



Part Number	<b>RA 470 Z</b>
Type	Complete Freewheel Clutch Unit
Spring	Z (Tension)
Sealed	Yes
Lubrication	Oil
Inner Ring Keyway	Yes
Outer Ring Keyway	Mounting Tab
Integrated Ball Bearing	Yes
Integrated Roller	Yes

**Shaft & Housing Tolerances**

Shaft Tolerance	k5
Housing Tolerance	N/A
Shaft & Housing	1mm x 15°

**Geometrical Data**

Bore Diameter	d [mm]	40
Outer Diameter	D [mm]	110
Mounting Tab Length	F [mm]	115
Mounting Tab Hole Spacing	E [mm]	85
Mounting Tab Width	W [mm]	50
Mounting Tab Thickness	A [mm]	20
Mounting Tab Bore	C [mm]	20
Keyway Width	b [mm]	12
Keyway Depth	t [mm]	3.3
Weight	[kg]	2.28

**Ratings**

Nominal Torque	[Nm]	509
Nominal Torque	[ft-lb]	375.4
Max. Static Radial Load	[N]	19,840
Max. Dynamic Radial Load	[N]	14,050
Max. Indexing Frequency	[Hz]	10
Max. Speed <sup>2</sup>	[rpm]	1,000
Max. Operating Temperature	[°C]	110

**Notes:**

1. The stated speed and torque ratings are contingent on utilizing specified tolerances, correct installation techniques, and operating temperature and load conditions below the specified maximums. If specific applications differ, please consult GMN USA engineers.
2. The stated RPM value is for the maximum freewheel rotational speed for the sprags, not the shaft or housing. High freewheel rotational speeds can produce centrifugal forces that can cause the sprags to lift off from frictional contact, therefore creating an opportunity for improper engagement and potential slip. The sprag RPM must be below the listed value before engagement occurs. The actual sprag freewheel speed is difficult to determine because the sprags are driven by frictional forces from the race(s) and lubrication. Theoretically there is no maximum rotational speed in the driving direction; the inner race, sprags, and outer race rotate as one unit unaffected by centrifugal forces. Please consult GMN USA engineers with high RPM applications that approach or exceed the stated RPM rating.