

# Product Specifications

## DLP™ LED Display Cube

Combination model name:

**Model: 70HE120**

Information in this document is subject to change without notice.

**Mitsubishi Electric Corporation  
Kyoto Works**

Date: November 14, 2014

## 70HE120 model Specifications

### (1) Combination model name

| Combination model name | Unit model name |            |            | Features  |
|------------------------|-----------------|------------|------------|---|
|                        | Engine          | Cabinet    | Screen     |   |
| 70HE120U               | VS-HE120U       | S-70HE75CA | SC-70HE75U | Redundant LED light source<br>Black stripe screen |
| 70HE120L               | VS-HE120U       | S-70HE75CA | SC-70HE75L | Redundant LED light source<br>Fine cross screen   |

### (2) Image panel and light source

|                               |  |
|-------------------------------|--|
| Type                          | DLP™ technology (0.65" DLP™ 1 chip)<br>DarkChip3™, BrilliantColor™                         |
| Resolution                    | 1920 x 1080 pixels   |
| Light source                  | Redundant LED (RGB)  |
| Light source average lifetime | 100,000hours @ ADV.ECO mode<br>80,000hours @ Normal, ECO mode<br>60,000hours @ Bright mode |

DLP and Digital Light Processing are trademarks of Texas Instruments.

### (3) Electric specification

|  |                   |  |                        |
|--|-------------------|--|------------------------|
| Power consumption<br>Thermal dissipation<br>(typ.) | Mode              | Power consumption  | Thermal dissipation    |
|  | BRIGHT            | 172W   | 147.9kcal/h (587BTU/h) |
|  | NORMAL            | 131W   | 112.7kcal/h (447BTU/h) |
|  | ECO               | 95W  | 81.7kcal/h (324BTU/h)  |
|  | ADV.ECO           | 80W  | 68.8kcal/h (273BTU/h)  |
| Voltage range                                      |                   | AC 100 – 240V +/-10% , 50/ 60Hz +/-1Hz   |                        |
| Operating current (100/240V)                       |                   | 2.5/1.2 Amp.   |                        |
| Inrush current (100/240V)                          |                   | 30/60 Amp.   |                        |
| Signal input terminal                              |                   | Digital/Analog RGB: DVI-I(DVI 1.0/HDCP) x1<br>Digital RGB: DVI-D (DVI 1.0/HDCP) x1<br>DisplayPort (DP1.1a) x1  |                        |
| RGB Input scanning<br>frequency                    | Signal resolution | VGA (640x480) – WUXGA (1920x1200)<br>(Refer to attached "Supported signal list")   |                        |
|  | Horizontal        | 31.5kHz – 92kHz  |                        |
|  | Vertical          | 49Hz- 85Hz   |                        |
| Analog RGB video input signal                      |                   | Video: 0.7V <sub>P-P</sub> positive / 75Ω<br>Synchronous: TTL level (positive/negative)<br>Sync On Green: Video: 0.7V <sub>P-P</sub> positive / 75Ω<br>Synchronous: 0.3V <sub>P-P</sub> negative / 75Ω |                        |
| Pixel clock rate                                   |                   | 25 MHz – 165MHz  |                        |

|                      |  |
|----------------------|--|
| Control signal input | RS-232C: D-Sub 9 pins  |
|                      | LAN: RJ45 x1 (10BASE-T/100BASE-TX)   |
|                      | D-Sub 9 pins x 2 (input, output)<br>Mitsubishi original control link                                     |
|                      | Wire remote: F3.5Jack  |
|                      | IR Receiver  |
| Input board slot     | Intel OPS slot x 1   |
| Functions            | Overlay function: Up to 2 windows per each screen<br>Scaling: shrink and zoom.<br>Frame rate conversion. |

#### (4) Optical specification (Typical value)

| Screen model name                                  |              | SC-70HE75U   | SC-70HE75L                              |
|--|--------------|--|---|
| Brightness   | BRIGHT mode  | 580cd/m <sup>2</sup>                                 | 290cd/m <sup>2</sup>                    |
|  | NORMAL mode  | 460cd/m <sup>2</sup>                                 | 230cd/m <sup>2</sup>                    |
|  | ECO mode     | 340cd/m <sup>2</sup>                                 | 170cd/m <sup>2</sup>                    |
|  | ADV.ECO mode | 140 cd/m <sup>2</sup>                                | 70 cd/m <sup>2</sup>                    |
| Viewing angle                                      | Horizontal   | 1/2 gain: +/- 35°<br>1/10 gain: +/- 57°              | 1/2 gain: +/- 35°<br>1/10 gain: +/- 57° |
|  | Vertical     | 1/2 gain +/- 10°<br>1/10 gain: +/- 28°               | 1/2 gain: +/- 33°<br>1/10 gain: +/- 55° |
| Screen size  |              | 70" Diagonal size (1548mm x 870.5mm)                 |   |
| Light output                                       |              | 730ANSI Lumen @BRIGHT mode                           |   |
| Contrast ratio                                     |              | 1500:1   |   |
| Brightness uniformity                              |              | 95% at 90% image height                              |   |
| Geometry distortion                                |              | 0.2%   |   |
| Mullion size (*)                                   |              | Horizontal: 0.2mm – 2.0mm<br>Vertical: 0.2mm – 1.5mm |   |
| Lateral color shift<br>Red – Green<br>Blue – Green |              | 0.5pixel   |   |

(\*) Depending on configuration and environment.

2.0mm (Horizontal), 1.5mm (Vertical) recommended for large walls to allow for expansion due to heat and humidity.

**(5) Mechanical specification** (Approximate value)

|                    |        |   |                |                |
|--------------------|--------|---|----------------|----------------|
| Dimensions         | Width  | 1550mm / 61.0"  |                |                |
|                    | Height | 1145mm / 45.1"  |                |                |
|                    | Depth  | 897mm / 35.3"   |                |                |
| Weight             |        | 101kg / 227lbs  |                |                |
| Audio noise        |        | 27dBA (typ.) (at 1m distance from screen center)  |                |                |
| Packing dimensions |        | Engine unit   | Cabinet unit   | Screen unit    |
|                    | Width  | 910mm / 35.8"   | 1615mm / 63.6" | 1710mm / 67.3" |
|                    | Height | 500mm / 19.7"   | 1328mm / 52.3" | 1055mm / 41.5" |
|                    | Depth  | 530mm / 20.9"   | 1000mm / 39.4" | 180mm / 7.1"   |
| Packing Weight     |        | 32kg / 71lbs  | 93kg / 205lbs  | 25kg / 55lbs   |
| Accessories        |        | Engine unit:<br>User's manual, Control cable<br>Cabinet unit:<br>User's manual, Chassis cover<br>Parts for connecting cubes<br>Bolts for engine fixation, Joint hole seal |                |                |

**(6) Environment**

|   |  |
|---|--|
| Temperature and humidity Condition at operation | 10°C – 35°C (50°F – 95°F),<br>20% – 80% non condensing   |
| Temperature and humidity Condition at storage   | -20°C – 50°C (-4°F – 122°F),<br>20% – 80% non condensing |

**(7) Safety approval**

|                 |  |
|-----------------|--|
| Safety approval | UL60950-1, CSAC22.2No.60950-1, EN60950-1<br>GOST IEC 60950-1, IS 13252 (Part 1), K60950-1,<br>AS/NZS60950.1, GB4943.1  |
| EMC             | FCC part15 Subpart B Class A<br>ICES-003 Issue No.5 Class A<br>EN55022 Class A, EN55024<br>EN61000-3-2, EN61000-3-3<br>GOST R 51318.22 (Class A),<br>GOST 30805.24, GOST R 51318.24<br>GOST R 51317.3.2, GOST R 51317.3.3<br>KN22 Class A, KN24<br>AS/NZS CISPR 22 Class A<br>GB9254 Class A, GB17625.1<br>VCCI Class A, JIS C 61000-3-2 |

**(8) Parts reliability (Average lifetime)**

|             |              |
|-------------|--------------|
| Cooling fan | 100,000hours |
|-------------|--------------|

**(9) Options**

|                               |            |
|-------------------------------|------------|
| Remote control unit           | R-XL51TX   |
| SDI input board               | DP-1SDI-3G |
| LED unit                      | S-120LE    |
| Power cord (North America)    | JC-PC3MA   |
| Power cord (Europe)           | JC-PC3ME   |
| Power cord (China)            | JC-PC3MC   |
| Power cord (Japan)            | JC-PC3MJ   |
| Motorized adjustment tool     | S-A70E     |
| Motor units for screen/mirror | S-MA70E    |

## Supported signals list

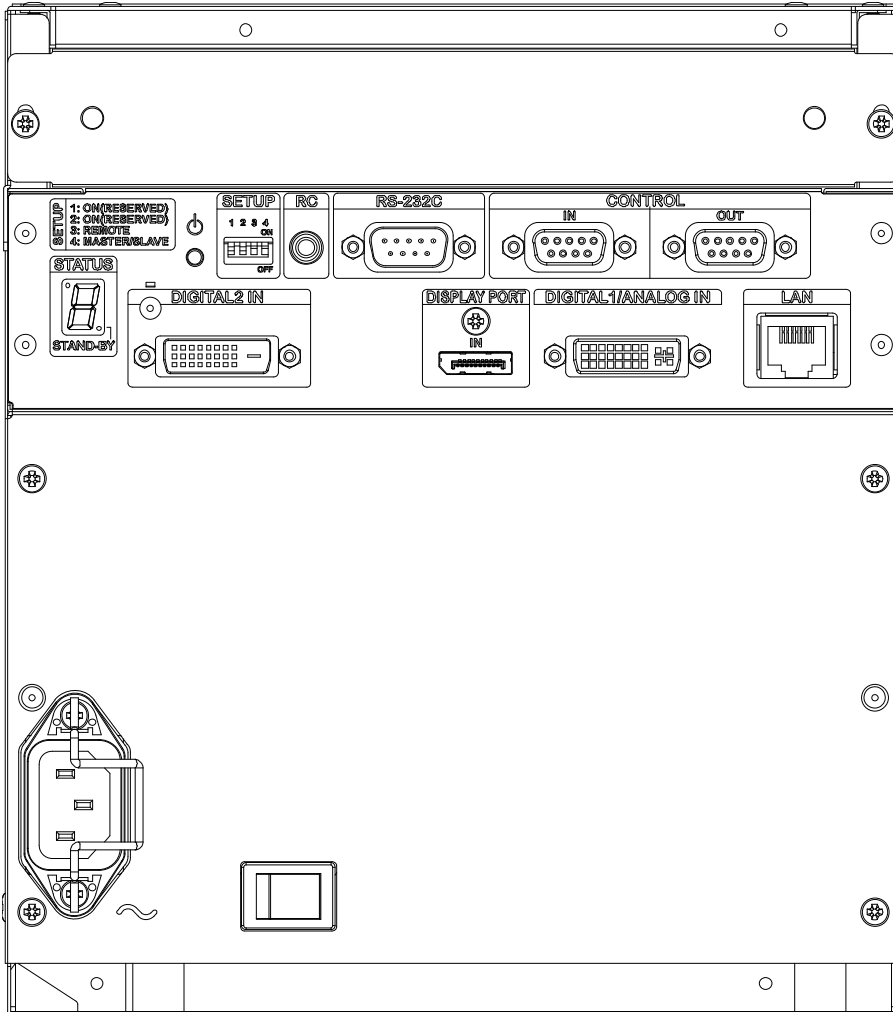
## RGB signals

| Signal    | Resolution  | Refresh rate (Hz) | Line rate (kHz) |
|-----------|-------------|-------------------|-----------------|
| VESA      | 1920 x 1200 | 60.0              | 74.0            |
|           | 1920 x 1080 | 60.0              | 67.5            |
|           | 1680 x 1050 | 60.0              | 65.3            |
|           | 1600 x 1200 | 60.0              | 75.0            |
|           | 1440 x 900  | 59.9              | 55.9            |
|           | 1400 x 1050 | 59.9              | 64.7            |
|           |             | 60.0              | 65.3            |
|           |             | 74.9              | 82.3            |
|           | 1366 x 768  | 59.8              | 47.7            |
|           | 1360 x 768  | 60.0              | 47.7            |
|           | 1280 x 1024 | 60.0              | 64.0            |
|           |             | 75.0              | 80.0            |
|           |             | 85.0              | 91.1            |
|           | 1280 x 960  | 60.0              | 60.0            |
|           | 1280 x 800  | 59.8              | 49.7            |
|           | 1280 x 768  | 59.9              | 47.8            |
|           | 1280 x 720  | 60.0              | 45.0            |
|           | 1152 x 864  | 75.0              | 67.5            |
|           | 1024 x 768  | 60.0              | 48.4            |
|           |             | 70.1              | 56.5            |
|           |             | 75.0              | 60.0            |
|           |             | 85.0              | 68.7            |
|           | 848 x 480   | 60.0              | 31.0            |
|           | 800 x 600   | 56.3              | 35.2            |
|           |             | 60.3              | 37.9            |
|           |             | 72.2              | 48.1            |
|           |             | 75.0              | 46.9            |
|           |             | 85.1              | 53.7            |
|           | 720 x 400   | 85.0              | 37.9            |
|           | 640 x 480   | 59.9              | 31.5            |
|           |             | 72.8              | 37.9            |
|           |             | 75.0              | 37.5            |
|           |             | 85.0              | 43.3            |
| 640 x 400 | 85.1        | 37.9              |                 |
| 640 x 350 | 85.1        | 37.9              |                 |
| PC        | 1400 x 1050 | 60.0              | 64.0            |
|           | 1280 x 1024 | 60.0              | 63.4            |
|           | 1280 x 960  | 75.0              | 75.0            |
|           | 1152 x 864  | 70.0              | 63.9            |
|           |             | 85.1              | 77.5            |
| 640 x 400 | 70.1        | 31.5              |                 |
|           | 84.1        | 37.9              |                 |
| Mac       | 1152 x 870  | 75.0              | 68.6            |
|           | 1024 x 768  | 74.9              | 60.2            |
|           | 832 x 624   | 74.5              | 49.7            |
|           | 640 x 480   | 66.7              | 35.0            |
| Unix      | 1280 x 1024 | 59.9              | 64.6            |
|           |             | 71.2              | 75.1            |
|           |             | 72.0              | 78.1            |
|           |             | 76.1              | 81.1            |
| HDTV      | 1920 x 1080 | 50.0              | 28.1            |
|           |             | 59.9              | 33.7            |
|           | 1280 x 720  | 50.0              | 37.5            |
|           |             | 59.9              | 45.0            |

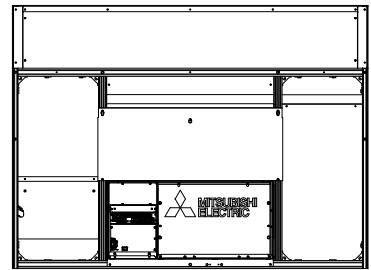
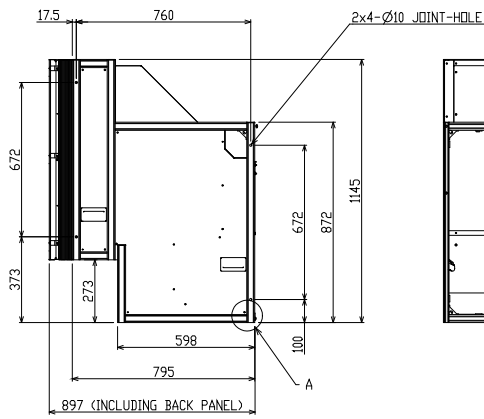
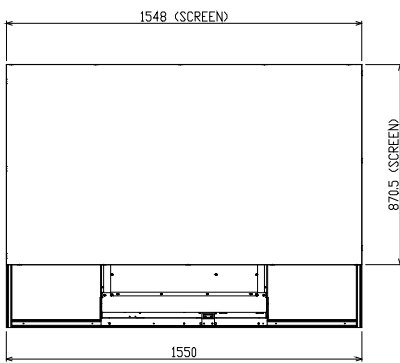
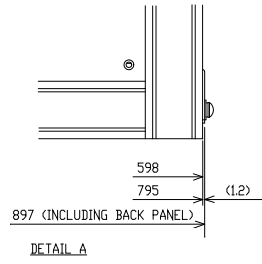
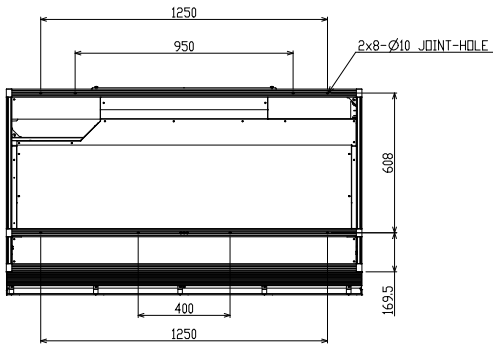
## Y/Cb/Cr ( Y/Pb/Pr ) signals

| Signal      | Resolution  | Refresh rate (Hz) | Line rate (kHz) |
|-------------|-------------|-------------------|-----------------|
| 1125p/1080p | 1920 x 1080 | 50.0              | 56.3            |
|             |             | 59.9              | 67.4            |
| 1125i/1080i | 1920 x 1080 | 50.0              | 28.1            |
|             |             | 59.9              | 33.7            |
| 750p/720p   | 1280 x 720  | 50.0              | 37.5            |
|             |             | 59.9              | 45.0            |
| 625p/576p   | 720 x 576   | 50.0              | 31.3            |
| 525p/480p   | 720 x 480   | 59.9              | 31.5            |

## Terminal appearance



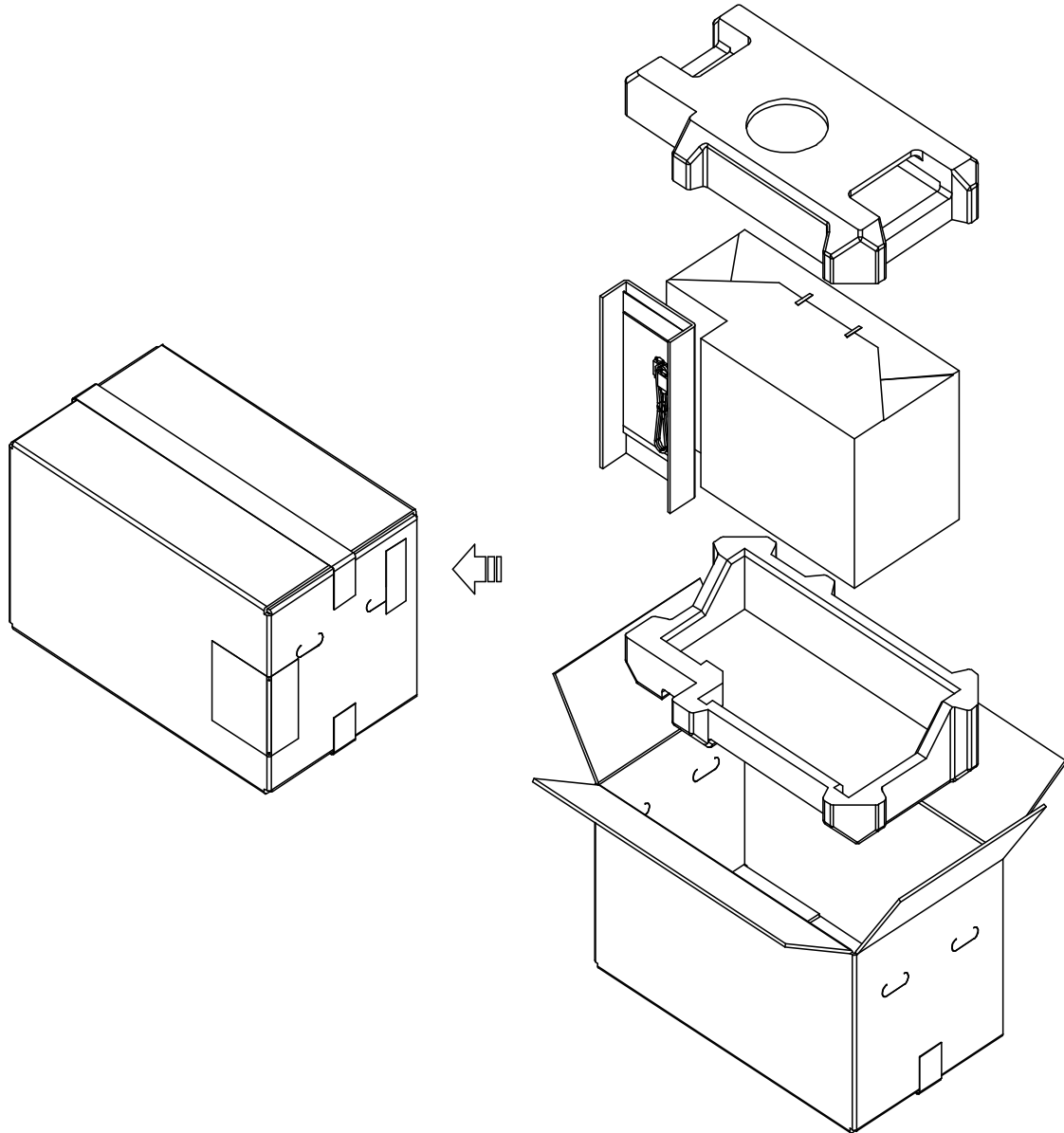
External dimensions



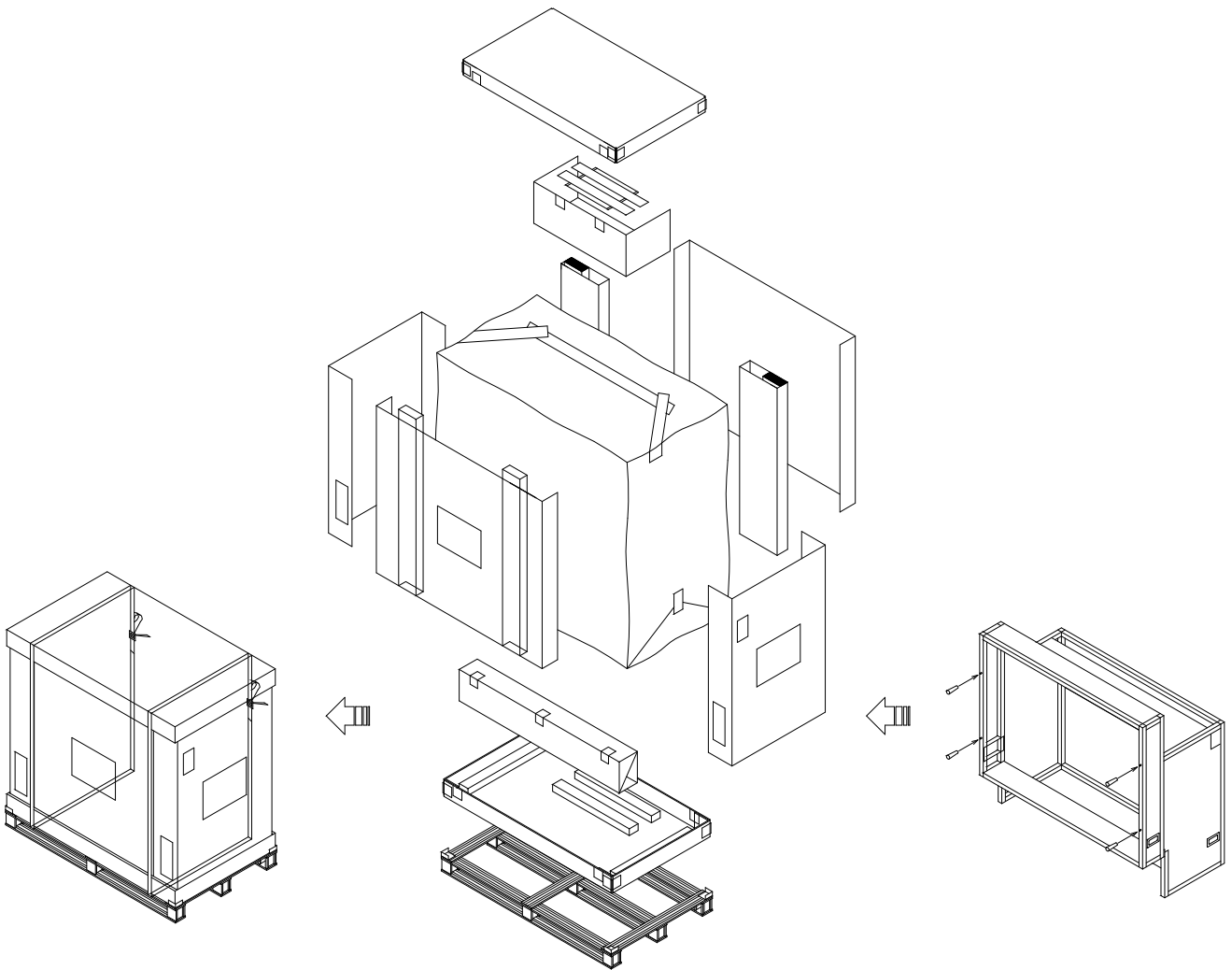


**Packing specification**

**[Engine unit: VS-HE120U]**



[Cabinet unit: S-70HE75CA]



[Screen unit: SC-70HE75U/L]

