

HP 620/50/B12 P28

Spannung: 11 V

$n_l=755.4\text{U/min}$
 $n_s=69.9\text{U/min/V}$

$I_o=2.2\text{A}$
 $k_n=-6.96\text{U/min/A}$

$k_M=15.44\text{Ncm/A}$

Spannung [V]	Strom [A]	Drehzahl [U/min]	Pin [W]	Pout [W]	Drehmoment [Ncm]	Wirkungsgrad [%]
11.0	10.0	711.0	109.9	89.8	120.6	81.70
11.0	12.0	694.3	131.8	108.5	149.2	82.33
11.0	14.0	677.9	153.6	126.7	178.5	82.46
11.6	16.0	661.6	175.5	144.3	208.3	82.23
11.5	18.0	645.5	197.3	161.3	238.6	81.75
11.6	20.0	629.6	219.0	177.6	269.3	81.07
10.9	22.0	613.9	240.8	193.2	300.5	80.24
10.9	24.0	598.4	262.5	208.0	332.0	79.26
10.9	26.0	583.2	284.1	222.1	363.7	78.18
10.9	28.0	568.1	305.8	235.4	395.8	76.99
10.9	30.0	553.2	327.4	247.9	428.0	75.72
10.9	32.0	538.5	349.0	259.6	460.3	74.38
10.9	34.0	524.1	370.6	270.4	492.7	72.96
10.9	36.0	509.8	392.1	280.3	525.1	71.49
10.9	38.0	495.8	413.6	289.4	557.4	69.98
10.9	40.0	481.9	435.0	297.6	589.7	68.41
10.9	42.0	468.3	456.5	305.0	621.8	66.81
10.9	44.0	454.9	477.9	311.5	653.8	65.18
10.9	46.0	441.8	499.3	317.1	685.4	63.51
10.8	48.0	428.8	520.6	321.9	716.8	61.83
10.8	50.0	416.1	541.9	325.8	747.8	60.13
10.8	52.0	403.6	563.2	329.0	778.4	58.41
10.8	54.0	391.3	584.5	331.3	808.5	56.69
10.8	56.0	379.3	605.7	332.9	838.1	54.96
10.8	58.0	367.5	626.9	333.7	867.1	53.23
10.8	60.0	355.9	648.1	333.7	895.5	51.50
10.8	62.0	344.5	669.2	333.1	923.2	49.77
10.8	64.0	333.4	690.3	331.7	950.1	48.06
10.8	66.0	322.5	711.4	329.7	976.3	46.35
10.8	68.0	311.9	732.4	327.1	1001.6	44.66
10.8	70.0	301.5	753.4	323.9	1026.0	42.99

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Spannung: 15 V

$n_l=1022.4\text{U/min}$
 $n_s=69.1\text{U/min/V}$

$I_o=2.8\text{A}$
 $k_n=-7.98\text{U/min/A}$

$k_M=16.19\text{Ncm/A}$

Spannung [V]	Strom [A]	Drehzahl [U/min]	Pin [W]	Pout [W]	Drehmoment [Ncm]	Wirkungsgrad [%]
15.1	10.0	987.0	150.8	122.4	118.4	81.17
15.1	12.0	966.3	180.9	148.6	146.9	82.17
15.1	14.0	945.9	210.9	174.5	176.1	82.75
15.1	16.0	925.8	240.8	199.9	206.2	83.01
15.0	18.0	906.0	270.8	224.8	237.0	83.04
15.0	20.0	886.5	300.7	249.2	268.4	82.88
15.0	22.0	867.3	330.5	272.9	300.4	82.56
15.0	24.0	848.4	360.3	295.8	333.0	82.10
15.0	26.0	829.9	390.1	318.0	366.0	81.53
15.0	28.0	811.6	419.8	339.4	399.4	80.85
15.0	30.0	793.6	449.5	360.0	433.2	80.08
15.0	32.0	775.9	479.2	379.6	467.2	79.22
15.0	34.0	758.6	508.8	398.3	501.5	78.29
15.0	36.0	741.5	538.4	416.1	535.9	77.29
14.9	38.0	724.8	567.9	432.9	570.4	76.23
14.9	40.0	708.3	597.4	448.7	604.9	75.11
14.9	42.0	692.2	626.9	463.5	639.4	73.94
14.9	44.0	676.4	656.3	477.3	673.8	72.72
14.9	46.0	660.9	685.7	490.0	708.1	71.47
14.9	48.0	645.7	715.0	501.8	742.1	70.18
14.9	50.0	630.9	744.3	512.6	775.8	68.86
14.9	52.0	616.3	773.6	522.3	809.3	67.52
14.9	54.0	602.1	802.8	531.1	842.3	66.15
14.9	56.0	588.2	832.0	538.8	874.8	64.77
14.8	58.0	574.6	861.1	545.6	906.8	63.36
14.8	60.0	561.4	890.2	551.5	938.2	61.95
14.8	62.0	548.4	919.3	556.5	968.9	60.53
14.8	64.0	535.8	948.3	560.5	999.0	59.11
14.8	66.0	523.5	977.3	563.7	1028.2	57.68
14.8	68.0	511.6	1006.3	566.1	1056.6	56.25
14.8	70.0	499.9	1035.2	567.6	1084.1	54.83
14.8	72.0	488.6	1064.1	568.3	1110.7	53.41
14.8	74.0	477.7	1092.9	568.3	1136.2	52.00

14.8	76.0	467.0	1121.7	567.6	1160.6	50.60
14.7	78.0	456.7	1150.4	566.2	1183.9	49.22
14.7	80.0	446.7	1179.2	564.2	1205.9	47.84
14.7	82.0	437.1	1207.8	561.5	1226.7	46.49
14.7	84.0	427.8	1236.5	558.2	1246.1	45.15
14.7	86.0	418.8	1265.1	554.4	1264.1	43.83
14.7	88.0	410.2	1293.6	550.1	1280.7	42.52
14.7	90.0	401.9	1322.2	545.3	1295.7	41.24
14.7	92.0	394.0	1350.6	540.1	1309.1	39.99
14.7	94.0	386.3	1379.1	534.4	1320.9	38.75
14.7	96.0	379.1	1407.5	528.3	1331.0	37.54
14.7	98.0	372.1	1435.9	521.9	1339.2	36.35
14.6	100.0	365.6	1464.2	515.2	1345.7	35.18

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Spannung: 20 V

$n_l=1344.4\text{U/min}$
 $n_s=68.9\text{U/min/V}$

$I_o=3.6\text{A}$
 $k_n=-9.45\text{U/min/A}$

$k_M=17.07\text{Ncm/A}$

Spannung [V]	Strom [A]	Drehzahl [U/min]	Pin [W]	Pout [W]	Drehmoment [Ncm]	Wirkungsgrad [%]
20.0	10.0	1309.8	199.5	165.0	120.3	82.67
19.9	12.0	1285.0	239.3	201.2	149.5	84.07
19.9	14.0	1260.6	279.1	237.0	179.5	84.92
19.9	16.0	1236.6	318.8	272.2	210.2	85.38
19.9	18.0	1213.1	358.5	306.8	241.5	85.58
19.9	20.0	1189.9	398.1	340.7	273.4	85.58
19.9	22.0	1167.2	437.8	373.9	305.9	85.42
19.9	24.0	1144.9	477.3	406.3	338.9	85.12
19.9	26.0	1123.0	516.9	437.9	372.4	84.72
19.9	28.0	1101.4	556.4	468.6	406.2	84.21
19.9	30.0	1080.3	595.9	498.3	440.5	83.63
19.9	32.0	1059.5	635.3	527.1	475.1	82.97
19.8	34.0	1039.1	674.7	554.9	510.0	82.25
19.8	36.0	1019.1	714.1	581.7	545.1	81.47
19.8	38.0	999.4	753.4	607.5	580.4	80.63
19.8	40.0	980.1	792.7	632.2	615.9	79.75
19.8	42.0	961.2	832.0	655.8	651.5	78.83
19.8	44.0	942.6	871.2	678.3	687.2	77.86
19.8	46.0	924.3	910.4	699.8	722.9	76.86
19.8	48.0	906.4	949.5	720.1	758.6	75.83
19.8	50.0	888.8	988.6	739.3	794.3	74.77
19.8	52.0	871.5	1027.7	757.3	829.8	73.69
19.8	54.0	854.5	1066.8	774.2	865.2	72.58
19.7	56.0	837.9	1105.8	790.1	900.4	71.45
19.7	58.0	821.6	1144.7	804.7	935.4	70.30
19.7	60.0	805.5	1183.7	818.3	970.1	69.13
19.7	62.0	789.8	1222.6	830.7	1004.4	67.95
19.7	64.0	774.3	1261.4	842.0	1038.4	66.75
19.7	66.0	759.2	1300.3	852.2	1072.0	65.54
19.7	68.0	744.3	1339.1	861.4	1105.2	64.33
19.7	70.0	729.7	1377.8	869.4	1137.8	63.10
19.7	72.0	715.3	1416.5	876.3	1169.9	61.86
19.7	74.0	701.2	1455.2	882.2	1201.4	60.62

19.7	76.0	687.4	1493.9	887.1	1232.3	59.38
19.6	78.0	673.8	1532.5	890.9	1262.5	58.13
19.6	80.0	660.5	1571.1	893.6	1292.0	56.88
19.6	82.0	647.4	1609.6	895.4	1320.8	55.63
19.6	84.0	634.5	1648.1	896.2	1348.7	54.38
19.6	86.0	621.9	1686.6	896.0	1375.8	53.12
19.6	88.0	609.5	1725.0	894.8	1402.0	51.87
19.6	90.0	597.3	1763.4	892.7	1427.3	50.63
19.6	92.0	585.3	1801.8	889.7	1451.5	49.38
19.6	94.0	573.5	1840.1	885.8	1474.8	48.14
19.6	96.0	562.0	1878.4	881.0	1497.0	46.90
19.6	98.0	550.6	1916.6	875.3	1518.1	45.67
19.5	100.0	539.4	1954.8	868.7	1538.0	44.44

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Spannung: 25 V

nl=1668.0U/min
ns=68.5U/min/V

Io=3.8A
kn=-10.87U/min/A

kM=17.61Ncm/A

Spannung [V]	Strom [A]	Drehzahl [U/min]	Pin [W]	Pout [W]	Drehmoment [Ncm]	Wirkungsgrad [%]
25.0	10.0	1634.7	249.6	205.5	120.1	82.34
25.0	12.0	1606.1	299.4	251.0	149.2	83.83
24.9	14.0	1578.1	349.2	296.2	179.2	84.82
24.9	16.0	1550.5	398.9	340.9	210.0	85.46
24.9	18.0	1523.3	448.6	385.1	241.4	85.86
24.9	20.0	1496.6	498.2	428.8	273.6	86.06
24.9	22.0	1470.3	547.9	471.8	306.4	86.11
24.9	24.0	1444.5	597.4	514.0	339.8	86.03
24.9	26.0	1419.1	647.0	555.4	373.7	85.84
24.9	28.0	1394.2	696.5	595.9	408.2	85.56
24.9	30.0	1369.7	745.9	635.5	443.0	85.19
24.9	32.0	1345.6	795.3	674.0	478.3	84.75
24.8	34.0	1321.9	844.7	711.5	514.0	84.23
24.8	36.0	1298.7	894.1	748.0	550.0	83.66
24.8	38.0	1275.9	943.4	783.3	586.3	83.03
24.8	40.0	1253.5	992.7	817.5	622.8	82.35
24.8	42.0	1231.5	1041.9	850.4	659.5	81.62
24.8	44.0	1209.9	1091.1	882.2	696.3	80.86
24.8	46.0	1188.7	1140.2	912.7	733.2	80.05
24.8	48.0	1168.0	1189.3	942.0	770.2	79.20
24.8	50.0	1147.6	1238.4	970.0	807.2	78.33
24.8	52.0	1127.7	1287.5	996.8	844.1	77.42
24.7	54.0	1108.1	1336.5	1022.3	881.0	76.49
24.7	56.0	1088.9	1385.4	1046.5	917.7	75.54
24.7	58.0	1070.2	1434.4	1069.4	954.3	74.56
24.7	60.0	1051.8	1483.2	1091.1	990.6	73.56
24.7	62.0	1033.8	1532.1	1111.5	1026.7	72.55
24.7	64.0	1016.2	1580.9	1130.6	1062.5	71.52
24.7	66.0	998.9	1629.7	1148.5	1097.9	70.47
24.7	68.0	982.0	1678.4	1165.1	1132.9	69.42
24.7	70.0	965.5	1727.1	1180.5	1167.5	68.35
24.7	72.0	949.4	1775.8	1194.7	1201.6	67.28
24.7	74.0	933.6	1824.4	1207.7	1235.2	66.20

24.6	76.0	918.2	1873.0	1219.5	1268.2	65.11
24.6	78.0	903.2	1921.5	1230.1	1300.6	64.02
24.6	80.0	888.5	1970.0	1239.6	1332.3	62.92
24.6	82.0	874.2	2018.5	1248.0	1363.3	61.83
24.6	84.0	860.2	2066.9	1255.3	1393.5	60.73
24.6	86.0	846.6	2115.3	1261.5	1422.9	59.64
24.6	88.0	833.3	2163.6	1266.6	1451.5	58.54
24.6	90.0	820.3	2211.9	1270.7	1479.2	57.45
24.6	92.0	807.7	2260.2	1273.8	1506.0	56.36
24.6	94.0	795.4	2308.5	1275.9	1531.8	55.27
24.5	96.0	783.5	2356.7	1277.1	1556.6	54.19
24.5	98.0	771.9	2404.8	1277.3	1580.3	53.12
24.5	100.0	760.6	2452.9	1276.6	1602.8	52.04

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Spannung: 30 V

nl=1988.0U/min
ns=67.2U/min/V

Io=4.1A
kn=-11.43U/min/A

kM=17.52Ncm/A

Spannung [V]	Strom [A]	Drehzahl [U/min]	Pin [W]	Pout [W]	Drehmoment [Ncm]	Wirkungsgrad [%]
30.2	10.0	1980.4	301.8	244.5	117.9	81.00
30.2	12.0	1946.6	362.1	299.2	146.8	82.63
30.2	14.0	1913.5	422.3	353.8	176.6	83.78
30.2	16.0	1881.0	482.5	408.2	207.2	84.60
30.1	18.0	1849.1	542.6	462.2	238.7	85.18
30.1	20.0	1817.9	602.7	515.7	270.9	85.57
30.1	22.0	1787.3	662.8	568.7	303.9	85.80
30.1	24.0	1757.2	722.8	621.0	337.5	85.91
30.1	26.0	1727.8	782.8	672.5	371.7	85.91
30.1	28.0	1699.0	842.8	723.2	406.5	85.81
30.1	30.0	1670.7	902.7	772.9	441.8	85.62
30.1	32.0	1643.1	962.6	821.6	477.5	85.36
30.1	34.0	1615.9	1022.4	869.3	513.7	85.03
30.1	36.0	1589.3	1082.2	915.9	550.3	84.63
30.1	38.0	1563.3	1141.9	961.2	587.2	84.17
30.0	40.0	1537.7	1201.7	1005.4	624.3	83.66
30.0	42.0	1512.7	1261.4	1048.2	661.7	83.10
30.0	44.0	1488.2	1321.0	1089.8	699.3	82.50
30.0	46.0	1464.2	1380.6	1130.0	737.0	81.85
30.0	48.0	1440.7	1440.2	1168.8	774.7	81.16
30.0	50.0	1417.6	1499.7	1206.2	812.5	80.43
30.0	52.0	1395.0	1559.2	1242.2	850.3	79.67
30.0	54.0	1372.8	1618.6	1276.7	888.1	78.87
30.0	56.0	1351.1	1678.1	1309.7	925.7	78.05
30.0	58.0	1329.8	1737.4	1341.2	963.1	77.20
29.9	60.0	1309.0	1796.8	1371.2	1000.3	76.32
29.9	62.0	1288.5	1856.1	1399.7	1037.3	75.41
29.9	64.0	1268.5	1915.4	1426.6	1074.0	74.48
29.9	66.0	1248.8	1974.6	1452.0	1110.3	73.53
29.9	68.0	1229.6	2033.8	1475.8	1146.2	72.57
29.9	70.0	1210.7	2092.9	1498.1	1181.6	71.58
29.9	72.0	1192.1	2152.0	1518.7	1216.6	70.57
29.9	74.0	1173.9	2211.1	1537.8	1251.0	69.55

29.9	76.0	1156.0	2270.1	1555.3	1284.8	68.51
29.9	78.0	1138.5	2329.1	1571.3	1317.9	67.46
29.9	80.0	1121.3	2388.1	1585.6	1350.4	66.40
29.8	82.0	1104.4	2447.0	1598.4	1382.1	65.32
29.8	84.0	1087.8	2505.9	1609.5	1413.0	64.23
29.8	86.0	1071.5	2564.7	1619.1	1443.0	63.13
29.8	88.0	1055.4	2623.5	1627.1	1472.2	62.02
29.8	90.0	1039.7	2682.3	1633.5	1500.4	60.90
29.8	92.0	1024.1	2741.0	1638.4	1527.7	59.77
29.8	94.0	1008.9	2799.7	1641.6	1553.9	58.63
29.8	96.0	993.8	2858.4	1643.3	1579.0	57.49
29.8	98.0	979.0	2917.0	1643.4	1603.0	56.34
29.8	100.0	964.4	2975.6	1641.9	1625.8	55.18

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Spannung: 35 V

nl=2292.5U/min
ns=66.9U/min/VIo=4.3A
kn=-12.62U/min/A

kM=17.92Ncm/A

Spannung [V]	Strom [A]	Drehzahl [U/min]	Pin [W]	Pout [W]	Drehmoment [Ncm]	Wirkungsgrad [%]
35.1	10.0	2293.3	350.6	276.2	115.0	78.78
35.1	12.0	2255.4	420.6	340.4	144.1	80.93
35.0	14.0	2218.4	490.6	404.6	174.2	82.47
35.0	16.0	2182.1	560.5	468.6	205.1	83.60
35.0	18.0	2146.5	630.4	532.3	236.8	84.44
35.0	20.0	2111.7	700.3	595.6	269.4	85.06
35.0	22.0	2077.6	770.1	658.4	302.6	85.49
35.0	24.0	2044.1	839.9	720.4	336.5	85.78
35.0	26.0	2011.4	909.6	781.7	371.1	85.94
35.0	28.0	1979.4	979.3	842.2	406.3	85.99
35.0	30.0	1948.0	1049.0	901.7	442.0	85.96
35.0	32.0	1917.3	1118.6	960.1	478.2	85.83
34.9	34.0	1887.2	1188.2	1017.5	514.8	85.63
34.9	36.0	1857.8	1257.8	1073.7	551.9	85.37
34.9	38.0	1829.0	1327.3	1128.7	589.3	85.04
34.9	40.0	1800.8	1396.8	1182.3	627.0	84.65
34.9	42.0	1773.1	1466.2	1234.7	664.9	84.21
34.9	44.0	1746.1	1535.6	1285.6	703.1	83.72
34.9	46.0	1719.6	1604.9	1335.1	741.4	83.19
34.9	48.0	1693.7	1674.3	1383.1	779.8	82.61
34.9	50.0	1668.3	1743.6	1429.6	818.3	82.00
34.9	52.0	1643.4	1812.8	1474.6	856.9	81.34
34.9	54.0	1619.0	1882.0	1518.0	895.3	80.66
34.8	56.0	1595.2	1951.2	1559.8	933.7	79.94
34.8	58.0	1571.8	2020.3	1599.9	972.0	79.19
34.8	60.0	1548.9	2089.4	1638.4	1010.1	78.41
34.8	62.0	1526.5	2158.5	1675.2	1048.0	77.61
34.8	64.0	1504.5	2227.5	1710.3	1085.6	76.78
34.8	66.0	1483.0	2296.5	1743.8	1122.9	75.93
34.8	68.0	1461.8	2365.4	1775.4	1159.8	75.06
34.8	70.0	1441.1	2434.3	1805.4	1196.3	74.16
34.8	72.0	1420.8	2503.2	1833.6	1232.3	73.25
34.8	74.0	1400.9	2572.0	1860.0	1267.9	72.32

34.7	76.0	1381.4	2640.8	1884.6	1302.8	71.37
34.7	78.0	1362.2	2709.5	1907.5	1337.2	70.40
34.7	80.0	1343.3	2778.3	1928.5	1370.9	69.42
34.7	82.0	1324.8	2846.9	1947.8	1404.0	68.42
34.7	84.0	1306.6	2915.6	1965.2	1436.2	67.40
34.7	86.0	1288.8	2984.2	1980.8	1467.7	66.38
34.7	88.0	1271.2	3052.7	1994.6	1498.3	65.34
34.7	90.0	1253.9	3121.3	2006.5	1528.1	64.28
34.7	92.0	1236.9	3189.7	2016.5	1556.9	63.22
34.7	94.0	1220.1	3258.2	2024.7	1584.7	62.14
34.7	96.0	1203.6	3326.6	2031.1	1611.5	61.06
34.6	98.0	1187.3	3395.0	2035.5	1637.2	59.96
34.6	100.0	1171.2	3463.3	2038.1	1661.7	58.85

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Spannung: 40 V

$n_l=2596.2\text{U/min}$
 $n_s=66.4\text{U/min/V}$

$I_o=4.5\text{A}$
 $k_n=-13.64\text{U/min/A}$

$k_M=18.29\text{Ncm/A}$

Spannung [V]	Strom [A]	Drehzahl [U/min]	Pin [W]	Pout [W]	Drehmoment [Ncm]	Wirkungsgrad [%]
40.0	10.0	2600.8	400.1	317.2	116.5	79.29
40.0	12.0	2559.9	480.0	390.6	145.7	81.37
40.0	14.0	2519.8	559.9	464.1	175.9	82.90
40.0	16.0	2480.6	639.7	537.7	207.0	84.05
40.0	18.0	2442.1	719.5	611.1	239.0	84.93
40.0	20.0	2404.4	799.2	684.2	271.7	85.61
40.0	22.0	2367.4	878.9	756.9	305.3	86.11
39.9	24.0	2331.2	958.6	829.0	339.6	86.48
39.9	26.0	2295.8	1038.2	900.4	374.5	86.72
39.9	28.0	2261.1	1117.8	971.0	410.1	86.86
39.9	30.0	2227.1	1197.4	1040.7	446.2	86.91
39.9	32.0	2193.8	1276.9	1109.4	482.9	86.88
39.9	34.0	2161.2	1356.4	1177.0	520.1	86.78
39.9	36.0	2129.2	1435.8	1243.4	557.7	86.60
39.9	38.0	2098.0	1515.2	1308.6	595.6	86.36
39.9	40.0	2067.3	1594.5	1372.4	633.9	86.07
39.9	42.0	2037.4	1673.8	1434.9	672.5	85.72
39.8	44.0	2008.0	1753.1	1495.8	711.4	85.32
39.8	46.0	1979.3	1832.3	1555.3	750.4	84.88
39.8	48.0	1951.2	1911.5	1613.2	789.5	84.39
39.8	50.0	1923.6	1990.7	1669.5	828.8	83.87
39.8	52.0	1896.7	2069.8	1724.2	868.1	83.30
39.8	54.0	1870.2	2148.9	1777.1	907.4	82.70
39.8	56.0	1844.4	2227.9	1828.4	946.6	82.07
39.8	58.0	1819.1	2306.9	1877.8	985.8	81.40
39.8	60.0	1794.3	2385.9	1925.5	1024.8	80.71
39.8	62.0	1770.0	2464.8	1971.4	1063.6	79.98
39.7	64.0	1746.2	2543.6	2015.4	1102.1	79.23
39.7	66.0	1722.9	2622.5	2057.5	1140.4	78.46
39.7	68.0	1700.1	2701.3	2097.8	1178.3	77.66
39.7	70.0	1677.7	2780.0	2136.1	1215.9	76.84
39.7	72.0	1655.8	2858.8	2172.5	1252.9	76.00
39.7	74.0	1634.3	2937.4	2207.0	1289.6	75.13

39.7	76.0	1613.2	3016.1	2239.5	1325.6	74.25
39.7	78.0	1592.6	3094.7	2270.0	1361.1	73.35
39.7	80.0	1572.3	3173.2	2298.5	1396.0	72.43
39.7	82.0	1552.4	3251.8	2325.0	1430.2	71.50
39.6	84.0	1532.9	3330.2	2349.5	1463.6	70.55
39.6	86.0	1513.8	3408.7	2372.0	1496.3	69.59
39.6	88.0	1495.0	3487.1	2392.4	1528.2	68.61
39.6	90.0	1476.5	3565.4	2410.7	1559.1	67.61
39.6	92.0	1458.3	3643.8	2427.0	1589.2	66.61
39.6	94.0	1440.5	3722.1	2441.2	1618.3	65.59
39.6	96.0	1422.9	3800.3	2453.2	1646.4	64.55
39.6	98.0	1405.7	3878.5	2463.2	1673.4	63.51
39.6	100.0	1388.7	3956.7	2471.1	1699.3	62.45

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Spannung: 45 V

$n_l=2909.6\text{U/min}$
 $n_s=66.0\text{U/min/V}$

$I_o=4.7\text{A}$
 $k_n=-14.78\text{U/min/A}$

$k_M=18.60\text{Ncm/A}$

Spannung [V]	Strom [A]	Drehzahl [U/min]	Pin [W]	Pout [W]	Drehmoment [Ncm]	Wirkungsgrad [%]
45.1	10.0	2917.5	450.9	364.4	119.3	80.82
45.1	12.0	2872.8	540.9	447.2	148.6	82.68
45.1	14.0	2829.1	630.9	530.3	179.0	84.06
45.1	16.0	2786.2	720.9	613.6	210.3	85.12
45.0	18.0	2744.3	810.9	696.9	242.5	85.94
45.0	20.0	2703.2	900.8	779.9	275.5	86.58
45.0	22.0	2663.0	990.6	862.5	309.3	87.07
45.0	24.0	2623.6	1080.5	944.7	343.8	87.43
45.0	26.0	2585.0	1170.3	1026.1	379.1	87.68
45.0	28.0	2547.3	1260.0	1106.9	414.9	87.84
45.0	30.0	2510.3	1349.7	1186.7	451.4	87.92
45.0	32.0	2474.1	1439.4	1265.5	488.4	87.92
45.0	34.0	2438.7	1529.1	1343.2	525.9	87.84
45.0	36.0	2404.1	1618.7	1419.7	563.9	87.71
45.0	38.0	2370.2	1708.3	1494.9	602.3	87.51
44.9	40.0	2337.0	1797.8	1568.7	641.0	87.26
44.9	42.0	2304.5	1887.3	1641.1	680.1	86.96
44.9	44.0	2272.7	1976.7	1712.0	719.3	86.61
44.9	46.0	2241.6	2066.2	1781.3	758.9	86.21
44.9	48.0	2211.2	2155.5	1849.0	798.5	85.78
44.9	50.0	2181.4	2244.9	1915.0	838.3	85.30
44.9	52.0	2152.3	2334.2	1979.2	878.2	84.79
44.9	54.0	2123.7	2423.5	2041.7	918.0	84.25
44.9	56.0	2095.8	2512.7	2102.3	957.9	83.67
44.9	58.0	2068.5	2601.9	2161.0	997.6	83.05
44.9	60.0	2041.8	2691.1	2217.8	1037.3	82.41
44.8	62.0	2015.6	2780.2	2272.7	1076.8	81.75
44.8	64.0	1989.9	2869.3	2325.6	1116.0	81.05
44.8	66.0	1964.8	2958.3	2376.5	1155.0	80.33
44.8	68.0	1940.3	3047.3	2425.3	1193.6	79.59
44.8	70.0	1916.2	3136.3	2472.1	1231.9	78.82
44.8	72.0	1892.6	3225.2	2516.8	1269.8	78.03
44.8	74.0	1869.5	3314.1	2559.3	1307.3	77.22

44.8	76.0	1846.9	3403.0	2599.7	1344.2	76.40
44.8	78.0	1824.7	3491.8	2638.0	1380.5	75.55
44.8	80.0	1802.9	3580.6	2674.0	1416.3	74.68
44.7	82.0	1781.6	3669.4	2707.9	1451.4	73.80
44.7	84.0	1760.7	3758.1	2739.5	1485.8	72.90
44.7	86.0	1740.1	3846.7	2768.9	1519.5	71.98
44.7	88.0	1720.0	3935.4	2795.9	1552.3	71.05
44.7	90.0	1700.1	4024.0	2820.7	1584.3	70.10
44.7	92.0	1680.7	4112.5	2843.2	1615.5	69.14
44.7	94.0	1661.6	4201.1	2863.4	1645.6	68.16
44.7	96.0	1642.7	4289.5	2881.2	1674.8	67.17
44.7	98.0	1624.2	4378.0	2896.6	1703.0	66.16
44.7	100.0	1606.0	4466.4	2909.6	1730.1	65.14

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Spannung: 50 V

$n_l=3215.5\text{U/min}$
 $n_s=65.8\text{U/min/V}$

$I_o=4.8\text{A}$
 $k_n=-16.00\text{U/min/A}$

$k_M=18.79\text{Ncm/A}$

Spannung [V]	Strom [A]	Drehzahl [U/min]	Pin [W]	Pout [W]	Drehmoment [Ncm]	Wirkungsgrad [%]
50.1	10.0	3234.4	500.6	385.4	113.8	76.99
50.0	12.0	3185.4	600.6	477.9	143.3	79.58
50.0	14.0	3137.5	700.5	570.9	173.8	81.50
50.0	16.0	3090.6	800.4	664.1	205.2	82.97
50.0	18.0	3044.6	900.3	757.3	237.5	84.12
50.0	20.0	2999.7	1000.1	850.4	270.7	85.02
50.0	22.0	2955.7	1099.9	943.1	304.7	85.74
50.0	24.0	2912.7	1199.7	1035.3	339.4	86.29
50.0	26.0	2870.6	1299.4	1126.8	374.8	86.72
50.0	28.0	2829.4	1399.1	1217.6	410.9	87.03
50.0	30.0	2789.2	1498.7	1307.4	447.6	87.24
49.9	32.0	2749.8	1598.3	1396.2	484.9	87.36
49.9	34.0	2711.2	1697.8	1483.9	522.6	87.40
49.9	36.0	2673.5	1797.3	1570.3	560.9	87.37
49.9	38.0	2636.7	1896.8	1655.3	599.5	87.27
49.9	40.0	2600.6	1996.2	1738.9	638.5	87.11
49.9	42.0	2565.4	2095.6	1821.0	677.8	86.90
49.9	44.0	2531.0	2195.0	1901.5	717.4	86.63
49.9	46.0	2497.3	2294.3	1980.4	757.3	86.32
49.9	48.0	2464.3	2393.5	2057.5	797.3	85.96
49.9	50.0	2432.1	2492.7	2132.8	837.4	85.56
49.8	52.0	2400.6	2591.9	2206.2	877.6	85.12
49.8	54.0	2369.8	2691.1	2277.8	917.8	84.64
49.8	56.0	2339.7	2790.2	2347.4	958.1	84.13
49.8	58.0	2310.3	2889.2	2415.0	998.2	83.59
49.8	60.0	2281.5	2988.2	2480.6	1038.3	83.01
49.8	62.0	2253.3	3087.2	2544.1	1078.1	82.41
49.8	64.0	2225.8	3186.2	2605.5	1117.8	81.77
49.8	66.0	2198.9	3285.1	2664.7	1157.2	81.12
49.8	68.0	2172.5	3383.9	2721.7	1196.4	80.43
49.8	70.0	2146.7	3482.7	2776.6	1235.1	79.72
49.7	72.0	2121.5	3581.5	2829.1	1273.5	78.99
49.7	74.0	2096.7	3680.2	2879.4	1311.4	78.24

49.7	76.0	2072.6	3778.9	2927.4	1348.8	77.47
49.7	78.0	2048.9	3877.6	2973.1	1385.7	76.67
49.7	80.0	2025.6	3976.2	3016.3	1422.0	75.86
49.7	82.0	2002.9	4074.8	3057.2	1457.6	75.03
49.7	84.0	1980.6	4173.3	3095.7	1492.6	74.18
49.7	86.0	1958.7	4271.8	3131.7	1526.8	73.31
49.7	88.0	1937.3	4370.2	3165.3	1560.2	72.43
49.7	90.0	1916.3	4468.7	3196.3	1592.8	71.53
49.6	92.0	1895.6	4567.0	3224.8	1624.5	70.61
49.6	94.0	1875.3	4665.4	3250.8	1655.3	69.68
49.6	96.0	1855.4	4763.6	3274.1	1685.1	68.73
49.6	98.0	1835.8	4861.9	3294.9	1713.9	67.77
49.6	100.0	1816.5	4960.1	3313.0	1741.6	66.79

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Spannung: 55 V

nl=3516.2U/min
ns=65.5U/min/VIo=4.9A
kn=-17.10U/min/A

kM=18.95Ncm/A

Spannung [V]	Strom [A]	Drehzahl [U/min]	Pin [W]	Pout [W]	Drehmoment [Ncm]	Wirkungsgrad [%]
55.0	10.0	3542.5	550.1	412.5	111.2	74.98
55.0	12.0	3490.0	660.0	513.7	140.6	77.83
55.0	14.0	3438.5	769.9	615.5	170.9	79.95
55.0	16.0	3388.2	879.7	717.8	202.3	81.59
55.0	18.0	3338.9	989.5	820.2	234.6	82.89
55.0	20.0	3290.7	1099.3	922.7	267.8	83.94
55.0	22.0	3243.5	1209.0	1024.9	301.8	84.78
54.9	24.0	3197.4	1318.6	1126.8	336.5	85.45
54.9	26.0	3152.2	1428.3	1228.1	372.1	85.99
54.9	28.0	3108.1	1537.8	1328.8	408.2	86.40
54.9	30.0	3064.9	1647.4	1428.5	445.1	86.71
54.9	32.0	3022.7	1756.9	1527.3	482.5	86.93
54.9	34.0	2981.4	1866.4	1624.9	520.5	87.06
54.9	36.0	2941.0	1975.8	1721.3	558.9	87.12
54.9	38.0	2901.6	2085.2	1816.4	597.8	87.11
54.9	40.0	2863.0	2194.5	1910.0	637.1	87.03
54.9	42.0	2825.3	2303.8	2002.0	676.7	86.90
54.8	44.0	2788.5	2413.1	2092.5	716.6	86.71
54.8	46.0	2752.4	2522.3	2181.1	756.7	86.47
54.8	48.0	2717.2	2631.5	2268.0	797.1	86.19
54.8	50.0	2682.8	2740.6	2353.1	837.6	85.86
54.8	52.0	2649.2	2849.8	2436.2	878.1	85.49
54.8	54.0	2616.3	2958.8	2517.3	918.8	85.08
54.8	56.0	2584.2	3067.8	2596.3	959.4	84.63
54.8	58.0	2552.8	3176.8	2673.2	1000.0	84.15
54.8	60.0	2522.1	3285.8	2748.0	1040.4	83.63
54.8	62.0	2492.1	3394.7	2820.6	1080.8	83.09
54.7	64.0	2462.8	3503.6	2890.9	1120.9	82.51
54.7	66.0	2434.2	3612.4	2958.9	1160.8	81.91
54.7	68.0	2406.1	3721.2	3024.6	1200.4	81.28
54.7	70.0	2378.7	3829.9	3087.9	1239.6	80.63
54.7	72.0	2352.0	3938.6	3148.8	1278.5	79.95
54.7	74.0	2325.8	4047.3	3207.3	1316.9	79.24

54.7	76.0	2300.1	4155.9	3263.2	1354.8	78.52
54.7	78.0	2275.0	4264.5	3316.7	1392.1	77.77
54.7	80.0	2250.5	4373.0	3367.6	1428.9	77.01
54.7	82.0	2226.5	4481.6	3415.9	1465.1	76.22
54.6	84.0	2202.9	4590.0	3461.5	1500.5	75.41
54.6	86.0	2179.9	4698.4	3504.6	1535.2	74.59
54.6	88.0	2157.3	4806.8	3544.9	1569.2	73.75
54.6	90.0	2135.1	4915.2	3582.5	1602.3	72.89
54.6	92.0	2113.4	5023.5	3617.4	1634.5	72.01
54.6	94.0	2092.1	5131.8	3649.5	1665.7	71.12
54.6	96.0	2071.2	5240.0	3678.7	1696.0	70.20
54.6	98.0	2050.7	5348.2	3705.1	1725.3	69.28
54.6	100.0	2030.5	5456.3	3728.6	1753.5	68.34