

## ■ Combination Data of Motor and Inverter

Here is an explanation of the settings and speed-torque characteristics when combining a brushless motor with an inverter. Set the parameters listed below. Parameters for exhibiting the characteristics and for safe use are listed.

### ■ Combinations

Brushless Motor			Inverter Mitsubishi Electric Corporation <b>D800</b>
Output Power	Type	Model Name	Model Name
750 W	Combination type	<b>BL2M6750CHP-□S, BL2M6750CHP-□FRS</b>	<b>FR-D820-0.75K-042</b> (Three-phase 200 V type)
	Round shaft type	<b>BL2M6750CHP-AS</b>	

● Enter the gear ratio in the box (□) within the model name.

### ■ Basic Parameter Setting

This setting assumes continuous operation of the motor (reference) and the ability to protect the motor from overheating with electronic thermal protection.

Set the speed control P gain as necessary (Pr. 820).

Perform auto-tuning of motor constants when combining an inverter (Pr. 96:1).

Parameter	Setting value	Content
Electronic thermal	9 3.6	Rated Current (A)
High-speed upper limit frequency	18 4000	Maximum speed (r/min)
Unit conversion from frequency to speed	53 1	Changed from Hz indication to r/min indication
Applicable motor	71 9090	9090: SPM motor
PWM frequency	72 15	Carrier frequency 15 kHz
Motor capacity	80 0.75	Rated output power (kW)
Number of motor poles	81 10	Number of magnet poles
Rated frequency of motor	84 3000	Rated speed (r/min)
Maximum frequency of motor	702 4000	Maximum speed (r/min)
Motor inertia integer part	707 114	Rotor inertia $114 \times 10^{-6} \text{ kgm}^2$
Motor inertia integer part	724 6	Rotor inertia $114 \times 10^{-6} \text{ kgm}^2$
Control method selection	800 10	PM sensorless vector control

### ■ Speed-Torque Characteristics (Reference)

Characteristics when combined with an inverter whose parameter settings have been changed. (Motor output shaft)  
Speed: Drive frequency x 12 [r/min]

