

Metalldraht für Siebgewebe

Nenndrahtdurchmesser nach DIN ISO 4782, $d = 0,020 \text{ mm} - 3,15 \text{ mm}$

1	2	3	4	5
Nenndrahtdurchmesser		Nominal wire diameter		
ISO 4782	bei Bedarf if needed	Querschnitt cross section	Genauwert correct equivalent	commonly used
R 10 und R 20	<i>R 40</i>		USA wire diameters	
mm	mm	mm ²	inch	inch
0,020	<i>0,020</i> <i>0,021</i>	0,00031 0,00035	.00079 .00083	.0008
0,022	<i>0,022</i> <i>0,024</i>	0,00038 0,00045	.00087 .00094	.0009
0,025	<i>0,025</i>	0,00049	.00098	.0010
0,028	<i>0,026</i> <i>0,028</i> <i>0,030</i>	0,00053 0,00062 0,00071	.00102 .00110 .00118	.0011 .0012
0,032	<i>0,032</i>	0,00080	.00126	.0013
0,036	<i>0,034</i> <i>0,036</i> <i>0,038</i>	0,00091 0,00102 0,00113	.00134 .00142 .00150	.0014 .0015
0,040	<i>0,040</i>	0,00126	.00157	.0016
0,045	<i>0,042</i> <i>0,045</i> <i>0,048</i>	0,00139 0,00159 0,00181	.00165 .00177 .00189	.0018 .0019
0,050	<i>0,050</i>	0,00196	.00197	.0020
0,056	<i>0,053</i> <i>0,056</i> <i>0,060</i>	0,00221 0,00246 0,00283	.00209 .00220 .00236	.0021 .0022 .0024
0,063	<i>0,063</i>	0,00312	.00248	.0025
0,071	<i>0,067</i> <i>0,071</i> <i>0,075</i>	0,00353 0,00396 0,00442	.00264 .00280 .00295	.0026 .0028 .0030
0,080	<i>0,080</i>	0,00503	.00315	.0032
0,090	<i>0,085</i> <i>0,090</i> <i>0,095</i>	0,00567 0,00636 0,00709	.00335 .00354 .00374	.0034 .0035 .0037
0,100	<i>0,100</i>	0,00785	.00394	.0040
0,112	<i>0,106</i> <i>0,112</i> <i>0,118</i>	0,00882 0,00985 0,01094	.00417 .00441 .00465	.0045
0,125	<i>0,125</i>	0,01227	.00492	.0050
0,140	<i>0,132</i> <i>0,140</i> <i>0,150</i>	0,01368 0,01539 0,01767	.00520 .00551 .00591	.0055 .0060
0,160	<i>0,160</i>	0,02011	.00630	.0063
0,180	<i>0,170</i> <i>0,180</i> <i>0,190</i>	0,02270 0,02545 0,02835	.00669 .00709 .00748	.0065 .0071 .0075
0,200	<i>0,200</i>	0,03142	.00787	.0080
0,224	<i>0,212</i> <i>0,224</i> <i>0,236</i>	0,03530 0,03941 0,04374	.00835 .00882 .00929	.0085 .0090 .0092
0,250	<i>0,250</i>	0,04909	.00984	.0100

1	2	3	4	5
Nenndrahtdurchmesser		Nominal wire diameter		
ISO 4782	bei Bedarf if needed	Querschnitt cross section	Genauwert correct equivalent	commonly used
R 10 und R 20	<i>R 40</i>		USA wire diameters	
mm	mm	mm ²	inch	inch
0,280	<i>0,265</i> <i>0,280</i> <i>0,300</i>	0,05515 0,06158 0,07069	.01043 .01102 .01181	.011 .012
0,315	<i>0,315</i>	0,07793	.01240	.0125
0,355	<i>0,335</i> <i>0,355</i> <i>0,375</i>	0,08814 0,09898 0,11045	.01319 .01398 .01476	.013 .014 .015
0,400	<i>0,400</i>	0,12566	.01575	.016
0,450	<i>0,425</i> <i>0,450</i> <i>0,475</i>	0,14186 0,15904 0,17721	.01673 .01772 .01870	.017 .018
0,500	<i>0,500</i>	0,19635	.01969	.020
0,560	<i>0,530</i> <i>0,560</i> <i>0,600</i>	0,22062 0,24630 0,28274	.02087 .02205 .02362	.021 .022
0,630	<i>0,630</i>	0,31172	.02480	.025
0,710	<i>0,670</i> <i>0,710</i> <i>0,750</i>	0,35257 0,39592 0,44179	.02638 .02795 .02953	.028
0,800	<i>0,800</i>	0,50265	.03150	.032
0,900	<i>0,850</i> <i>0,900</i> <i>0,950</i>	0,56745 0,63617 0,70882	.03346 .03543 .03740	.035
1,000	<i>1,000</i>	0,78540	.03937	.040
1,120	<i>1,060</i> <i>1,120</i> <i>1,180</i>	0,88247 0,98520 1,09359	.04173 .04409 .04646	.045 .047
1,250	<i>1,250</i>	1,22718	.04921	.050
1,400	<i>1,320</i> <i>1,400</i> <i>1,500</i>	1,36848 1,53938 1,76715	.05197 .05512 .05906	.055 .063
1,600	<i>1,600</i>	2,01062	.06299	.063
1,800	<i>1,700</i> <i>1,800</i> <i>1,900</i>	2,26980 2,54469 2,83529	.06693 .07087 .07480	.071 .080
2,000	<i>2,000</i>	3,14159	.07874	.080
2,240	<i>2,120</i> <i>2,240</i> <i>2,360</i>	3,52989 3,94081 4,37435	.08346 .08819 .09291	.090 .093
2,500	<i>2,500</i>	4,90874	.09843	.100
2,800	<i>2,650</i> <i>2,800</i> <i>3,000</i>	5,51546 6,15752 7,06858	.10433 .11024 .11811	.105 .110 .120
3,150	<i>3,150</i>	7,79311	.12402	.125

Metalldraht für Siebgewebe

Nenndrahtdurchmesser nach DIN ISO 4782, $d = 3,35 \text{ mm} - 25 \text{ mm}$

1	2	3	4	5
Nenndrahtdurchmesser		Nominal wire diameter		
ISO 4782	bei Bedarf if needed	Querschnitt cross section	Genauwert correct equivalent	commonly used
R 10 und R 20	R 40		USA wire diameters	
mm	mm	mm ²	inch	inch
	3,350	8,81413	.13189	.135
3,550	3,550	9,89798	.13976	.140
	3,750	11,04466	.14764	.148
4,000	4,000	12,56637	.15748	.160
	4,250	14,18625	.16732	
4,500	4,500	15,90431	.17717	.180
	4,750	17,72055	.18701	.192
5,000	5,000	19,63495	.19685	.200
	5,300	22,06183	.20866	.207
5,600	5,600	24,63009	.22047	.220
	6,000	28,27433	.23622	
6,300	6,300	31,17245	.24803	.250
	6,700	35,25652	.26378	
7,100	7,100	39,59192	.27953	
	7,500	44,17865	.29528	
8,000	8,000	50,26548	.31496	.315
	8,500	56,74502	.33465	
9,000	9,000	63,61725	.35433	
	9,500	70,88218	.37402	
10,00	10,000	78,53982	.39370	.400
	10,600	88,24734	.41732	
11,20	11,200	98,52035	.44094	
	11,800	109,35884	.46457	
12,50	12,500	122,71846	.49213	.500
	13,200	136,84778	.51969	
14,00	14,000	153,93804	.55118	
	15,000	176,71459	.59055	
16,00	16,000	201,06193	.62992	.630
	17,000	226,98007	.66929	
18,00	18,000	254,46900	.70866	
	19,000	283,52874	.74803	
20,00	20,000	314,15927	.78740	.800
	21,200	352,98935	.83465	
22,40	22,400	394,08138	.88189	
	23,600	437,43536	.92913	
25,00	25,000	490,87385	.98425	1.000

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Normzahlen DIN 323-1 – 1974

Diese Normzahlen werden für Drahtdurchmesser und auch für Maschenweiten von Drahtgeweben verwendet.

Normzahlen sind gerundete Glieder geometrischer Reihen, die die ganzzahligen Potenzen von 10 enthalten. Stufensprünge sind:

$$\sqrt[5]{10} \approx 1,6$$

$$\sqrt[10]{10} \approx 1,25$$

$$\sqrt[20]{10} \approx 1,12$$

$$\sqrt[40]{10} \approx 1,06$$

Formel zur Berechnung des Draht-Querschnittes A (mm²):

$$A = d^2 \cdot \frac{\pi}{4} \quad \text{bzw.} \quad A = d^2 \cdot 0,7854$$

Formel zur Bestimmung der Draht-Lauflänge L (m/kg):

(Quelle: DIN ISO 4782, Oktober 1993)

$$L = \frac{4 \cdot 10^6}{\pi \cdot d^2 \cdot \rho}$$

ρ = die Dichte des Werkstoffs in kg/m³

Beispiele für Stahl, $\rho = 7850 \text{ kg/m}^3$ *:

Drahtdurchmesser wire diameter d mm	Querschnitt cross section A mm ²	Lauflänge running length L m/kg
0,02	0,000314159	405490,30087
0,2	0,031415927	4054,90301
2	3,141592654	40,54903
20	314,1592654	0,40549

* weitere Werkstoffdichten s. DIN ISO 4782, Tabelle 2