



Atacama Large Millimeter Array

ALMA

Documentation Standards

ALMA-80.02.00.00-003-F-STD

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Change Record

Version	Date	Affected Section(s)	Change Request #	Reason/Initiation/Remarks
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1 Introduction

This plan provides a set of standards and guidelines for all ALMA project Board-level, Project-level and Controlled IPT-level documents which are all hereafter referred to as controlled documents. For a definition of the documents that fall under this controlled document status, please refer to the ALMA Documentation Control Plan (AD01).

In the application of these standards, a “document” refers to a word processing file, spreadsheet, schedule, graphics file, technical drawing, image, illustration, slideshow presentation, audio, video, or any similar item that can be contained in an electronic file. All documents whose content is pertinent to the administration, design, construction, operations, or maintenance of the ALMA project are project level and operations documents and therefore should adhere to the applicable standards presented herein.

1.1 Applicable Documents

The following list of documents is applicable to this document to the extent specified. In the event of a conflict between the information stated in this document and the information stated in one of the following, listed documents, the information in this document supercedes that available in the other documents.

Doc. #	Document Title	ALMA Document Number
AD01	ALMA Documentation Control Plan	ALMA-80.02.00.00-011-A-PLA
AD02	ALMA Official Acronyms and Abbreviations	ALMA-80.02.00.00-004-A-PLA
AD03	ALMA Product Tree	ALMA-80.03.00.00-001-L-LIS

1.2 List of Acronyms and Abbreviations

The list of acronyms and abbreviations used within this document are given below. For a complete set of acronyms and abbreviations, please see ALMA Official Acronyms and Abbreviations, AD02.

Abbreviation or Acronym	Non-abbreviated Reference
ALMA	Atacama Large Millimeter Array
ATF	ALMA Test Facility
ICD	Interface Control Document
IPT	Integrated Product Team



2 Document Norms

The following sections define common elements that are applicable to all controlled ALMA documentation.

2.1 Templates

It is recommended that all controlled ALMA documents use the templates which are available online in ALMAEDM. The templates are located in the Documentation workspace which is directly under the top-level ALMA Project workspace. Document templates are only provided for Microsoft Word which is the standard word processing application for the ALMA project.

Drawing title block and revision templates are available in the Documentation workspace which is directly under the top-level ALMA Project workspace as well. While the use of these is not required, it is recommended. For more information on drawing labeling requirements, please see section 3 of this document.

2.2 Language

All official ALMA documents shall exist in English. In addition to English, official ALMA documents may be required to exist in Spanish when necessary.

In cases where documents exist in both Spanish and English, both versions shall be maintained in parallel. Thus if a new revision of either the English or Spanish document is required, a new version shall be created for both simultaneously. In cases of discrepancy between the Spanish and English versions of document, the English version shall take precedence.

2.3 Date Format

The date format for all ALMA documentation shall be written in the order of year, month and day with hyphens used to separate year, month and day. This is shown below.

Year – Month - Day

This convention follows the International Standard ISO8601.

Year shall be 4 digits, Month 2 digits and Day 2 digits and leading zeros are used in cases where the month or day is a single digit.

For example, March 15, 1969 would be written as “1969-03-15”. This standard should be adhered to as closely as possible in order to avoid confusion.



2.4 Paper Size

All documents, including technical drawings and illustrations, shall be sized to print to the standard paper sizes listed in Table 1. All ALMA templates will include margins that allow them to print to both paper sizes.

Table 1: Standard Paper Sizes

American			European		
Size Name	Size in mm	Size in Inches	Size Name	Size in mm	Size in Inches
A	216 x 279	8.5 x 11	A4	210 x 297	8.27 x 11.69
B	279 x 432	11 x 17	A3	297 x 420	11.69 x 16.54
C	432 x 559	17 x 22	A2	420 x 594	16.54 x 23.39
D	559 x 864	22 x 34	A1	594 x 841	23.39 x 33.11
E	864 x 1118	34 x 44	A0	841 x 1189	33.11 x 46.81

2.5 Page Numbering

All documents shall list pages numbers in the format of “page ‘x’ of ‘y’”.


2.6 File Formats

All controlled ALMA documentation shall be provided in two electronic file formats, the source file format and Adobe Acrobat PDF Version 3 or later. All word processing derived documents must have a source file provided in Microsoft Word 6.0 or later. It is the responsibility of the author to ensure the accurateness and readability of the PDF version.

2.7 Electronic File Names

Electronic file names use the same naming standards as the document numbering scheme detailed in Section 4 with the proper file extension added. For example, document “ALMA-30.01.01.01-001-A-DWG”, would have a file name of “ALMA-30.01.01.01-001-A-DWG.dwg”. If a PDF version of the file also exists, then the PDF version of the file has the same number but a “.PDF” as the extension (“ALMA-30.01.01.01-001-A-DWG.pdf”).

For draft versions of documents, the author shall append the date of the draft (in ALMA format) to the beginning of the filename. This provides a clear indication of draft versus approved status from the file name. For example, a draft of ALMA-30.01.01.01-001-A-DWG would have file names of “2003-08-30ALMA-30.01.01.01-001-A-DWG.pdf” and “2003-08-30ALMA-30.01.01.01-001-A-DWG.dwg”. Once the document is approved,

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the date is removed, thus the filenames of the approved versions of these documents would be “ALMA-30.01.01.01-001-A-DWG.pdf” and “ALMA-30.01.01.01-001-A-DWG.dwg”.

2.7.1 CAD File Names

CAD software packages often produce a set of linked files required to produce a single drawing. Since these files are all necessary to produce the drawing, they should be submitted as one aggregate file. This can be either a zipped file or a tarball. This aggregate file should follow the same file naming conventions that are outlined above. The individual files within the zipped file or the tarball may be named according to the convention of the software that is being used, however the zip file must be named using the standard ALMA convention in section 2.7, above. A single PDF version of all drawings should be submitted in addition to the single or aggregate source file.

The software used to create the ‘zipped’ aggregate file shall be an industry standard type that can be decompressed using the standard ‘zip’ programs included with either the MS Windows NT (or later) or the UNIX operating system.

3 Technical Drawings and Illustrations

Technical drawings and illustrations must adhere to all general language, paper sizing, file naming, and page numbering standards in this document. In addition to these standards, technical drawings must adhere to the standards detailed in the following subsections.

3.1 Title Blocks

The title block for all ALMA drawings shall include all applicable information presented in the sample title block template (Table 2). The title block should be placed in the bottom right hand corner of every drawing. For consistency of appearance and for legibility, a single font should be used for all elements of the title and revision blocks within the same drawing. When additional lines in the tables of the title block or the revision block are needed, they should be created by copying the existing line spacing and font. For examples of filled in title blocks, please see Appendix B.




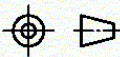

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Table 2: Sample Title Block and Revision Template

Titleblock for Sub-assemblies and assemblies

					General Tolerances:	Scale:	Sub-System:		
					Date:	Name:	Description:		
					Drawn:				
					Designed:				
					Checked:				
				Released:		Document Number:		Sheet of Sheets	
Issue	Date	Name	CRE Number	 <i>Field for Company Logo</i>		Document Number:		Sheet of Sheets	
All units are in mm									

Titleblock for workshop drawings

					Material:	Surface:	Weight:	
					General Tolerances:	Scale:	Sub-System:	
					Date:	Name:	Description:	
					Drawn:			
					Designed:			
				Checked:				
				Released:		Document Number:		Sheet of Sheets
Issue	Date	Name	CRE Number	 <i>Field for Company Logo</i>		Document Number:		Sheet of Sheets
All units are in mm								

3.2 Dimensioning

All drawings should be dimensioned using metric units and the use of dimensioning units other than physical units should be avoided. When appropriate, a scaling bar can be included for approximate size calculations from the hardcopy, however, all drawings should have dimension labels so that measuring parts on the drawing is not required. Within reason, the dimension style can be varied to suit the application and/or existing practices.

ISO drawing standards are default for ALMA drawings. Any deviation from these standards shall be approved by the appropriate IPT leader. The deviation request and response shall be recorded as a controlled IPT – level document.

4 Document Numbering Conventions

All controlled documents shall be assigned a unique reference number according to the system outlined in the following subsections.



For numbering purposes only, all documents are split into two categories: Interface Control Documents (ICDs) and all other documents and drawings. Documents within these two categories are assigned numbers in similar schemes, with slight variations incorporated for clarity of position within the ALMA Product Structure.

Section 4.3 provides a detailed explanation of each of the codes which comprise the document number for both ICD and non-ICD ALMA documents.

4.1 Non-ICD Document Numbering Format

Non-ICD project documentation shall be assigned reference numbers based on the following format.

CCCC-PP.PP.PP.PP-SSS-V-TTT

Where:

- C = Project Code
- P = Product structure item number
- S = Sequence number
- V = Version letter
- T = Document type code

Capital letters shall be used for all components of the document number.

4.2 ICD Document Numbering Format

The numbering scheme for Interface Control Documents is different because these documents reference two different product tree items.

Interface control document numbers take the form of:

CCCC-PP.PP.PP.PP-PP.PP.PP.PP-V-TTT

Where:

- C = Project Code
- P = Product tree item number
- S = Sequence number
- V = Version letter
- T = Document type-alpha characters

Capital letters shall be used for all components of the document number.



4.3 Document Number Component Definition

The following subsections provide a detailed explanation of each of the elements comprising the ALMA document numbering convention defined in Section 4.1 and Section 4.2.

4.3.1 Project Code (CCCC)

The first component of the document number is a four letter project code (CCCC). This code allows for easy recognition of ALMA project files. All controlled ALMA project level documents shall use the project code “ALMA”.

If ALMA Integrated Product Teams choose to use this numbering scheme for their IPT level documents they must use the designated four letter code for their IPT. These codes are outlined in Table 3.

Table 3: Project Codes

ALMA	ALMA Project Documents
ATFD	ALMA Test Facility Documents
ANTD	Antenna Documents
BEND	Back End Documents
COMP	Computing Documents
CORL	Correlator Documents
FEND	Front End Documents
MNGT	Management Documents
OPER	Operations Documents
SCID	Science Documents
SITE	Site Documents
SYSE	Systems Engineering Documents

4.3.2 Product Structure Item Number (PP.PP.PP.PP)

The Product Structure Item component allows the document to be classified into a subject-oriented, hierarchical product tree structure which assists in the retrieval of the documents. It is always entered as a series of four sets of two digit numbers, with zero placeholders used as needed. The number must always be given in its complete form.



This ensures that all documents have document identifiers that are the same length regardless of where they are referenced in the ALMA product tree structure.

The ICD numbering scheme uses a combination of two product tree structure item numbers to designate the interface that is involved. The resultant ICD number takes the following form.

CCCC-PP.PP.PP.PP-PP.PP.PP.PP-V-ICD

The first four sets of two digit numbers refer to one item defined in the product tree and the second four sets of two digit numbers referring to a second item in the product tree.

In all cases, the determination of the order of the two product tree designations is made by placing the smaller of the two numbers first. For example, if an ICD is created between product tree items 30.01.02.00 and 40.02.03.01, then the ICD document number will be: ALMA-30.01.02.00-40.02.03.01-A-ICD.

4.3.3 Sequence Number (SSS)

The sequence number is a sequential number that is assigned to the document within the product structure. This number is always given as a three-digit number with leading zero placeholders used as needed. The sequence number is assigned within the product tree structure beginning with the number 1 within each fourth level product structure folder. Interface Control Documents do not include sequence numbers since only one ICD can exist between product structure designations.

4.3.4 Version Letter (V)

The version letter is a sequentially assigned letter by which versions are tracked. The first version of a document is always letter “A”. If a document exceeds 26 versions, then a double digit version letter is assigned, beginning at “AA”.

The approved document with the highest version letter is always the current version. Every time a new version of a document is approved, the author must change the status of the prior version to “superceded”. In addition, each version letter increment must be tracked in the document’s change record.

Please see the section regarding document changes in the ALMA Documentation Control Plan (AD01) for further explanation of document change control procedures.

4.3.5 Draft Document Numbering Convention

Drafts of documents between released versions should use the calendar date (in ALMA format) to indicate this version of the document is in a draft state. New version letters are not to be assigned until the new version gains approved status. Dates of draft versions may be tracked in the document change record at the author’s discretion.

4.3.6 Document Type Designator (TTT)



The next component of the document number is the document type designator. This three-digit abbreviation is used to classify the document into one of the recognized types, as outlined in table 5. A description of what is to be included within the classification of the document type is provided for guidance. This document type classification serves to identify the main contents of the document, in order to assist individuals in recovering the information that they are seeking. If an author is uncertain of the appropriate document type designation or multiple document types apply to a single document, ask for clarification from the Documentation Specialist, or simply choose the most applicable type designator.

Table 4: Document Types

DOCUMENT TYPE	ACRONYM	DESCRIPTION
Bill of Material/Parts List	BOM	List of parts and/or subassemblies used in the creation of an assembly or a list that enumerates all parts including unique type codes (e.g. manufacturer's type number), used in a single product or a logical or functional part of a product
Contract	CON	Document serving as a contract
Configuration Change Request	CRE	Official request to change an item or a system
Discrepancy Notice	DNO	Notification that an item under configuration control is not compliant with the specification or ICD
Design Description	DSN	Document describing the design of a system, sub-system, hardware or software item.
Drawing/ Drawing List	DWG	Document presenting a graphical representation of a physical part or a document which enumerates all drawings that describe a single product or a logical or functional part of a product, or is a technical drawing showing a schematic representation of an electrical circuit, hydraulic system etc.
General	GEN	Open category for documents not accounted for elsewhere. Only use this document type when all other document type categories do not apply.



Interface Control Document	ICD	Document describing the requirements and design of the interface between two configuration items
Instruction	INS	Guideline on how to perform a certain task or process
List	LIS	Document giving an enumeration of items

Table 5: Document Types, continued

DOCUMENT TYPE	ACRONYM	DESCRIPTION
Manual	MAN	Document usage. e.g. user, maintenance, installation.
Manufacturer Data Sheet	MDS	Data sheet supplied by an outside manufacturer
Memorandum	MEM	Document, can address any subject
Minutes of Meeting	MIN	Meeting report, can include action item list



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Plan	PLA	Document describing an intended scheme or (sub-project)
Procedures	PRO	Mandatory description of how a certain task or process should be executed
Report	REP	Document giving an official written account, including technical documents
Request for Proposals	RFP	Document stating an official request for proposals
Request for Waiver	RFW	Official request to be exempted from a requirement
Specification	SPE	Document describing the required performance of a product
Standards	STD	Document describing or listing standards criteria for a system, product, or process.
Statement of Work	SOW	Document describing what tasks should be carried out by a defined entity (person, company, institute)
Verification Document/Test Protocol	VER	Document describing a test procedure



5 Document Content

All controlled documents have a set of attributes recorded for categorization and retrieval purposes. These attributes are archived by the software tool used to manage the documents. However, the attributes need to be supplied by the author of the document when the document is first entered into the system. The document management software has a very brief form to complete when documents are first added to the system. The software for the document management system also tracks the modification history of the documents through full audit reports. See Table 6 for a complete list of attributes that are supplied by the author. See Table 7 for attributes that are recorded by the software tool.

Table 5: Attributes Recorded by the Author/Document Owner

Author (s)	Single or multiple authors must be recorded for each document. The order of the author names is determined through agreement of the authors
Organization (s)	Select from an approved list of abbreviated organization codes (for example: ESO, NRAO, NAOJ) (see appendix)
Date	In accordance with the ISO 8601 standard, being the 4 digit year - 2 digit month - 2 digit day, for example: Nov 19 th of 2001 would be 2001-11-19. Note: the separator is a dash (-), not a slash (/)
Doc status	Draft, Pending, Approved, Released, Obsolete
Doc title	The full title of the document
Doc abstract	A short, meaningful summary of the contents of the document
File type	Name and version of native program
Keywords	Meaningful keywords by which to search for the document
Document Number	Official document number


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Table 6: Attributes Recorded by the Document Management Software

Posted By	Name of individual who posted (uploaded) the document.
Date Posted	Date and time the document was posted (uploaded).
Modified By	Name of individual who made changes to a document record.
Date Modified	Date and time the document record was changed.
File Size	Size of the individual files
File Name	Name of the individual files, as uploaded to the ALMAEDM

In some cases, externally produced documents need to be placed into the ALMA document archive and tracked with ALMA document numbers that can be referenced within our system. An example of this is a manufacturer data sheet for a part that is used in the construction of the telescope. If a document receives an ALMA document number, then an ALMA title page must be added to the front of the document in its PDF version. For assistance with this process contact the ALMA Documentation Specialist.

5.1 Title Page

All official documents must begin with a title page. The title page shall include the following information:

- Document Title
- ALMA Document Number
- Version
- Status (draft, approved)
- Date
- Names of Author, Approval and Release persons

The author category should include all contributing authors, with the order of the authors' names being at the discretion of the authors. The approval and release categories are signed by the appropriate individuals in the approval process (see approval section of the ALMA Document Control Plan).

5.2 Change Record

A Change Record must be included in every official ALMA document. This list is to be updated after each change to the document. The Change Record always begins on the second page, immediately following the title page. If necessary, the Change Record may expand to multiple pages, however, the description of changes should be as succinct as possible.



It must include the version letter, date, affected sections list, and remarks. If the change resulted from a formal Configuration Change Request (CRE), the CRE number must be referenced in the appropriate column.

For technical drawings and illustrations, the revision block serves as the change record.

5.3 Table of Contents

The Table of Contents should be the third item of the document beginning on the page after the end of the Change Record. If changes to a document affect the page numbering, the Table of Contents must be updated with each revision to reflect the new page numbering. It is strongly recommended that the automatic Table of Contents generator for Microsoft Word be used whenever possible so that changes to the document do not require a manual update to the Table of Contents. All of the ALMA templates have been created to be used with the automatic Table of Contents generator.

5.4 Standard Paragraph for Project Description

Wherever a statement in description of the project is appropriate, the supplied paragraph (below) shall be used.

“The Atacama Large Millimeter Array (ALMA) is an international astronomy facility. ALMA is an equal partnership between Europe and North America, in cooperation with the Republic of Chile, and is funded in North America by the U.S. National Science Foundation (NSF) in cooperation with the National Research Council of Canada (NRC), and in Europe by the European Southern Observatory (ESO) and Spain. ALMA construction and operations are led on behalf of North America by the National Radio Astronomy Observatory (NRAO), which is managed by Associated Universities, Inc.(AUI), and on behalf of Europe by ESO.”

5.5 List of Acronyms/Abbreviations

An official list of acronyms is maintained for the project. The List of Acronyms/Abbreviations sections of documents should reference this list in lieu of stating every acronym used. The official list can be located on the ALMA document server, as ALMA Official Acronyms and Abbreviations (AD02). Any deviations from this official acronym list, or use of abbreviations not on the official list, must be stated within the document’s List of Acronyms/Abbreviations. New submissions to the project acronym and abbreviations list may be made thorough the ALMA Documentation Specialist.

5.6 List of Figures

A List of Figures should be included in every document in which figures are placed. This list should enumerate figures, provide figure titles, and locate the figures by page number.



This list must be updated when revisions to a document effect the page numbering. In all documents containing a List of Figures, it should be the fourth item of the document, beginning on the page after the end of the Table of Contents.

5.7 List of Tables

A List of Tables should be included in every document in which tables are placed. This list should enumerate the tables, provide table titles, and locate the tables by page number. This list must be updated when revisions to a document effect the page numbering. In all documents containing a List of Tables, it should be the fifth item of the document, beginning on the page after the end of the List of Figures.

5.8 List of Applicable Documents

A list of applicable documents shall be included in every document in which other documents are identified as containing applicable requirements or specifications.

Applicable documents may be listed either in the order of citation within the text or in alphabetical order by authors last name, as long as the order is consistent throughout the list. This list must be updated when changes are made that cause additions or deletions to the applicable items.

All drawings that are listed in the applicable documents table are to be attached to the pdf version of the final released document. The drawings should be appended after any appendices, and the pages need not be listed in the table of contents for the document. All attached drawings must contain the appropriate signatures, dependent upon their status as either a project or an ipt level document.

5.9 List of References

A List of References should be included in every document in which other documents are referenced. Referenced documents may be listed either in the order of citation within the text or in alphabetical order by authors last name, as long as the order is consistent within the reference list. This reference list must be updated when changes are made that cause additions or deletions to the referenced items. When revising an existing document, continue with the same reference style that is already in use for that document's reference list.

Appendix A is a table that lists the necessary reference information for commonly referenced document types. Reference Lists that follow the style guidelines established by "The Astronomical Journal" or any of the IEEE periodicals or journals are acceptable, with no modifications necessary. The categories in Appendix A represent a minimum level of information required for each referenced item. Additional information may be provided, as long as a consistent, readable reference style is used.



6 Requirement Numbering Convention

Requirements which define any aspect of the ALMA project and are subject to verification shall use the numbering convention defined in this section. This requirement numbering convention provides traceability and completeness to aid in the creation of specifications and work statements by the various organizations involved in the ALMA project.

All ALMA requirements shall be assigned unique numbers based on the following format.

PPPP-XXXXX-YY / Z1,Z2

Where:

PPPP = Product code acronym. The number of characters used to specify the product code is variable. However, the only allowable source for the product code acronym shall be the ALMA Acronyms and Abbreviations List (ALMA-80.00.00.00-004-B-LIS). Thus if the desired product code is not recorded in the ALMA Acronyms and Abbreviations List, the author must request it be added.

XXXXX = A consecutive number starting at 00010 with the next number being 00020. This number sequence will be unique for each product code (CCCC).

YY = Requirement version number starting with 00, then 01.

Z1,Z2 = Verification method(s) as defined in **Error! Reference source not found.**8. More than one verification type can be specified for an individual requirement.

Capital letters shall be used for all components of the requirement number.

Table 7: Requirement Verification Codes

A	Analysis
I	Inspection
R	Review
T	Test




7 Appendix A: Required Data for References

Books	Author(s) [Last name, First name initials] Title Year of publication Volume [if multivolume work] Edition [if any] City of publication Publisher
Periodical	Author(s) [Last name, and First name initials] Year Periodical title Volume number First page of article
Article or chapter in edited collection	Author(s) [Last name, and First name initials] Year Collection Title Editors [Last name, and First name initials] City of Publication Publisher First page of article
Conference proceedings (published)	Author(s) [Last name, and First name initials] Year Conference series title Conference number Volume title First page of article
Conference proceedings (unpublished)	Author(s) [Last name, and First name initials] Year Conference title Conference number Conference location
Star catalogues	Author(s) [Last name, First name initials] Catalog title Year of publication City of publication Publisher
Instrument documentation	Author(s) [Last name, First name initials] Title Document number Issuing Agency



Appendix A: Reference List Categories (continued)




ALMA documents	Author(s) [Last name, First name initials] Title Document number Version letter
Preprints	Author(s) [Last name, First name initials] Title Year Preprint series and Preprint number
Papers submitted or in press	Author(s) [Last name, First name initials] Year Publication name Status [either “submitted” or “in press”]
Personal communications and papers in preparation	Should be cited in the main body of the text and not in the reference list. The citation should include the first name initial and last name of the author(s), year, and the phrase “personal communication” or “in preparation”
Technical reports	Author(s) [Last name, First name initials] Title Document number Issuing agency name Issuing agency address Publication date
Standards/Patents	Author(s) [Last name, First name initials] Title Issuing agency Patent or standard number Date
Electronic source - book	Author(s) [Last name, First name initials] Title Year of publication Volume [if multivolume work] Edition [if any] Web address
Electronic source - periodical	Author(s) [Last name, First name initials] Title Periodical Year of publication Volume [if multivolume work] Web Address

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8 Appendix B: Examples of Filled in Title Blocks

Titleblock for Sub-assemblies and assemblies

Example:

					General Tolerances:	Scale: 1:20	Sub-System: ALMA ANTENNA STATION		
					Date: Drawn: 2003-02-26 QJJ Designed: 2003-02-27 MKR Checked: 2003-02-27 SST Released: 2003-02-05 MTA	Name: Description: Kinematic mount lower part Assembly and final tolerances			
B	2004-04-01	MKR	ALMA-20.02.00.00-001-A-CDE						
A	2003-03-05	QJJ	First Issue						
Issue	Date	Name	CRE Number						
All units are in mm				 EUROPEAN SOUTHERN OBSERVATORY Karl-Schwarzschild Str. 2 D-85748 Garching bei München www.eso.org		Document Number: ALMA-20.02.00.00-001-B-DWG		Sheet 1 of 1 Sheets	

Titleblock for workshop drawings

Example:

					Material: C45 Rp 0,2 > 350MPa	Surface: Passivated	Weight:	
					General Tolerances: ISO 2768-K ISO 1101	Scale: 1:1	Sub-System: ALMA ANTENNA STATION	
B	2003-04-24	MKR	ALMA-20.02.00.00-004-A-CDE					
A	2003-03-04	QJJ	First Issue					
Issue	Date	Name	CRE Number					
All units are in mm				 EUROPEAN SOUTHERN OBSERVATORY Karl-Schwarzschild Str. 2 D-85748 Garching bei München www.eso.org		Document Number: ALMA-20.02.00.00-004-B-DWG		Sheet 1 of 1 Sheets