

November 6, 2015

Motor Business Unit
Smart Factory Solutions Business Division
Automotive & Industrial Systems Company
Panasonic Corporation

Announcement of New product release: **MINAS A6-Series AC Servo Motors and Drivers**

In order to meet further market needs of faster, higher precision for industrial machinery, robots and etc., we are releasing our New MINAS A6-Series AC Servo Motors and Drivers.

This New product has more compact motor and further advanced servo functions, enabling it to increase the productivity of various industrial machinery and equipment.

1. Official date of release: November 20, 2015
2. Product features
 - 2-1. Industry's smallest, lightest¹ servo motor, industry's fastest-responding² servo driver.
 - Servo motor length: 67.5 mm (30% shorter than conventional model³) MHMF-type 200 W
 - Servo motor weight: 750 g (20 % lighter than conventional model³) MHMF-type 200 W
 - Servo driver velocity response frequency 3.2 kHz (30% faster than conventional model⁴)
 - Multi-functional real-time tuning
 - Fully automatic calibration (fit-gain) = complies with PANATERM setup support software.
 - 2-2. Lineup of network drivers (RTEX[3]) achieving the industry's shortest class^c of communication cycle.
 - Contributes to Networking of machines and devices and minimizing use of cables.
 - Shortest communication cycle of 62.5 microseconds (25% shorter than conventional model⁴)
 1. For a servo motor (200 W output) as of October 2015. Surveyed by Panasonic.
 2. For a servo driver (200 W output) as of October 2015. Surveyed by Panasonic.
 3. Comparison with our conventional MINAS A5-Series Servo Motor (200 W output).
 4. Comparison with our conventional MINAS A5-Series Servo Driver.

Applications: semiconductor manufacturing devices, LCD manufacturing devices, industrial robots, electronic components mounting devices, machine tools, etc.

3. Output range: 50 W to 5.0 kW. Voltage: 100 V / 200 V
 - Standanrd equipped with 23-bit absolute encoder
 - Max speed 6500 rpm (for 400 W or below MHMF-type and MQMF-type)Lineup will be expanded and released consequently from 2016.
4. Model numbers, prices, and order format
Refer to Page 3 onwards.
For the prices, please send RFQ (request for quote) to our sales representatives.
 - * No information is given on shared options with current models.
 - * For motor model numbers ending with letter "M", please make an inquiry to us.
5. External dimensions and specifications
Refer to the information on our website on the MINAS A6 Series.
<http://industrial.panasonic.com/ww/products/motors-compressors/fa-motors>

6. Other

- * You can download PANATERM, the setup support software, from our website for free.
Purchase any commercially available mini USB cable for the communications cable.



Ultra high-speed Network MINAS A6N Series
Realtime Express (RTEX) AC Servo Motor and AC Servo Driver
Output: 200 W



MINAS A6 Series AC Servo Motor and AC Servo Driver
Output: 50 W to 5.0 kW

■ **MINAS A6 Series Driver**

• **MINAS A6 Driver (multi-functional type)**

Model number	Output (W)	Input voltage (V)
MADLT01SF	50	Single-phase 100
MADLT05SF	100	Single-phase / three-phase 200
MADLT11SF	100	Single-phase 100
MADLT15SF	200	Single-phase / three-phase 200
MBDLT21SF	200	Single-phase 100
MBDLT25SF	400	Single-phase / three-phase 200
MCDLT31SF	400	Single-phase 100
MCDLT35SF	750	Single-phase / three-phase 200
MDDL45SF	1k	Single-phase / three-phase 200
MDDL55SF	1.5k	Single-phase / three-phase 200
MEDLT83SF	2k	Three-phase 200
MFDLTA3SF	3k	Three-phase 200
MFDLTB3SF	5k	Three-phase 200

• **MINAS A6 Driver (basic type)**

Model number	Output (W)	Input voltage (V)
MADLN01SE	50	Single-phase 100
MADLN11SE	100	Single-phase 100
MADLN05SE	100	Single-phase / three-phase 200
MBDLN21SE	200	Single-phase 100
MADLN15SE	200	Single-phase / three-phase 200
MCDLN31SE	400	Single-phase 100
MBDLN25SE	400	Single-phase / three-phase 200
MCDLN35SE	750	Single-phase / three-phase 200
MDDL45SE	1k	Single-phase / three-phase 200
MDDL55SE	1.5k	Single-phase / three-phase 200
MEDLN83SE	2k	Three-phase 200
MFDLNA3SE	3k	Three-phase 200
MFDLNB3SE	5k	Three-phase 200

• **MINAS A6 Driver (without STO)**

Model number	Output (W)	Input voltage (V)
MADLN01NE	50	Single-phase 100
MADLN05NE	100	Single-phase / three-phase 200
MADLN11NE	100	Single-phase 100
MADLN15NE	200	Single-phase / three-phase 200
MBDLN21NE	200	Single-phase 100
MBDLN25NE	400	Single-phase / three-phase 200
MCDLN31NE	400	Single-phase 100
MCDLN35NE	750	Single-phase / three-phase 200
MDDLN45NE	1k	Single-phase / three-phase 200
MDDLN55NE	1.5k	Single-phase / three-phase 200
MEDLN83NE	2k	Three-phase 200
MFDLNA3NE	3k	Three-phase 200
MFDLNB3NE	5k	Three-phase 200

• **MINAS A6 Driver (RS485/232 Communication type)**

Model number	Output (W)	Input voltage (V)
MADLN01SG	50	Single-phase 100
MADLN05SG	100	Single-phase / three-phase 200
MADLN11SG	100	Single-phase 100
MADLN15SG	200	Single-phase / three-phase 200
MBDLN21SG	200	Single-phase 100
MBDLN25SG	400	Single-phase / three-phase 200
MCDLN31SG	400	Single-phase 100
MCDLN35SG	750	Single-phase / three-phase 200
MDDLN45SG	1k	Single-phase / three-phase 200
MDDLN55SG	1.5k	Single-phase / three-phase 200
MEDLN83SG	2k	Three-phase 200
MFDLNA3SG	3k	Three-phase 200
MFDLNB3SG	5k	Three-phase 200

■ MINAS A6 Series Motor

Category indications

(Shaft specifications: straight = ○, with key = □, tap with key = △)

(Oil seal: included = ●, included (protective lip) = ▲)

(Motor I/F: JN = ◎, JN2 = ○, JL10 = △)

• MINAS A6 MHMF Series (□80 mm or less)

Model number	Output (W)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MHMF5AZL1A1	50	100/200	○			◎
MHMF5AZL1A2	50	100/200	○			Lead wire
MHMF5AZL1B1	50	100/200	○	◆		◎
MHMF5AZL1B2	50	100/200	○	◆		Lead wire
MHMF5AZL1C1	50	100/200	○		●	◎
MHMF5AZL1C2	50	100/200	○		●	Lead wire
MHMF5AZL1C3	50	100/200	○		▲	◎
MHMF5AZL1C4	50	100/200	○		▲	Lead wire
MHMF5AZL1D1	50	100/200	○	◆	●	◎
MHMF5AZL1D2	50	100/200	○	◆	●	Lead wire
MHMF5AZL1D3	50	100/200	○	◆	▲	◎
MHMF5AZL1D4	50	100/200	○	◆	▲	Lead wire
MHMF5AZL1S1	50	100/200	△			◎
MHMF5AZL1S2	50	100/200	△			Lead wire
MHMF5AZL1T1	50	100/200	△	◆		◎
MHMF5AZL1T2	50	100/200	△	◆		Lead wire
MHMF5AZL1U1	50	100/200	△		●	◎
MHMF5AZL1U2	50	100/200	△		●	Lead wire
MHMF5AZL1U3	50	100/200	△		▲	◎
MHMF5AZL1U4	50	100/200	△		▲	Lead wire
MHMF5AZL1V1	50	100/200	△	◆	●	◎
MHMF5AZL1V2	50	100/200	△	◆	●	Lead wire
MHMF5AZL1V3	50	100/200	△	◆	▲	◎
MHMF5AZL1V4	50	100/200	△	◆	▲	Lead wire
MHMF011L1A1	100	100	○			◎
MHMF011L1A2	100	100	○			Lead wire
MHMF011L1B1	100	100	○	◆		◎
MHMF011L1B2	100	100	○	◆		Lead wire

Model number	Output (W)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MHMF011L1C1	100	100	○		●	◎
MHMF011L1C2	100	100	○		●	Lead wire
MHMF011L1C3	100	100	○		▲	◎
MHMF011L1C4	100	100	○		▲	Lead wire
MHMF011L1D1	100	100	○	◆	●	◎
MHMF011L1D2	100	100	○	◆	●	Lead wire
MHMF011L1D3	100	100	○	◆	▲	◎
MHMF011L1D4	100	100	○	◆	▲	Lead wire
MHMF011L1S1	100	100	△			◎
MHMF011L1S2	100	100	△			Lead wire
MHMF011L1T1	100	100	△	◆		◎
MHMF011L1T2	100	100	△	◆		Lead wire
MHMF011L1U1	100	100	△		●	◎
MHMF011L1U2	100	100	△		●	Lead wire
MHMF011L1U3	100	100	△		▲	◎
MHMF011L1U4	100	100	△		▲	Lead wire
MHMF011L1V1	100	100	△	◆	●	◎
MHMF011L1V2	100	100	△	◆	●	Lead wire
MHMF011L1V3	100	100	△	◆	▲	◎
MHMF011L1V4	100	100	△	◆	▲	Lead wire
MHMF012L1A1	100	200	○			◎
MHMF012L1A2	100	200	○			Lead wire
MHMF012L1B1	100	200	○	◆		◎
MHMF012L1B2	100	200	○	◆		Lead wire
MHMF012L1C1	100	200	○		●	◎
MHMF012L1C2	100	200	○		●	Lead wire
MHMF012L1C3	100	200	○		▲	◎
MHMF012L1C4	100	200	○		▲	Lead wire
MHMF012L1D1	100	200	○	◆	●	◎
MHMF012L1D2	100	200	○	◆	●	Lead wire
MHMF012L1D3	100	200	○	◆	▲	◎
MHMF012L1D4	100	200	○	◆	▲	Lead wire
MHMF012L1S1	100	200	△			◎

Model number	Output (W)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MHMF012L1S2	100	200	△			Lead wire
MHMF012L1T1	100	200	△	◆		◎
MHMF012L1T2	100	200	△	◆		Lead wire
MHMF012L1U1	100	200	△		●	◎
MHMF012L1U2	100	200	△		●	Lead wire
MHMF012L1U3	100	200	△		▲	◎
MHMF012L1U4	100	200	△		▲	Lead wire
MHMF012L1V1	100	200	△	◆	●	◎
MHMF012L1V2	100	200	△	◆	●	Lead wire
MHMF012L1V3	100	200	△	◆	▲	◎
MHMF012L1V4	100	200	△	◆	▲	Lead wire
MHMF021L1A1	200	100	○			◎
MHMF021L1A2	200	100	○			Lead wire
MHMF021L1B1	200	100	○	◆		◎
MHMF021L1B2	200	100	○	◆		Lead wire
MHMF021L1C1	200	100	○		●	◎
MHMF021L1C2	200	100	○		●	Lead wire
MHMF021L1C3	200	100	○		▲	◎
MHMF021L1C4	200	100	○		▲	Lead wire
MHMF021L1D1	200	100	○	◆	●	◎
MHMF021L1D2	200	100	○	◆	●	Lead wire
MHMF021L1D3	200	100	○	◆	▲	◎
MHMF021L1D4	200	100	○	◆	▲	Lead wire
MHMF021L1S1	200	100	△			◎
MHMF021L1S2	200	100	△			Lead wire
MHMF021L1T1	200	100	△	◆		◎
MHMF021L1T2	200	100	△	◆		Lead wire
MHMF021L1U1	200	100	△		●	◎
MHMF021L1U2	200	100	△		●	Lead wire
MHMF021L1U3	200	100	△		▲	◎
MHMF021L1U4	200	100	△		▲	Lead wire
MHMF021L1V1	200	100	△	◆	●	◎
MHMF021L1V2	200	100	△	◆	●	Lead wire

Model number	Output (W)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MHMF021L1V3	200	100	△	◆	▲	◎
MHMF021L1V4	200	100	△	◆	▲	Lead wire
MHMF022L1A1	200	200	○			◎
MHMF022L1A2	200	200	○			Lead wire
MHMF022L1B1	200	200	○	◆		◎
MHMF022L1B2	200	200	○	◆		Lead wire
MHMF022L1C1	200	200	○		●	◎
MHMF022L1C2	200	200	○		●	Lead wire
MHMF022L1C3	200	200	○		▲	◎
MHMF022L1C4	200	200	○		▲	Lead wire
MHMF022L1D1	200	200	○	◆	●	◎
MHMF022L1D2	200	200	○	◆	●	Lead wire
MHMF022L1D3	200	200	○	◆	▲	◎
MHMF022L1D4	200	200	○	◆	▲	Lead wire
MHMF022L1S1	200	200	△			◎
MHMF022L1S2	200	200	△			Lead wire
MHMF022L1T1	200	200	△	◆		◎
MHMF022L1T2	200	200	△	◆		Lead wire
MHMF022L1U1	200	200	△		●	◎
MHMF022L1U2	200	200	△		●	Lead wire
MHMF022L1U3	200	200	△		▲	◎
MHMF022L1U4	200	200	△		▲	Lead wire
MHMF022L1V1	200	200	△	◆	●	◎
MHMF022L1V2	200	200	△	◆	●	Lead wire
MHMF022L1V3	200	200	△	◆	▲	◎
MHMF022L1V4	200	200	△	◆	▲	Lead wire
MHMF041L1A1	400	100	○			◎
MHMF041L1A2	400	100	○			Lead wire
MHMF041L1B1	400	100	○	◆		◎
MHMF041L1B2	400	100	○	◆		Lead wire
MHMF041L1C1	400	100	○		●	◎
MHMF041L1C2	400	100	○		●	Lead wire
MHMF041L1C3	400	100	○		▲	◎

Model number	Output (W)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MHMF041L1C4	400	100	○		▲	Lead wire
MHMF041L1D1	400	100	○	◆	●	◎
MHMF041L1D2	400	100	○	◆	●	Lead wire
MHMF041L1D3	400	100	○	◆	▲	◎
MHMF041L1D4	400	100	○	◆	▲	Lead wire
MHMF041L1S1	400	100	△			◎
MHMF041L1S2	400	100	△			Lead wire
MHMF041L1T1	400	100	△	◆		◎
MHMF041L1T2	400	100	△	◆		Lead wire
MHMF041L1U1	400	100	△		●	◎
MHMF041L1U2	400	100	△		●	Lead wire
MHMF041L1U3	400	100	△		▲	◎
MHMF041L1U4	400	100	△		▲	Lead wire
MHMF041L1V1	400	100	△	◆	●	◎
MHMF041L1V2	400	100	△	◆	●	Lead wire
MHMF041L1V3	400	100	△	◆	▲	◎
MHMF041L1V4	400	100	△	◆	▲	Lead wire
MHMF042L1A1	400	200	○			◎
MHMF042L1A2	400	200	○			Lead wire
MHMF042L1B1	400	200	○	◆		◎
MHMF042L1B2	400	200	○	◆		Lead wire
MHMF042L1C1	400	200	○		●	◎
MHMF042L1C2	400	200	○		●	Lead wire
MHMF042L1C3	400	200	○		▲	◎
MHMF042L1C4	400	200	○		▲	Lead wire
MHMF042L1D1	400	200	○	◆	●	◎
MHMF042L1D2	400	200	○	◆	●	Lead wire
MHMF042L1D3	400	200	○	◆	▲	◎
MHMF042L1D4	400	200	○	◆	▲	Lead wire
MHMF042L1S1	400	200	△			◎
MHMF042L1S2	400	200	△			Lead wire
MHMF042L1T1	400	200	△	◆		◎
MHMF042L1T2	400	200	△	◆		Lead wire

Model number	Output (W)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MHMF042L1U1	400	200	△		●	◎
MHMF042L1U2	400	200	△		●	Lead wire
MHMF042L1U3	400	200	△		▲	◎
MHMF042L1U4	400	200	△		▲	Lead wire
MHMF042L1V1	400	200	△	◆	●	◎
MHMF042L1V2	400	200	△	◆	●	Lead wire
MHMF042L1V3	400	200	△	◆	▲	◎
MHMF042L1V4	400	200	△	◆	▲	Lead wire
MHMF082L1A1	750	200	○			◎
MHMF082L1A2	750	200	○			Lead wire
MHMF082L1B1	750	200	○	◆		◎
MHMF082L1B2	750	200	○	◆		Lead wire
MHMF082L1C1	750	200	○		●	◎
MHMF082L1C2	750	200	○		●	Lead wire
MHMF082L1C3	750	200	○		▲	◎
MHMF082L1C4	750	200	○		▲	Lead wire
MHMF082L1D1	750	200	○	◆	●	◎
MHMF082L1D2	750	200	○	◆	●	Lead wire
MHMF082L1D3	750	200	○	◆	▲	◎
MHMF082L1D4	750	200	○	◆	▲	Lead wire
MHMF082L1S1	750	200	△			◎
MHMF082L1S2	750	200	△			Lead wire
MHMF082L1T1	750	200	△	◆		◎
MHMF082L1T2	750	200	△	◆		Lead wire
MHMF082L1U1	750	200	△		●	◎
MHMF082L1U2	750	200	△		●	Lead wire
MHMF082L1U3	750	200	△		▲	◎
MHMF082L1U4	750	200	△		▲	Lead wire
MHMF082L1V1	750	200	△	◆	●	◎
MHMF082L1V2	750	200	△	◆	●	Lead wire
MHMF082L1V3	750	200	△	◆	▲	◎
MHMF082L1V4	750	200	△	◆	▲	Lead wire
MHMF092L1A1	850	200	○			◎

Model number	Output (W)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MHMF092L1A2	850	200	○			Lead wire
MHMF092L1B1	850	200	○	◆		◎
MHMF092L1B2	850	200	○	◆		Lead wire
MHMF092L1C1	850	200	○		●	◎
MHMF092L1C2	850	200	○		●	Lead wire
MHMF092L1C3	850	200	○		▲	◎
MHMF092L1C4	850	200	○		▲	Lead wire
MHMF092L1D1	850	200	○	◆	●	◎
MHMF092L1D2	850	200	○	◆	●	Lead wire
MHMF092L1D3	850	200	○	◆	▲	◎
MHMF092L1D4	850	200	○	◆	▲	Lead wire
MHMF092L1S1	850	200	△			◎
MHMF092L1S2	850	200	△			Lead wire
MHMF092L1T1	850	200	△	◆		◎
MHMF092L1T2	850	200	△	◆		Lead wire
MHMF092L1U1	850	200	△		●	◎
MHMF092L1U2	850	200	△		●	Lead wire
MHMF092L1U3	850	200	△		▲	◎
MHMF092L1U4	850	200	△		▲	Lead wire
MHMF092L1V1	850	200	△	◆	●	◎
MHMF092L1V2	850	200	△	◆	●	Lead wire
MHMF092L1V3	850	200	△	◆	▲	◎
MHMF092L1V4	850	200	△	◆	▲	Lead wire

Category indications

(Shaft specifications: straight = ○, with key = □, tap with key = △)

(Oil seal: included = ●, included (protective lip) = ▲)

(Motor I/F: JN = ◎, JN2 = ○, JL10 = △)

• MINAS A6 MQMF Series (□80 mm or less)

Model number	Output (W)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MQMF011L1A1	100	100	○			◎
MQMF011L1A2	100	100	○			Lead wire
MQMF011L1B1	100	100	○	◆		◎
MQMF011L1B2	100	100	○	◆		Lead wire
MQMF011L1C1	100	100	○		●	◎
MQMF011L1C2	100	100	○		●	Lead wire
MQMF011L1C3	100	100	○		▲	◎
MQMF011L1C4	100	100	○		▲	Lead wire
MQMF011L1D1	100	100	○	◆	●	◎
MQMF011L1D2	100	100	○	◆	●	Lead wire
MQMF011L1D3	100	100	○	◆	▲	◎
MQMF011L1D4	100	100	○	◆	▲	Lead wire
MQMF011L1S1	100	100	△			◎
MQMF011L1S2	100	100	△			Lead wire
MQMF011L1T1	100	100	△	◆		◎
MQMF011L1T2	100	100	△	◆		Lead wire
MQMF011L1U1	100	100	△		●	◎
MQMF011L1U2	100	100	△		●	Lead wire
MQMF011L1U3	100	100	△		▲	◎
MQMF011L1U4	100	100	△		▲	Lead wire
MQMF011L1V1	100	100	△	◆	●	◎
MQMF011L1V2	100	100	△	◆	●	Lead wire
MQMF011L1V3	100	100	△	◆	▲	◎
MQMF011L1V4	100	100	△	◆	▲	Lead wire
MQMF012L1A1	100	200	○			◎
MQMF012L1A2	100	200	○			Lead wire
MQMF012L1B1	100	200	○	◆		◎
MQMF012L1B2	100	200	○	◆		Lead wire
MQMF012L1C1	100	200	○		●	◎
MQMF012L1C2	100	200	○		●	Lead wire

Automotive & Industrial Systems Company, Panasonic Corporation

Model number	Output (W)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MQMF012L1C3	100	200	○		▲	◎
MQMF012L1C4	100	200	○		▲	Lead wire
MQMF012L1D1	100	200	○	◆	●	◎
MQMF012L1D2	100	200	○	◆	●	Lead wire
MQMF012L1D3	100	200	○	◆	▲	◎
MQMF012L1D4	100	200	○	◆	▲	Lead wire
MQMF012L1S1	100	200	△			◎
MQMF012L1S2	100	200	△			Lead wire
MQMF012L1T1	100	200	△	◆		◎
MQMF012L1T2	100	200	△	◆		Lead wire
MQMF012L1U1	100	200	△		●	◎
MQMF012L1U2	100	200	△		●	Lead wire
MQMF012L1U3	100	200	△		▲	◎
MQMF012L1U4	100	200	△		▲	Lead wire
MQMF012L1V1	100	200	△	◆	●	◎
MQMF012L1V2	100	200	△	◆	●	Lead wire
MQMF012L1V3	100	200	△	◆	▲	◎
MQMF012L1V4	100	200	△	◆	▲	Lead wire
MQMF021L1A1	200	100	○			◎
MQMF021L1A2	200	100	○			Lead wire
MQMF021L1B1	200	100	○	◆		◎
MQMF021L1B2	200	100	○	◆		Lead wire
MQMF021L1C1	200	100	○		●	◎
MQMF021L1C2	200	100	○		●	Lead wire
MQMF021L1C3	200	100	○		▲	◎
MQMF021L1C4	200	100	○		▲	Lead wire
MQMF021L1D1	200	100	○	◆	●	◎
MQMF021L1D2	200	100	○	◆	●	Lead wire
MQMF021L1D3	200	100	○	◆	▲	◎
MQMF021L1D4	200	100	○	◆	▲	Lead wire
MQMF021L1S1	200	100	△			◎
MQMF021L1S2	200	100	△			Lead wire
MQMF021L1T1	200	100	△	◆		◎

Model number	Output (W)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MQMF021L1T2	200	100	△	◆		Lead wire
MQMF021L1U1	200	100	△		●	◎
MQMF021L1U2	200	100	△		●	Lead wire
MQMF021L1U3	200	100	△		▲	◎
MQMF021L1U4	200	100	△		▲	Lead wire
MQMF021L1V1	200	100	△	◆	●	◎
MQMF021L1V2	200	100	△	◆	●	Lead wire
MQMF021L1V3	200	100	△	◆	▲	◎
MQMF021L1V4	200	100	△	◆	▲	Lead wire
MQMF022L1A1	200	200	○			◎
MQMF022L1A2	200	200	○			Lead wire
MQMF022L1B1	200	200	○	◆		◎
MQMF022L1B2	200	200	○	◆		Lead wire
MQMF022L1C1	200	200	○		●	◎
MQMF022L1C2	200	200	○		●	Lead wire
MQMF022L1C3	200	200	○		▲	◎
MQMF022L1C4	200	200	○		▲	Lead wire
MQMF022L1D1	200	200	○	◆	●	◎
MQMF022L1D2	200	200	○	◆	●	Lead wire
MQMF022L1D3	200	200	○	◆	▲	◎
MQMF022L1D4	200	200	○	◆	▲	Lead wire
MQMF022L1S1	200	200	△			◎
MQMF022L1S2	200	200	△			Lead wire
MQMF022L1T1	200	200	△	◆		◎
MQMF022L1T2	200	200	△	◆		Lead wire
MQMF022L1U1	200	200	△		●	◎
MQMF022L1U2	200	200	△		●	Lead wire
MQMF022L1U3	200	200	△		▲	◎
MQMF022L1U4	200	200	△		▲	Lead wire
MQMF022L1V1	200	200	△	◆	●	◎
MQMF022L1V2	200	200	△	◆	●	Lead wire
MQMF022L1V3	200	200	△	◆	▲	◎
MQMF022L1V4	200	200	△	◆	▲	Lead wire

Model number	Output (W)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MQMF041L1A1	400	100	○			◎
MQMF041L1A2	400	100	○			Lead wire
MQMF041L1B1	400	100	○	◆		◎
MQMF041L1B2	400	100	○	◆		Lead wire
MQMF041L1C1	400	100	○		●	◎
MQMF041L1C2	400	100	○		●	Lead wire
MQMF041L1C3	400	100	○		▲	◎
MQMF041L1C4	400	100	○		▲	Lead wire
MQMF041L1D1	400	100	○	◆	●	◎
MQMF041L1D2	400	100	○	◆	●	Lead wire
MQMF041L1D3	400	100	○	◆	▲	◎
MQMF041L1D4	400	100	○	◆	▲	Lead wire
MQMF041L1S1	400	100	△			◎
MQMF041L1S2	400	100	△			Lead wire
MQMF041L1T1	400	100	△	◆		◎
MQMF041L1T2	400	100	△	◆		Lead wire
MQMF041L1U1	400	100	△		●	◎
MQMF041L1U2	400	100	△		●	Lead wire
MQMF041L1U3	400	100	△		▲	◎
MQMF041L1U4	400	100	△		▲	Lead wire
MQMF041L1V1	400	100	△	◆	●	◎
MQMF041L1V2	400	100	△	◆	●	Lead wire
MQMF041L1V3	400	100	△	◆	▲	◎
MQMF041L1V4	400	100	△	◆	▲	Lead wire
MQMF042L1A1	400	200	○			◎
MQMF042L1A2	400	200	○			Lead wire
MQMF042L1B1	400	200	○	◆		◎
MQMF042L1B2	400	200	○	◆		Lead wire
MQMF042L1C1	400	200	○		●	◎
MQMF042L1C2	400	200	○		●	Lead wire
MQMF042L1C3	400	200	○		▲	◎
MQMF042L1C4	400	200	○		▲	Lead wire
MQMF042L1D1	400	200	○	◆	●	◎

Model number	Output (W)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MQMF042L1D2	400	200	○	◆	●	Lead wire
MQMF042L1D3	400	200	○	◆	▲	◎
MQMF042L1D4	400	200	○	◆	▲	Lead wire
MQMF042L1S1	400	200	△			◎
MQMF042L1S2	400	200	△			Lead wire
MQMF042L1T1	400	200	△	◆		◎
MQMF042L1T2	400	200	△	◆		Lead wire
MQMF042L1U1	400	200	△		●	◎
MQMF042L1U2	400	200	△		●	Lead wire
MQMF042L1U3	400	200	△		▲	◎
MQMF042L1U4	400	200	△		▲	Lead wire
MQMF042L1V1	400	200	△	◆	●	◎
MQMF042L1V2	400	200	△	◆	●	Lead wire
MQMF042L1V3	400	200	△	◆	▲	◎
MQMF042L1V4	400	200	△	◆	▲	Lead wire

Category indications

(Shaft specifications: straight = ○, with key = □, tap with key = △)

(Oil seal: included = ●, included (protective lip) = ▲)

(Motor I/F: JN = ◎, JN2 = ○, JL10 = △)

• MINAS A6 MSMF Series (□80mm or less)

Model number	Output (W)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MSMF5AZL1A1	50	100/200	○			◎
MSMF5AZL1A2	50	100/200	○			Lead wire
MSMF5AZL1B1	50	100/200	○	◆		◎
MSMF5AZL1B2	50	100/200	○	◆		Lead wire
MSMF5AZL1C1	50	100/200	○		●	◎
MSMF5AZL1C2	50	100/200	○		●	Lead wire
MSMF5AZL1D1	50	100/200	○	◆	●	◎
MSMF5AZL1D2	50	100/200	○	◆	●	Lead wire
MSMF5AZL1S1	50	100/200	△			◎
MSMF5AZL1S2	50	100/200	△			Lead wire
MSMF5AZL1T1	50	100/200	△	◆		◎
MSMF5AZL1T2	50	100/200	△	◆		Lead wire
MSMF5AZL1U1	50	100/200	△		●	◎
MSMF5AZL1U2	50	100/200	△		●	Lead wire
MSMF5AZL1V1	50	100/200	△	◆	●	◎
MSMF5AZL1V2	50	100/200	△	◆	●	Lead wire
MSMF011L1A1	100	100	○			◎
MSMF011L1A2	100	100	○			Lead wire
MSMF011L1B1	100	100	○	◆		◎
MSMF011L1B2	100	100	○	◆		Lead wire
MSMF011L1C1	100	100	○		●	◎
MSMF011L1C2	100	100	○		●	Lead wire
MSMF011L1D1	100	100	○	◆	●	◎
MSMF011L1D2	100	100	○	◆	●	Lead wire
MSMF011L1S1	100	100	△			◎
MSMF011L1S2	100	100	△			Lead wire
MSMF011L1T1	100	100	△	◆		◎
MSMF011L1T2	100	100	△	◆		Lead wire
MSMF011L1U1	100	100	△		●	◎
MSMF011L1U2	100	100	△		●	Lead wire

Automotive & Industrial Systems Company, Panasonic Corporation

Model number	Output (W)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MSMF011L1V1	100	100	△	◆	●	◎
MSMF011L1V2	100	100	△	◆	●	Lead wire
MSMF012L1A1	100	200	○			◎
MSMF012L1A2	100	200	○			Lead wire
MSMF012L1B1	100	200	○	◆		◎
MSMF012L1B2	100	200	○	◆		Lead wire
MSMF012L1C1	100	200	○		●	◎
MSMF012L1C2	100	200	○		●	Lead wire
MSMF012L1D1	100	200	○	◆	●	◎
MSMF012L1D2	100	200	○	◆	●	Lead wire
MSMF012L1S1	100	200	△			◎
MSMF012L1S2	100	200	△			Lead wire
MSMF012L1T1	100	200	△	◆		◎
MSMF012L1T2	100	200	△	◆		Lead wire
MSMF012L1U1	100	200	△		●	◎
MSMF012L1U2	100	200	△		●	Lead wire
MSMF012L1V1	100	200	△	◆	●	◎
MSMF012L1V2	100	200	△	◆	●	Lead wire
MSMF021L1A1	200	100	○			◎
MSMF021L1A2	200	100	○			Lead wire
MSMF021L1B1	200	100	○	◆		◎
MSMF021L1B2	200	100	○	◆		Lead wire
MSMF021L1C1	200	100	○		●	◎
MSMF021L1C2	200	100	○		●	Lead wire
MSMF021L1D1	200	100	○	◆	●	◎
MSMF021L1D2	200	100	○	◆	●	Lead wire
MSMF021L1S1	200	100	△			◎
MSMF021L1S2	200	100	△			Lead wire
MSMF021L1T1	200	100	△	◆		◎
MSMF021L1T2	200	100	△	◆		Lead wire
MSMF021L1U1	200	100	△		●	◎
MSMF021L1U2	200	100	△		●	Lead wire
MSMF021L1V1	200	100	△	◆	●	◎

Model number	Output (W)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MSMF021L1V2	200	100	△	◆	●	Lead wire
MSMF022L1A1	200	200	○			◎
MSMF022L1A2	200	200	○			Lead wire
MSMF022L1B1	200	200	○	◆		◎
MSMF022L1B2	200	200	○	◆		Lead wire
MSMF022L1C1	200	200	○		●	◎
MSMF022L1C2	200	200	○		●	Lead wire
MSMF022L1D1	200	200	○	◆	●	◎
MSMF022L1D2	200	200	○	◆	●	Lead wire
MSMF022L1S1	200	200	△			◎
MSMF022L1S2	200	200	△			Lead wire
MSMF022L1T1	200	200	△	◆		◎
MSMF022L1T2	200	200	△	◆		Lead wire
MSMF022L1U1	200	200	△		●	◎
MSMF022L1U2	200	200	△		●	Lead wire
MSMF022L1V1	200	200	△	◆	●	◎
MSMF022L1V2	200	200	△	◆	●	Lead wire
MSMF041L1A1	400	100	○			◎
MSMF041L1A2	400	100	○			Lead wire
MSMF041L1B1	400	100	○	◆		◎
MSMF041L1B2	400	100	○	◆		Lead wire
MSMF041L1C1	400	100	○		●	◎
MSMF041L1C2	400	100	○		●	Lead wire
MSMF041L1D1	400	100	○	◆	●	◎
MSMF041L1D2	400	100	○	◆	●	Lead wire
MSMF041L1S1	400	100	△			◎
MSMF041L1S2	400	100	△			Lead wire
MSMF041L1T1	400	100	△	◆		◎
MSMF041L1T2	400	100	△	◆		Lead wire
MSMF041L1U1	400	100	△		●	◎
MSMF041L1U2	400	100	△		●	Lead wire
MSMF041L1V1	400	100	△	◆	●	◎
MSMF041L1V2	400	100	△	◆	●	Lead wire

Model number	Output (W)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MSMF042L1A1	400	200	○			◎
MSMF042L1A2	400	200	○			Lead wire
MSMF042L1B1	400	200	○	◆		◎
MSMF042L1B2	400	200	○	◆		Lead wire
MSMF042L1C1	400	200	○		●	◎
MSMF042L1C2	400	200	○		●	Lead wire
MSMF042L1D1	400	200	○	◆	●	◎
MSMF042L1D2	400	200	○	◆	●	Lead wire
MSMF042L1S1	400	200	△			◎
MSMF042L1S2	400	200	△			Lead wire
MSMF042L1T1	400	200	△	◆		◎
MSMF042L1T2	400	200	△	◆		Lead wire
MSMF042L1U1	400	200	△		●	◎
MSMF042L1U2	400	200	△		●	Lead wire
MSMF042L1V1	400	200	△	◆	●	◎
MSMF042L1V2	400	200	△	◆	●	Lead wire
MSMF082L1A1	750	200	○			◎
MSMF082L1A2	750	200	○			Lead wire
MSMF082L1B1	750	200	○	◆		◎
MSMF082L1B2	750	200	○	◆		Lead wire
MSMF082L1C1	750	200	○		●	◎
MSMF082L1C2	750	200	○		●	Lead wire
MSMF082L1D1	750	200	○	◆	●	◎
MSMF082L1D2	750	200	○	◆	●	Lead wire
MSMF082L1S1	750	200	△			◎
MSMF082L1S2	750	200	△			Lead wire
MSMF082L1T1	750	200	△	◆		◎
MSMF082L1T2	750	200	△	◆		Lead wire
MSMF082L1U1	750	200	△		●	◎
MSMF082L1U2	750	200	△		●	Lead wire
MSMF082L1V1	750	200	△	◆	●	◎
MSMF082L1V2	750	200	△	◆	●	Lead wire
MSMF092L1A1	1000	200	○			◎

Model number	Output (W)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MSMF092L1A2	1000	200	○			Lead wire
MSMF092L1B1	1000	200	○	◆		◎
MSMF092L1B2	1000	200	○	◆		Lead wire
MSMF092L1C1	1000	200	○		●	◎
MSMF092L1C2	1000	200	○		●	Lead wire
MSMF092L1D1	1000	200	○	◆	●	◎
MSMF092L1D2	1000	200	○	◆	●	Lead wire
MSMF092L1S1	1000	200	△			◎
MSMF092L1S2	1000	200	△			Lead wire
MSMF092L1T1	1000	200	△	◆		◎
MSMF092L1T2	1000	200	△	◆		Lead wire
MSMF092L1U1	1000	200	△		●	◎
MSMF092L1U2	1000	200	△		●	Lead wire
MSMF092L1V1	1000	200	△	◆	●	◎
MSMF092L1V2	1000	200	△	◆	●	Lead wire

Category indications

(Shaft specifications: straight = ○, with key = □, tap with key = △)

(Oil seal: included = ●, included (protective lip) = ▲)

(Motor I/F: JN = ◎, JN2 = ○, JL10 = △)

• MINAS A6 MSMF Series (□100 mm or more)

Model number	Output (kW)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MSMF102L1C5	1.0	200	○		●	○
MSMF102L1C6	1.0	200	○		●	△
MSMF102L1C7	1.0	200	○		▲	○
MSMF102L1C8	1.0	200	○		▲	△
MSMF102L1D5	1.0	200	○	◆	●	○
MSMF102L1D6	1.0	200	○	◆	●	△
MSMF102L1D7	1.0	200	○	◆	▲	○
MSMF102L1D8	1.0	200	○	◆	▲	△
MSMF102L1G5	1.0	200	□		●	○
MSMF102L1G6	1.0	200	□		●	△
MSMF102L1G7	1.0	200	□		▲	○
MSMF102L1G8	1.0	200	□		▲	△
MSMF102L1H5	1.0	200	□	◆	●	○
MSMF102L1H6	1.0	200	□	◆	●	△
MSMF102L1H7	1.0	200	□	◆	▲	○
MSMF102L1H8	1.0	200	□	◆	▲	△
MSMF152L1C5	1.5	200	○		●	○
MSMF152L1C6	1.5	200	○		●	△
MSMF152L1C7	1.5	200	○		▲	○
MSMF152L1C8	1.5	200	○		▲	△
MSMF152L1D5	1.5	200	○	◆	●	○
MSMF152L1D6	1.5	200	○	◆	●	△
MSMF152L1D7	1.5	200	○	◆	▲	○
MSMF152L1D8	1.5	200	○	◆	▲	△
MSMF152L1G5	1.5	200	□		●	○
MSMF152L1G6	1.5	200	□		●	△
MSMF152L1G7	1.5	200	□		▲	○
MSMF152L1G8	1.5	200	□		▲	△
MSMF152L1H5	1.5	200	□	◆	●	○
MSMF152L1H6	1.5	200	□	◆	●	△

Automotive & Industrial Systems Company, Panasonic Corporation

Model number	Output (kW)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MSMF152L1H7	1.5	200	□	◆	▲	○
MSMF152L1H8	1.5	200	□	◆	▲	△
MSMF202L1C5	2.0	200	○		●	○
MSMF202L1C6	2.0	200	○		●	△
MSMF202L1C7	2.0	200	○		▲	○
MSMF202L1C8	2.0	200	○		▲	△
MSMF202L1D5	2.0	200	○	◆	●	○
MSMF202L1D6	2.0	200	○	◆	●	△
MSMF202L1D7	2.0	200	○	◆	▲	○
MSMF202L1D8	2.0	200	○	◆	▲	△
MSMF202L1G5	2.0	200	□		●	○
MSMF202L1G6	2.0	200	□		●	△
MSMF202L1G7	2.0	200	□		▲	○
MSMF202L1G8	2.0	200	□		▲	△
MSMF202L1H5	2.0	200	□	◆	●	○
MSMF202L1H6	2.0	200	□	◆	●	△
MSMF202L1H7	2.0	200	□	◆	▲	○
MSMF202L1H8	2.0	200	□	◆	▲	△
MSMF302L1C5	3.0	200	○		●	○
MSMF302L1C6	3.0	200	○		●	△
MSMF302L1C7	3.0	200	○		▲	○
MSMF302L1C8	3.0	200	○		▲	△
MSMF302L1D5	3.0	200	○	◆	●	○
MSMF302L1D6	3.0	200	○	◆	●	△
MSMF302L1D7	3.0	200	○	◆	▲	○
MSMF302L1D8	3.0	200	○	◆	▲	△
MSMF302L1G5	3.0	200	□		●	○
MSMF302L1G6	3.0	200	□		●	△
MSMF302L1G7	3.0	200	□		▲	○
MSMF302L1G8	3.0	200	□		▲	△
MSMF302L1H5	3.0	200	□	◆	●	○
MSMF302L1H6	3.0	200	□	◆	●	△
MSMF302L1H7	3.0	200	□	◆	▲	○

Model number	Output (kW)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MSMF302L1H8	3.0	200	□	◆	▲	△
MSMF402L1C5	4.0	200	○		●	○
MSMF402L1C6	4.0	200	○		●	△
MSMF402L1C7	4.0	200	○		▲	○
MSMF402L1C8	4.0	200	○		▲	△
MSMF402L1D5	4.0	200	○	◆	●	○
MSMF402L1D6	4.0	200	○	◆	●	△
MSMF402L1D7	4.0	200	○	◆	▲	○
MSMF402L1D8	4.0	200	○	◆	▲	△
MSMF402L1G5	4.0	200	□		●	○
MSMF402L1G6	4.0	200	□		●	△
MSMF402L1G7	4.0	200	□		▲	○
MSMF402L1G8	4.0	200	□		▲	△
MSMF402L1H5	4.0	200	□	◆	●	○
MSMF402L1H6	4.0	200	□	◆	●	△
MSMF402L1H7	4.0	200	□	◆	▲	○
MSMF402L1H8	4.0	200	□	◆	▲	△
MSMF502L1C5	5.0	200	○		●	○
MSMF502L1C6	5.0	200	○		●	△
MSMF502L1C7	5.0	200	○		▲	○
MSMF502L1C8	5.0	200	○		▲	△
MSMF502L1D5	5.0	200	○	◆	●	○
MSMF502L1D6	5.0	200	○	◆	●	△
MSMF502L1D7	5.0	200	○	◆	▲	○
MSMF502L1D8	5.0	200	○	◆	▲	△
MSMF502L1G5	5.0	200	□		●	○
MSMF502L1G6	5.0	200	□		●	△
MSMF502L1G7	5.0	200	□		▲	○
MSMF502L1G8	5.0	200	□		▲	△
MSMF502L1H5	5.0	200	□	◆	●	○
MSMF502L1H6	5.0	200	□	◆	●	△
MSMF502L1H7	5.0	200	□	◆	▲	○
MSMF502L1H8	5.0	200	□	◆	▲	△

Category indications

(Shaft specifications: straight = ○, with key = □, tap with key = △)

(Oil seal: included = ●, included (protective lip) = ▲)

(Motor I/F: JN = ◎, JN2 = ○, JL10 = △)

• MINAS A6 MDMF Series (□130 mm or more)

Model number	Output (kW)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MDMF102L1C5	1.0	200	○		●	○
MDMF102L1C6	1.0	200	○		●	△
MDMF102L1C7	1.0	200	○		▲	○
MDMF102L1C8	1.0	200	○		▲	△
MDMF102L1D5	1.0	200	○	◆	●	○
MDMF102L1D6	1.0	200	○	◆	●	△
MDMF102L1D7	1.0	200	○	◆	▲	○
MDMF102L1D8	1.0	200	○	◆	▲	△
MDMF102L1G5	1.0	200	□		●	○
MDMF102L1G6	1.0	200	□		●	△
MDMF102L1G7	1.0	200	□		▲	○
MDMF102L1G8	1.0	200	□		▲	△
MDMF102L1H5	1.0	200	□	◆	●	○
MDMF102L1H6	1.0	200	□	◆	●	△
MDMF102L1H7	1.0	200	□	◆	▲	○
MDMF102L1H8	1.0	200	□	◆	▲	△
MDMF152L1C5	1.5	200	○		●	○
MDMF152L1C6	1.5	200	○		●	△
MDMF152L1C7	1.5	200	○		▲	○
MDMF152L1C8	1.5	200	○		▲	△
MDMF152L1D5	1.5	200	○	◆	●	○
MDMF152L1D6	1.5	200	○	◆	●	△
MDMF152L1D7	1.5	200	○	◆	▲	○
MDMF152L1D8	1.5	200	○	◆	▲	△
MDMF152L1G5	1.5	200	□		●	○
MDMF152L1G6	1.5	200	□		●	△
MDMF152L1G7	1.5	200	□		▲	○
MDMF152L1G8	1.5	200	□		▲	△
MDMF152L1H5	1.5	200	□	◆	●	○
MDMF152L1H6	1.5	200	□	◆	●	△

Model number	Output (kW)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MDMF152L1H7	1.5	200	□	◆	▲	○
MDMF152L1H8	1.5	200	□	◆	▲	△
MDMF202L1C5	2.0	200	○		●	○
MDMF202L1C6	2.0	200	○		●	△
MDMF202L1C7	2.0	200	○		▲	○
MDMF202L1C8	2.0	200	○		▲	△
MDMF202L1D5	2.0	200	○	◆	●	○
MDMF202L1D6	2.0	200	○	◆	●	△
MDMF202L1D7	2.0	200	○	◆	▲	○
MDMF202L1D8	2.0	200	○	◆	▲	△
MDMF202L1G5	2.0	200	□		●	○
MDMF202L1G6	2.0	200	□		●	△
MDMF202L1G7	2.0	200	□		▲	○
MDMF202L1G8	2.0	200	□		▲	△
MDMF202L1H5	2.0	200	□	◆	●	○
MDMF202L1H6	2.0	200	□	◆	●	△
MDMF202L1H7	2.0	200	□	◆	▲	○
MDMF202L1H8	2.0	200	□	◆	▲	△
MDMF302L1C5	3.0	200	○		●	○
MDMF302L1C6	3.0	200	○		●	△
MDMF302L1C7	3.0	200	○		▲	○
MDMF302L1C8	3.0	200	○		▲	△
MDMF302L1D5	3.0	200	○	◆	●	○
MDMF302L1D6	3.0	200	○	◆	●	△
MDMF302L1D7	3.0	200	○	◆	▲	○
MDMF302L1D8	3.0	200	○	◆	▲	△
MDMF302L1G5	3.0	200	□		●	○
MDMF302L1G6	3.0	200	□		●	△
MDMF302L1G7	3.0	200	□		▲	○
MDMF302L1G8	3.0	200	□		▲	△
MDMF302L1H5	3.0	200	□	◆	●	○
MDMF302L1H6	3.0	200	□	◆	●	△
MDMF302L1H7	3.0	200	□	◆	▲	○

Model number	Output (kW)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MDMF302L1H8	3.0	200	□	◆	▲	△
MDMF402L1C5	4.0	200	○		●	○
MDMF402L1C6	4.0	200	○		●	△
MDMF402L1C7	4.0	200	○		▲	○
MDMF402L1C8	4.0	200	○		▲	△
MDMF402L1D5	4.0	200	○	◆	●	○
MDMF402L1D6	4.0	200	○	◆	●	△
MDMF402L1D7	4.0	200	○	◆	▲	○
MDMF402L1D8	4.0	200	○	◆	▲	△
MDMF402L1G5	4.0	200	□		●	○
MDMF402L1G6	4.0	200	□		●	△
MDMF402L1G7	4.0	200	□		▲	○
MDMF402L1G8	4.0	200	□		▲	△
MDMF402L1H5	4.0	200	□	◆	●	○
MDMF402L1H6	4.0	200	□	◆	●	△
MDMF402L1H7	4.0	200	□	◆	▲	○
MDMF402L1H8	4.0	200	□	◆	▲	△
MDMF502L1C5	5.0	200	○		●	○
MDMF502L1C6	5.0	200	○		●	△
MDMF502L1C7	5.0	200	○		▲	○
MDMF502L1C8	5.0	200	○		▲	△
MDMF502L1D5	5.0	200	○	◆	●	○
MDMF502L1D6	5.0	200	○	◆	●	△
MDMF502L1D7	5.0	200	○	◆	▲	○
MDMF502L1D8	5.0	200	○	◆	▲	△
MDMF502L1G5	5.0	200	□		●	○
MDMF502L1G6	5.0	200	□		●	△
MDMF502L1G7	5.0	200	□		▲	○
MDMF502L1G8	5.0	200	□		▲	△
MDMF502L1H5	5.0	200	□	◆	●	○
MDMF502L1H6	5.0	200	□	◆	●	△
MDMF502L1H7	5.0	200	□	◆	▲	○
MDMF502L1H8	5.0	200	□	◆	▲	△

Category indications

(Shaft specifications: straight = ○, with key = □, tap with key = △)

(Oil seal: included = ●, included (protective lip) = ▲)

(Motor I/F: JN = ◎, JN2 = ○, JL10 = △)

• MINAS A6 MHMF Series (130 mm or more)

Model number	Output (kW)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MHMF102L1C5	1.0	200	○		●	○
MHMF102L1C6	1.0	200	○		●	△
MHMF102L1C7	1.0	200	○		▲	○
MHMF102L1C8	1.0	200	○		▲	△
MHMF102L1D5	1.0	200	○	◆	●	○
MHMF102L1D6	1.0	200	○	◆	●	△
MHMF102L1D7	1.0	200	○	◆	▲	○
MHMF102L1D8	1.0	200	○	◆	▲	△
MHMF102L1G5	1.0	200	□		●	○
MHMF102L1G6	1.0	200	□		●	△
MHMF102L1G7	1.0	200	□		▲	○
MHMF102L1G8	1.0	200	□		▲	△
MHMF102L1H5	1.0	200	□	◆	●	○
MHMF102L1H6	1.0	200	□	◆	●	△
MHMF102L1H7	1.0	200	□	◆	▲	○
MHMF102L1H8	1.0	200	□	◆	▲	△
MHMF152L1C5	1.5	200	○		●	○
MHMF152L1C6	1.5	200	○		●	△
MHMF152L1C7	1.5	200	○		▲	○
MHMF152L1C8	1.5	200	○		▲	△
MHMF152L1D5	1.5	200	○	◆	●	○
MHMF152L1D6	1.5	200	○	◆	●	△
MHMF152L1D7	1.5	200	○	◆	▲	○
MHMF152L1D8	1.5	200	○	◆	▲	△
MHMF152L1G5	1.5	200	□		●	○
MHMF152L1G6	1.5	200	□		●	△
MHMF152L1G7	1.5	200	□		▲	○
MHMF152L1G8	1.5	200	□		▲	△
MHMF152L1H5	1.5	200	□	◆	●	○
MHMF152L1H6	1.5	200	□	◆	●	△

Automotive & Industrial Systems Company, Panasonic Corporation

Model number	Output (kW)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MHMF152L1H7	1.5	200	□	◆	▲	○
MHMF152L1H8	1.5	200	□	◆	▲	△
MHMF202L1C5	2.0	200	○		●	○
MHMF202L1C6	2.0	200	○		●	△
MHMF202L1C7	2.0	200	○		▲	○
MHMF202L1C8	2.0	200	○		▲	△
MHMF202L1D5	2.0	200	○	◆	●	○
MHMF202L1D6	2.0	200	○	◆	●	△
MHMF202L1D7	2.0	200	○	◆	▲	○
MHMF202L1D8	2.0	200	○	◆	▲	△
MHMF202L1G5	2.0	200	□		●	○
MHMF202L1G6	2.0	200	□		●	△
MHMF202L1G7	2.0	200	□		▲	○
MHMF202L1G8	2.0	200	□		▲	△
MHMF202L1H5	2.0	200	□	◆	●	○
MHMF202L1H6	2.0	200	□	◆	●	△
MHMF202L1H7	2.0	200	□	◆	▲	○
MHMF202L1H8	2.0	200	□	◆	▲	△
MHMF302L1C5	3.0	200	○		●	○
MHMF302L1C6	3.0	200	○		●	△
MHMF302L1C7	3.0	200	○		▲	○
MHMF302L1C8	3.0	200	○		▲	△
MHMF302L1D5	3.0	200	○	◆	●	○
MHMF302L1D6	3.0	200	○	◆	●	△
MHMF302L1D7	3.0	200	○	◆	▲	○
MHMF302L1D8	3.0	200	○	◆	▲	△
MHMF302L1G5	3.0	200	□		●	○
MHMF302L1G6	3.0	200	□		●	△
MHMF302L1G7	3.0	200	□		▲	○
MHMF302L1G8	3.0	200	□		▲	△
MHMF302L1H5	3.0	200	□	◆	●	○
MHMF302L1H6	3.0	200	□	◆	●	△
MHMF302L1H7	3.0	200	□	◆	▲	○

Model number	Output (kW)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MHMF302L1H8	3.0	200	□	◆	▲	△
MHMF402L1C5	4.0	200	○		●	○
MHMF402L1C6	4.0	200	○		●	△
MHMF402L1C7	4.0	200	○		▲	○
MHMF402L1C8	4.0	200	○		▲	△
MHMF402L1D5	4.0	200	○	◆	●	○
MHMF402L1D6	4.0	200	○	◆	●	△
MHMF402L1D7	4.0	200	○	◆	▲	○
MHMF402L1D8	4.0	200	○	◆	▲	△
MHMF402L1G5	4.0	200	□		●	○
MHMF402L1G6	4.0	200	□		●	△
MHMF402L1G7	4.0	200	□		▲	○
MHMF402L1G8	4.0	200	□		▲	△
MHMF402L1H5	4.0	200	□	◆	●	○
MHMF402L1H6	4.0	200	□	◆	●	△
MHMF402L1H7	4.0	200	□	◆	▲	○
MHMF402L1H8	4.0	200	□	◆	▲	△
MHMF502L1C5	5.0	200	○		●	○
MHMF502L1C6	5.0	200	○		●	△
MHMF502L1C7	5.0	200	○		▲	○
MHMF502L1C8	5.0	200	○		▲	△
MHMF502L1D5	5.0	200	○	◆	●	○
MHMF502L1D6	5.0	200	○	◆	●	△
MHMF502L1D7	5.0	200	○	◆	▲	○
MHMF502L1D8	5.0	200	○	◆	▲	△
MHMF502L1G5	5.0	200	□		●	○
MHMF502L1G6	5.0	200	□		●	△
MHMF502L1G7	5.0	200	□		▲	○
MHMF502L1G8	5.0	200	□		▲	△
MHMF502L1H5	5.0	200	□	◆	●	○
MHMF502L1H6	5.0	200	□	◆	●	△
MHMF502L1H7	5.0	200	□	◆	▲	○
MHMF502L1H8	5.0	200	□	◆	▲	△

Category indications

(Shaft specifications: straight = ○, with key = □, tap with key = △)

(Oil seal: included = ●, included (protective lip) = ▲)

(Motor I/F: JN = ◎, JN2 = ○, JL10 = △)

• MINAS A6 MGMF Series (□130 mm or more)

Model number	Output (kW)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MGMF092L1C5	0.85	200	○		●	○
MGMF092L1C6	0.85	200	○		●	△
MGMF092L1C7	0.85	200	○		▲	○
MGMF092L1C8	0.85	200	○		▲	△
MGMF092L1D5	0.85	200	○	◆	●	○
MGMF092L1D6	0.85	200	○	◆	●	△
MGMF092L1D7	0.85	200	○	◆	▲	○
MGMF092L1D8	0.85	200	○	◆	▲	△
MGMF092L1G5	0.85	200	□		●	○
MGMF092L1G6	0.85	200	□		●	△
MGMF092L1G7	0.85	200	□		▲	○
MGMF092L1G8	0.85	200	□		▲	△
MGMF092L1H5	0.85	200	□	◆	●	○
MGMF092L1H6	0.85	200	□	◆	●	△
MGMF092L1H7	0.85	200	□	◆	▲	○
MGMF092L1H8	0.85	200	□	◆	▲	△
MGMF132L1C5	1.3	200	○		●	○
MGMF132L1C6	1.3	200	○		●	△
MGMF132L1C7	1.3	200	○		▲	○
MGMF132L1C8	1.3	200	○		▲	△
MGMF132L1D5	1.3	200	○	◆	●	○
MGMF132L1D6	1.3	200	○	◆	●	△
MGMF132L1D7	1.3	200	○	◆	▲	○
MGMF132L1D8	1.3	200	○	◆	▲	△
MGMF132L1G5	1.3	200	□		●	○
MGMF132L1G6	1.3	200	□		●	△
MGMF132L1G7	1.3	200	□		▲	○
MGMF132L1G8	1.3	200	□		▲	△
MGMF132L1H5	1.3	200	□	◆	●	○
MGMF132L1H6	1.3	200	□	◆	●	△

Model number	Output (kW)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MGMF132L1H7	1.3	200	□	◆	▲	○
MGMF132L1H8	1.3	200	□	◆	▲	△
MGMF182L1C5	1.8	200	○		●	○
MGMF182L1C6	1.8	200	○		●	△
MGMF182L1C7	1.8	200	○		▲	○
MGMF182L1C8	1.8	200	○		▲	△
MGMF182L1D5	1.8	200	○	◆	●	○
MGMF182L1D6	1.8	200	○	◆	●	△
MGMF182L1D7	1.8	200	○	◆	▲	○
MGMF182L1D8	1.8	200	○	◆	▲	△
MGMF182L1G5	1.8	200	□		●	○
MGMF182L1G6	1.8	200	□		●	△
MGMF182L1G7	1.8	200	□		▲	○
MGMF182L1G8	1.8	200	□		▲	△
MGMF182L1H5	1.8	200	□	◆	●	○
MGMF182L1H6	1.8	200	□	◆	●	△
MGMF182L1H7	1.8	200	□	◆	▲	○
MGMF182L1H8	1.8	200	□	◆	▲	△
MGMF292L1C5	2.9	200	○		●	○
MGMF292L1C6	2.9	200	○		●	△
MGMF292L1C7	2.9	200	○		▲	○
MGMF292L1C8	2.9	200	○		▲	△
MGMF292L1D5	2.9	200	○	◆	●	○
MGMF292L1D6	2.9	200	○	◆	●	△
MGMF292L1D7	2.9	200	○	◆	▲	○
MGMF292L1D8	2.9	200	○	◆	▲	△
MGMF292L1G5	2.9	200	□		●	○
MGMF292L1G6	2.9	200	□		●	△
MGMF292L1G7	2.9	200	□		▲	○
MGMF292L1G8	2.9	200	□		▲	△
MGMF292L1H5	2.9	200	□	◆	●	○
MGMF292L1H6	2.9	200	□	◆	●	△
MGMF292L1H7	2.9	200	□	◆	▲	○

Model number	Output (kW)	Voltage (V)	Shaft specifications	Holding brake	Oil seal	Motor I/F
MGMF292L1H8	2.9	200	□	◆	▲	△
MGMF442L1C5	4.4	200	○		●	○
MGMF442L1C6	4.4	200	○		●	△
MGMF442L1C7	4.4	200	○		▲	○
MGMF442L1C8	4.4	200	○		▲	△
MGMF442L1D5	4.4	200	○	◆	●	○
MGMF442L1D6	4.4	200	○	◆	●	△
MGMF442L1D7	4.4	200	○	◆	▲	○
MGMF442L1D8	4.4	200	○	◆	▲	△
MGMF442L1G5	4.4	200	□		●	○
MGMF442L1G6	4.4	200	□		●	△
MGMF442L1G7	4.4	200	□		▲	○
MGMF442L1G8	4.4	200	□		▲	△
MGMF442L1H5	4.4	200	□	◆	●	○
MGMF442L1H6	4.4	200	□	◆	●	△
MGMF442L1H7	4.4	200	□	◆	▲	○
MGMF442L1H8	4.4	200	□	◆	▲	△

■ MINAS A6 Options

• MINAS A6 Options

Model number	Description
DV0PM24581	Connector kit for motor and encoder
DV0PM24582	Connector kit for motor and encoder
DV0PM24583	Connector kit for motor and encoder
DV0PM24584	Connector kit for motor and encoder
DV0PM24585	Connector kit for motor and encoder
DV0PM24586	Connector kit for motor and encoder
DV0PM24587	Connector kit for motor and encoder
DV0PM24588	Connector kit for motor and encoder
DV0PM24589	Connector kit for motor and encoder
DV0PM24590	Connector kit for motor and encoder
DV0PM20100	A and B Frame mounting bracket
DV0PM20101	C and D Frame mounting bracket