

# Product Specifications

## DLP™ LED Display Cube

Combination model name:

**Model: 70HEF120**

Information in this document is subject to change without notice.

**Mitsubishi Electric Corporation  
Kyoto Works**

Date: November 14, 2014

## 70HEF120 model Specifications

### (1) Combination model name

Combination model name	Unit model name			Features
	Engine	Cabinet	Screen	
70HEF120U	VS-HE120U	S-70HE75CAF	SC-70HE75UF	Redundant LED light source Front maintenance Black stripe screen
70HEF120L	VS-HE120U	S-70HE75CAF	SC-70HE75LF	Redundant LED light source Front maintenance Fine cross screen

### (2) Image panel and light source

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

DLP and Digital Light Processing are trademarks of Texas Instruments.

### (3) Electric specification

Power consumption Thermal dissipation (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 Digital RGB: DVI-D (DVI 1.0/HDCP) x1 DisplayPort (DP1.1a) x1	
RGB Input scanning frequency	Signal resolution	VGA (640x480) – WUXGA (1920x1200) (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 Synchronous: TTL level (positive/negative) Sync On Green: Video: 0.7V <sub>P-P</sub> positive / 75Ω 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) 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 Scaling: shrink and zoom. Frame rate conversion.

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

Screen model name		SC-70HE75UF	SC-70HE75LF
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° 1/10 gain: +/- 57°	1/2 gain: +/- 35° 1/10 gain: +/- 57°
	Vertical	1/2 gain +/- 10° 1/10 gain: +/- 28°	1/2 gain: +/- 33° 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: 1.0mm – 3.0mm Vertical: 1.0mm – 2.5mm	
Lateral color shift Red – Green Blue – Green		0.5pixel	

(\*) Depending on configuration and environment.

3.0mm (Horizontal), 2.5mm (Vertical) recommended for large walls to allow for expansion due to heat and humidity.

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

Dimensions	Width	1551mm / 61.1"		
	Height	1147mm / 45.2"		
	Depth	962mm / 37.9"		
Weight		106kg / 234lbs		
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	95kg / 209lbs	27kg / 60lbs
Accessories		Engine unit: User's manual, Control cable Cabinet unit: User's manual Parts for connecting cubes Brackets for engine fixation Bolts for engine fixation, Joint hole seal		

**(6) Environment**

Temperature and humidity Condition at operation	10°C – 30°C (50°F – 86°F), 20% – 80% non condensing
Temperature and humidity Condition at storage	-20°C – 50°C (-4°F – 122°F), 20% – 80% non condensing

**(7) Safety approval**

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

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

Cooling fan	100,000hours
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**(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

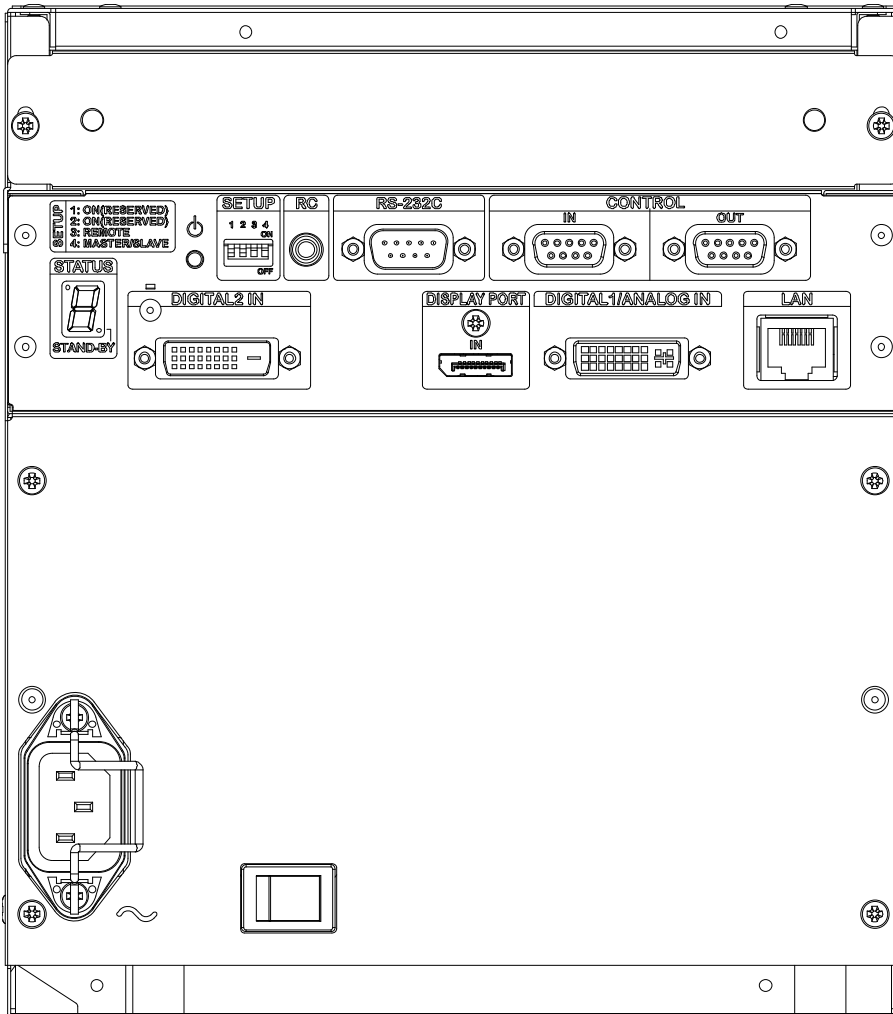
### RGB signals

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

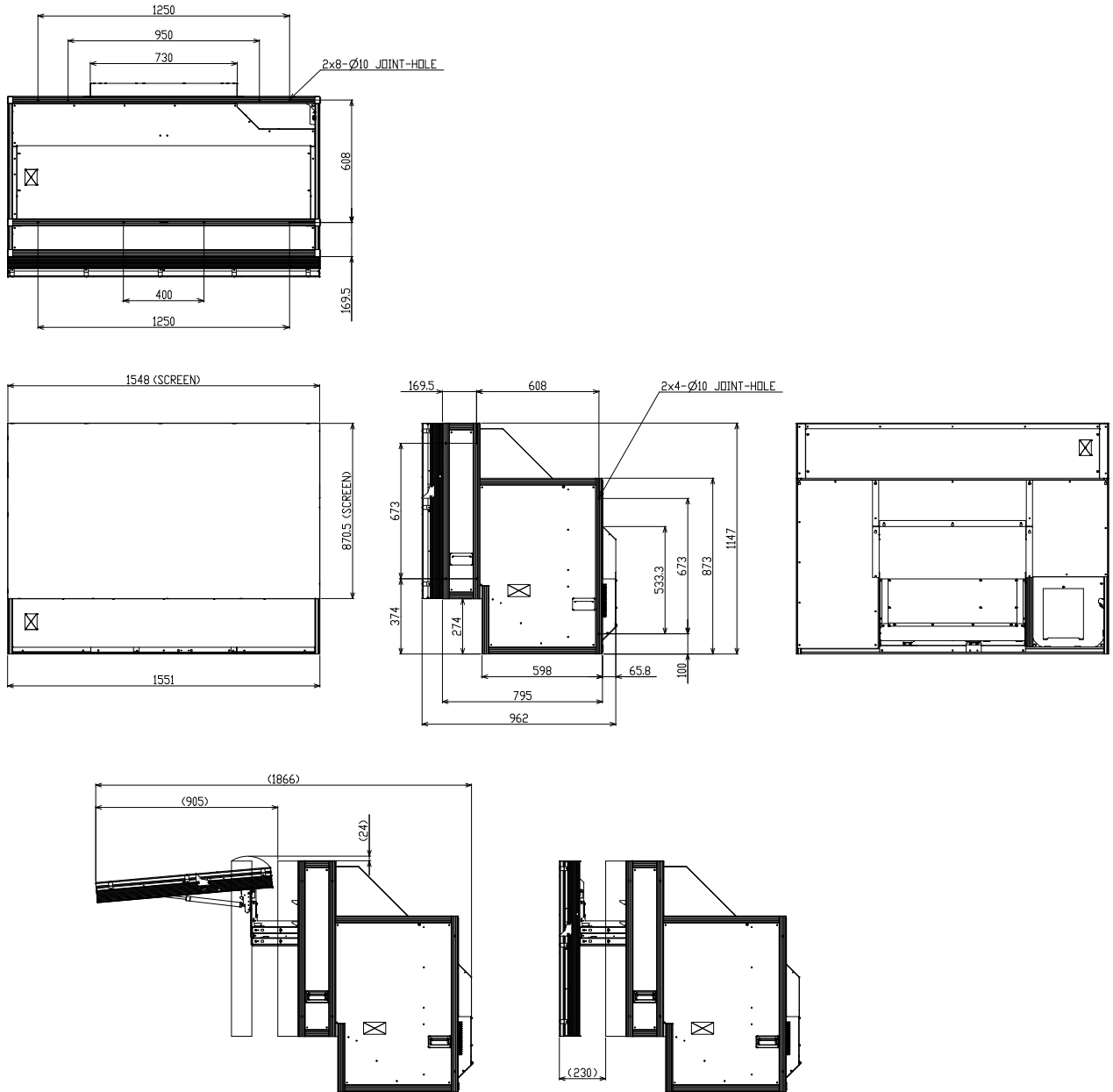
### Y/Cb/Cr ( Y/Pb/Pr ) signals

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



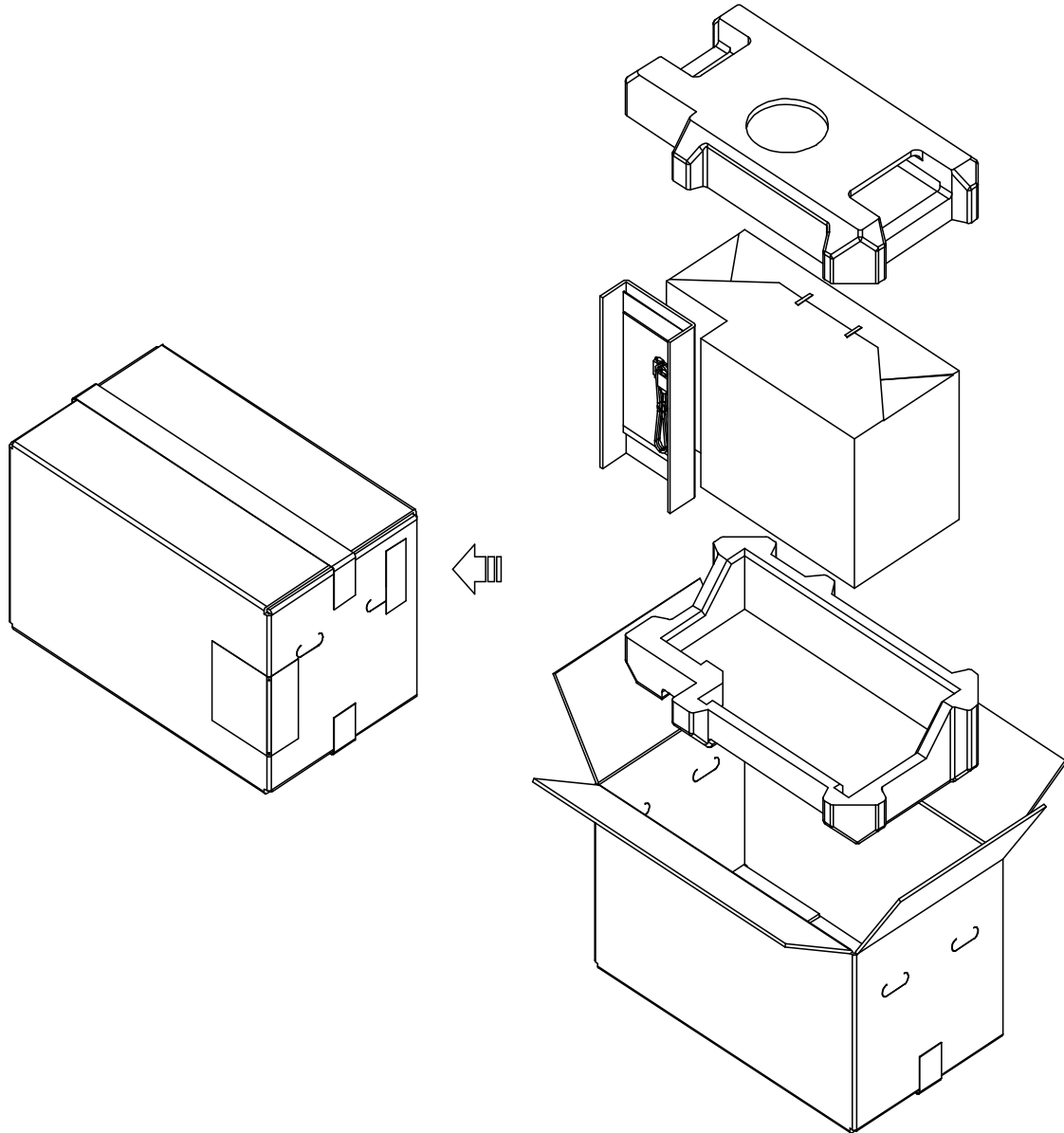
External dimensions



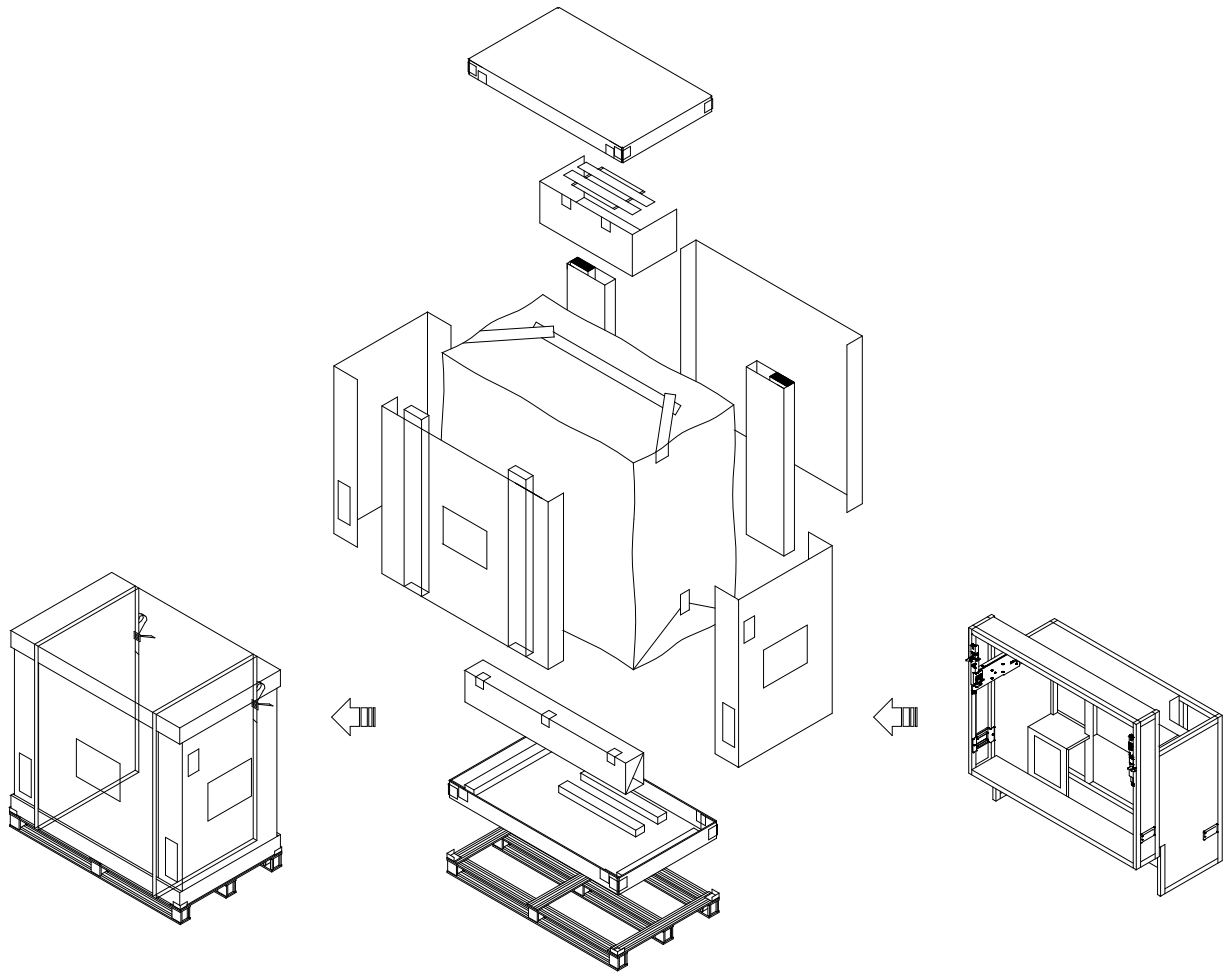


**Packing specification**

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



[Cabinet unit: S-70HE75CAF]



[Screen unit: SC-70HE75UF/LF]

