Changes for the Better

MITSUBISHI ELECTRIC

MITSUBISHI CNC
DRIVE SYSTEM

# GENERAL CATALOG

MDS-D Series
MDS-DM Series
MDS-D-SVJ3/SPJ3 Series

BNP-A1205-H-ENG

# Versatile drive and motor series with supreme agility

## MITSUBISHI CNC DRIVE SYSTEM LINES

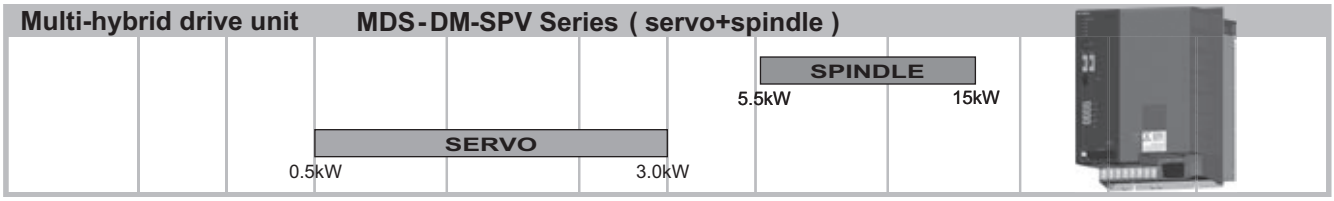
### Drive unit to realize complete nano control MDS-DH Series (400V)




### MDS-D Series (200V)

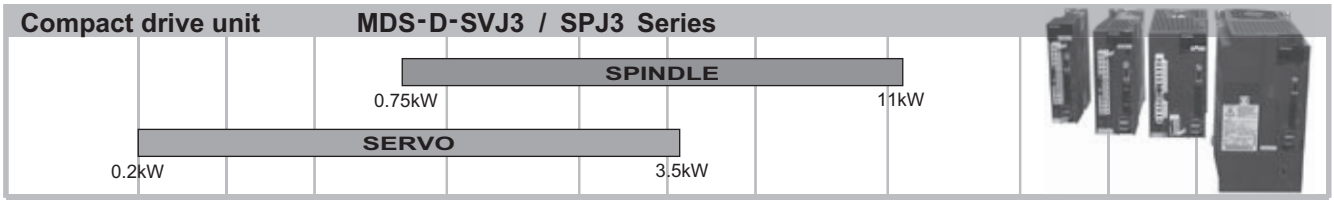



### Multi-hybrid drive unit MDS-DM-SPV Series ( servo+spindle )

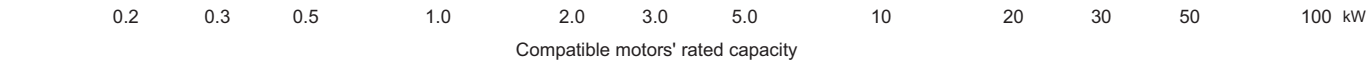





### Compact drive unit MDS-D-SVJ3 / SPJ3 Series






Compatible motors' rated capacity

## Explanation of type

### Servo motor HF Series

HF ① ② ③ - ④

①Rated output and maximum rotation speed

| Symbol | Rated output | Max.rotation speed | Flange size(mm) |
|---|---|---|---|
| 75 | 0.75 kW | 5000 r/min | 90 SQ. |
| 105 | 1.0 kW | 5000 r/min | 90 SQ. |
| 54 | 0.5 kW | 4000 r/min | 130 SQ. |
| 104 | 1.0 kW | 4000 r/min | 130 SQ. |
| 154 | 1.5 kW | 4000 r/min | 130 SQ. |
| 224 | 2.2 kW | 4000 r/min | 130 SQ. |
| 204 | 2.0 kW | 4000 r/min | 176 SQ. |
| 354 | 3.5 kW | 4000 r/min | 176 SQ. |
| 123 | 1.2 kW | 3000 r/min | 130 SQ. |
| 223 | 2.2 kW | 3000 r/min | 130 SQ. |
| 303 | 3.0 kW | 3000 r/min | 176 SQ. |
| 453 | 4.5 kW | 3500 r/min | 176 SQ. |
| 703 | 7.0 kW | 3000 r/min | 176 SQ. |
| 903 | 9.0 kW | 3000 r/min | 204 SQ. |
| 142 | 1.4 kW | 2000 r/min | 130 SQ. |
| 302 | 3.0 kW | 2000 r/min | 176 SQ. |

②Magnetic brake

| Symbol | Magnetic brake |
|---|---|
| blank | Unavailable |
| B | With magnetic brake |

③Shaft end structure

| Symbol | Shaft end structure |
|---|---|
| S | Straight |
| T | Taper |

(Note)"Taper"is available for the motor with flange size of 90mm SQ. or 130mm SQ.

④Detector

| Symbol | Detection method | Detector resolution | detector type |
|---|---|---|---|
| A48 | Absolute position | 260,000 p/rev | OSA18 |
| A51 | | 1,000,000 p/rev | OSA105S5 |
| A74 | | 16,000,000 p/rev | OSA166S5 |

* A74 falls under the Export Trade Control Ordinance and Foreign Trade Ordinance.

### Servo motor HF-KP Series

HF-KP13 ② J-S17

| Rated output | Max.rotation speed | Flange size(mm) |
|---|---|---|
| 0.1 kW | 6000 r/min | 40 SQ. |

* The motor-end detector has absolute position specifications, but is not equipped with the capacitor for data backup. Thus, absolute position is lost immediately after disconnection of the detector cable.

HF-KP ① ② JW04-S6

①Rated output and maximum rotation speed

| Symbol | Rated output | Max.rotation speed | Flange size(mm) |
|---|---|---|---|
| 23 | 0.2 kW | 6000 r/min | 60 SQ. |
| 43 | 0.4 kW | 6000 r/min | 60 SQ. |
| 73 | 0.75 kW | 6000 r/min | 80 SQ. |

②Magnetic brake

| Symbol | Magnetic brake |
|---|---|
| blank | Unavailable |
| B | With magnetic brake |

## Explanation of type

**Spindle motor SJ-V/VL Series**

SJ- ① ② ③ ④ - ⑤ ⑥ T

①Motor series

| Symbol | Motor series |
|---|---|
| V | Medium inertia series |
| VL | Low inertia series |

②Coil changeover

| Symbol | Coil changeover |
|---|---|
| blank | Unavailable |
| K | Available |

③Shaft configuration

| Symbol | Axis configuration |
|---|---|
| blank | Standard |
| S | Hollow shaft |

④Short time rated output

| Symbol | Short time rated output |
|---|---|
| 0.75 | 0.75 kW |
| 1.5 | 1.5 kW |
| 2.2 | 2.2 kW |
| 3.7 | 3.7 kW |
| 5.5 | 5.5 kW |
| 7.5 | 7.5 kW |
| 11 | 11 kW |
| 15 | 15 kW |
| 18.5 | 18.5 kW |
| 22 | 22 kW |
| 26 | 26 kW |
| 30 | 30 kW |
| 37 | 37 kW |
| 45 | 45 kW |
| 55 | 55 kW |

⑤Specification code

The SJ-V/VLSeries is indicated with a specification code (00 to 99).

⑥Special specifications

| Symbol | Special specifications |
|---|---|
| blank | Standard |
| Z | High-speed bearing |
| FZ | High-speed bearing front-lock |

## HF Series

| Servo motor type | | HF-KP13 | HF-KP23 | HF-KP43 | HF-KP73 | HF75 | HF105 |
|---|---|---|---|---|---|---|---|
| Compatible drive unit | 1-axis type | - | MDS-D-V1-20 | MDS-D-V1-20 | MDS-D-V1-20 | MDS-D-V1-20 | MDS-D-V1-20 |
| | 2-axis type | - | MDS-D-V2-2020<br>MDS-D-V2-4020 | MDS-D-V2-2020<br>MDS-D-V2-4020 | MDS-D-V2-2020<br>MDS-D-V2-4020 | MDS-D-V2-2020<br>MDS-D-V2-4020 | MDS-D-V2-2020<br>MDS-D-V2-4020 |
| | 3-axis type | - | MDS-DM-V3-202020 | MDS-DM-V3-202020 | MDS-DM-V3-202020<br>MDS-DM-V3-404040 | MDS-DM-V3-202020<br>MDS-DM-V3-404040 | MDS-DM-V3-202020<br>MDS-DM-V3-404040 |
| | Multi-hybrid drive | - | - | - | - | - | - |
| | Resistor regeneration type | MDS-D-SVJ3-03 | MDS-D-SVJ3-03 | MDS-D-SVJ3-04 | MDS-D-SVJ3-07 | MDS-D-SVJ3-07 | MDS-D-SVJ3-07 |
| Output<br>Stall torque ■<br>Max.torque □ | [N·m] | 15<br>10<br>5<br>0<br>0.32 0.95 | 0.64 1.9 | 1.3 3.8 | 2.4 7.2 | 2.0 8.0 | 3.0 11.0 |
| Rated output | [kW] | 0.1 | 0.2 | 0.4 | 0.75 | 0.75 | 1.0 |
| Max.rotation speed | [r/min] | 6000 | 6000 | 6000 | 6000 | 5000 | 5000 |
| Motor inertia | [kg·cm²] | 0.089 | 0.23 | 0.42 | 1.43 | 2.6 | 5.1 |
| Motor inertia with a brake | [kg·cm²] | 0.091 | 0.31 | 0.50 | 1.63 | 2.8 | 5.3 |
| Protection level(The shaft-through portion is excluded) | | IP 65 | IP 65 | IP 65 | IP 65 | IP 67 | IP 67 |
| Outline dimension drawing<br>(Note) The total length will be 3.5mm longer when using an A51 or A74 detector. | [mm] | 40 SQ.<br>50 SQ.<br>92.8 | 60 SQ.<br>98 | 60 SQ.<br>119.9 | 80 SQ.<br>134.2 | 90 SQ.<br>126.5 | 90 SQ.<br>162.5 |
| Flange fitting diameter | [mm] | ø30 | ø50 | ø50 | ø70 | ø80 | ø80 |
| Shaft diameter | [mm] | ø8 | ø14 | ø14 | ø19 | ø14 | ø14 |
| Mass (with a brake) | [kg] | 0.66 (0.96) | 1.15 (1.77) | 1.68 (2.30) | 2.9 (3.1) | 2.5 (3.9) | 4.3 (5.7) |
| Absolute position detector compatible drive unit | 16,000,000[p/rev] (A74) | - | - | - | - | MDS-D-V1/V2 | MDS-D-V1/V2 |
| | 1,000,000[p/rev] (A51) | - | - | - | - | MDS-D-V1/V2 | MDS-D-V1/V2 |
| | 260,000[p/rev] (A48) | SVJ3 | MDS-D/DM, SVJ3 | MDS-D/DM, SVJ3 | MDS-D/DM, SVJ3 | MDS-DM, SVJ3 | MDS-DM, SVJ3 |

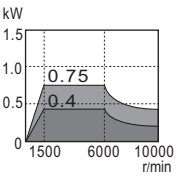
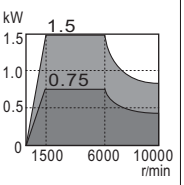
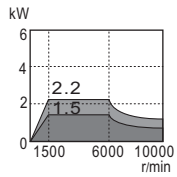
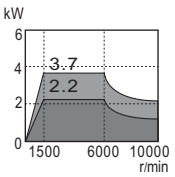
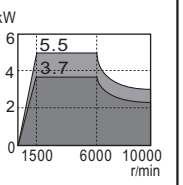
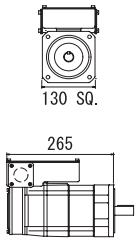
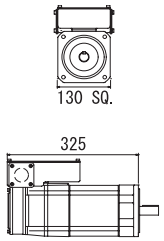
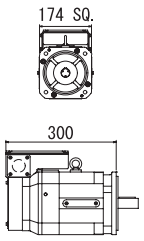
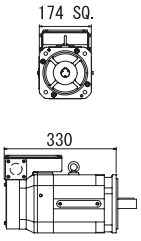
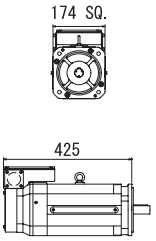
| Servo motor type | | HF54 | HF104 | HF154 | | HF224 | HF204 | |
|---|---|---|---|---|---|---|---|---|
| Compatible drive unit | 1-axis type | MDS-D-V1-40 | MDS-D-V1-40 | - | MDS-D-V1-80 | MDS-D-V1-80 | - | MDS-D-V1-80 |
| | 2-axis type | MDS-D-V2-4020<br>MDS-D-V2-4040<br>MDS-D-V2-8040 | MDS-D-V2-4020<br>MDS-D-V2-4040<br>MDS-D-V2-8040 | - | MDS-D-V2-8040<br>MDS-D-V2-8080<br>MDS-D-V2-16080 | MDS-D-V2-8040<br>MDS-D-V2-8080<br>MDS-D-V2-16080 | - | MDS-D-V2-8040<br>MDS-D-V2-8080<br>MDS-D-V2-16080 |
| | 3-axis type | MDS-DM-V3-404040 | MDS-DM-V3-404040 | MDS-DM-V3-404040 | - | - | - | - |
| | Multi drive | MDS-DM-SPV2<br>MDS-DM-SPV3 | MDS-DM-SPV2<br>MDS-DM-SPV3 | - | MDS-DM-SPV2<br>MDS-DM-SPV3 | MDS-DM-SPV2<br>MDS-DM-SPV3 | - | MDS-DM-SPV2<br>MDS-DM-SPV3 |
| | Resistor regeneration type | MDS-D-SVJ3-07 | MDS-D-SVJ3-10 | - | MDS-D-SVJ3-20 | MDS-D-SVJ3-20 | MDS-D-SVJ3-20 | - |
| Output<br>Stall torque ■<br>Max.torque □ | [N·m] | 50<br>40<br>30<br>20<br>10<br>0<br>2.9 13.0 | 5.9 23.3 | 7.0 23.7 | 9.0 42.0 | 12.0 46.5 | 13.7 42.0 | 13.7 47.0 |
| Rated output | [kW] | 0.5 | 1.0 | 1.5 | 1.5 | 2.2 | 2.0 | 2.0 |
| Max.rotation speed | [r/min] | 4000 | 4000 | 4000 | 4000 | 4000 | 4000 | 4000 |
| Motor inertia | [kg·cm²] | 6.1 | 11.9 | 17.8 | 17.8 | 23.7 | 38.3 | 38.3 |
| Motor inertia with a brake | [kg·cm²] | 8.3 | 14.1 | 20.0 | 20.0 | 25.9 | 48.0 | 48.0 |
| Protection level(The shaft-through portion is excluded) | | IP 67 | IP 67 | IP67 | IP67 | IP67 | IP67 | IP67 |
| Outline dimension drawing<br>(Note) The total length will be 3.5mm longer when using an A51 or A74 detector. | [mm] | 130 SQ.<br>118.5 | 130 SQ.<br>140.5 | 130 SQ.<br>162.5 | | 130 SQ.<br>184.5 | 176 SQ.<br>143.5 | |
| Flange fitting diameter | [mm] | ø110 | ø110 | ø110 | | ø110 | ø114.3 | |
| Shaft diameter | [mm] | ø24 | ø24 | ø24 | | ø24 | ø35 | |
| Mass (with a brake) | [kg] | 4.8 (6.8) | 6.5 (8.5) | 8.3 (10.3) | | 10.0 (12.0) | 12.0 (18.0) | |
| Absolute position detector compatible drive unit | 16,000,000[p/rev] (A74) | MDS-D-V1/V2 | MDS-D-V1/V2 | - | MDS-D-V1/V2 | MDS-D-V1/V2 | - | MDS-D-V1/V2 |
| | 1,000,000[p/rev] (A51) | MDS-D-V1/V2 | MDS-D-V1/V2 | MDS-DM | MDS-D-V1/V2 | MDS-D-V1/V2 | SVJ3 | MDS-D-V1/V2 |
| | 260,000[p/rev] (A48) | MDS-DM, SVJ3 | MDS-DM, SVJ3 | | MDS-DM, SVJ3 | MDS-DM, SVJ3 | | MDS-DM |

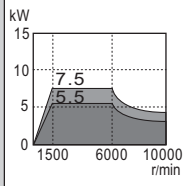
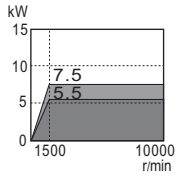
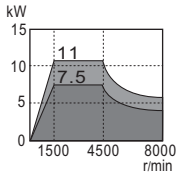
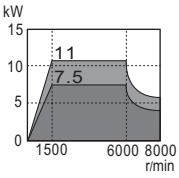
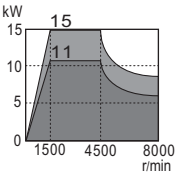
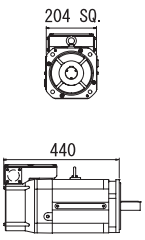
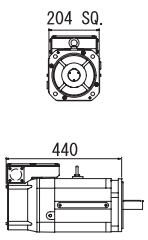
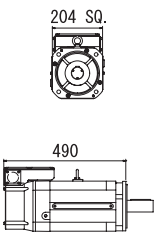
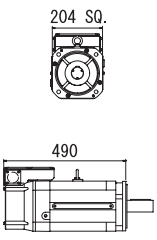
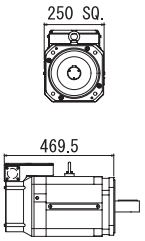
## HF Series

| Servo motor type | | HF354 | | HF123 | HF223 | | HF303 |
|---|---|---|---|---|---|---|---|
| Compatible drive unit | 1-axis type | - | MDS-D-V1-160 | MDS-D-V1-20 | - | MDS-D-V1-40 | MDS-D-V1-80 |
| | 2-axis type | - | MDS-D-V2-16080<br>MDS-D-V2-160160<br>MDS-D-V2-160160W | MDS-D-V2-2020<br>MDS-D-V2-4020 | - | MDS-D-V2-4020<br>MDS-D-V2-4040<br>MDS-D-V2-8040 | MDS-D-V2-8040<br>MDS-D-V2-8080<br>MDS-D-V2-16080 |
| | 3-axis type | - | - | MDS-DM-V3-202020<br>MDS-DM-V3-404040 | MDS-DM-V3-404040<br>(M axis, S axis) | MDS-DM-V3-404040<br>(L axis) | - |
| | Multi-hybrid drive | - | - | - | - | MDS-DM-SPV2<br>MDS-DM-SPV3 | MDS-DM-SPV2<br>MDS-DM-SPV3 |
| | Resistor regeneration type | MDS-D-SVJ3-35 | - | MDS-D-SVJ3-10 | - | MDS-D-SVJ3-10 | MDS-D-SVJ3-20 |
| Output<br>Stall torque<br>Max.torque | [N·m] | 100<br>80<br>60<br>40<br>20<br>0 | 22.5 65.0<br>22.5 90.0 | 7.0 17.0 | 10.0 32.0 | 12.0 32.0 | 22.5 64.0 |
| Rated output | [kW] | 3.5 | 3.5 | 1.2 | 2.1 | 2.2 | 3.0 |
| Max.rotation speed | [r/min] | 3500 | 4000 | 3000 | 3000 | 3000 | 3000 |
| Motor inertia | [kg·cm²] | 75.0 | 75.0 | 11.9 | 23.7 | 23.7 | 75.0 |
| Motor inertia with a brake | [kg·cm²] | 84.7 | 84.7 | 14.1 | 25.9 | 25.9 | 84.7 |
| Protection level(The shaft-through portion is excluded) | | IP67 | IP67 | IP67 | IP67 | IP67 | IP67 |
| Outline dimension drawing<br>(Note) The total length will be 3.5mm longer when using an A51 or A74 detector. | [mm] | 176 SQ.<br>183.5 | | 130 SQ.<br>140.5 | 130 SQ.<br>184.5 | | 176 SQ.<br>183.5 |
| Flange fitting diameter | [mm] | ø114.3 | | ø110 | ø110 | | ø114.3 |
| Shaft diameter | [mm] | ø35 | | ø24 | ø24 | | ø35 |
| Mass (with a brake) | [kg] | 19.0 (25.0) | | 6.5 (8.0) | 10.0 (12.0) | | 19.0 (25.0) |
| Absolute position detector compatible drive unit | 16,000,000[p/rev] (A74) | - | MDS-D-V1/V2 | MDS-D-V1/V2 | - | MDS-D-V1/V2 | MDS-D-V1/V2 |
| | 1,000,000[p/rev] (A51) | SVJ3 | MDS-D-V1/V2 | MDS-D-V1/V2<br>MDS-DM, SVJ3 | MDS-DM | MDS-D-V1/V2<br>MDS-DM, SVJ3 | MDS-D-V1/V2<br>MDS-DM, SVJ3 |
| | 260,000[p/rev] (A48) | | | | | | |

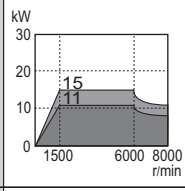
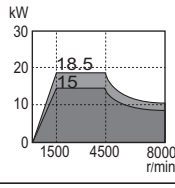
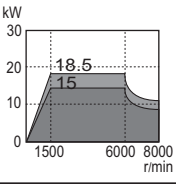
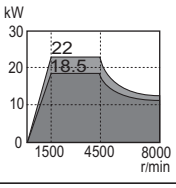
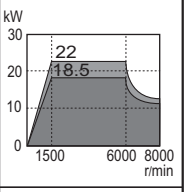
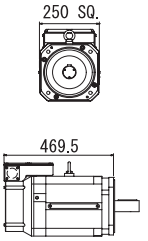
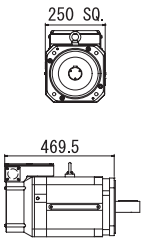
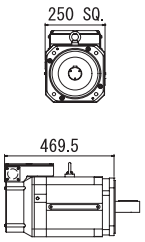
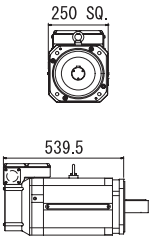
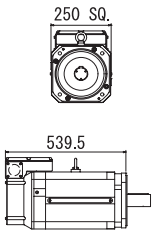
| Servo motor type | | HF453 | HF703 | HF903 | HF142 | HF302 | |
|---|---|---|---|---|---|---|---|
| Compatible drive unit | 1-axis type | MDS-D-V1-160 | MDS-D-V1-160W | MDS-D-V1-320 | MDS-D-V1-20 | - | MDS-D-V1-40 |
| | 2-axis type | MDS-D-V2-16080<br>MDS-D-V2-160160<br>MDS-D-V2-160160W | MDS-D-V2-160160W | - | MDS-D-V2-2020<br>MDS-D-V2-4020 | - | MDS-D-V2-4020<br>MDS-D-V2-4040<br>MDS-D-V2-8040 |
| | 3-axis type | - | - | - | MDS-DM-V3-202020<br>MDS-DM-V3-404040 | MDS-DM-V3-404040<br>(M axis, S axis) | MDS-DM-V3-404040<br>(L axis) |
| | Multi-hybrid drive | - | - | - | - | - | MDS-DM-SPV2<br>MDS-DM-SPV3 |
| | Resistor regeneration type | - | - | - | MDS-D-SVJ3-10 | - | MDS-D-SVJ3-10 |
| Output<br>Stall torque<br>Max.torque | [N·m] | 200<br>150<br>100<br>50<br>0 | 37.2 122.0<br>49.0 152.0 | 58.8 208.0 | 11.0 26.5 | 15.6 50.0 | 20.0 50.0 |
| Rated output | [kW] | 4.5 | 7.0 | 9.0 | 1.4 | 2.2 | 3.0 |
| Max.rotation speed | [r/min] | 3500 | 3000 | 3000 | 2000 | 2000 | 2000 |
| Motor inertia | [kg·cm²] | 112.0 | 154.0 | 196.0 | 17.8 | 75.0 | 75.0 |
| Motor inertia with a brake | [kg·cm²] | 121.7 | 163.7 | 205.7 | 20.0 | 84.7 | 84.7 |
| Protection level(The shaft-through portion is excluded) | | IP67 | IP67 | IP67 | IP67 | IP67 | IP67 |
| Outline dimension drawing<br>(Note) The total length will be 3.5mm longer when using an A51 or A74 detector. | [mm] | 176 SQ.<br>223.5 | 176 SQ.<br>263.5 | 204 SQ.<br>330 | 130 SQ.<br>162.5 | 176 SQ.<br>183.5 | |
| Flange fitting diameter | [mm] | ø114.3 | ø114.3 | ø180 | ø110 | ø114.3 | |
| Shaft diameter | [mm] | ø35 | ø35 | ø42 | ø24 | ø35 | |
| Mass (with a brake) | [kg] | 26.0 (32.0) | 32.0 (38.0) | 45.0 (51.0) | 8.3 (11.0) | 19.0 (25.0) | |
| Absolute position detector compatible drive unit | 16,000,000[p/rev] (A74) | MDS-D-V1/V2 | MDS-D-V1/V2 | MDS-D-V1 | MDS-D-V1/V2 | - | MDS-D-V1/V2 |
| | 1,000,000[p/rev] (A51) | MDS-D-V1/V2 | MDS-D-V1/V2 | MDS-D-V1 | MDS-D-V1/V2<br>MDS-DM, SVJ3 | MDS-DM | MDS-D-V1/V2<br>MDS-DM, SVJ3 |
| | 260,000[p/rev] (A48) | | | | | | |

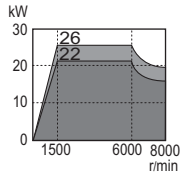
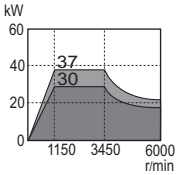
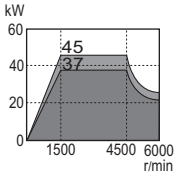
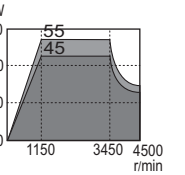
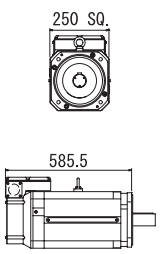
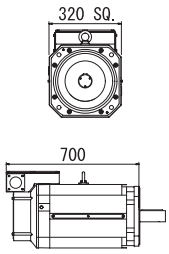
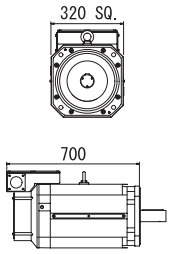
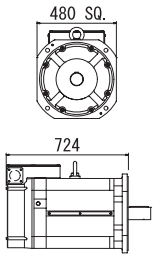
## SJ-V Series (Standard specification)

| Spindle motor type | | | SJ-VL0.75-01T | SJ-VL1.5-01T | SJ-V2.2-01T | SJ-V3.7-01T | SJ-V5.5-01ZT |
|---|---|---|---|---|---|---|---|
| Compatible drive unit | 1-axis type | | MDS-D-SP-20 | MDS-D-SP-20 | MDS-D-SP-40 | MDS-D-SP-80 | MDS-D-SP-80 |
| | 2-axis type | | MDS-D-SP2-2020<br>MDS-D-SP2-4020 | MDS-D-SP2-2020<br>MDS-D-SP2-4020 | MDS-D-SP2-4020<br>MDS-D-SP2-4040<br>MDS-D-SP2-8040 | MDS-D-SP2-8040<br>MDS-D-SP2-8080<br>MDS-D-SP2-16080 | MDS-D-SP2-8040<br>MDS-D-SP2-8080<br>MDS-D-SP2-16080 |
| | Multi-hybrid drive | | - | - | - | - | MDS-DM-SPV2-10080<br>MDS-DM-SPV3-10080 |
| | Resistor regeneration type | | MDS-D-SPJ3-075 | MDS-D-SPJ3-22 | MDS-D-SPJ3-22 | MDS-D-SPJ3-37 | MDS-D-SPJ3-55 |
| Output<br>Short time rating<br>Continuous rating | | |  <br>Short time rating(10min) |  <br>Short time rating(10min) |  <br>Short time rating(15min) |  <br>Short time rating(15min) |  <br>Short time rating(30min) |
| Base rotation speed | | [r/min] | 1500 | 1500 | 1500 | 1500 | 1500 |
| Max.rotation speed in constant output range | | [r/min] | 6000 | 6000 | 6000 | 6000 | 6000 |
| Maximum rotation speed | | [r/min] | 10000 | 10000 | 10000 | 10000 | 10000 |
| Continuous rated torque | | [N·m] | 2.55 | 4.77 | 9.55 | 14 | 23.5 |
| Motor inertia | | [kg·cm$^2$] | 13 | 24 | 67.5 | 87.5 | 147 |
| Outline dimension drawing (Flange type) | | [mm] |  |  |  |  |  |
| Flange fitting diameter | | [mm] | ø110 | ø110 | ø150 | ø150 | ø150 |
| Shaft diameter | | [mm] | ø22 | ø22 | ø28 | ø28 | ø28 |
| Mass | | [kg] | 15 | 20 | 25 | 30 | 49 |

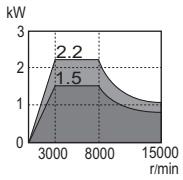
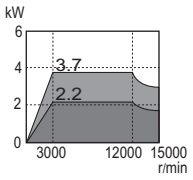
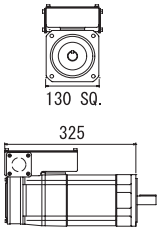
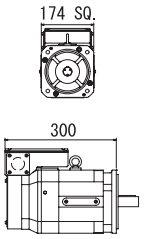
| Spindle motor type | | | SJ-V7.5-01ZT | SJ-V7.5-03ZT | SJ-V11-01ZT | SJ-V11-13ZT | SJ-V15-01ZT |
|---|---|---|---|---|---|---|---|
| Compatible drive unit | 1-axis type | | MDS-D-SP-160 | MDS-D-SP-160 | MDS-D-SP-160 | MDS-D-SP-200 | MDS-D-SP-200 |
| | 2-axis type | | MDS-D-SP2-16080 | MDS-D-SP2-16080 | MDS-D-SP2-16080 | - | - |
| | Multi-hybrid drive | | MDS-DM-SPV2-10080<br>MDS-DM-SPV3-10080 | MDS-DM-SPV2-16080<br>MDS-DM-SPV3-16080 | MDS-DM-SPV2-16080<br>MDS-DM-SPV3-16080 | MDS-DM-SPV2-20080<br>MDS-DM-SPV3-20080 | MDS-DM-SPV2-20080<br>MDS-DM-SPV3-20080 |
| | Resistor regeneration type | | MDS-D-SPJ3-75 | MDS-D-SPJ3-110 | MDS-D-SPJ3-110 | - | - |
| Output<br>30 min rating<br>Continuous rating | | |  |  |  |  |  |
| Base rotation speed | | [r/min] | 1500 | 1500 | 1500 | 1500 | 1500 |
| Max.rotation speed in constant output range | | [r/min] | 6000 | 10000 | 4500 | 6000 | 4500 |
| Maximum rotation speed | | [r/min] | 10000 | 10000 | 8000 | 8000 | 8000 |
| Continuous rated torque | | [N·m] | 35 | 35 | 47.7 | 47.7 | 70 |
| Motor inertia | | [kg·cm$^2$] | 245 | 245 | 300 | 300 | 575 |
| Outline dimension drawing (Flange type) | | [mm] |  |  |  |  |  |
| Flange fitting diameter | | [mm] | ø180 | ø180 | ø180 | ø180 | ø230 |
| Shaft diameter | | [mm] | ø32 | ø32 | ø48 | ø48 | ø48 |
| Mass | | [kg] | 60 | 60 | 70 | 70 | 110 |

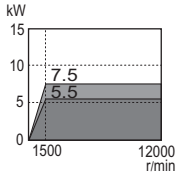
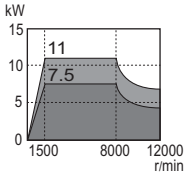
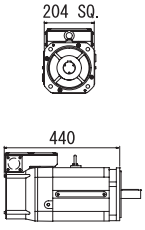
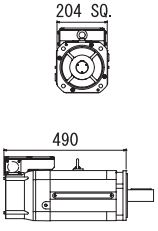
## SJ-V Series (Standard specification)

| Spindle motor type | | | SJ-V15-09ZT | SJ-V18.5-01ZT | SJ-V18.5-04ZT | SJ-V22-01ZT | SJ-V22-04ZT |
|---|---|---|---|---|---|---|---|
| Compatible drive unit | 1-axis type | | MDS-D-SP-200 | MDS-D-SP-200 | MDS-D-SP-240 | MDS-D-SP-240 | MDS-D-SP-320 |
| | 2-axis type | | - | - | - | - | - |
| | Multi-hybrid drive | | - | - | - | - | - |
| | Resistor regeneration type | | - | - | - | - | - |
| Output<br>30 min rating<br>Continuous rating | | |  |  |  |  |  |
| Base rotation speed | | [r/min] | 1500 | 1500 | 1500 | 1500 | 1500 |
| Max.rotation speed in constant output range | | [r/min] | 6000 | 4500 | 6000 | 4500 | 6000 |
| Maximum rotation speed | | [r/min] | 8000 | 8000 | 8000 | 8000 | 8000 |
| Continuous rated torque | | [N·m] | 70 | 95.5 | 95.5 | 118 | 118 |
| Motor inertia | | [kg·cm$^2$] | 575 | 575 | 575 | 800 | 800 |
| Outline dimension drawing (Flange type) | | [mm] |  |  |  |  |  |
| Flange fitting diameter | | [mm] | ø230 | ø230 | ø230 | ø230 | ø230 |
| Shaft diameter | | [mm] | ø48 | ø48 | ø48 | ø55 | ø55 |
| Mass | | [kg] | 110 | 110 | 110 | 135 | 135 |

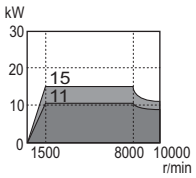
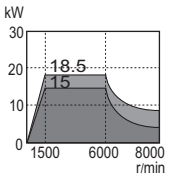
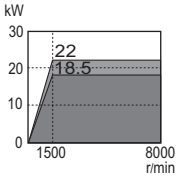
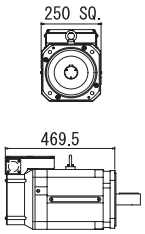
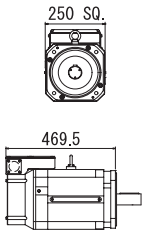
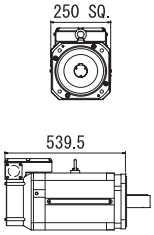
| Spindle motor type | | | SJ-V26-01ZT | SJ-V37-01ZT | SJ-V45-01ZT | SJ-V55-01ZT |
|---|---|---|---|---|---|---|
| Compatible drive unit | 1-axis type | | MDS-D-SP-320 | MDS-D-SP-400 | MDS-D-SP-640 | MDS-D-SP-640 |
| | 2-axis type | | - | - | - | - |
| | Multi-hybrid drive | | - | - | - | - |
| | Resistor regeneration type | | - | - | - | - |
| Output<br>30 min rating<br>Continuous rating | | |  |  |  |  |
| Base rotation speed | | [r/min] | 1500 | 1150 | 1500 | 1150 |
| Max.rotation speed in constant output range | | [r/min] | 6000 | 3450 | 4500 | 3450 |
| Maximum rotation speed | | [r/min] | 8000 | 6000 | 6000 | 4500 |
| Continuous rated torque | | [N·m] | 140 | 249 | 236 | 374 |
| Motor inertia | | [kg·cm$^2$] | 925 | 3400 | 3400 | 8475 |
| Outline dimension drawing (Flange type) | | [mm] |  |  |  |  |
| Flange fitting diameter | | [mm] | ø230 | ø300 | ø300 | ø450 |
| Shaft diameter | | [mm] | ø55 | ø60 | ø60 | ø75 |
| Mass | | [kg] | 155 | 390 | 390 | 450 |

## SJ-V Series (High-speed specification)

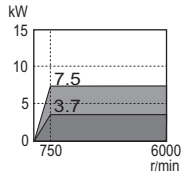
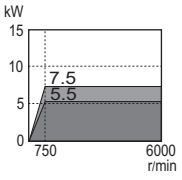
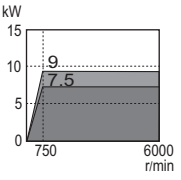
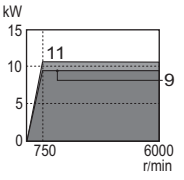
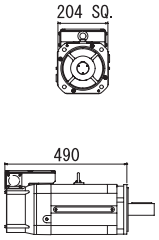
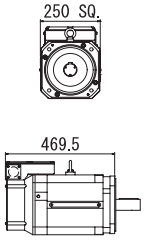
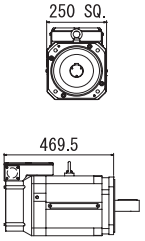
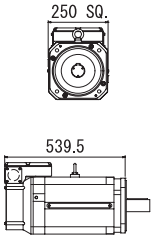
| Spindle motor type | | | SJ-VL2.2-02ZT | SJ-V3.7-02ZT |
|---|---|---|---|---|
| Compatible drive unit | 1-axis type | | MDS-D-SP-40 | MDS-D-SP-80 |
| | 2-axis type | | MDS-D-SP2-4020<br>MDS-D-SP2-4040<br>MDS-D-SP2-8040 | MDS-D-SP2-8040<br>MDS-D-SP2-8080<br>MDS-D-SP2-16080 |
| | Multi-hybrid drive | | - | - |
| | Resistor regeneration type | | - | - |
| Output<br>15 min rating □<br>Continuous rating ■ | | |  |  |
| Base rotation speed | | [r/min] | 3000 | 3000 |
| Max.rotation speed in constant output range | | [r/min] | 8000 | 12000 |
| Maximum rotation speed | | [r/min] | 15000 | 15000 |
| Continuous rated torque | | [N·m] | 4.78 | 7 |
| Motor inertia | | [kg·cm$^2$] | 24 | 67.5 |
| Outline dimension drawing (Flange type) | | [mm] |  |  |
| Flange fitting diameter | | [mm] | ø110 | ø150 |
| Shaft diameter | | [mm] | ø22 | ø28 |
| Mass | | [kg] | 20 | 25 |

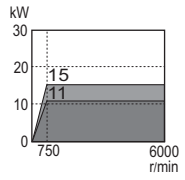
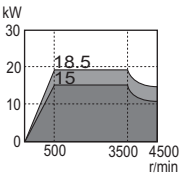
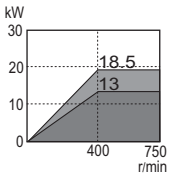
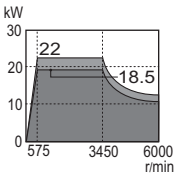
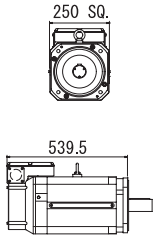
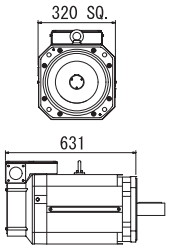
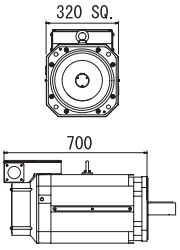
| Spindle motor type | | | SJ-V11-06ZT | SJ-V11-08ZT |
|---|---|---|---|---|
| Compatible drive unit | 1-axis type | | MDS-D-SP-200 | MDS-D-SP-200 |
| | 2-axis type | | - | - |
| | Multi-hybrid drive | | MDS-DM-SPV2-20080<br>MDS-DM-SPV3-20080 | - |
| | Resistor regeneration type | | - | - |
| Output<br>30 min rating □<br>Continuous rating ■ | | |  |  |
| Base rotation speed | | [r/min] | 1500 | 1500 |
| Max.rotation speed in constant output range | | [r/min] | 12000 | 8000 |
| Maximum rotation speed | | [r/min] | 12000 | 12000 |
| Continuous rated torque | | [N·m] | 35 | 47.7 |
| Motor inertia | | [kg·cm$^2$] | 245 | 300 |
| Outline dimension drawing (Flange type) | | [mm] |  |  |
| Flange fitting diameter | | [mm] | ø180 | ø180 |
| Shaft diameter | | [mm] | ø32 | ø48 |
| Mass | | [kg] | 60 | 70 |

## SJ-V Series (High-speed specification)

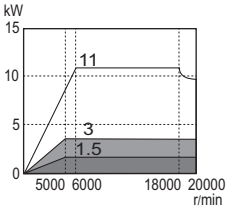
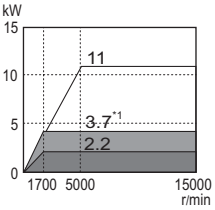
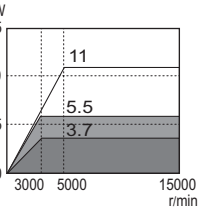
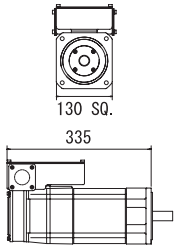
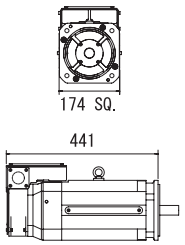
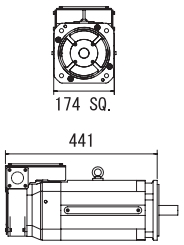
| Spindle motor type | | | SJ-V22-06ZT | SJ-V18.5-04ZT | SJ-V30-02ZT |
|---|---|---|---|---|---|
| Compatible drive unit | 1-axis type | | MDS-D-SP-240 | MDS-D-SP-240 | MDS-D-SP-320 |
| | 2-axis type | | - | - | - |
| | Multi drive | | - | - | - |
| | Resistor regeneration type | | - | - | - |
| Output<br>30 min rating ■<br>Continuous rating ■ | | |  |  |  |
| Base rotation speed | | [r/min] | 1500 | 1500 | 1500 |
| Max.rotation speed in constant output range | | [r/min] | 8000 | 6000 | 8000 |
| Maximum rotation speed | | [r/min] | 10000 | 8000 | 8000 |
| Continuous rated torque | | [N·m] | 70 | 95.5 | 118 |
| Motor inertia | | [kg·cm$^2$] | 575 | 575 | 800 |
| Outline dimension drawing (Flange type) | | [mm] |  |  |  |
| Flange fitting diameter | | [mm] | ø230 | ø230 | ø230 |
| Shaft diameter | | [mm] | ø48 | ø48 | ø55 |
| Mass | | [kg] | 110 | 110 | 135 |

## SJ-V Series (Wide range constant output specification)

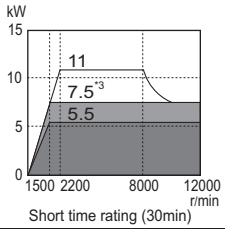
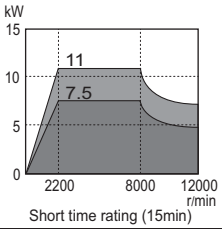
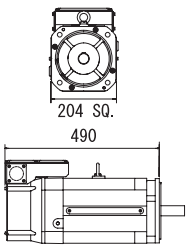
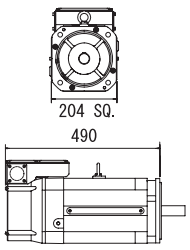
| Spindle motor type | | | SJ-V11-01T | SJ-V11-09T | SJ-V15-03T | SJ-V18.5-03T |
|---|---|---|---|---|---|---|
| Compatible drive uni | 1-axis type | | MDS-D-SP-160 | MDS-D-SP-160 | MDS-D-SP-200 | MDS-D-SP-240 |
| | 2-axis type | | MDS-D-SP2-16080 | MDS-D-SP2-16080 | - | - |
| | Multi-hybrid drive | | MDS-DM-SPV2-16080<br>MDS-DM-SPV3-16080 | MDS-DM-SPV2-16080<br>MDS-DM-SPV3-16080 | - | - |
| | Resistor regeneration type | | - | - | - | - |
| Output<br>30 min rating<br>Continuous rating | | |  |  |  |  |
| Base rotation speed | | [r/min] | 750 | 750 | 750 | 750 |
| Max.rotation speed in constant output range | | [r/min] | 6000 | 6000 | 6000 | 6000 |
| Maximum rotation speed | | [r/min] | 6000 | 6000 | 6000 | 6000 |
| Continuous rated torque | | [N·m] | 47.1 | 70 | 95.5 | 115 |
| Motor inertia | | [kg·cm$^2$] | 300 | 575 | 575 | 800 |
| Outline dimension drawing (Flange type) | | [mm] |  |  |  |  |
| Flange fitting diameter | | [mm] | ø180 | ø230 | ø230 | ø230 |
| Shaft diameter | | [mm] | ø48 | ø48 | ø48 | ø55 |
| Mass | | [kg] | 70 | 110 | 110 | 135 |

| Spindle motor type | | | SJ-V22-05T | SJ-V22-09T | SJ-VK22-19ZT | |
|---|---|---|---|---|---|---|
| Compatible drive unit | 1-axis type | | MDS-D-SP-320 | MDS-D-SP-320 | MDS-D-SP-320 | |
| | 2-axis type | | - | - | - | |
| | Multi-hybrid drive | | - | - | - | |
| | Resistor regeneration type | | - | - | - | |
| Output<br>Short time rating<br>Continuous rating | | |  <br>Short time rating (30min) |  <br>Short time rating (30min) |  <br>Short time rating (15min) |  <br>Short time rating (30min) |
| Base rotation speed | | [r/min] | 750 | 500 | 400 | 575 |
| Max.rotation speed in constant output range | | [r/min] | 6000 | 3500 | 750 | 3450 |
| Maximum rotation speed | | [r/min] | 6000 | 4500 | 750 | 6000 |
| Continuous rated torque | | [N·m] | 140 | 286 | 310 | 307.3 |
| Motor inertia | | [kg·cm$^2$] | 800 | 3075 | 3400 | |
| Outline dimension drawing (Flange type) | | [mm] |  |  |  | |
| Flange fitting diameter | | [mm] | ø230 | ø300 | ø300 | |
| Shaft diameter | | [mm] | ø55 | ø60 | ø60 | |
| Mass | | [kg] | 135 | 280 | 390 | |

## SJ-VL Series (Low-inertia specification)

| Spindle motor type | | | SJ-VL11-05FZT-S01 | SJ-VL11-10FZT | SJ-VL11-10FZT |
|---|---|---|---|---|---|
| Compatible drive unit | 1-axis type | | MDS-D-SP-160 | MDS-D-SP-160 | MDS-D-SP-160 |
| | 2-axis type | | - | - | - |
| | Multi-hybrid drive | | - | MDS-DM-SPV2-16080<br>MDS-DM-SPV3-16080 | MDS-DM-SPV2-16080<br>MDS-DM-SPV3-16080 |
| | Resistor regeneration type | | - | - | - |
| Output<br>Accelevation/Deceleration<br>Short time rating<br>Continuous rating | | |  <br>Short time rating (10min) |  <br>Short time rating (15min) |  <br>Short time rating (15min) (10min)*2 |
| Base rotation speed | | [r/min] | 5000 | 1700 | 3000 2500*2 |
| Max.rotation speed in constant output range | | [r/min] | 20000 | 15000 | 15000 |
| Maximum rotation speed | | [r/min] | 20000 | 15000 | 15000 |
| Continuous rated torque | | [N·m] | 2.8 | 12.4 | 11.8 |
| Motor inertia | | [kg·cm$^2$] | 24 | 53 | 53 |
| Outline dimension drawing (Flange type) | | [mm] |  |  |  |
| Flange fitting diameter | | [mm] | ø110 | ø150 | ø150 |
| Shaft diameter | | [mm] | ø22 | ø28 | ø28 |
| Mass | | [kg] | 20 | 40 | 40 |

*1 Output is limited by parameter.
*2 In the case of 10 min. rating the base rotation speed is 2500r/min.

| Spindle motor type | | | SJ-VL11-07ZT | SJ-VL11-07ZT |
|---|---|---|---|---|
| Compatible drive unit | 1-axis type | | MDS-D-SP-160 | MDS-D-SP-160 |
| | 2-axis type | | - | - |
| | Multi-hybrid drive | | MDS-DM-SPV2-16080<br>MDS-DM-SPV3-16080 | MDS-DM-SPV2-16080<br>MDS-DM-SPV3-16080 |
| | Resistor regeneration type | | - | - |
| Output<br>Accelevation/Deceleration<br>Short time rating<br>Continuous rating | | |  <br>Short time rating (30min) |  <br>Short time rating (15min) |
| Base rotation speed | | [r/min] | 1500 | 2200 |
| Max.rotation speed in constant output range | | [r/min] | 12000 | 8000 |
| Maximum rotation speed | | [r/min] | 12000 | 12000 |
| Continuous rated torque | | [N·m] | 35 | 32.6 |
| Motor inertia | | [kg·cm$^2$] | 180 | 180 |
| Outline dimension drawing (Flange type) | | [mm] |  |  |
| Flange fitting diameter | | [mm] | ø180 | ø180 |
| Shaft diameter | | [mm] | ø32 | ø32 |
| Mass | | [kg] | 70 | 70 |

*3 Output is limited by parameter.

## MDS-D Series

### 1-axis servo drive unit

| Drive unit type | | MDS-D-V1-20 | MDS-D-V1-40 | MDS-D-V1-80 | MDS-D-V1-160 | MDS-D-V1-160W | MDS-D-V1-320 | MDS-D-V1-320W |
|---|---|---|---|---|---|---|---|---|
| Drive unit category | | 1-axis servo | | | | | | |
| Nominal maximum current (peak) [A] | | 20 | 40 | 80 | 160 | 160 | 320 | 320 |
| Power input | Rated voltage [V] | 270 to 311DC | | | | | | |
| | Rated current [A] | 7 | 7 | 14 | 30 | 35 | 45 | 55 |
| | Frequency [Hz] | 50/60 Frequency fluctuation: within ±3% | | | | | | |
| Control power input | Voltage [V] | 200AC (50Hz) / 200 to 230AC (60Hz) Power fluctuation rate: within +10%, -15% | | | | | | |
| | Current [A] | MAX. 0.2 | | | | | | |
| Control method | | Sine wave PWM control method | | | | | | |
| Regeneration method | | Power regeneration method | | | | | | |
| Dynamic brakes | | Built-in | | | | | | External |
| Machine end detector | | Compatible | | | | | | |
| Cooling method | | Forced wind cooling | | | | | | |
| Mass [kg] | | 3.8 | 3.8 | 3.8 | 3.8 | 4.5 | 5.8 | 7.5 |
| Unit outline dimension drawing | | A1 | A1 | A1 | A1 | B1 | C1 | D1 |

### 2-axis servo drive unit

| Drive unit type | | MDS-D-V2-2020 | MDS-D-V2-4020 | MDS-D-V2-4040 | MDS-D-V2-8040 | MDS-D-V2-8080 | MDS-D-V2-16080 | MDS-D-V2-160160 | MDS-D-V2-160160W |
|---|---|---|---|---|---|---|---|---|---|
| Drive unit category | | 2-axis servo | | | | | | | |
| Nominal maximum current (peak) [A] | | 20/20 | 40/20 | 40/40 | 80/40 | 80/80 | 160/80 | 160/160 | 160/160 |
| Power input | Rated voltage [V] | 270 to 311DC | | | | | | | |
| | Rated current [A] | 14 | 14 | 14 | 21 | 28 | 44 | 60 | 70 |
| | Frequency [Hz] | 50/60 Frequency fluctuation: within ±3% | | | | | | | |
| Control power input | Voltage [V] | 200AC (50Hz) / 200 to 230AC (60Hz) Power fluctuation rate: within +10%, -15% | | | | | | | |
| | Current [A] | MAX. 0.2 | | | | | | | |
| Control method | | Sine wave PWM control method | | | | | | | |
| Regeneration method | | Power regeneration method | | | | | | | |
| Dynamic brakes | | Built-in | | | | | | | |
| Machine end detector | | Compatible | | | | | | | |
| Cooling method | | Forced wind cooling | | | | | | | |
| Mass [kg] | | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 5.2 | 5.2 | 6.3 |
| Unit outline dimension drawing | | A1 | A1 | A1 | A1 | A1 | B1 | B1 | C1 |

### 3-axis servo drive unit

| Drive unit type | | MDS-DM-V3-202020 | MDS-DM-V3-404040 |
|---|---|---|---|
| Drive unit category | | 3-axis servo | |
| Nominal maximum current (peak) [A] | | 20/20/20 | 40/40/40 |
| Power input | Rated voltage [V] | 270 to 311DC | |
| | Rated current [A] | 21 | 21 |
| | Frequency [Hz] | 50/60 Frequency fluctuation: within ±3% | |
| Control power input | Voltage [V] | 200AC (50Hz) / 200 to 230AC (60Hz)<br>Power fluctuation rate: within +10%, -15% | |
| | Current [A] | MAX. 0.2 | |
| Control method | | Sine wave PWM control method | |
| Regeneration method | | Power regeneration method | |
| Dynamic brakes | | Built-in | |
| Machine end detector | | Not compatible | |
| Cooling method | | Natural cooling | |
| Mass [kg] | | 3.8 | 3.8 |
| Unit outline dimension drawing | | A0 | A0 |

## MDS-D Series

### 1-axis spindle drive unit

| Dive unit type | | MDS-D-SP-20 | MDS-D-SP-40 | MDS-D-SP-80 | MDS-D-SP-160 | MDS-D-SP-200 | MDS-D-SP-240 | MDS-D-SP-320 | MDS-D-SP-400 | MDS-D-SP-640 |
|---|---|---|---|---|---|---|---|---|---|---|
| Drive unit category | | 1-axis spindle | | | | | | | | |
| Nominal maximum current (peak) [A] | | 20 | 40 | 80 | 160 | 200 | 240 | 320 | 400 | 640 |
| Power input | Rated voltage [V] | 270 to 311DC | | | | | | | | |
| | Rated current [A] | 7 | 13 | 20 | 41 | 76 | 95 | 140 | 150 | 210 |
| | Frequency [Hz] | 50/60 Frequency fluctuation: within ±3% | | | | | | | | |
| Control power input | Voltage [V] | 200AC (50Hz) / 200 to 230AC (60Hz) Power fluctuation rate: within +10%, -15% | | | | | | | | |
| | Current [A] | MAX. 0.2 | | | | | | | | |
| Control method | | Sine wave PWM control method | | | | | | | | |
| Regeneration method | | Power regeneration method | | | | | | | | |
| Cooling method | | Forced wind cooling | | | | | | | | |
| Mass [kg] | | 3.8 | 3.8 | 3.8 | 4.5 | 5.8 | 6.5 | 7.5 | 16.5 | 16.5 |
| Unit outline dimension drawing | | A1 | A1 | A1 | B1 | C1 | D1 | D2 | E1 | F1 |

### 2-axis spindle drive unit

| Dive unit type | | MDS-D-SP2-2020 | MDS-D-SP2-4020 | MDS-D-SP2-4040 | MDS-D-SP2-8040 | MDS-D-SP2-8080 | MDS-D-SP2-16080 |
|---|---|---|---|---|---|---|---|
| Drive unit category | | 2-axis spindle | | | | | |
| Nominal maximum current (peak) [A] | | 20/20 | 40/20 | 40/40 | 80/40 | 80/80 | 160/80 |
| Power input | Rated voltage [V] | 270 to 311DC | | | | | |
| | Rated current [A] | 14 | 20 | 26 | 33 | 40 | 61 |
| | Frequency [Hz] | 50/60 Frequency fluctuation: within ±3% | | | | | |
| Control power input | Voltage [V] | 200AC (50Hz) / 200 to 230AC (60Hz) Power fluctuation rate: within +10%, -15% | | | | | |
| | Current [A] | MAX. 0.2 | | | | | |
| Control method | | Sine wave PWM control method | | | | | |
| Regeneration method | | Power regeneration method | | | | | |
| Cooling method | | Forced wind cooling | | | | | |
| Mass [kg] | | 4.5 | 4.5 | 6.5 | 6.5 | 6.5 | 6.5 |
| Unit outline dimension drawing | | A1 | A1 | B1 | B1 | C1 | C1 |

### Power supply unit

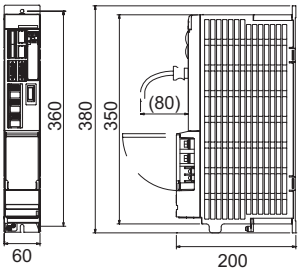
| Power supply unit type | | MDS-D-CV-37 | MDS-D-CV-75 | MDS-D-CV-110 | MDS-D-CV-185 | MDS-D-CV-300 | MDS-D-CV-370 | MDS-D-CV-450 | MDS-D-CV-550 |
|---|---|---|---|---|---|---|---|---|---|
| Rated output [kW] | | 3.7 | 7.5 | 11 | 18.5 | 30 | 37 | 45 | 55 |
| Power input | Rated voltage [V] | 200AC (50Hz) / 200 to 230AC (60Hz) Power fluctuation rate: within +10%, -15% | | | | | | | |
| | Rated current [A] | 15 | 26 | 35 | 65 | 107 | 121 | 148 | 200 |
| | Frequency [Hz] | 50/60 Frequency fluctuation: within ±3% | | | | | | | |
| Control power input | Voltage [V] | 200AC (50Hz) / 200 to 230AC (60Hz) Power fluctuation rate: within +10%, -15% | | | | | | | |
| | Current [A] | MAX. 0.2 | | | | | | | |
| Main circuit method | | Converter with power regeneration circuit | | | | | | | |
| Cooling method | | Natural cooling | | Forced wind cooling | | | | | |
| Mass [kg] | | 4.0 | 4.0 | 6.0 | 6.0 | 10.0 | 10.0 | 10.0 | 25.5 |
| Unit outline dimension drawing | | A2 | A2 | B1 | B1 | D1 | D1 | D2 | F1 |

## MDS-D Series

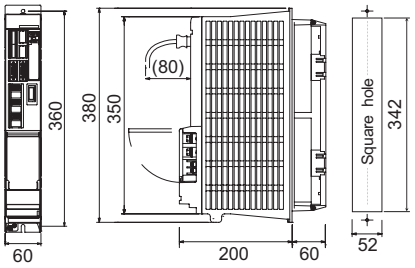
### Unit outline dimension drawings

Unit[mm]

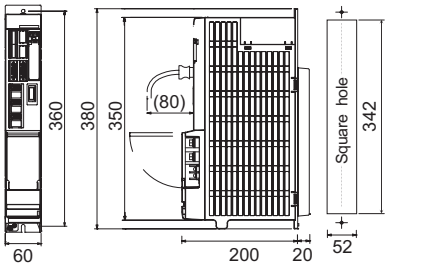
A0



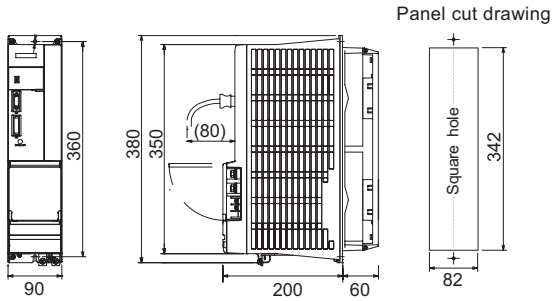

A1



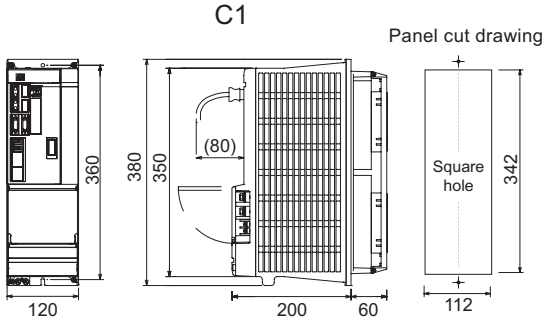

A2



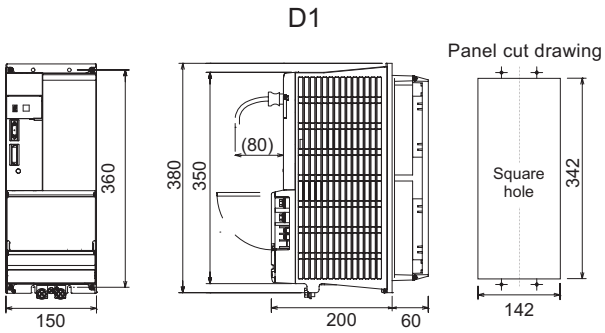

B1



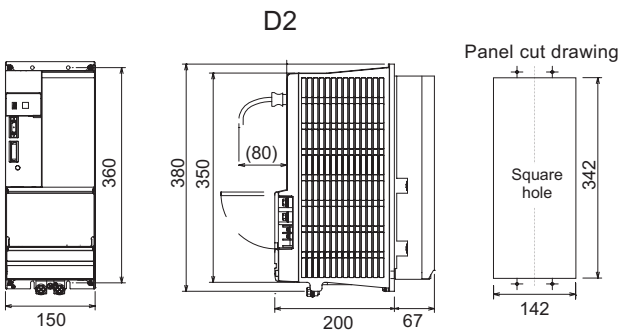

C1



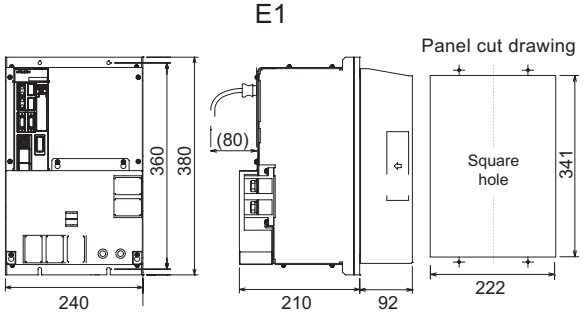

D1



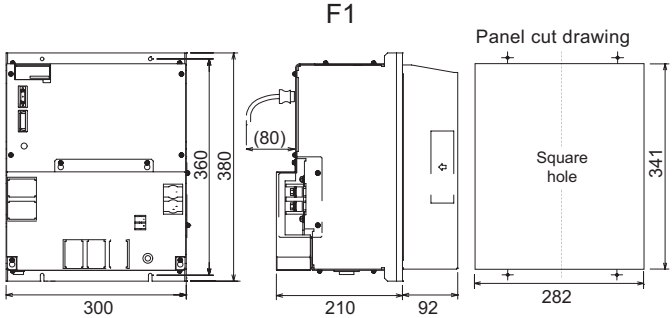

D2




E1




F1



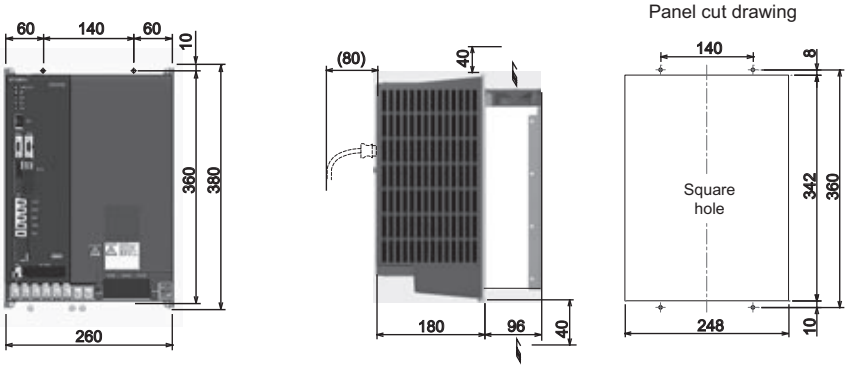
## MDS-DM Series

### Multi-hybrid drive

| Drive unit type | | | MDS-DM-SPV2-10080 | MDS-DM-SPV2-16080 | MDS-DM-SPV2-20080 | MDS-DM-SPV3-10080 | MDS-DM-SPV3-16080 | MDS-DM-SPV3-20080 |
|---|---|---|---|---|---|---|---|---|
| Drive unit category | | | 2-axis servo, 1-axis spindle (with converter) | | | 3-axis servo, 1-axis spindle (with converter) | | |
| Nominal maximum current (spindle/servo) | | [A] | 100 / 80×2 | 160 / 80×2 | 200 / 80×2 | 100 / 80×3 | 160 / 80×3 | 200 / 80×3 |
| Power input | Rated voltage | [V] | 200AC (50Hz) / 200 to 230AC (60Hz) Power fluctuation rate: within +10%, -15% | | | | | |
| | Rated current | [A] | 65 | 65 | 65 | 65 | 65 | 65 |
| | Frequency | [Hz] | 50/60 Frequency fluctuation: within ±3% | | | | | |
| Control power input | Voltage | [V] | 24DC Power fluctuation rate: within ±10% | | | | | |
| | Current | [A] | MAX. 4.0 | | | | | |
| Control method | | | Sine wave PWM control method | | | | | |
| Regeneration method | | | Power regeneration method | | | | | |
| Dynamic brakes (servo) | | | Built-in | | | | | |
| Machine end detector (servo) | | | Not Compatible | | | | | |
| Cooling method | | | Forced wind cooling | | | | | |
| Mass | | [kg] | 14.5 | 14.5 | 14.5 | 15 | 15 | 15 |

### Unit outline dimension drawing

Unit [mm]



## MDS-D-SVJ3/SPJ3 Series

### Resistor regeneration type compact servo drive unit

| Drive unit type | | | MDS-D-SVJ3-03 | MDS-D-SVJ3-04 | MDS-D-SVJ3-07 | MDS-D-SVJ3-10 | MDS-D-SVJ3-20 | MDS-D-SVJ3-35 |
|---|---|---|---|---|---|---|---|---|
| Drive unit category | | | 1-axis servo (with converter) | | | | | |
| Rated output | | [kW] | 0.3 | 0.4 | 0.75 | 1.0 | 2.0 | 3.5 |
| Power input | Rated voltage | [V] | 200AC (50Hz) / 200 to 230AC (60Hz) Power fluctuation rate: within +10%, -15% | | | | | |
| | Rated current | [A] | 1.5 | 2.9 | 3.8 | 5.0 | 10.5 | 16.0 |
| Control power input | Voltage | [V] | 200AC (50Hz) / 200 to 230AC (60Hz) Power fluctuation rate: within +10%, -15% | | | | | |
| | Current | [A] | MAX. 0.2 | | | | | |
| | Frequency | [Hz] | 50/60 Frequency fluctuation: within ±3% | | | | | |
| Control method | | | Sine wave PWM control method | | | | | |
| Regeneration method | | | Power regeneration method | | | | | |
| Dynamic brakes | | | Built-in | | | | | |
| Machine end detector | | | Compatible | | | | | |
| Cooling method | | | Natural cooling | | Forced wind cooling | | | |
| Mass | | [kg] | 0.8 | 1.0 | 1.4 | 2.3 | 2.3 | 2.3 |
| Unit outline dimension drawing | | | J1 | J2 | J3 | J4 | J4 | J4 |

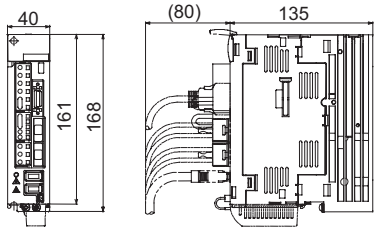
### Resistor regeneration type compact spindle drive unit

| Drive unit type | | | MDS-D-SPJ3-075 | MDS-D-SPJ3-22 | MDS-D-SPJ3-37 | MDS-D-SPJ3-55 | MDS-D-SPJ3-75 | MDS-D-SPJ3-110 |
|---|---|---|---|---|---|---|---|---|
| Drive unit category | | | 1-axis spindle (with Converter) | | | | | |
| Rated output | | [kW] | 0.75 | 2.2 | 3.7 | 5.5 | 7.5 | 11.0 |
| Power input | Rated voltage | [V] | 200AC (50Hz) / 200 to 230AC (60Hz) Power fluctuation rate: within +10%, -15% | | | | | |
| | Rated current | [A] | 2.6 | 9.0 | 10.5 | 16.0 | 26.0 | 35.4 |
| Control power input | Voltage | [V] | 200AC (50Hz) / 200 to 230AC (60Hz) Power fluctuation rate: within +10%, -15% | | | | | |
| | Current | [A] | MAX. 0.2 | | | | | |
| | Frequency | [Hz] | 50/60 Frequency fluctuation: within ±3% | | | | | |
| Control method | | | Sine wave PWM control method | | | | | |
| Regeneration method | | | Resistor regeneration method | | | | | |
| Cooling method | | | Forced wind cooling | | | | | |
| Mass | | [kg] | 1.4 | 2.1 | 2.1 | 4.6 | 4.6 | 6.5 |
| Unit outline dimension drawing | | | J3 | J4 | J4 | J5 | J5 | J6 |

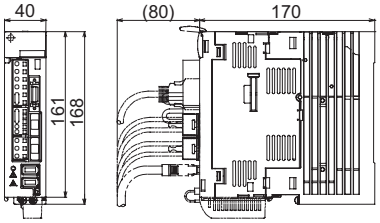
### Unit outline dimension drawings

Unit [mm]

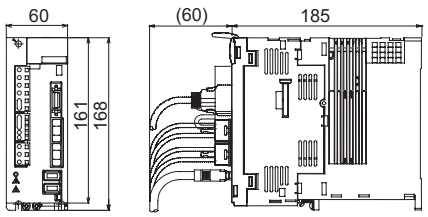
J1



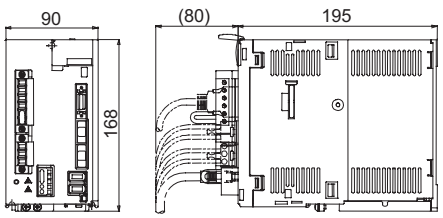

J2



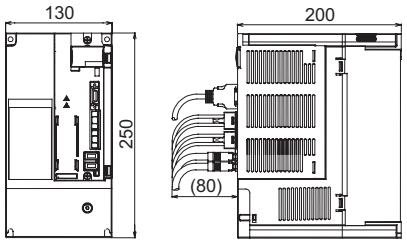

J3



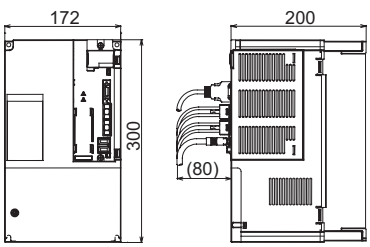

J4




J5




J6



Mitsubishi Electric Corporation Nagoya Works is a factory certified for ISO14001 (standards for environmental management systems) and ISO9001(standards for quality assurance managememt systems)


**⚠ Safety Warning**

To ensure proper use of the products listed in this catalog, please be sure to read the instruction manual prior to use.

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