

CROUZET - 52MM DIAMETER DC MOTOR WITH PLANETARY GEAR - DCMIND BRUSH SERIES

8983BXXX

Planetary 52mm gearmotor 57W 12→90Vdc

10→429rpm 25Nm max

- 12→120 V dc, 57→104 W, 10→490 rpm, 25 Nm max
- Low noise/vibration
- High efficiency
- Long life
- IP65 as standard



PRODUCT DESCRIPTION

The DCMind Brush product family is Crouzet's new generation of high performance DC motors.

Engineered to be very quiet and energy-efficient, making it ideal for medical and laboratory applications and any application that requires low noise levels & low vibration - the motor without gearbox emits a noise level of 35 dBA, substantially quieter than the sound of rainfall (50 dB).

DCmind Brush has a lifespan of up to 24,000hr without load and up to 5,000hr with rated load.

The motors are rated to IP65 dust/water protection class as standard with the ability to reach up to IP69K.

DCmind is certified for UL and various other specific certificates within the medicine and household industry.

Options for adaptation to the standard motor include encoder, brake, special output shafts & general mechanical/electrical modifications developed according to your specific application requirements.

TECHNICAL DATA

Diameter	52 mm
IP class	IP65
Life span	5000h
Max. torque	25 Nm
Power	57 W
Ratio	i=7→393:1
Shaft diameter	12 mm
Speed options	10rpm→429rpm
Supply voltage	12 V DC, 24 V DC, 48 V DC, 90 V DC
Type of gearbox	Planetary 1→3 stages

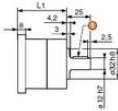
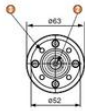
GEARBOXES FOR DCmind BRUSH RANGE

3 to 25 Nm

- Planetary and worm gearboxes, very silent versions
- Shafts on ball bearings
- Long service life

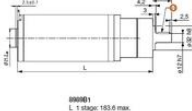


Planetary gearbox e 52 type B1



- Parallel key 4 x 4 x 16 DIN9885
 - M4, depth 10
 - 4 x M5 at 90°, depth 10 over Ø 40
- L1 1 stage: 56.1 max.
L1 2 stages: 70.3 max.
L1 3 stages: 84.5 max.

8903B1 - 8909B1



8903B1
L 1 stages: 158.1 max.
L 2 stages: 173.3 max.
L 3 stages: 187.3 max.

8909B1
L 1 stages: 163.6 max.
L 2 stages: 197.8 max.
L 3 stages: 212 max.

- Parallel key 4 x 4 x 16 DIN9885
- 4 x M5 at 90°, depth 10 over Ø 40
- M4, depth 10

Part numbers

Designation	Part number	Part number	Part number
Family	A1	B1	8903B1
Type of gearbox	Planetary e 52	Planetary e 52	Planetary e 52
Input shaft	Input shaft 1	Input shaft 2	Input shaft 3
Output shaft	Output shaft 1	Output shaft 2	Output shaft 3
Input speed	Input speed 1	Input speed 2	Input speed 3
Output speed	Output speed 1	Output speed 2	Output speed 3
Input torque	Input torque 1	Input torque 2	Input torque 3
Output torque	Output torque 1	Output torque 2	Output torque 3
Input power	Input power 1	Input power 2	Input power 3
Output power	Output power 1	Output power 2	Output power 3
Input current	Input current 1	Input current 2	Input current 3
Output current	Output current 1	Output current 2	Output current 3
Input voltage	Input voltage 1	Input voltage 2	Input voltage 3
Output voltage	Output voltage 1	Output voltage 2	Output voltage 3
Input frequency	Input frequency 1	Input frequency 2	Input frequency 3
Output frequency	Output frequency 1	Output frequency 2	Output frequency 3
Input ripple	Input ripple 1	Input ripple 2	Input ripple 3
Output ripple	Output ripple 1	Output ripple 2	Output ripple 3
Input noise	Input noise 1	Input noise 2	Input noise 3
Output noise	Output noise 1	Output noise 2	Output noise 3

Planetary gearbox:
To maintain a very low noise level, the motor pinion is precision-machined on motor shaft to obtain optimum concentricity and parallelism. The gears in the first stage are helical-cut and made from a composite material. This design significantly improves gear life by reducing wear due to friction, increases gearbox efficiency and ensures a very low noise level even with the gearbox under load.

Worm gearbox:
This gearbox combines a hardened steel worm gear with a hardened bronze helical wheel, a combination that ensures a long service life. The helical wheel rotates in a grease reservoir to provide an excellent slip coefficient and dissipate heat. Springs and lip seals equipped with perforated springs are used to ensure sealing the gearbox output shaft.

The gearbox casing is made of aluminum to maximize heat dissipation. However, because of the high power rating of this gearbox and the lower efficiency inherent in worm gearboxes, care must be taken not to exceed a temperature of 75°C on the gearbox casing during operation.

The output shaft configuration can be right, left, or a dual shaft output on both sides.