ASSET DATA DICTIONARY DEFINITION DOCUMENT (AD4)
L7515 - AIR HANDLING UNIT (AHU)

Document Number: **CRL1-XRL-Z3-ADDSD-CR001-50113**

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5.0	27-Aug-2015	[redacted]	[redacted]	[redacted]	Labelling Section Updated
6.0	20-Sep-2016	[redacted]	[redacted]	[redacted]	Attribute added

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Contents

1 Introduction 3
1.1 Asset Details 3
1.2 Description 3
1.3 Related Functions 3
2 Asset Tag Identification Rules 4
2.1 Example Images 4
3 Attributes 6
3.1 Generic Attributes 6
3.2 Class Specific Attributes 6
4 Performance Data 9
5 Labelling 9
6 Other Information 9
7 Reference Material 9
8 Crossrail Technical Approvals 10

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1 Introduction

1.1 Asset Details

Class Code:	L7515
Class Name:	Air Handling Unit (AHU)
Class Lineage:	Construction Products>Services>Climate control plant and equipment (HVAC)>Complete climate control systems>Air Handling Unit (AHU)

1.2 Description

Air Handling Unit (AHU) is a device used to condition and circulate air as part of a heating, ventilating, and air-conditioning (HVAC) system. They are either integral devices with all functions part of the core unit or are supplied as modular units attached to each other.

They will typically provide more than one HVAC function e.g. air movement, heating, cooling, filtration and will have no sections of ducting between these functions.

The whole unit will be group as a single asset, the individual fans, filters etc. do not need to be identified separately.

1.3 Related Functions

All information on the configuration of asset classes (L-Class) to functions is contained within the latest revision of the Asset Data Dictionary Master Configuration document (eB ref: CRL1-XRL-Z3-ADDSD-CR001-50186)

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2 Asset Tag Identification Rules

Assets will be identified as required by the Asset Identification Standard (CRL1-XRL-O6-STD-CR001-00031) in the following format:

<LCS Code>-<Function Code>-<Incremental number to ensure uniqueness>

e.g. CR076-BAF-12345

Information and guidance on the standard naming convention for all asset classes is contained within the latest revision of the Asset Naming Convention Document (eB ref: CRL1-XR1-Z3-ADDSD-CR001-50413).

2.1 Example Images

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3 Attributes

3.1 Generic Attributes

All Classes of assets will have a set of Generic Attributes for which data is collected without exception. Full details relating to these assets can be found at:

AD4 – Generic Attributes CRL1-XRL-Z3-ADDSD-CR001-50069

3.2 Class Specific Attributes

Below is a table of the further specific attributes which are associated with this asset class.

Attribute Name	Base Unit or Formula	Value Type (See Below)	Decimal Places (nu Only)	Defined Values List (pd only)	Description
AHU Heat Recovery		PD		Thermal Wheel Cross Plate Mixing Run-Around Coil None	The type of Heat Recovery
Anti-Vibration Mounts		PD		Required Not required	Are Anti-Vibration Mounts required or not
BMS Connection		PD		Controlled & Monitored Monitored Only No BMS Connection	Is the unit connected to BSM and if so the type of control
Coil Type		PD		Direct expansion - R410a Direct expansion - R407c Water	The type of cooling coil used.
Cooling Coil Rating (kW)	kW	NU	2		The cooling output (UK nominal) that the AHU contains

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Attribute Name	Base Unit or Formula	Value Type (See Below)	Decimal Places (nu Only)	Defined Values List (pd only)	Description
Dry Weight (Kilograms)	Kilograms	NU	2		Dry weight of the AHU unit
Dry Weight Largest Section (Kilograms)	Kilograms	NU	2		The Dry Weight of the largest Section
Duty Air Flow (Cubic Metres/Sec)	Cubic Metres/Sec	NU	2		The air flow at the duty point
Duty Operating Air Pressure (Pa)	Pa	NU	0		The air pressure at the duty point
Heater Battery Rating (kW)	kW	NU	2		The heater Battery rating (UK nominal) that the AHU contains
Input Voltage (Volts)	Volts	NU	0		The rated operating voltage of the unit
IP Rating		CH			What is the IP rating of the AHU
Motor Drive		PD		DOL Inverter SD	What type of motor does the unit have?
Number of Integral Fan Motors (#)	#	NU	0		How many Integral Fan Motors does the unit have?
Number of Motorised Dampers (#)	#	NU	0		The Number of motorised dampers present in the AHU
Number of Sections (#)	#	NU	0		For modular plant
Power Rating (kW)	kW	NU	2		The power rating of the unit at duty
Pre- Heat / frost protection		PD		Yes No	Does the unit have Pre- Heat / frost protection
Primary Air Filter Grade		PD		G1 G2 G3 G4 None	The Grade Class of filter to BS EN779

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Attribute Name	**Base Unit or Formula**	**Value Type** (See Below)	**Decimal Places** (nu Only)	**Defined Values List** (pd only)	**Description**
Rotational Speed (RPM)	RPM	NU	0		The speed of the fan in RPM at peak duty point
Secondary Air Filter Grade		PD		F5 F6 F7 F8 F9 None	The Grade Class of filter to BS EN779
Thermal Insulation		PD		Insulated Un-Insulated	Is the AHU thermally insulated
AHU Type		PD		Extraction Supply	Does the Air Handling Unit extract or supply air

pd = Predefined List (Listed Values Only)
nu = Numeric (dp and number format can be stipulated)
ch = Free text (Max 255 Characters)
da = Date (dd-mm-yyyy)
me = Memo (Free text 1GB Limit)

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4 Performance Data

This section is to be used to specify the performance data to be gathered from this Class of asset when in operation. To be populated once the performance measures have been agreed with the Infrastructure Managers.

5 Labelling

Information and guidance on the standard labelling convention for all asset classes is contained within the latest revision of the Asset Naming and Labelling Convention Document (eB ref: CRL1-XR1-Z3-ADDSD-CR001-50413).

6 Other Information

Not Applicable

7 Reference Material

- Asset Data Dictionary Master Configuration - CRL1-XRL-Z3-ADDSD-CR001-50186
- Asset Identification Standard - CRL1-XRL-O6-STD-CR001-00031
- AD4 – Generic Attributes - CRL1-XRL-Z3-ADDSD-CR001-50069
- Asset Naming Convention Document - CRL1-XR1-Z3-ADDSD-CR001-50413

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8 Crossrail Technical Approvals

Name	Role	Date
[redacted]	Lead Mechanical & Electrical Plant (MEP) Engineer	19-Sep-2014

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