

Kilopond je Quadratcentimeter – Bar

Bar – Kilopond je Quadratcentimeter

Umrechnungstabellen

DIN
66 037

Kilogramme-force/square centimetre — bar, bar — kilogramme-force/square centimetre; conversion tables

Diese Norm kann benutzt werden für die Umrechnung der Zahlenwerte von Größen, mit der Einheit Kilopond je Quadratcentimeter in bar, oder umgekehrt. Sie kann auch verwendet werden für die Umrechnung der Zahlenwerte abgeleiteter Größen, z. B. kp/mm^2 in hbar.

Kilopond (kp) ist nach ISO-Empfehlung ISO/R 31/Teil III „Größen und Einheiten der Mechanik“, Ausgabe Dezember 1960, gleichbedeutend mit der Einheit, die im Englischen und Französischen kilogramme-force (kgf) genannt wird.

1. Umrechnung von Kilopond je Quadratcentimeter (kp/cm^2) in Bar (bar)

Einheitengleichung: $1 \text{ kp/cm}^2 = 1 \text{ at (techn. Atmosph.)} = 0,980665 \text{ bar}$ (Zahlenwert genau, nach DIN 1314).

Die Zahlenwerte der Tabelle 1 sind Genauwerte. Reicht eine geringere Stellenzahl aus, ist nach DIN 1333 zu runden.

Tabelle 1.

kp/cm^2 = at	0,0	0,1	0,2	0,3	0,4	0,5	0,6	0,7	0,8	0,9
	bar									
0	0,0000000	0,0980665	0,1961330	0,2941995	0,3922660	0,4903325	0,5883990	0,6864655	0,7845320	0,8825985
1	0,9806650	1,0787315	1,1767980	1,2748645	1,3729310	1,4709975	1,5690640	1,6671305	1,7651970	1,8632635
2	1,9613300	2,0593965	2,1574630	2,2555295	2,3535960	2,4516625	2,5497290	2,6477955	2,7458620	2,8439285
3	2,9419950	3,0400615	3,1381280	3,2361945	3,3342610	3,4323275	3,5303940	3,6284605	3,7265270	3,8245935
4	3,9226600	4,0207265	4,1187930	4,2168595	4,3149260	4,4129925	4,5110590	4,6091255	4,7071920	4,8052585
5	4,9033250	5,0013915	5,0994580	5,1975245	5,2955910	5,3936575	5,4917240	5,5897905	5,6878570	5,7859235
6	5,8839900	5,9820565	6,0801230	6,1781895	6,2762560	6,3743225	6,4723890	6,5704555	6,6685220	6,7665885
7	6,8646550	6,9627215	7,0607880	7,1588545	7,2569210	7,3549875	7,4530540	7,5511205	7,6491870	7,7472535
8	7,8453200	7,9433865	8,0414530	8,1395195	8,2375860	8,3356525	8,4337190	8,5317855	8,6298520	8,7279185
9	8,8259850	8,9240515	9,0221180	9,1201845	9,2182510	9,3163175	9,4143840	9,5124505	9,6105170	9,7085835
10	9,8066500	9,9047165	10,0027830	10,1008495	10,1989160	10,2969825	10,3950490	10,4931155	10,5911820	10,6892485
11	10,7873150	10,8853815	10,9834480	11,0815145	11,1795810	11,2776475	11,3757140	11,4737805	11,5718470	11,6699135
12	11,7679800	11,8660465	11,9641130	12,0621795	12,1602460	12,2583125	12,3563790	12,4544455	12,5525120	12,6505785
13	12,7486450	12,8467115	12,9447780	13,0428445	13,1409110	13,2389775	13,3370440	13,4351105	13,5331770	13,6312435
14	13,7293100	13,8273765	13,9254430	14,0235095	14,1215760	14,2196425	14,3177090	14,4157755	14,5138420	14,6119085
15	14,7099750	14,8080415	14,9061080	15,0041745	15,1022410	15,2003075	15,2983740	15,3964405	15,4945070	15,5925735
16	15,6906400	15,7887065	15,8867730	15,9848395	16,0829060	16,1809725	16,2790390	16,3771055	16,4751720	16,5732385
17	16,6713050	16,7693715	16,8674380	16,9655045	17,0635710	17,1616375	17,2597040	17,3577705	17,4558370	17,5539035
18	17,6519700	17,7500365	17,8481030	17,9461695	18,0442360	18,1423025	18,2403690	18,3384355	18,4365020	18,5345685
19	18,6326350	18,7307015	18,8287680	18,9268345	19,0249010	19,1229675	19,2210340	19,3191005	19,4171670	19,5152335
20	19,6133000	19,7113665	19,8094330	19,9074995	20,0055660	20,1036325	20,2016990	20,2997655	20,3978320	20,4958985
21	20,5939650	20,6920315	20,7900980	20,8881645	20,9862310	21,0842975	21,1823640	21,2804305	21,3784970	21,4765635
22	21,5746300	21,6726965	21,7707630	21,8688295	21,9668960	22,0649625	22,1630290	22,2610955	22,3591620	22,4572285
23	22,5552950	22,6533615	22,7514280	22,8494945	22,9475610	23,0456275	23,1436940	23,2417605	23,3398270	23,4378935
24	23,5359600	23,6340265	23,7320930	23,8301595	23,9282260	24,0262925	24,1243590	24,2224255	24,3204920	24,4185585
25	24,5166250	24,6146915	24,7127580	24,8108245	24,9088910	25,0069575	25,1050240	25,2030905	25,3011570	25,3992235
26	25,4972900	25,5953565	25,6934230	25,7914895	25,8895560	25,9876225	26,0856890	26,1837555	26,2818220	26,3798885
27	26,4779550	26,5760215	26,6740880	26,7721545	26,8702210	26,9682875	27,0663540	27,1644205	27,2624870	27,3605535
28	27,4586200	27,5566865	27,6547530	27,7528195	27,8508860	27,9489525	28,0470190	28,1450855	28,2431520	28,3412185
29	28,4392850	28,5373515	28,6354180	28,7334845	28,8315510	28,9296175	29,0276840	29,1257505	29,2238170	29,3218835
30	29,4199500	29,5180165	29,6160830	29,7141495	29,8122160	29,9102825	30,0083490	30,1064155	30,2044820	30,3025485
31	30,4006150	30,4986815	30,5967480	30,6948145	30,7928810	30,8909475	30,9890140	31,0870805	31,1851470	31,2832135
32	31,3812800	31,4793465	31,5774130	31,6754795	31,7735460	31,8716125	31,9696790	32,0677455	32,1658120	32,2638785
33	32,3619450	32,4600115	32,5580780	32,6561445	32,7542110	32,8522775	32,9503440	33,0484105	33,1464770	33,2445435
34	33,3426100	33,4406765	33,5387430	33,6368095	33,7348760	33,8329425	33,9310090	34,0290755	34,1271420	34,2252085
35	34,3232750	34,4213415	34,5194080	34,6174745	34,7155410	34,8136075	34,9116740	35,0097405	35,1078070	35,2058735
36	35,3039400	35,4020065	35,5000730	35,5981395	35,6962060	35,7942725	35,8923390	35,9904055	36,0884720	36,1865385
37	36,2846050	36,3826715	36,4807380	36,5788045	36,6768710	36,7749375	36,8730040	36,9710705	37,0691370	37,1672035
38	37,2652700	37,3633365	37,4614030	37,5594695	37,6575360	37,7556025	37,8536690	37,9517355	38,0498020	38,1478685
39	38,2459350	38,3440015	38,4420680	38,5401345	38,6382010	38,7362675	38,8343340	38,9324005	39,0304670	39,1285335
40	39,2266000									

Fortsetzung Seite 2 bis 4

Ausschuß Normungstechnik (ANT) im Deutschen Normenausschuß (DNA)

Tabelle 1. (Fortsetzung von Seite 1)

kp/cm ² = at	0,0	0,1	0,2	0,3	0,4	0,5	0,6	0,7	0,8	0,9
	bar									
40	39,2266000	39,3246665	39,4227330	39,5207995	39,6188660	39,7169325	39,8149990	39,9130655	40,0111320	40,1091985
41	40,2072650	40,3053315	40,4033980	40,5014645	40,5995310	40,6975975	40,7956640	40,8937305	40,9917970	41,0898635
42	41,1879300	41,2859965	41,3840630	41,4821295	41,5801960	41,6782625	41,7763290	41,8743955	41,9724620	42,0705285
43	42,1685950	42,2666615	42,3647280	42,4627945	42,5608610	42,6589275	42,7569940	42,8550605	42,9531270	43,0511935
44	43,1492600	43,2473265	43,3453930	43,4434595	43,5415260	43,6395925	43,7376590	43,8357255	43,9337920	44,0318585
45	44,1299250	44,2279915	44,3260580	44,4241245	44,5221910	44,6202575	44,7183240	44,8163905	44,9144570	45,0125235
46	45,1105900	45,2086565	45,3067230	45,4047895	45,5028560	45,6009225	45,6989890	45,7970555	45,8951220	45,9931885
47	46,0912550	46,1893215	46,2873880	46,3854545	46,4835210	46,5815875	46,6796540	46,7777205	46,8757870	46,9738535
48	47,0719200	47,1699865	47,2680530	47,3661195	47,4641860	47,5622525	47,6603190	47,7583855	47,8564520	47,9545185
49	48,0525850	48,1506515	48,2487180	48,3467845	48,4448510	48,5429175	48,6409840	48,7390505	48,8371170	48,9351835
50	49,0332500	49,1313165	49,2293830	49,3274495	49,4255160	49,5235825	49,6216490	49,7197155	49,8177820	49,9158485
51	50,0139150	50,1119815	50,2100480	50,3081145	50,4061810	50,5042475	50,6023140	50,7003805	50,7984470	50,8965135
52	50,9945800	51,0926465	51,1907130	51,2887795	51,3868460	51,4849125	51,5829790	51,6810455	51,7791120	51,8771785
53	51,9752450	52,0733115	52,1713780	52,2694445	52,3675110	52,4655775	52,5636440	52,6617105	52,7597770	52,8578435
54	52,9559100	53,0539765	53,1520430	53,2501095	53,3481760	53,4462425	53,5443090	53,6423755	53,7404420	53,8385085
55	53,9365750	54,0346415	54,1327080	54,2307745	54,3288410	54,4269075	54,5249740	54,6230405	54,7211070	54,8191735
56	54,9172400	55,0153065	55,1133730	55,2114395	55,3095060	55,4075725	55,5056390	55,6037055	55,7017720	55,7998385
57	55,8979050	55,9959715	56,0940380	56,1921045	56,2901710	56,3882375	56,4863040	56,5843705	56,6824370	56,7805035
58	56,8785700	56,9766365	57,0747030	57,1727695	57,2708360	57,3689025	57,4669690	57,5650355	57,6631020	57,7611685
59	57,8592350	57,9573015	58,0553680	58,1534345	58,2515010	58,3495675	58,4476340	58,5457005	58,6437670	58,7418335
60	58,8399000	58,9379665	59,0360330	59,1340995	59,2321660	59,3302325	59,4282990	59,5263655	59,6244320	59,7224985
61	59,8205650	59,9186315	60,0166980	60,1147645	60,2128310	60,3108975	60,4089640	60,5070305	60,6050970	60,7031635
62	60,8012300	60,8992965	60,9973630	61,0954295	61,1934960	61,2915625	61,3896290	61,4876955	61,5857620	61,6838285
63	61,7818950	61,8799615	61,9780280	62,0760945	62,1741610	62,2722275	62,3702940	62,4683605	62,5664270	62,6644935
64	62,7625600	62,8606265	62,9586930	63,0567595	63,1548260	63,2528925	63,3509590	63,4490255	63,5470920	63,6451585
65	63,7432250	63,8412915	63,9393580	64,0374245	64,1354910	64,2335575	64,3316240	64,4296905	64,5277570	64,6258235
66	64,7238900	64,8219565	64,9200230	65,0180895	65,1161560	65,2142225	65,3122890	65,4103555	65,5084220	65,6064885
67	65,7045550	65,8026215	65,9006880	65,9987545	66,0968210	66,1948875	66,2929540	66,3910205	66,4890870	66,5871535
68	66,6852200	66,7832865	66,8813530	66,9794195	67,0774860	67,1755525	67,2736190	67,3716855	67,4697520	67,5678185
69	67,6658850	67,7639515	67,8620180	67,9600845	68,0581510	68,1562175	68,2542840	68,3523505	68,4504170	68,5484835
70	68,6465500	68,7446165	68,8426830	68,9407495	69,0388160	69,1368825	69,2349490	69,3330155	69,4310820	69,5291485
71	69,6272150	69,7252815	69,8233480	69,9214145	70,0194810	70,1175475	70,2156140	70,3136805	70,4117470	70,5098135
72	70,6078800	70,7059465	70,8040130	70,9020795	71,0001460	71,0982125	71,1962790	71,2943455	71,3924120	71,4904785
73	71,5885450	71,6866115	71,7846780	71,8827445	71,9808110	72,0788775	72,1769440	72,2750105	72,3730770	72,4711435
74	72,5692100	72,6672765	72,7653430	72,8634095	72,9614760	73,0595425	73,1576090	73,2556755	73,3537420	73,4518085
75	73,5498750	73,6479415	73,7460080	73,8440745	73,9421410	74,0402075	74,1382740	74,2363405	74,3344070	74,4324735
76	74,5305400	74,6286065	74,7266730	74,8247395	74,9228060	75,0208725	75,1189390	75,2170055	75,3150720	75,4131385
77	75,5112050	75,6092715	75,7073380	75,8054045	75,9034710	76,0015375	76,0996040	76,1976705	76,2957370	76,3938035
78	76,4918700	76,5899365	76,6880030	76,7860695	76,8841360	76,9822025	77,0802690	77,1783355	77,2764020	77,3744685
79	77,4725350	77,5706015	77,6686680	77,7667345	77,8648010	77,9628675	78,0609340	78,1590005	78,2570670	78,3551335
80	78,4532000	78,5512665	78,6493330	78,7473995	78,8454660	78,9435325	79,0415990	79,1396655	79,2377320	79,3357985
81	79,4338650	79,5319315	79,6299980	79,7280645	79,8261310	79,9241975	80,0222640	80,1203305	80,2183970	80,3164635
82	80,4145300	80,5125965	80,6106630	80,7087295	80,8067960	80,9048625	81,0029290	81,1009955	81,1990620	81,2971285
83	81,3951950	81,4932615	81,5913280	81,6893945	81,7874610	81,8855275	81,9835940	82,0816605	82,1797270	82,2777935
84	82,3758600	82,4739265	82,5719930	82,6700595	82,7681260	82,8661925	82,9642590	83,0623255	83,1603920	83,2584585
85	83,3565250	83,4545915	83,5526580	83,6507245	83,7487910	83,8468575	83,9449240	84,0429905	84,1410570	84,2391235
86	84,3371900	84,4352565	84,5333230	84,6313895	84,7294560	84,8275225	84,9255890	85,0236555	85,1217220	85,2197885
87	85,3178550	85,4159215	85,5139880	85,6120545	85,7101210	85,8081875	85,9062540	86,0043205	86,1023870	86,2004535
88	86,2985200	86,3965865	86,4946530	86,5927195	86,6907860	86,7888525	86,8869190	86,9849855	87,0830520	87,1811185
89	87,2791850	87,3772515	87,4753180	87,5733845	87,6714510	87,7695175	87,8675840	87,9656505	88,0637170	88,1617835
90	88,2598500	88,3579165	88,4559830	88,5540495	88,6521160	88,7501825	88,8482490	88,9463155	89,0443820	89,1424485
91	89,2405150	89,3385815	89,4366480	89,5347145	89,6327810	89,7308475	89,8289140	89,9269805	90,0250470	90,1231135
92	90,2211800	90,3192465	90,4173130	90,5153795	90,6134460	90,7115125	90,8095790	90,9076455	91,0057120	91,1037785
93	91,2018450	91,2999115	91,3979780	91,4960445	91,5941110	91,6921775	91,7902440	91,8883105	91,9863770	92,0844435
94	92,1825100	92,2805765	92,3786430	92,4767095	92,5747760	92,6728425	92,7709090	92,8689755	92,9670420	93,0651085
95	93,1631750	93,2612415	93,3593080	93,4573745	93,5554410	93,6535075	93,7515740	93,8496405	93,9477070	94,0457735
96	94,1438400	94,2419065	94,3399730	94,4380395	94,5361060	94,6341725	94,7322390	94,8303055	94,9283720	95,0264385
97	95,1245050	95,2225715	95,3206380	95,4187045	95,5167710	95,6148375	95,7129040	95,8109705	95,9090370	96,0071035
98	96,1051700	96,2032365	96,3013030	96,3993695	96,4974360	96,5955025	96,6935690	96,7916355	96,8897020	96,9877685
99	97,0858350	97,1839015	97,2819680	97,3800345	97,4781010	97,5761675	97,6742340	97,7723005	97,8703670	97,9684335
100	98,0665000									

Anwendungsbeispiele unter Aufrechterhaltung der Genauigkeit der Tabellenwerte

0,7 kp/cm² = 0,6864655 bar
 5,5 kp/cm² = 5,3936575 bar
 67 kp/cm² = 65,7045550 bar

3625 kp/cm² = ? bar
 3620 kp/cm² = 3550,00730 bar
 5 kp/cm² = 4,90332 bar
 3625 kp/cm² = 3554,91062 bar