GENERAL INFORMATION INDEX

GLOBAL STANDARD COMPONENTS





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PUBLICATIONS FOR DRAFTING AND COMPONENT STANDARDS

- Metric Dimensioning and Tolerances ANSI Y14.5 2009
- Metric Limits and Fits ANSI B4.2 1978
- Units and Metric/U.S. Customary Conversion NAAMS, Pages GEN-4, 5, 6 and 7

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- DIN 74 Form K SCR.: C' BORE
- Dowels ISO-8735 1987
- Preferred Numbers ISO 497 1973 R'10 Series
- Letter and Geometric Symbol References ANSI Y10, Y32 Series
- Single Rod Cylinders ISO 6431, ISO 3320 1992
- Cylinder Rod Envelope and Mounting Specifications VDMA 24 562 1992
- Cylinder Rod Thread Specifications DIN ISO 4395 1985

CONTACTS FOR STANDARDS

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Copies of referenced standards are available from the following sources:

ANSI

American National Standards Instuite 25 West 43rd Street, 4th floor New York, NY 10036-7417

Phone: (212) 642-4900 FAX: (212) 398-0023

ISO

American National Standards Instuite 1899 L St. NW, 11th Floor Washington, DC 20036 Phone: +1 (212) 642-4900 Fax: +1 (212) 398-0023

DIN

DIN Deutsches Institut für Normung e. V. Am DIN-Platz Burggrafenstraße 6 10787 Berlin Germany Phone: +49 30 2601-0 FAX: +49 30 2601-1231

VDMA

German Engineering Federation Lyoner Str 18 60528 Frankfurt am Main - Niederrad, Germany Phone: +49 69 66 03-0 Fax: +49 69 66 03-1511

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METRIC EQUIVALENT CHART (1 OF 2)

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METRIC EQUIVALENT CHART (2 OF 2)

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Multiply:	by:	to get: Multiply	by:	to get:	
		$r_{2}(t) = 0.807 m/s^{2}$			-
		avity = 9.807 m/s	X 0.004	- footlooo2	
inches/sec ²	X 0.3048 X 0.0254	=metres/sec (m/s)	X 3.281 X 39 37	= inches/	20
sec ²	X 0.0204		X 00.01		<u> </u>
		acond = ioulo = nowton motro)			ö
foot-pounds	X 1 3558	= ioules (.1)	X 0 7376	= foot-	4
pounds	77110000	Jourge (6)		1001	6
calories (heat)	X 4.187	= joules (J)	X 0.2388	= calories	ப்பட்ட ப
(IIILI) Btu (int'I)	X 1055		X 0 000948	= Btu (int'l)	
watt-hours	X 3600	= joules (J) = joules (J)	X 0.000340 X 0.0002778	= watt-	
nours		Jourge (9)	X 0.0002110	man	60 ——
kilowatt-hours	X 3.600	= megajoules (MJ)	X 0.2778	= kilowatt-	
nours		, , ,			70
	OR STRESS	(newton/sg metre = pascal)			یں س
nches Ha(60°E)	X 3 377	= kilonascals (kPa)	X 0 2961	= inches Ha	₩ — — —
ounds/sq in	X 6 895	= kilopascals (kPa)	X 0 145	= nounds/	
sq in				peanad	т 90—
pounds/sq in	X .06895	= Bars	X 14.504	= pounds/	
sq in					in 1
nches H ₂ O(60°F)	X 0.2488	= kilopascals (kPa)	X 4.0193	= inches	ēt 04
H ₂ O hars	X 100	= kilonascals (kPa)	X 0.01	= bare	
ounds/sa ft	X 47 88	= pascals (Pa)	X 0.01 X 0.02088	= pounds/	s 10
sa ft	77 11.00		710.02000	poundo	, —
kgf/cm ²	X 98.07	= kilopascals (kPa)	X 0.010197	= kgf/cm ²	120
POWER					
horsepower	X 0.746	= kilowatts (kW)	X 1.34	= horse-	ö
power					<u> </u>
t-lbf/min	X 0.0226	= watts (W)	X 44.25	= ft-lbf/min	4
TORQUE					1 5 —
	X 0 11208	= nowton motros (Nm)	V 9 951	- nound	oo
nches	A U. 1 1290	- newton-metres (Mm)	1 60.0 V	– pouna-	–
pound-feet	X 1.3558	= newton-metres (Nm)	X 0.7376	= pound-	60
eet				F - 0.10	
kgf-cm	X 0.09807	= newton-metres (Nm)	X 10.197	= kgf-cm	Z
kgf-m	X 9.807	= newton-metres (Nm)	X 0.10197	= kgf-m	
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SELECTED RULES FOR COMMUNICATING IN THE SI METRIC SYSTEM

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		Examples:		
APPL	ICATION OF PREFIXES	CORRECT	INCORRECT	
1.	Approved prefixes (instead of powers of ten) should be used to indicate orders of magnitude.	12.3 km	12.3x10 ³ m	
2.	Prefixes must be combined with units and not used alone	kilogram	kilo	
3.	Avoid using multiple prefixes.	pF	$\mu\mu$ F	
4.	Avoid mixing prefixes within a text of drawing.	1000 mm 10mm	100 cm 10mm	
5.	Choose prefixes representing steps of 1000.	mN,N,kN		
6.	Choose prefixes giving numerical values of 0.1 through 1000.	3.94 mm	0.003 94 m	
PUNO	CTUATION			
1.	The decimal sign is the dot on the line.	25.26	25,26 or 25 26	
2.	Periods should not be used after symbols for SI units except at the end of a sentence.	ms	m.s or ms.	
3.	Separate symbols from numerical values by a space	21 m	21m	
SPEL 1.	LING AND CAPITALIZATION Names of SI units and prefixes are not capitalized except at the beginning of a sentence. (Exceptions: See items 2 and 3 below.)	metre kilo	Metre Kilo	
2.	Symbols for SI units derived from proper names have the first letter capitalized; symbols for other units are lower case (Except L for litre).	Pa, J cd	pa, j Cd	
3.	Symbols for prefixes are not capitalized except for T, G and M.	m (for milli) M (for mega)		
4.	Symbols for units and prefixes are always written in singular form.	10 metres=10 m	10 metres=10 ms	
5.	Place the symbol for a prefix immediately before the unit which it modifies.	km	k m	
6.	Avoid hand-drawn Greek letters (Ω , $\mu,$ etc.); Spell out words where possible.	microsecond for μs ohm for Ω	3	
отне	ER USAGE CONVENTIONS			
1.	Express metric figures with one digit on either side of the decimal point.			
	 a. For whole numbers, where a decimal is used it should be followed by a zero. 	25.0 kg or 25 kg	25. kg	
	 When the value is less than unity, the decimal should be preceded by a zero. 	0.25 kg	.25 kg	
2.	Numbers having four or more digits should be placed in groups of three separated by a space; do not use commas (some countries use a comma for the decimal point).	11 532	11,532	
	For four digits, the space is optional.	1532	1,532	
3.	Avoid mixing customary units and SI units.	kg/m³	kg/ft ³	
4.	When expressing compound units in symbolic form, use nothing between the units or a raised dot to indicate the product. Do not use an "x".	mkg/m•kg	m x kg	

SURFACE ROUGHNESS CONVERSION

GLOBAL STANDARD COMPONENTS



Absolute surface roughness is indefinite; therefore surface roughness, whether measured by the method of arithmetic average or by root mean squared average (RMS), will be considered equivalent. 1 micrometer (μ m) \cong 40 microinches (μ in.) 1 microinch = 0.000 001 in 1 micrometer = 0.001mm

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COMPONENT IDENTIFICATION, PAGE FORMATTING, LOGSHEET



COMPONENT IDENTIFICATION

Each part to be marked with the manufacturers identification and NAAMS code where possible.

PAGE FORMATTING

In the previous published version of these standards, odd numbered (right hand) pages were offset to the right and even numbered (left hand) pages offset to the left to allow for binding. The pages are now centered. This format allows the pages to be punched in the left margin for insertion into a ring binder. Changes since the original publication are indicated by capital letters placed in boxes in the right hand margins. The latest revision date is indicated in the title block of each page.

LOGSHEET

The logsheet allows the user to determine the latest change to any standard by referring to the date in the last column. Individual pages are accessed by clicking onto the page number in the first column. The change level (A, B, etc.) and a brief description of each change are listed in their respective columns for each page.

SAFETY COLOR PAINT SPECIFICATIONS

The following safety paint colors are in accordance with SAE\USCAR-9 paint specifications, and are the recommended colors for NAAMS components where safety paint is specified.

<u>Color</u>	Munsell Number
Safety Black	N 0.75
Safety Blue	2.5PB 3/10
Safety Green	7.5G 4/8
Safety Orange	3.75YR 6/14
Safety Purple	10P 5/10
Safety Red	7.5R 4/14
Safety White	N 9.5
Safety Yellow	3.75Y 8.5/12

FABRICATION AND MACHINING SPECIFICATIONS FOR ALL NAAMS DETAILS

(Except Components in Chapter F)

- All weldments are to be 100% welded unless noted on print.
- All details will be free of weld spatter and slag.
- All rough and sharp edges will be broken unless noted on print.
- Chamfer all holes (tapped, clearence, dowels, and bores).
- All holes must be free of metal chips.

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NAAMS SEARCH FUNCTIONS

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NAAMS documentation is published in PDF format.

Search Functions are executed utilizing the core functionality that comes with Adobe software.

RISE		BRACKETS	SUDBAL STANDARD COMPONENTS
C	OMPONE	NTS INDEX	Assembly 08/13/07
PAGE	DATE	"A" HEIGHT	DESCRIPTION
E-1	08/13/07	450 900 mm	Riser Angle Brackets Components Index
E-2	00/03/30	450-800 mm	Maximum Recommended Loade
EA	08/18/03	400-800 mm	Riser Apole Bracket
E-4	00/13/07	100-400 mm	Riser Angle Bracket
E-4.1	09/24/04	100-400 mm	Riser Angle Bracket
E-O	00/13/07	100-800 mm	Riser Angle Bracket
<u>E-0</u>	09/24/04	100-800 mm	Riser Angle Bracket
E-1	00/13/07	100-400 mm	Riser Angle Bracket
E-0	00/13/07	460 000 mm	Picer Angle Bracket
E-9	08/13/07	450-800 mm	Riser Angle Bracket
E-10	09/24/04	450-800 mm	Riser Angle Bracket
E-11	08/13/07	150 500 mm	Riser Angle Bracket
E-12	08/13/07	150-500 mm	Stack Riser
E-13	08/13/07	400&800 mm	Stack Riser
E-14	03/01/99		Maximum Recommended Loads
E-15	08/18/03	300-500 mm	Maximum Recommended Loads
E-16	08/18/03	550-750 mm	Maximum Recommended Loads
<u>E-17</u>	08/18/03	800-1400 mm	Maximum Recommended Loads
E-18	08/18/03	1450-1600 mm	Maximum Recommended Loads
E-19	08/13/07		Tubular Riser Construction
<u>E-20</u>	07/15/03	ACTIVATE ADO	DBE SEARCH FUNTION
E-21	07/15/03	BY SELEC	TING THIS ICON
<u>E-22</u>	09/24/04	(SEE	NEXT PAGE)
<u>E-23</u>	07/15/03	(522	ded Loads
<u>E-24</u>	10/06/03	850-1600	Tubular Riser Maximum Recommended Loads
E-25	08/13/07	100-400	Riser Angle Bracket - Aluminum
E-26	08/01/03	100-400	Riser Angle Bracket - Aluminum
<u>E-27</u>	08/01/03	100-400	Maximum Recommended Loads
E-28	08/01/03	100-400	Maximum Recommended Loads
E-29	07/09/07	60-600	Riser for Pass Takes
E-30	05/08/07	60-500	1 31

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) W	hat word or phrase would u like to search for?	RISE	RANGLE	BRACKETS	^{\$} "NAAMS (
	AAB200 🧲	CC	OMPONE	NTS INDEX	Assembly	8/13/07
	Whele words each	PAGE	DATE	"A" HEIGHT	DESCRIPTION	
	Case-Sensitive	E-1 E-2	08/13/07	450-800 mm	Riser Angle Brackets Components Ind Maximum Recommended Loads	ex
	Include Bookmarks	E-3	08/18/03	450-800 mm	Maximum Recommended Loads	
	Include Comments	E-4	08/13/07	100-400 mm	Riser Angle Bracket	
	Search	E-4.1	09/24/04	100-400 mm	Riser Angle Bracket	
		E-5	08/13/07	100-800 mm	Riser Angle Bracket	
		E-6	09/24/04	100-800 mm	Riser Angle Bracket	
		E-7	08/13/07	100-400 mm	Riser Angle Bracket	
		E-8	08/13/07	100-400 mm	Riser Angle Bracket	
		E-9	08/13/07	450-800 mm	Riser Angle Bracket	
		E-10	09/24/04	450-800 mm	Riser Angle Bracket	
		E-11	08/13/07		Riser Angle Bracket	
		E-12	08/13/07	150-500 mm	Stack Riser	
		E-13	08/13/07	400&800 mm	Stack Riser	
		E-14	03/01/99		Maximum Recommended Loads	
		E-15	08/18/03	300-500 mm	Maximum Recommended Loads	
		E-16	08/18/03	550-750 mm	Maximum Recommended Loads	
		E-17	08/18/03	800-1400 mm	Maximum Recommended Loads	
		E-18	08/18/03	1450-1600 mm	Maximum Recommended Loads	
		<u>E-19</u>	08/13/07		Tubular Riser Construction	
		<u>E-20</u>	07/15/03	850-1600	Tubular Riser	
		<u>E-21</u>	07/15/03	850-1600	Tubular Riser	
		<u>E-22</u>	09/24/04	850-1600	Tubular Riser	
		E-23	07/15/03		Tubular Riser Maximum Recommende	d Loads
		5-24	10/06/03	850-1600	Tubular Riser Maximum Recommende	d Loads
		E-25	08/13/07	100-400	Riser Angle Bracket - Aluminum	
		E-26	08/01/03	100-400	Hiser Angle Bracket - Aluminum	
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FREQUENTLY ASKED QUESTIONS

GLOBAL STANDARD COMPONENTS

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FREQUENTLY ASKED QUESTIONS:

Q: I HAVE A NAAMS CODE AND CANNOT LOCATE IT ON THE WEB SITE. DOES THIS NUMBER EXIST? A: IF YOU CANNOT LOCATE A NUMBER ON THE NAAMS WEB SITE, **IT DOES NOT EXIST**.

Q: IF A DISCONTINUED NAAMS CODE EXISTS ON THE WEB SITE, ARE THERE REPLACEMENT CODES?A: NEVER. WHEN NAAMS CODES ARE DISCONTINUED, THEY REMAIN ON THE WEB SITE FOR LEGACY TOOLING PURPOSES. DISCONTINUED COMPONENTS CAN STILL BE MANUFACTURED. A SIMILAR NEW PART MAY EXIST.

Q: SOME PARTS HAVE A "M" SUFFIX, WHILE OTHERS DO NOT. WHAT IS THE DIFFERENCE?

A: THE "M" SUFFIX SIGNIFIES THE PART IS A METRIC COMPONENT.