## DIN7500-2-84 (1728x2273x2 tiff)

Fax:062084389

# UDC 621.882.2.082.8 : 621.882.081.1

December 1984

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<section-header><section-header><section-header><text><text><text><text></text></text></text></text></section-header></section-header></section-header>	n keeping with comma has bee	current practice in standards published by en used throughout as the decimal marker	the International Organization for S	Standardization (ISO),
This standard specifies hole diameters for thread rolling screws conforming to DIN 7500 Part 1. These hole diameters are the result of tests carried out by manufacturers and users. The values given are assigned to various materials and lengths of engagement and should be regarded as guideline values. As there is a wide variety of designs of thread rolling screws where the rolling area is defined only in terms of the maximum length in DIN 7500 Part 1, it is advisable to examine the specified hole diameters, particularly in mass production, by internal checks. If the process of manufacturing the hole, e.g. punching, causes a hardness increase in the hole wall, larger hole diameters than those given in this standard may be required. This standard does not apply to holes with particular shape, e.g. triangular, octagonal holes. <b>2 Guideline values for hole diameters</b> $\frac{d_i}{d_i} = \frac{d_i}{d_i} = \frac{d_i}{$		Dimensir	ons in mm	
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be intered of the terms of the maximum length in DIN 7500 Part 1, it is advisable to examine the specified hole diameters, particularly in mass production, by internal checks. If the process of manufacturing the hole, e.g. punching, causes a hardness increase in the hole wall, larger hole diameters than those given in this standard may be required. This may also apply to cast holes (casting crust). This standard does not apply to holes with particular shape, e.g. triangular, octagonal holes. <b>2 Guideline values for hole diameters</b> $\begin{array}{c} \hline \\ \hline $	an an	nd users. The values given are assigned to v nd users. The values given are assigned to v nd should be regarded as guideline values.	1 tests carried out by manufacturers arious materials and lengths of engag	ement
2 Guideline values for hole diameters $ \begin{array}{c}                                     $	ex If ho ais Th	amine the specified hole diameters, particle the process of manufacturing the hole, e.g ble wall, larger hole diameters than those g so apply to cast holes (casting crust). his standard does not apply to holes with c	th in DIN 7500 Part 1, it is advisable ularly in mass production, by interna 9. punching, causes a hardness increas iven in this standard may be required	to Il checks. Se in the S. This may
Cast hole in Al and Zn alloys $d_{h}$ $d_{h}$ $d_{h}$ For cast holes in Al and Zn alloys, the hole diameters are the mean of $d_{h}^{*}$ at a				
For cast holes in AL and Zn alloys, the hole diameters are the mean of $d_{\rm h}^{\rm L}$ at a		- <i>d</i> -	Al and Zn alloys	1
diameters are the mean of $d'_{\mathbf{h}}$ and $d'_{\mathbf{h}}$ at a				1
			diameters are the mean of $d'_{\mathbf{h}}$ and	, the hole $d_{\mathbf{h}}^{''}$ at a
Continued on pa				Continued on page 2

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## Page 2 DIN 7500 Part 2

#### In table 1

- St stands for St 12 and St 37-2;
- At stands for Al99,5 F13 and AlMn F10:

Cull stands for E-Cu57F30, E-Cu58F30 and CuZnF38

#### Table 1.

zed M 2.5 M 3 M 3,5 M		M 4	M 5 M 6				M 8	i	i M 10			
		Hole	diame	eter $d_{\mathbf{h}}$ (	tolerance cla	ass H	11)	ъ.		•		
St   At   Cu	St AL Cu	SI AL Cu	' St	AL Cu	SI AL C	1 · St		St	AL C	u St	: AL	Ċ
2.25				·								
2.25	,	•	•			•		•		÷		
2.25	2.7		•		•	•		÷		1 . 1		
2.25	. 2.7	3,15	:		• • • •	÷		÷-			·	
2.25	2,7	3,15	:	3.6	4.5				••• ••	·;		· —
2.25	2,7	3.2	3.6		4.5			1				
2.25	2,7	3.2	•	3.6	• •• <u>-</u> • •• • 4,5	-		i			• •	••••
2.25	2.75 2.7	3.2		3.6	4.5	•			• • • • • •	-		
2,25	2.75 2.7	3.2	•	3.6	4.5	••	5,4			ii	• • •	
2.25	2.75	3.2	•	 3.5	4,5	:	5.4		7.25	÷		•••••••
2.25	2,75	3.2	3.65	3.6	4,5	•	5,4	1 1		9.2	i	
2,3	2.75	3.2	3.65	3.6	4.5	1	5.45				<u>+</u>	.15
2.3	2.75	3.2	3,65	3,5	4,55 4.5	-	5,45				÷	.15
2,3	2.75	3.2	3.65		4.55	1	5,45					
2,3	2.75	3.2	3,65		4,55	5.5	5.5 5.45		·			,15
2.3	2,75	3.2 3.25	3.7	3.65	4,6	5.5	5.45	7.4	7.3			
	2.75	3.2 3,25	3.7	3,65	4,6	· • · • • •	5.5	7,4	7,3	9.3		+
	2.75		3.7	3.65	4,6	<u> </u>	5,5	7,4	7,3	9.3		<u>+</u>
		1		3.7	4.85	+	5.5	7.4	7,35	9.3		÷
			:	3.7	4.65	1.	5.5	7,4	7.35	9.3		⊢
				3.7	4.65	5.55	5.5	7.5	7,4	9,3	9.2	
		,	í	3.7	4,65	5,55	5.5	7.5	7.4	9,4	9.	3
					4.65	1	5.55	7.5	7,4	9,4	9,	3
		•	• ·	···· • • •			•		7,5	9.5	9	4
			••••••••••••••••••••••••••••••••••••••	·· ··· <del>·</del>		• • • •	· · · ·		7.5	9.5	g	4
1				•		•		•••		· · · · · ·	9.	5
	S1         A1         Cu           2.75         2.25         2.25           2.25         2.25         2.25           2.25         2.25         2.25           2.25         2.25         2.25           2.25         2.25         2.25           2.25         2.25         2.25           2.25         2.3         2.3           2.3         2.3         2.3           2.3         2.3         2.3	S1         A1         Cu         S1         A1         Cu           2.75         2.75         2.7         2.25         2.7           2.25         2.7         2.25         2.7           2.25         2.7         2.25         2.7           2.25         2.7         2.25         2.7           2.25         2.7         2.25         2.7           2.25         2.75         2.7         2.25           2.75         2.75         2.75         2.7           2.25         2.75         2.75         2.75           2.3         2.75         2.3         2.75           2.3         2.75         2.3         2.75           2.3         2.75         2.3         2.75           2.3         2.75         2.3         2.75           2.3         2.75         2.3         2.75           2.3         2.75         2.3         2.75	Hole           S1         AI         Cu         SI         AI         Cu         SI         AI         Cu           2.25         2.25         2.7         3.15         2.25         2.7         3.15           2.25         2.7         3.15         2.25         2.7         3.15           2.25         2.7         3.15         2.25         2.7         3.2           2.25         2.7         3.2         2.25         2.7         3.2           2.25         2.75         2.7         3.2         2.25         2.75         3.2           2.25         2.75         3.2         2.25         2.75         3.2         2.25         2.75         3.2           2.25         2.75         3.2 </td <td>SI         AI         Cu         SI         Cu         SI&lt;</td> <td>Hole diameter d<sub>h</sub> f         S1       At       Cu       St       At       St       At       St       At       St       At       St       At       St       St       St<!--</td--><td>Hole diameter <math>d_h</math> (tolerance cl.         SI       At       Cu       St       At       St       At       St       At       St       At       St       At       St       At       St       At</td><td>Hole diameter d<sub>h</sub> (tolerance class Hole diameter diameter diameter diameter diameter diameter diameter</td><td>Mole diameter <math>d_h</math> (tolerance class H11)           SI AI Cu           2.75         2.75         2.75           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.2           2.25         2.7         3.2           2.25         2.7         3.2           2.25         2.7         3.2           2.25         2.7         3.2           2.25         2.7         3.2           2.25         2.75         3.2           3.2         3.65         4.5           2.3         2.75         3.2         3.65           3.2         3.65         3.6         4.55           2.3         2.75         3.2         3.65         4.55           2.3         2.75</td><td>M 5           M 5           M 5           M 5           M 5           M 5           M 5           M 5           M 5           M 5           M 5           M 5           M 5           All Cu St Al Cu St Al Cu St Al Cu St           2.25           2.25           2.25         2.7           3.6         4.5           2.25         2.7         3.6           2.25         2.7         3.6         4.5         5.4           2.25         2.7         3.2         3.6         4.5         5.4           2.25         2.7         3.2         3.6         4.5         5.4           2.75         3.2         3.6         4.5         5.4           2.75</td><td>SI         AI         Cu         SI         AI         Cu</td><td>Hole diameter <math>d_h</math> (tolerance class H11)           Si At Cu St At Cu St</td><td>Hole diameter <math>d_h</math> (tolerance class H11)         M 8         M 8         M           S1         A1         Cu         S1         A1&lt;</td></td>	SI         AI         Cu         SI         Cu         SI<	Hole diameter d <sub>h</sub> f         S1       At       Cu       St       At       St       At       St       At       St       At       St       At       St       St       St </td <td>Hole diameter <math>d_h</math> (tolerance cl.         SI       At       Cu       St       At       St       At       St       At       St       At       St       At       St       At       St       At</td> <td>Hole diameter d<sub>h</sub> (tolerance class Hole diameter diameter diameter diameter diameter diameter diameter</td> <td>Mole diameter <math>d_h</math> (tolerance class H11)           SI AI Cu           2.75         2.75         2.75           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.2           2.25         2.7         3.2           2.25         2.7         3.2           2.25         2.7         3.2           2.25         2.7         3.2           2.25         2.7         3.2           2.25         2.75         3.2           3.2         3.65         4.5           2.3         2.75         3.2         3.65           3.2         3.65         3.6         4.55           2.3         2.75         3.2         3.65         4.55           2.3         2.75</td> <td>M 5           M 5           M 5           M 5           M 5           M 5           M 5           M 5           M 5           M 5           M 5           M 5           M 5           All Cu St Al Cu St Al Cu St Al Cu St           2.25           2.25           2.25         2.7           3.6         4.5           2.25         2.7         3.6           2.25         2.7         3.6         4.5         5.4           2.25         2.7         3.2         3.6         4.5         5.4           2.25         2.7         3.2         3.6         4.5         5.4           2.75         3.2         3.6         4.5         5.4           2.75</td> <td>SI         AI         Cu         SI         AI         Cu</td> <td>Hole diameter <math>d_h</math> (tolerance class H11)           Si At Cu St At Cu St</td> <td>Hole diameter <math>d_h</math> (tolerance class H11)         M 8         M 8         M           S1         A1         Cu         S1         A1&lt;</td>	Hole diameter $d_h$ (tolerance cl.         SI       At       Cu       St       At       St       At       St       At       St       At       St       At       St       At       St       At	Hole diameter d <sub>h</sub> (tolerance class Hole diameter diameter diameter diameter diameter diameter diameter	Mole diameter $d_h$ (tolerance class H11)           SI AI Cu           2.75         2.75         2.75           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.15           2.25         2.7         3.2           2.25         2.7         3.2           2.25         2.7         3.2           2.25         2.7         3.2           2.25         2.7         3.2           2.25         2.7         3.2           2.25         2.75         3.2           3.2         3.65         4.5           2.3         2.75         3.2         3.65           3.2         3.65         3.6         4.55           2.3         2.75         3.2         3.65         4.55           2.3         2.75	M 5           M 5           M 5           M 5           M 5           M 5           M 5           M 5           M 5           M 5           M 5           M 5           M 5           All Cu St Al Cu St Al Cu St Al Cu St           2.25           2.25           2.25         2.7           3.6         4.5           2.25         2.7         3.6           2.25         2.7         3.6         4.5         5.4           2.25         2.7         3.2         3.6         4.5         5.4           2.25         2.7         3.2         3.6         4.5         5.4           2.75         3.2         3.6         4.5         5.4           2.75	SI         AI         Cu         SI         AI         Cu	Hole diameter $d_h$ (tolerance class H11)           Si At Cu St	Hole diameter $d_h$ (tolerance class H11)         M 8         M 8         M           S1         A1         Cu         S1         A1<

### Standards referred to

DIN 7500 Part 1 Thread rolling screws for ISO metric thread; dimensions, requirements, testing

### International Patent Classification F 16 B 25/00