | 42,94                              | 1,56                    | 55,98                              | 42,18                              | 2,69                    |
| 122,17                                   | 4      | 80,16         | 46,90                              | 31,43                              | 2,16                    | 40,60                              | 29,47                              | 3,85                    | 47,64                              | 32,09                              | 2,08                    | 41,83                              | 31,51                              | 3,61                    |
| 158,15                                   | 4      | 103,76        | 36,23                              | 24,28                              | 2,80                    | 31,36                              | 22,76                              | 4,98                    | 36,80                              | 24,79                              | 2,70                    | 32,31                              | 24,34                              | 4,67                    |
| 218,47                                   | 4      | 143,34        | 26,23                              | 17,58                              | 3,87                    | 22,70                              | 16,48                              | Ex.                     | 26,64                              | 17,94                              | 3,73                    | 23,39                              | 17,62                              | Ex.                     |
| 322,94                                   | 5      | 190,69        | 17,74                              | 11,89                              | 5,15                    | 15,36                              | 11,15                              | Ex.                     | 18,02                              | 12,14                              | 4,96                    | 15,82                              | 11,92                              | Ex.                     |
| 395,48                                   | 5      | 233,53        | 14,49                              | 9,71                               |                         | 12,54                              | 9,10                               | Torque max. 5,5 N·m     | 14,72                              | 9,91                               |                         | 12,92                              | 9,74                               |                         |
| 532,93                                   | 5      | 314,69        | 10,75                              | 7,21                               |                         | 9,31                               | 6,76                               |                         | 10,92                              | 7,36                               |                         | 9,59                               | 7,22                               |                         |
| 611,56                                   | 5      | 361,12        | 9,37                               | 6,28                               |                         | 8,11                               | 5,89                               |                         | 9,52                               | 6,41                               |                         | 8,36                               | 6,30                               |                         |

**NO LOAD SPEED/NOMINAL TORQUE**

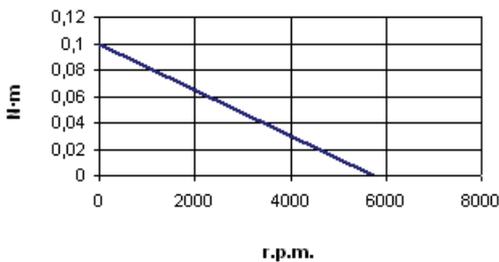
Motor BG 32x10-24V= 5730 r.p.m./0,1Nm.  
 Motor BG 32x20-24V= 4960 r.p.m./0,22Nm.  
 Motor BG 32x10 KI-12V= 5820 r.p.m./0,099Nm.  
 Motor BG 32x20 KI-24V= 5110 r.p.m./0,207Nm.

**WARNING:** The load might reduce final speed up to 40%.

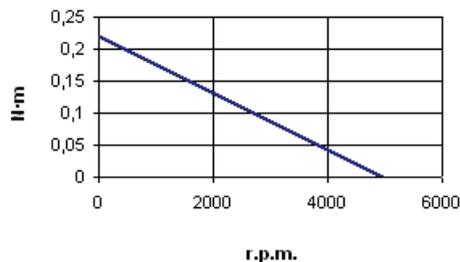
**Ex** Exceeds maximal admissible torque

**CURVES**

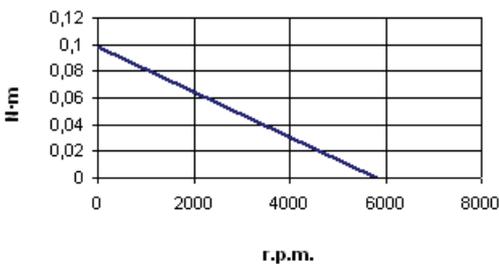
BG32x10 24V



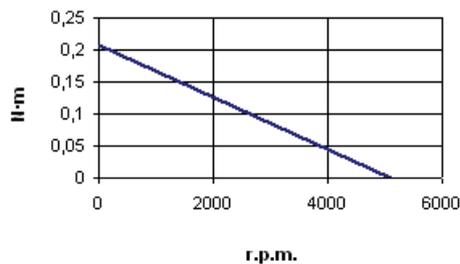
BG32x20 24V



BG32x10KI 12V



BG32x20KI 24V



**GEARBOX TIPS:**

**Noise:** noise level depends on load symmetry, location (avoid acoustic resonance), and rotation speed; the lower the speed on the input shaft (motor), the lower the noise.