

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
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

3 to 25 Nm

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



Plant numbers

[illegible]

Planetary gearboxes:

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, elongation, deflection, off-synchronous rotation, or other low motor-level problems with the gearbox, engine input.

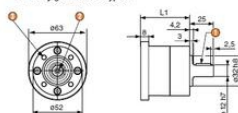
Worms (gearbox)

This gearbox combines a tapered 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. O-rings and lip seals equipped with garter springs are used to ensure sealing.

However, because of the high power rating of this gearbox and the lower efficiency inherent in ratio worm gearboxes, care must be taken not to exceed a

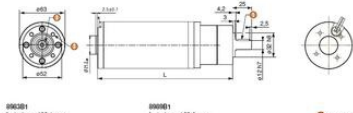
The output shaft configuration can be right, left, or a dual shaft (shaft output on both sides).

Planetary gearbox ø 52 type 81



- 1 Parallel key 4 x 4 x 16 DIN6885
- 2 M4, depth 10
- 3 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.



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 L 1 stages: 159.1 max.
 L 2 stages: 173.3 max.
 L 3 stages: 187.5 max.

TABLE 1

L 1 stage:	163.6 max.
L 2 stage:	197.6 max.
L 3 stage:	212 max.

- Parallel key 4 x 4 x 16 DN6685
- 4 x M5 at 90°, depth 10 over Ø 40
- M4, depth 10

3 to 25 Nm

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



Part objectives

[illegible]

Planetary gearboxes:

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.

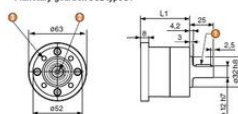
Worm gear(s):

This gearbox combines a tempered 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. O-rings and lip seals equipped with garter springs are used to ensure sealing.

However, because of the high power rating of this gearbox and the lower efficiency inherent in ratio worm gearboxes, care must be taken not to exceed a

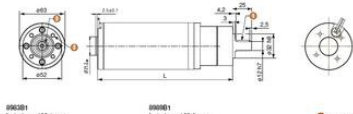
The output shaft configuration can be right, left, or a dual shaft output on both sides.

Planetary gearbox ø 52 type 81



- ① Parallel key 4 x 4 x 16 DIN6885
- ② M4, depth 10
- ③ 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.



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L 1 stage: 159.1 max.
L 2 stage: 173.3 max.
L 3 stage: 187.5 max.

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L 1 stage: 183.6 max.
L 2 stage: 197.8 max.
L 3 stage: 212 max.

- Parallel key 4 x 4 x 16 DIN6885
- 4 x M5 at 90°, depth 10 over Ø 40
- M5, depth 10