

Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B8 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **30.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 1,427.3 [RPM] lo: 3.8 [A] kv: 48.1 [RPM/V] kn: -4.03 [RPM/A] kT: 22.45 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
30.0	15.0	1,393.4	450.0	367.3	251.7	81.62
30.0	18.0	1,376.5	540.0	459.8	319.0	85.15
30.0	21.0	1,360.1	630.0	550.3	386.4	87.36
30.0	24.0	1,344.0	720.0	638.6	453.7	88.69
30.0	27.0	1,328.4	810.0	724.9	521.1	89.49
30.0	30.0	1,313.1	900.0	809.1	588.4	89.90
29.9	33.0	1,298.2	986.7	891.4	655.7	90.34
29.9	36.0	1,283.6	1,076.4	972.0	723.1	90.30
29.9	39.0	1,269.3	1,166.1	1,050.6	790.4	90.10
29.9	42.0	1,255.4	1,255.8	1,127.7	857.8	89.80
29.9	45.0	1,241.7	1,345.5	1,202.9	925.1	89.40
29.9	48.0	1,228.2	1,435.2	1,276.5	992.5	88.94
29.9	51.0	1,215.0	1,524.9	1,348.4	1,059.8	88.43
29.9	54.0	1,202.0	1,614.6	1,418.8	1,127.2	87.88
29.9	57.0	1,189.2	1,704.3	1,487.5	1,194.5	87.28
29.9	60.0	1,176.6	1,794.0	1,554.8	1,261.9	86.67
29.9	63.0	1,164.1	1,883.7	1,620.4	1,329.2	86.02
29.9	66.0	1,151.8	1,973.4	1,684.5	1,396.6	85.36
29.9	69.0	1,139.6	2,063.1	1,747.0	1,463.9	84.68
29.9	72.0	1,127.5	2,152.8	1,808.0	1,531.3	83.99
29.9	75.0	1,115.5	2,242.5	1,867.4	1,598.6	83.27
29.9	78.0	1,103.6	2,332.2	1,925.4	1,666.0	82.56
29.9	81.0	1,091.7	2,421.9	1,981.6	1,733.3	81.82
29.9	84.0	1,079.8	2,511.6	2,036.2	1,800.7	81.07
29.9	87.0	1,068.0	2,601.3	2,089.2	1,868.0	80.31
29.9	90.0	1,056.1	2,691.0	2,140.4	1,935.4	79.54

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
29.8	93.0	1,044.2	2,771.4	2,189.9	2,002.7	79.02
29.8	96.0	1,032.3	2,860.8	2,237.8	2,070.1	78.22
29.8	99.0	1,020.3	2,950.2	2,283.7	2,137.4	77.41
29.8	102.0	1,008.2	3,039.6	2,327.7	2,204.7	76.58
29.8	105.0	996.0	3,129.0	2,369.8	2,272.1	75.74
29.8	108.0	983.7	3,218.4	2,409.9	2,339.4	74.88
29.8	111.0	971.2	3,307.8	2,447.8	2,406.8	74.00
29.8	114.0	958.6	3,397.2	2,483.6	2,474.1	73.11
29.8	117.0	945.7	3,486.6	2,516.9	2,541.5	72.19
29.8	120.0	932.7	3,576.0	2,548.1	2,608.8	71.25
29.8	123.0	919.5	3,665.4	2,576.9	2,676.2	70.30
29.8	126.0	906.0	3,754.8	2,602.9	2,743.5	69.32
29.8	129.0	892.3	3,844.2	2,626.5	2,810.9	68.32
29.8	132.0	878.3	3,933.6	2,647.2	2,878.2	67.30
29.8	135.0	864.0	4,023.0	2,665.1	2,945.6	66.25
29.8	138.0	849.4	4,112.4	2,679.9	3,012.9	65.17
29.8	141.0	834.4	4,201.8	2,691.5	3,080.3	64.06
29.8	144.0	819.1	4,291.2	2,699.9	3,147.6	62.92
29.8	147.0	803.4	4,380.6	2,704.8	3,215.0	61.75
29.8	150.0	787.4	4,470.0	2,706.5	3,282.3	60.55
29.8	153.0	770.9	4,559.4	2,704.2	3,349.7	59.31
29.7	156.0	754.0	4,633.2	2,698.0	3,417.0	58.23
29.7	159.0	736.6	4,722.3	2,687.7	3,484.4	56.92
29.7	162.0	718.8	4,811.4	2,673.5	3,551.7	55.57
29.7	165.0	700.5	4,900.5	2,654.8	3,619.1	54.17
29.7	168.0	681.7	4,989.6	2,631.6	3,686.4	52.74
29.7	171.0	662.4	5,078.7	2,603.9	3,753.8	51.27
29.7	174.0	642.5	5,167.8	2,570.9	3,821.1	49.75
29.7	177.0	622.0	5,256.9	2,532.7	3,888.4	48.18
29.7	180.0	601.0	5,346.0	2,489.6	3,955.8	46.57

nl = rpm with no load

lo = current with no load

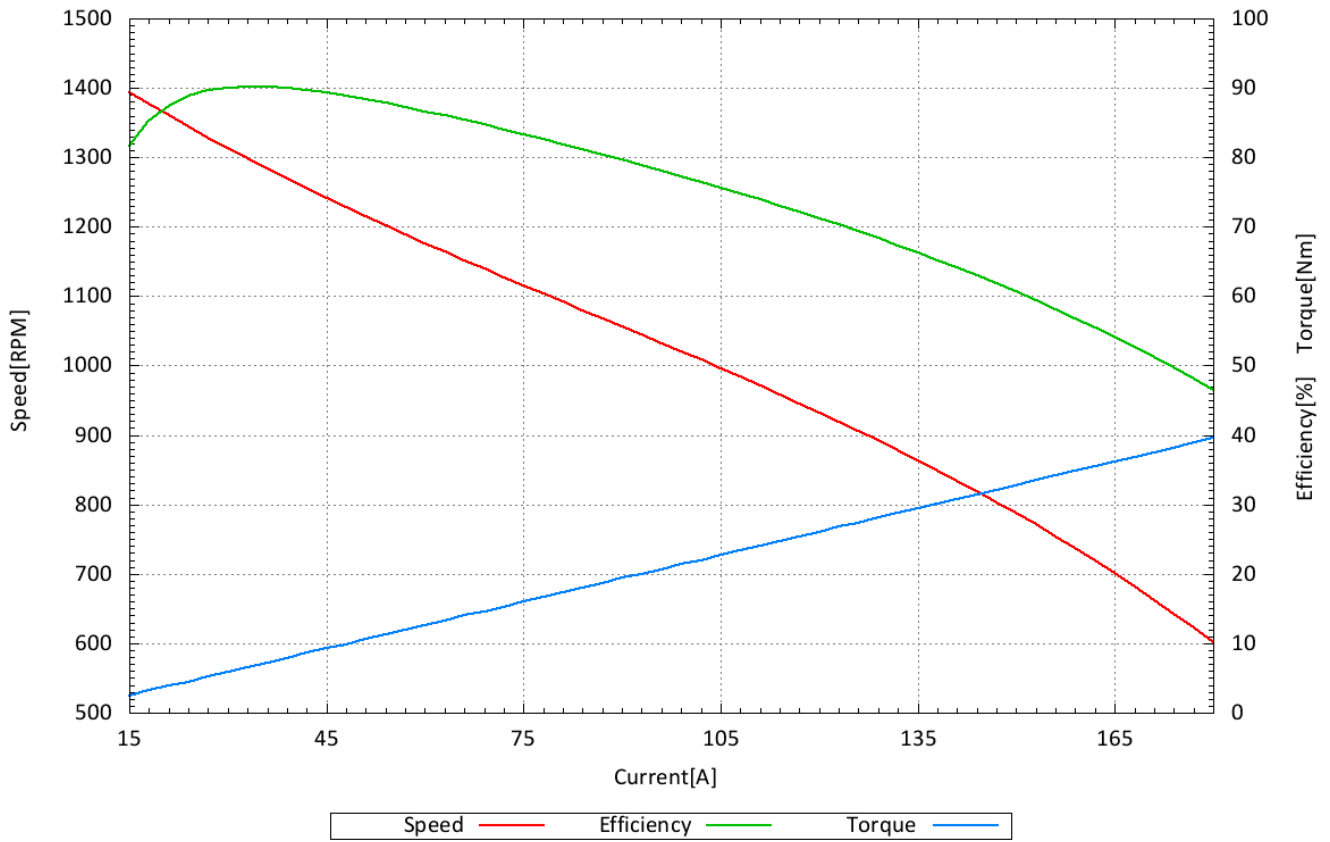
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_50_B8_P30_30V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B8 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **40.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 1,901.3 [RPM] lo: 4.1 [A] kv: 48.1 [RPM/V] kn: -5.37 [RPM/A] kT: 22.45 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
40.0	15.0	1,865.5	600.0	476.5	243.9	79.41
40.0	18.0	1,844.4	720.0	601.3	311.3	83.51
40.0	21.0	1,823.8	840.0	723.1	378.6	86.08
40.0	24.0	1,803.8	960.0	842.5	446.0	87.76
40.0	27.0	1,784.2	1,080.0	959.1	513.3	88.80
40.0	30.0	1,765.1	1,200.0	1,073.4	580.7	89.45
39.9	33.0	1,746.5	1,316.7	1,185.1	648.0	90.01
39.9	36.0	1,728.3	1,436.4	1,294.8	715.4	90.14
39.9	39.0	1,710.4	1,556.1	1,401.9	782.7	90.09
39.9	42.0	1,692.9	1,675.8	1,507.1	850.1	89.93
39.9	45.0	1,675.8	1,795.5	1,609.9	917.4	89.67
39.9	48.0	1,659.0	1,915.2	1,710.9	984.8	89.33
39.9	51.0	1,642.5	2,034.9	1,809.6	1,052.1	88.93
39.9	54.0	1,626.2	2,154.6	1,906.5	1,119.5	88.48
39.9	57.0	1,610.2	2,274.3	2,001.2	1,186.8	87.99
39.9	60.0	1,594.5	2,394.0	2,094.2	1,254.2	87.48
39.9	63.0	1,578.9	2,513.7	2,185.0	1,321.5	86.92
39.9	66.0	1,563.5	2,633.4	2,274.0	1,388.9	86.35
39.9	69.0	1,548.3	2,753.1	2,361.0	1,456.2	85.76
39.9	72.0	1,533.2	2,872.8	2,446.2	1,523.6	85.15
39.9	75.0	1,518.1	2,992.5	2,529.1	1,590.9	84.52
39.9	78.0	1,503.2	3,112.2	2,610.4	1,658.3	83.88
39.9	81.0	1,488.4	3,231.9	2,689.6	1,725.6	83.22
39.9	84.0	1,473.5	3,351.6	2,766.5	1,792.9	82.54
39.9	87.0	1,458.7	3,471.3	2,841.7	1,860.3	81.86
39.9	90.0	1,443.9	3,591.0	2,914.6	1,927.6	81.16

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
39.8	93.0	1,429.0	3,701.4	2,985.4	1,995.0	80.66
39.8	96.0	1,414.1	3,820.8	3,053.9	2,062.3	79.93
39.8	99.0	1,399.1	3,940.2	3,120.3	2,129.7	79.19
39.8	102.0	1,384.0	4,059.6	3,184.2	2,197.0	78.44
39.8	105.0	1,368.7	4,179.0	3,245.6	2,264.4	77.66
39.8	108.0	1,353.3	4,298.4	3,304.4	2,331.7	76.88
39.8	111.0	1,337.7	4,417.8	3,360.7	2,399.1	76.07
39.8	114.0	1,321.9	4,537.2	3,414.2	2,466.4	75.25
39.8	117.0	1,305.9	4,656.6	3,465.1	2,533.8	74.41
39.8	120.0	1,289.6	4,776.0	3,512.7	2,601.1	73.55
39.8	123.0	1,273.1	4,895.4	3,557.6	2,668.5	72.67
39.8	126.0	1,256.3	5,014.8	3,599.2	2,735.8	71.77
39.8	129.0	1,239.1	5,134.2	3,637.4	2,803.2	70.85
39.8	132.0	1,221.6	5,253.6	3,672.1	2,870.5	69.90
39.8	135.0	1,203.7	5,373.0	3,703.3	2,937.9	68.92
39.8	138.0	1,185.4	5,492.4	3,730.5	3,005.2	67.92
39.8	141.0	1,166.8	5,611.8	3,754.3	3,072.6	66.90
39.8	144.0	1,147.6	5,731.2	3,773.4	3,139.9	65.84
39.8	147.0	1,128.0	5,850.6	3,788.6	3,207.3	64.76
39.8	150.0	1,107.9	5,970.0	3,799.2	3,274.6	63.64
39.8	153.0	1,087.4	6,089.4	3,805.5	3,341.9	62.49
39.7	156.0	1,066.2	6,193.2	3,806.6	3,409.3	61.46
39.7	159.0	1,044.5	6,312.3	3,802.7	3,476.6	60.24
39.7	162.0	1,022.2	6,431.4	3,793.7	3,544.0	58.99
39.7	165.0	999.4	6,550.5	3,779.5	3,611.3	57.70
39.7	168.0	975.8	6,669.6	3,759.1	3,678.7	56.36
39.7	171.0	951.7	6,788.7	3,733.3	3,746.0	54.99
39.7	174.0	926.8	6,907.8	3,701.1	3,813.4	53.58
39.7	177.0	901.3	7,026.9	3,662.8	3,880.7	52.12
39.7	180.0	875.0	7,146.0	3,617.6	3,948.1	50.62

nl = rpm with no load

lo = current with no load

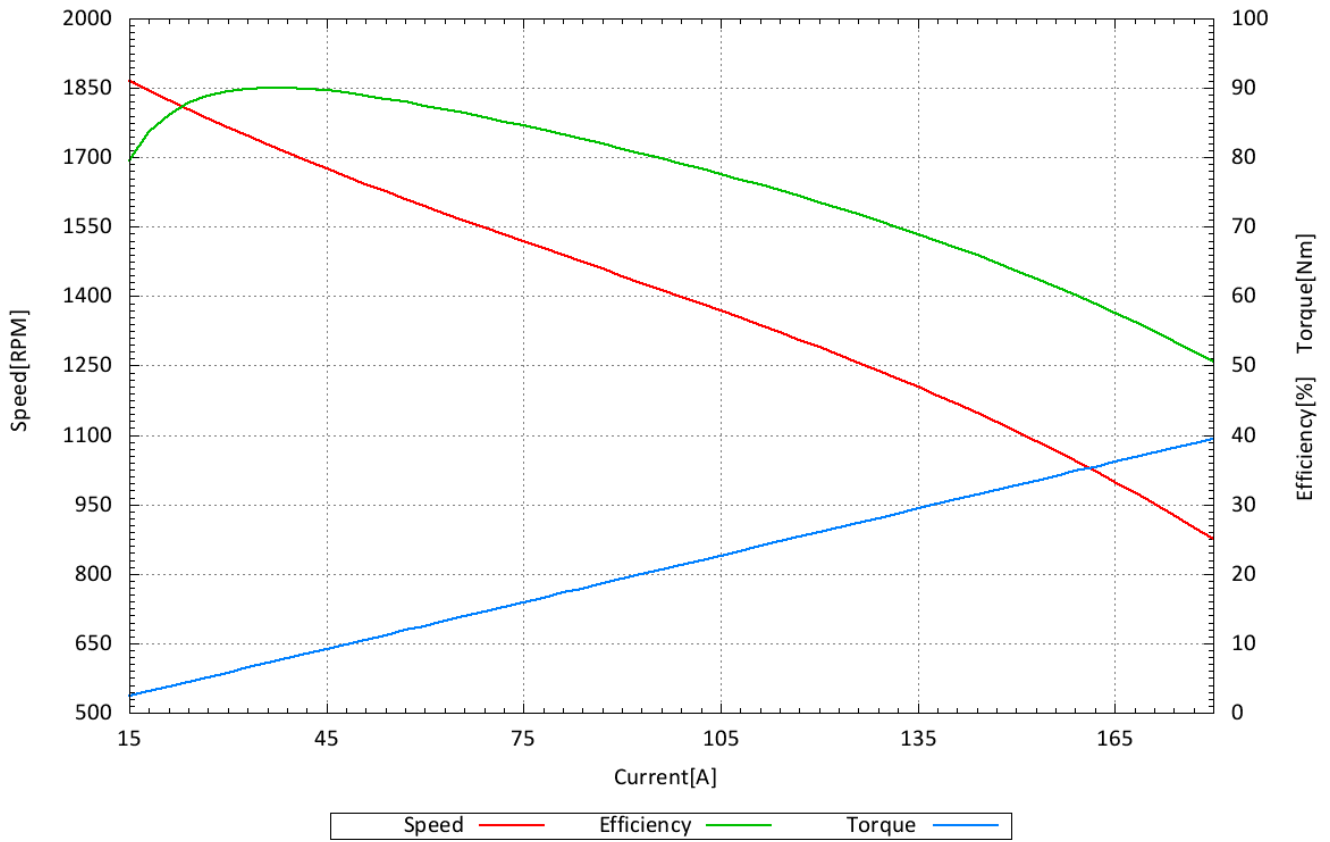
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_50_B8_P30_40V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B8 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **50.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 2,367.4 [RPM] lo: 4.7 [A] kv: 47.9 [RPM/V] kn: -6.04 [RPM/A] kT: 22.59 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
50.0	15.0	2,330.8	750.0	567.7	232.6	75.70
50.0	18.0	2,307.3	900.0	725.6	300.3	80.62
50.0	21.0	2,284.4	1,050.0	880.6	368.1	83.86
50.0	24.0	2,261.9	1,200.0	1,032.5	435.9	86.04
50.0	27.0	2,240.0	1,350.0	1,181.3	503.6	87.50
49.9	30.0	2,218.5	1,497.0	1,327.5	571.4	88.68
49.9	33.0	2,197.5	1,646.7	1,470.9	639.2	89.33
49.9	36.0	2,176.9	1,796.4	1,611.5	706.9	89.71
49.9	39.0	2,156.8	1,946.1	1,749.7	774.7	89.91
49.9	42.0	2,137.0	2,095.8	1,885.4	842.5	89.96
49.9	45.0	2,117.6	2,245.5	2,018.4	910.2	89.89
49.9	48.0	2,098.5	2,395.2	2,149.2	978.0	89.73
49.9	51.0	2,079.8	2,544.9	2,277.7	1,045.8	89.50
49.9	54.0	2,061.4	2,694.6	2,403.7	1,113.5	89.20
49.9	57.0	2,043.3	2,844.3	2,527.7	1,181.3	88.87
49.9	60.0	2,025.4	2,994.0	2,649.3	1,249.1	88.49
49.9	63.0	2,007.8	3,143.7	2,768.7	1,316.8	88.07
49.9	66.0	1,990.4	3,293.4	2,886.0	1,384.6	87.63
49.9	69.0	1,973.3	3,443.1	3,001.3	1,452.4	87.17
49.9	72.0	1,956.3	3,592.8	3,114.1	1,520.1	86.68
49.9	75.0	1,939.5	3,742.5	3,225.1	1,587.9	86.17
49.9	78.0	1,922.9	3,892.2	3,334.0	1,655.7	85.66
49.9	81.0	1,906.4	4,041.9	3,440.6	1,723.4	85.12
49.8	84.0	1,890.0	4,183.2	3,545.1	1,791.2	84.75
49.8	87.0	1,873.7	4,332.6	3,647.4	1,858.9	84.19
49.8	90.0	1,857.4	4,482.0	3,747.6	1,926.7	83.61

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
49.8	93.0	1,841.2	4,631.4	3,845.6	1,994.5	83.03
49.8	96.0	1,825.1	4,780.8	3,941.4	2,062.2	82.44
49.8	99.0	1,808.9	4,930.2	4,034.8	2,130.0	81.84
49.8	102.0	1,792.8	5,079.6	4,126.2	2,197.8	81.23
49.8	105.0	1,776.6	5,229.0	4,214.9	2,265.5	80.61
49.8	108.0	1,760.3	5,378.4	4,301.2	2,333.3	79.97
49.8	111.0	1,744.0	5,527.8	4,385.2	2,401.1	79.33
49.8	114.0	1,727.6	5,677.2	4,466.4	2,468.8	78.67
49.8	117.0	1,711.1	5,826.6	4,545.2	2,536.6	78.01
49.8	120.0	1,694.5	5,976.0	4,621.4	2,604.4	77.33
49.8	123.0	1,677.7	6,125.4	4,694.6	2,672.1	76.64
49.8	126.0	1,660.8	6,274.8	4,765.2	2,739.9	75.94
49.8	129.0	1,643.6	6,424.2	4,832.5	2,807.7	75.22
49.8	132.0	1,626.3	6,573.6	4,897.0	2,875.4	74.49
49.8	135.0	1,608.7	6,723.0	4,958.2	2,943.2	73.75
49.8	138.0	1,590.8	6,872.4	5,016.0	3,011.0	72.99
49.7	141.0	1,572.7	7,007.7	5,070.4	3,078.7	72.35
49.7	144.0	1,554.3	7,156.8	5,121.4	3,146.5	71.56
49.7	147.0	1,535.6	7,305.9	5,168.8	3,214.3	70.75
49.7	150.0	1,516.6	7,455.0	5,212.4	3,282.0	69.92
49.7	153.0	1,497.2	7,604.1	5,252.0	3,349.8	69.07
49.7	156.0	1,477.5	7,753.2	5,287.8	3,417.6	68.20
49.7	159.0	1,457.3	7,902.3	5,318.9	3,485.3	67.31
49.7	162.0	1,436.8	8,051.4	5,346.0	3,553.1	66.40
49.7	165.0	1,415.8	8,200.5	5,368.4	3,620.9	65.46
49.7	168.0	1,394.3	8,349.6	5,385.8	3,688.6	64.50
49.7	171.0	1,372.4	8,498.7	5,398.6	3,756.4	63.52
49.7	174.0	1,350.0	8,647.8	5,406.3	3,824.2	62.52
49.7	177.0	1,327.1	8,796.9	5,408.7	3,891.9	61.48
49.7	180.0	1,303.7	8,946.0	5,405.9	3,959.7	60.43

nl = rpm with no load

lo = current with no load

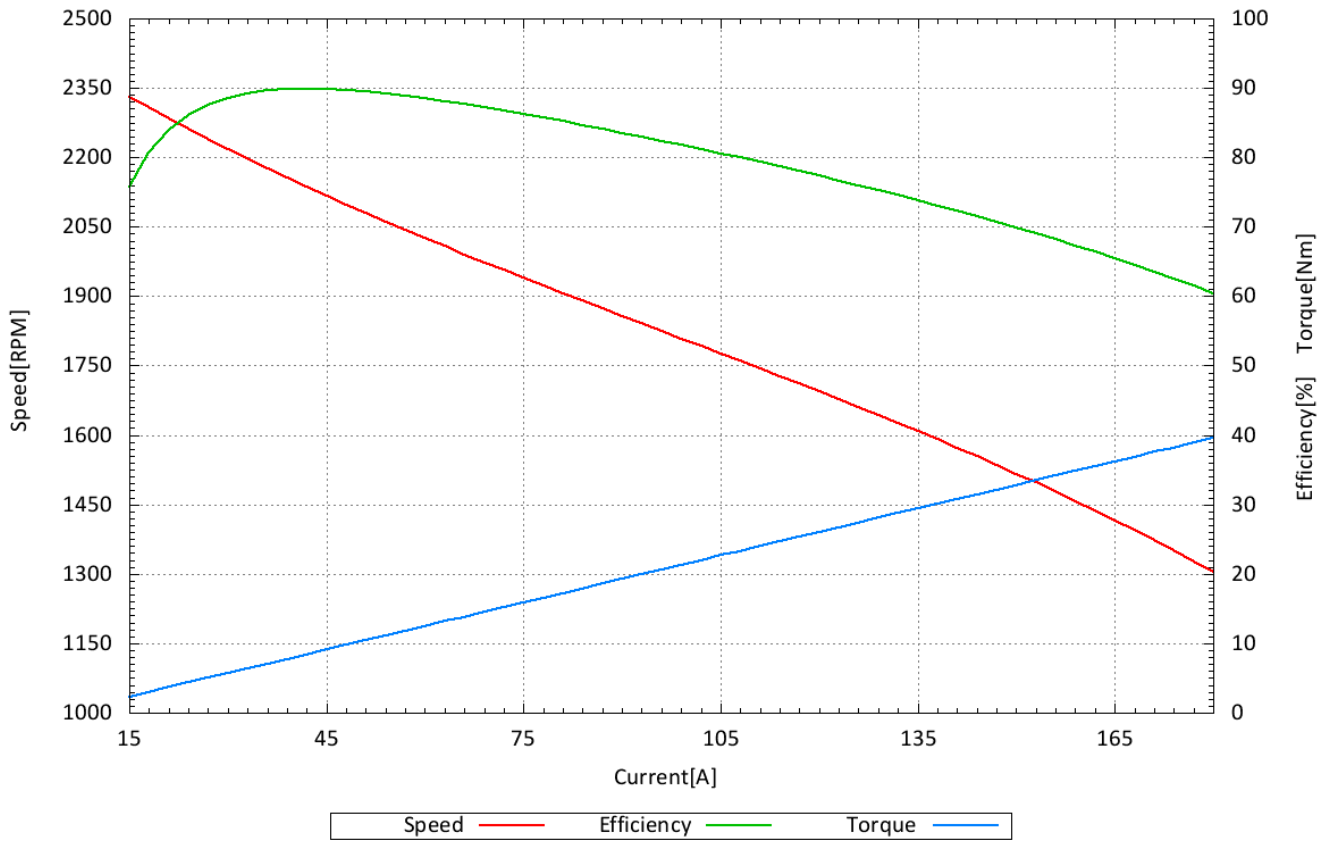
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_50_B8_P30_50V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B8 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **60.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 2,844.0 [RPM] lo: 4.6 [A] kv: 47.9 [RPM/V] kn: -6.80 [RPM/A] kT: 22.57 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
60.0	15.0	2,803.6	900.0	687.0	234.0	76.33
60.0	18.0	2,776.7	1,080.0	877.3	301.7	81.23
60.0	21.0	2,750.5	1,260.0	1,064.0	369.4	84.44
60.0	24.0	2,724.9	1,440.0	1,247.3	437.1	86.62
60.0	27.0	2,699.9	1,620.0	1,427.2	504.8	88.10
59.9	30.0	2,675.4	1,797.0	1,604.0	572.5	89.26
59.9	33.0	2,651.6	1,976.7	1,777.7	640.2	89.93
59.9	36.0	2,628.2	2,156.4	1,948.3	707.9	90.35
59.9	39.0	2,605.3	2,336.1	2,116.0	775.6	90.58
59.9	42.0	2,582.9	2,515.8	2,281.0	843.3	90.67
59.9	45.0	2,561.0	2,695.5	2,443.2	911.0	90.64
59.9	48.0	2,539.4	2,875.2	2,602.9	978.8	90.53
59.9	51.0	2,518.3	3,054.9	2,759.8	1,046.5	90.34
59.9	54.0	2,497.6	3,234.6	2,914.2	1,114.2	90.09
59.9	57.0	2,477.2	3,414.3	3,066.0	1,181.9	89.80
59.9	60.0	2,457.2	3,594.0	3,215.4	1,249.6	89.47
59.9	63.0	2,437.5	3,773.7	3,362.5	1,317.3	89.10
59.9	66.0	2,418.0	3,953.4	3,507.0	1,385.0	88.71
59.9	69.0	2,398.8	4,133.1	3,649.2	1,452.7	88.29
59.9	72.0	2,379.9	4,312.8	3,789.2	1,520.4	87.86
59.9	75.0	2,361.2	4,492.5	3,926.8	1,588.1	87.41
59.9	78.0	2,342.7	4,672.2	4,062.1	1,655.8	86.94
59.9	81.0	2,324.3	4,851.9	4,195.0	1,723.5	86.46
59.9	84.0	2,306.1	5,031.6	4,325.6	1,791.2	85.97
59.9	87.0	2,288.0	5,211.3	4,453.9	1,858.9	85.47
59.8	90.0	2,270.1	5,382.0	4,580.0	1,926.6	85.10

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
59.8	93.0	2,252.2	5,561.4	4,703.6	1,994.3	84.57
59.8	96.0	2,234.3	5,740.8	4,824.6	2,062.0	84.04
59.8	99.0	2,216.5	5,920.2	4,943.3	2,129.7	83.50
59.8	102.0	2,198.7	6,099.6	5,059.5	2,197.4	82.95
59.8	105.0	2,180.9	6,279.0	5,173.1	2,265.1	82.39
59.8	108.0	2,163.0	6,458.4	5,284.0	2,332.8	81.82
59.8	111.0	2,145.1	6,637.8	5,392.3	2,400.5	81.24
59.8	114.0	2,127.1	6,817.2	5,497.9	2,468.2	80.65
59.8	117.0	2,108.9	6,996.6	5,600.4	2,535.9	80.04
59.8	120.0	2,090.7	7,176.0	5,700.3	2,603.6	79.44
59.8	123.0	2,072.3	7,355.4	5,797.0	2,671.3	78.81
59.8	126.0	2,053.7	7,534.8	5,890.6	2,739.0	78.18
59.8	129.0	2,034.9	7,714.2	5,980.9	2,806.7	77.53
59.8	132.0	2,015.9	7,893.6	6,068.0	2,874.4	76.87
59.8	135.0	1,996.6	8,073.0	6,151.4	2,942.1	76.20
59.8	138.0	1,977.1	8,252.4	6,231.5	3,009.8	75.51
59.8	141.0	1,957.2	8,431.8	6,307.6	3,077.5	74.81
59.8	144.0	1,937.0	8,611.2	6,379.8	3,145.2	74.09
59.7	147.0	1,916.5	8,775.9	6,448.1	3,212.9	73.48
59.7	150.0	1,895.7	8,955.0	6,512.6	3,280.6	72.73
59.7	153.0	1,874.4	9,134.1	6,572.3	3,348.3	71.95
59.7	156.0	1,852.7	9,313.2	6,627.5	3,416.0	71.16
59.7	159.0	1,830.6	9,492.3	6,678.3	3,483.7	70.35
59.7	162.0	1,808.0	9,671.4	6,724.0	3,551.4	69.52
59.7	165.0	1,785.0	9,850.5	6,765.0	3,619.1	68.68
59.7	168.0	1,761.4	10,029.6	6,800.6	3,686.9	67.81
59.7	171.0	1,737.3	10,208.7	6,830.7	3,754.6	66.91
59.7	174.0	1,712.7	10,387.8	6,855.4	3,822.3	66.00
59.7	177.0	1,687.4	10,566.9	6,873.8	3,890.0	65.05
59.7	180.0	1,661.6	10,746.0	6,886.5	3,957.7	64.08

nl = rpm with no load

lo = current with no load

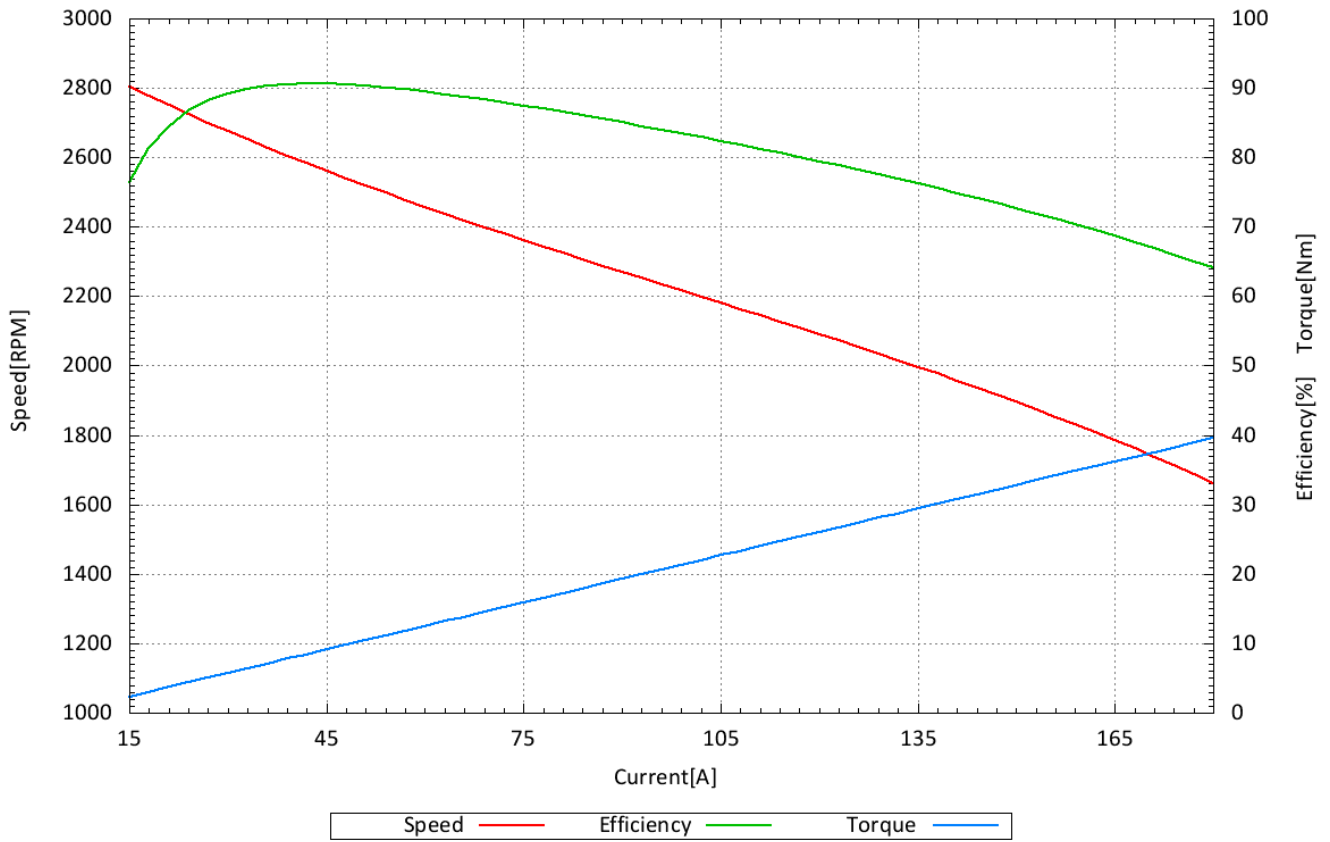
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_50_B8_P30_60V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B8 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **70.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 3,318.8 [RPM] lo: 4.9 [A] kv: 47.9 [RPM/V] kn: -7.54 [RPM/A] kT: 22.60 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
70.0	15.0	3,276.5	1,050.0	786.8	229.3	74.93
70.0	18.0	3,246.5	1,260.0	1,010.1	297.1	80.16
70.0	21.0	3,217.2	1,470.0	1,229.4	364.9	83.63
70.0	24.0	3,188.6	1,680.0	1,444.8	432.7	86.00
70.0	27.0	3,160.6	1,890.0	1,656.5	500.5	87.65
70.0	30.0	3,133.3	2,100.0	1,864.7	568.3	88.80
70.0	33.0	3,106.6	2,310.0	2,069.4	636.1	89.58
70.0	36.0	3,080.5	2,520.0	2,270.7	703.9	90.11
70.0	39.0	3,055.0	2,730.0	2,468.8	771.7	90.43
70.0	42.0	3,030.1	2,940.0	2,663.8	839.5	90.61
70.0	45.0	3,005.6	3,150.0	2,855.7	907.3	90.66
70.0	48.0	2,981.7	3,360.0	3,044.7	975.1	90.62
70.0	51.0	2,958.2	3,570.0	3,230.7	1,042.9	90.50
70.0	54.0	2,935.2	3,780.0	3,414.0	1,110.7	90.32
70.0	57.0	2,912.7	3,990.0	3,594.6	1,178.5	90.09
70.0	60.0	2,890.5	4,200.0	3,772.5	1,246.3	89.82
70.0	63.0	2,868.7	4,410.0	3,947.7	1,314.1	89.52
70.0	66.0	2,847.3	4,620.0	4,120.4	1,381.9	89.19
70.0	69.0	2,826.2	4,830.0	4,290.5	1,449.7	88.83
70.0	72.0	2,805.4	5,040.0	4,458.1	1,517.5	88.45
70.0	75.0	2,784.9	5,250.0	4,623.3	1,585.3	88.06
70.0	78.0	2,764.6	5,460.0	4,785.9	1,653.1	87.65
70.0	81.0	2,744.6	5,670.0	4,946.1	1,720.9	87.23
70.0	84.0	2,724.8	5,880.0	5,103.9	1,788.7	86.80
70.0	87.0	2,705.2	6,090.0	5,259.2	1,856.5	86.36
70.0	90.0	2,685.8	6,300.0	5,412.2	1,924.3	85.91

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
70.0	93.0	2,666.4	6,510.0	5,562.4	1,992.1	85.44
70.0	96.0	2,647.3	6,720.0	5,710.5	2,059.9	84.98
70.0	99.0	2,628.2	6,930.0	5,856.0	2,127.7	84.50
70.0	102.0	2,609.1	7,140.0	5,998.6	2,195.5	84.01
70.0	105.0	2,590.1	7,350.0	6,138.9	2,263.3	83.52
70.0	108.0	2,571.2	7,560.0	6,276.6	2,331.1	83.02
70.0	111.0	2,552.2	7,770.0	6,411.4	2,398.9	82.52
70.0	114.0	2,533.2	7,980.0	6,543.6	2,466.7	82.00
70.0	117.0	2,514.2	8,190.0	6,673.0	2,534.5	81.48
70.0	120.0	2,495.0	8,400.0	6,799.2	2,602.3	80.94
70.0	123.0	2,475.8	8,610.0	6,922.6	2,670.1	80.40
70.0	126.0	2,456.5	8,820.0	7,043.1	2,737.9	79.85
70.0	129.0	2,437.0	9,030.0	7,160.2	2,805.7	79.29
70.0	132.0	2,417.3	9,240.0	7,274.0	2,873.5	78.72
70.0	135.0	2,397.4	9,450.0	7,384.3	2,941.3	78.14
70.0	138.0	2,377.4	9,660.0	7,491.5	3,009.1	77.55
70.0	141.0	2,357.0	9,870.0	7,594.5	3,076.9	76.95
70.0	144.0	2,336.4	10,080.0	7,694.1	3,144.7	76.33
70.0	147.0	2,315.5	10,290.0	7,789.6	3,212.5	75.70
70.0	150.0	2,294.3	10,500.0	7,881.2	3,280.3	75.06
70.0	153.0	2,272.8	10,710.0	7,968.7	3,348.1	74.40
70.0	156.0	2,250.9	10,920.0	8,051.7	3,415.9	73.73
70.0	159.0	2,228.5	11,130.0	8,129.8	3,483.7	73.04
70.0	162.0	2,205.8	11,340.0	8,203.6	3,551.5	72.34
70.0	165.0	2,182.7	11,550.0	8,272.7	3,619.3	71.63
70.0	168.0	2,159.1	11,760.0	8,336.5	3,687.1	70.89
70.0	171.0	2,135.0	11,970.0	8,395.1	3,754.9	70.13
70.0	174.0	2,110.4	12,180.0	8,448.2	3,822.7	69.36
70.0	177.0	2,085.2	12,390.0	8,495.4	3,890.5	68.57
70.0	180.0	2,059.5	12,600.0	8,536.9	3,958.3	67.75

nl = rpm with no load

lo = current with no load

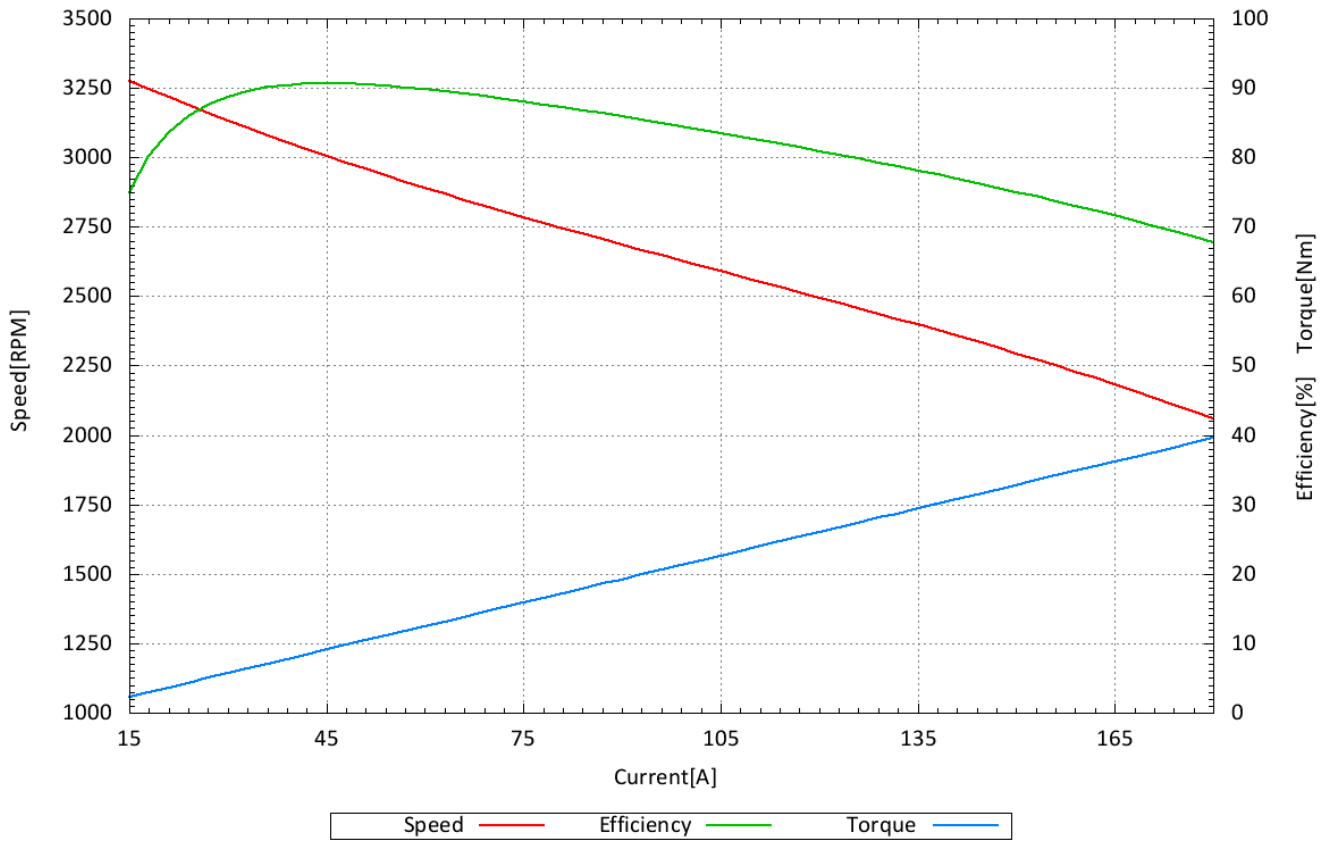
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_50_B8_P30_70V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B8 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **80.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 3,767.0 [RPM] lo: 5.5 [A] kv: 47.7 [RPM/V] kn: -8.13 [RPM/A] kT: 22.72 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
80.0	15.0	3,728.5	1,200.0	839.1	214.9	69.92
80.0	18.0	3,695.6	1,440.0	1,095.6	283.1	76.08
80.0	21.0	3,663.5	1,680.0	1,347.7	351.3	80.22
80.0	24.0	3,632.2	1,920.0	1,595.2	419.4	83.09
80.0	27.0	3,601.8	2,160.0	1,839.1	487.6	85.14
79.9	30.0	3,572.1	2,397.0	2,079.1	555.8	86.74
79.9	33.0	3,543.1	2,636.7	2,315.2	624.0	87.81
79.9	36.0	3,514.9	2,876.4	2,547.5	692.1	88.56
79.9	39.0	3,487.3	3,116.1	2,776.5	760.3	89.10
79.9	42.0	3,460.3	3,355.8	3,002.2	828.5	89.46
79.9	45.0	3,434.0	3,595.5	3,224.2	896.6	89.67
79.9	48.0	3,408.2	3,835.2	3,443.4	964.8	89.78
79.9	51.0	3,383.0	4,074.9	3,659.6	1,033.0	89.81
79.9	54.0	3,358.2	4,314.6	3,872.2	1,101.1	89.75
79.9	57.0	3,334.0	4,554.3	4,082.4	1,169.3	89.64
79.9	60.0	3,310.2	4,794.0	4,289.7	1,237.5	89.48
79.9	63.0	3,286.8	5,033.7	4,493.8	1,305.6	89.27
79.9	66.0	3,263.7	5,273.4	4,695.3	1,373.8	89.04
79.9	69.0	3,241.1	5,513.1	4,894.3	1,442.0	88.77
79.9	72.0	3,218.7	5,752.8	5,090.0	1,510.1	88.48
79.9	75.0	3,196.7	5,992.5	5,283.5	1,578.3	88.17
79.9	78.0	3,174.9	6,232.2	5,474.2	1,646.5	87.84
79.9	81.0	3,153.3	6,471.9	5,662.2	1,714.7	87.49
79.9	84.0	3,131.9	6,711.6	5,847.1	1,782.8	87.12
79.9	87.0	3,110.7	6,951.3	6,029.7	1,851.0	86.74
79.8	90.0	3,089.6	7,182.0	6,209.4	1,919.2	86.46

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
79.8	93.0	3,068.6	7,421.4	6,386.1	1,987.3	86.05
79.8	96.0	3,047.6	7,660.8	6,560.0	2,055.5	85.63
79.8	99.0	3,026.7	7,900.2	6,731.2	2,123.7	85.20
79.8	102.0	3,005.8	8,139.6	6,899.1	2,191.8	84.76
79.8	105.0	2,984.9	8,379.0	7,064.3	2,260.0	84.31
79.8	108.0	2,963.9	8,618.4	7,226.2	2,328.2	83.85
79.8	111.0	2,942.8	8,857.8	7,384.7	2,396.3	83.37
79.8	114.0	2,921.6	9,097.2	7,540.1	2,464.5	82.88
79.8	117.0	2,900.2	9,336.6	7,692.0	2,532.7	82.39
79.8	120.0	2,878.6	9,576.0	7,840.0	2,600.8	81.87
79.8	123.0	2,856.8	9,815.4	7,984.7	2,669.0	81.35
79.8	126.0	2,834.8	10,054.8	8,125.6	2,737.2	80.81
79.8	129.0	2,812.5	10,294.2	8,262.6	2,805.4	80.26
79.8	132.0	2,789.8	10,533.6	8,394.8	2,873.5	79.70
79.8	135.0	2,766.8	10,773.0	8,523.2	2,941.7	79.12
79.8	138.0	2,743.5	11,012.4	8,647.4	3,009.9	78.52
79.8	141.0	2,719.7	11,251.8	8,766.3	3,078.0	77.91
79.8	144.0	2,695.5	11,491.2	8,880.8	3,146.2	77.28
79.8	147.0	2,670.8	11,730.6	8,990.2	3,214.4	76.64
79.7	150.0	2,645.6	11,955.0	9,094.1	3,282.5	76.07
79.7	153.0	2,619.8	12,194.1	9,192.5	3,350.7	75.38
79.7	156.0	2,593.5	12,433.2	9,285.4	3,418.9	74.68
79.7	159.0	2,566.6	12,672.3	9,372.1	3,487.0	73.96
79.7	162.0	2,539.1	12,911.4	9,453.1	3,555.2	73.21
79.7	165.0	2,510.9	13,150.5	9,527.4	3,623.4	72.45
79.7	168.0	2,482.0	13,389.6	9,594.7	3,691.5	71.66
79.7	171.0	2,452.3	13,628.7	9,655.1	3,759.7	70.84
79.7	174.0	2,421.9	13,867.8	9,708.3	3,827.9	70.01
79.7	177.0	2,390.7	14,106.9	9,754.0	3,896.1	69.14
79.7	180.0	2,358.7	14,346.0	9,791.7	3,964.2	68.25

nl = rpm with no load

lo = current with no load

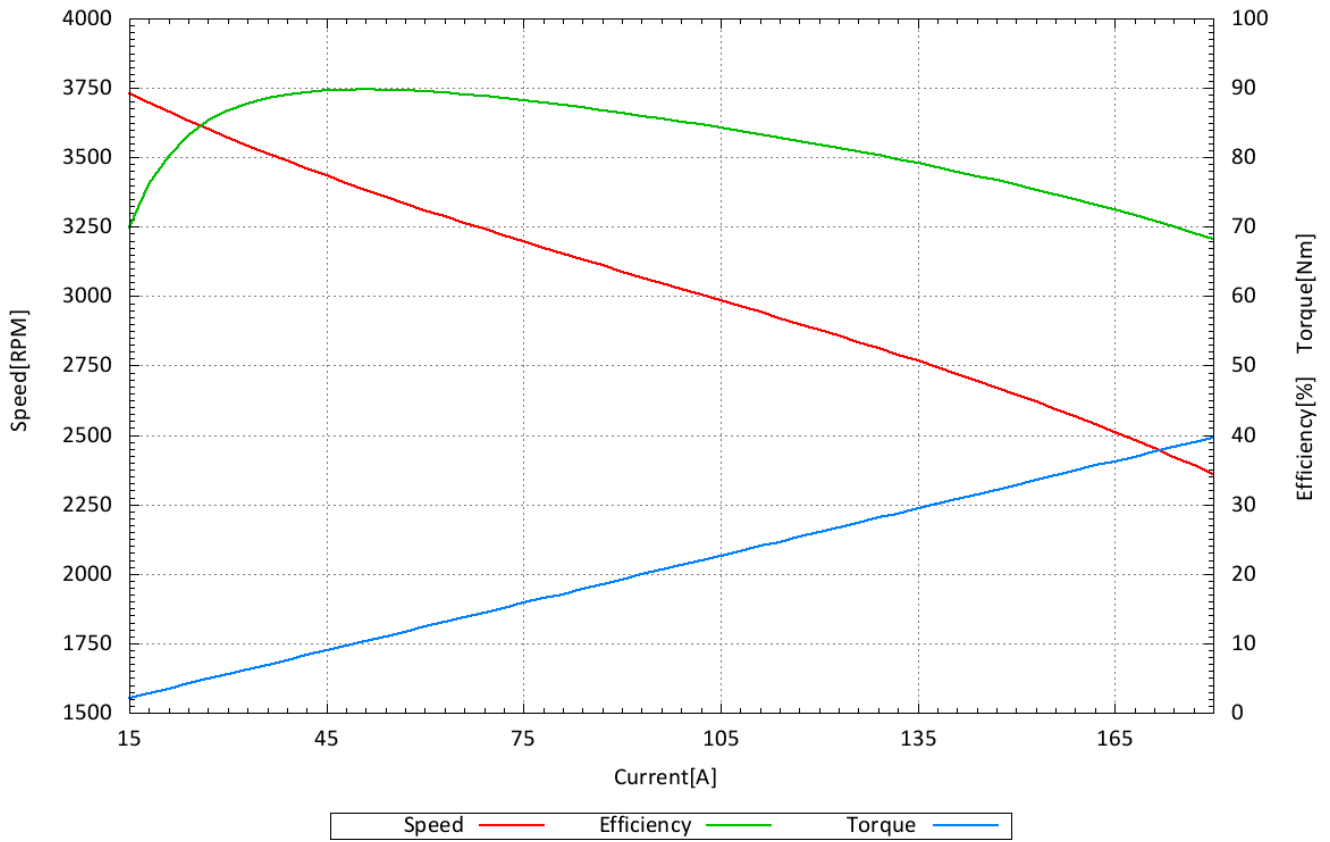
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_50_B8_P30_80V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B8 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **90.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 4,237.5 [RPM] lo: 5.0 [A] kv: 47.6 [RPM/V] kn: -8.75 [RPM/A] kT: 22.72 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
90.0	15.0	4,193.0	1,350.0	1,000.7	227.9	74.12
90.0	18.0	4,157.4	1,620.0	1,288.7	296.0	79.55
90.0	21.0	4,122.8	1,890.0	1,572.4	364.2	83.20
90.0	24.0	4,089.0	2,160.0	1,851.5	432.4	85.72
90.0	27.0	4,056.0	2,430.0	2,125.8	500.5	87.48
90.0	30.0	4,023.9	2,700.0	2,396.4	568.7	88.76
90.0	33.0	3,992.5	2,970.0	2,662.8	636.9	89.66
90.0	36.0	3,961.8	3,240.0	2,924.9	705.0	90.27
90.0	39.0	3,931.9	3,510.0	3,183.6	773.2	90.70
90.0	42.0	3,902.6	3,780.0	3,438.2	841.3	90.96
90.0	45.0	3,874.0	4,050.0	3,689.7	909.5	91.10
90.0	48.0	3,846.0	4,320.0	3,937.7	977.7	91.15
90.0	51.0	3,818.6	4,590.0	4,182.0	1,045.8	91.11
90.0	54.0	3,791.8	4,860.0	4,423.4	1,114.0	91.02
90.0	57.0	3,765.5	5,130.0	4,661.7	1,182.2	90.87
90.0	60.0	3,739.8	5,400.0	4,896.6	1,250.3	90.68
90.0	63.0	3,714.5	5,670.0	5,128.7	1,318.5	90.45
90.0	66.0	3,689.6	5,940.0	5,357.5	1,386.6	90.19
90.0	69.0	3,665.2	6,210.0	5,583.8	1,454.8	89.92
90.0	72.0	3,641.2	6,480.0	5,807.3	1,523.0	89.62
90.0	75.0	3,617.5	6,750.0	6,027.5	1,591.1	89.30
90.0	78.0	3,594.2	7,020.0	6,245.3	1,659.3	88.96
90.0	81.0	3,571.2	7,290.0	6,460.4	1,727.5	88.62
90.0	84.0	3,548.5	7,560.0	6,672.4	1,795.6	88.26
89.9	87.0	3,526.0	7,821.3	6,881.9	1,863.8	87.99
89.9	90.0	3,503.7	8,091.0	7,088.6	1,932.0	87.61

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
89.9	93.0	3,481.6	8,360.7	7,292.2	2,000.1	87.22
89.9	96.0	3,459.7	8,630.4	7,493.4	2,068.3	86.83
89.9	99.0	3,437.9	8,900.1	7,691.4	2,136.4	86.42
89.9	102.0	3,416.3	9,169.8	7,887.0	2,204.6	86.01
89.9	105.0	3,394.7	9,439.5	8,079.6	2,272.8	85.59
89.9	108.0	3,373.1	9,709.2	8,268.8	2,340.9	85.16
89.9	111.0	3,351.6	9,978.9	8,455.4	2,409.1	84.73
89.9	114.0	3,330.0	10,248.6	8,638.8	2,477.3	84.29
89.9	117.0	3,308.5	10,518.3	8,818.9	2,545.4	83.84
89.9	120.0	3,286.8	10,788.0	8,995.8	2,613.6	83.39
89.9	123.0	3,265.1	11,057.7	9,169.3	2,681.7	82.92
89.9	126.0	3,243.2	11,327.4	9,339.4	2,749.9	82.45
89.9	129.0	3,221.2	11,597.1	9,506.1	2,818.1	81.97
89.9	132.0	3,199.0	11,866.8	9,668.7	2,886.2	81.48
89.9	135.0	3,176.5	12,136.5	9,827.6	2,954.4	80.98
89.9	138.0	3,153.9	12,406.2	9,982.9	3,022.6	80.47
89.9	141.0	3,130.9	12,675.9	10,133.4	3,090.7	79.94
89.9	144.0	3,107.7	12,945.6	10,280.2	3,158.9	79.41
89.9	147.0	3,084.2	13,215.3	10,422.8	3,227.1	78.87
89.9	150.0	3,060.2	13,485.0	10,559.9	3,295.2	78.31
89.9	153.0	3,035.9	13,754.7	10,692.9	3,363.4	77.74
89.9	156.0	3,011.2	14,024.4	10,820.6	3,431.5	77.16
89.9	159.0	2,986.1	14,294.1	10,943.7	3,499.7	76.56
89.9	162.0	2,960.4	14,563.8	11,060.9	3,567.9	75.95
89.9	165.0	2,934.3	14,833.5	11,172.7	3,636.0	75.32
89.9	168.0	2,907.6	15,103.2	11,278.7	3,704.2	74.68
89.9	171.0	2,880.4	15,372.9	11,378.9	3,772.4	74.02
89.9	174.0	2,852.6	15,642.6	11,472.5	3,840.5	73.34
89.9	177.0	2,824.2	15,912.3	11,560.0	3,908.7	72.65
89.9	180.0	2,795.1	16,182.0	11,640.2	3,976.8	71.93

nl = rpm with no load

lo = current with no load

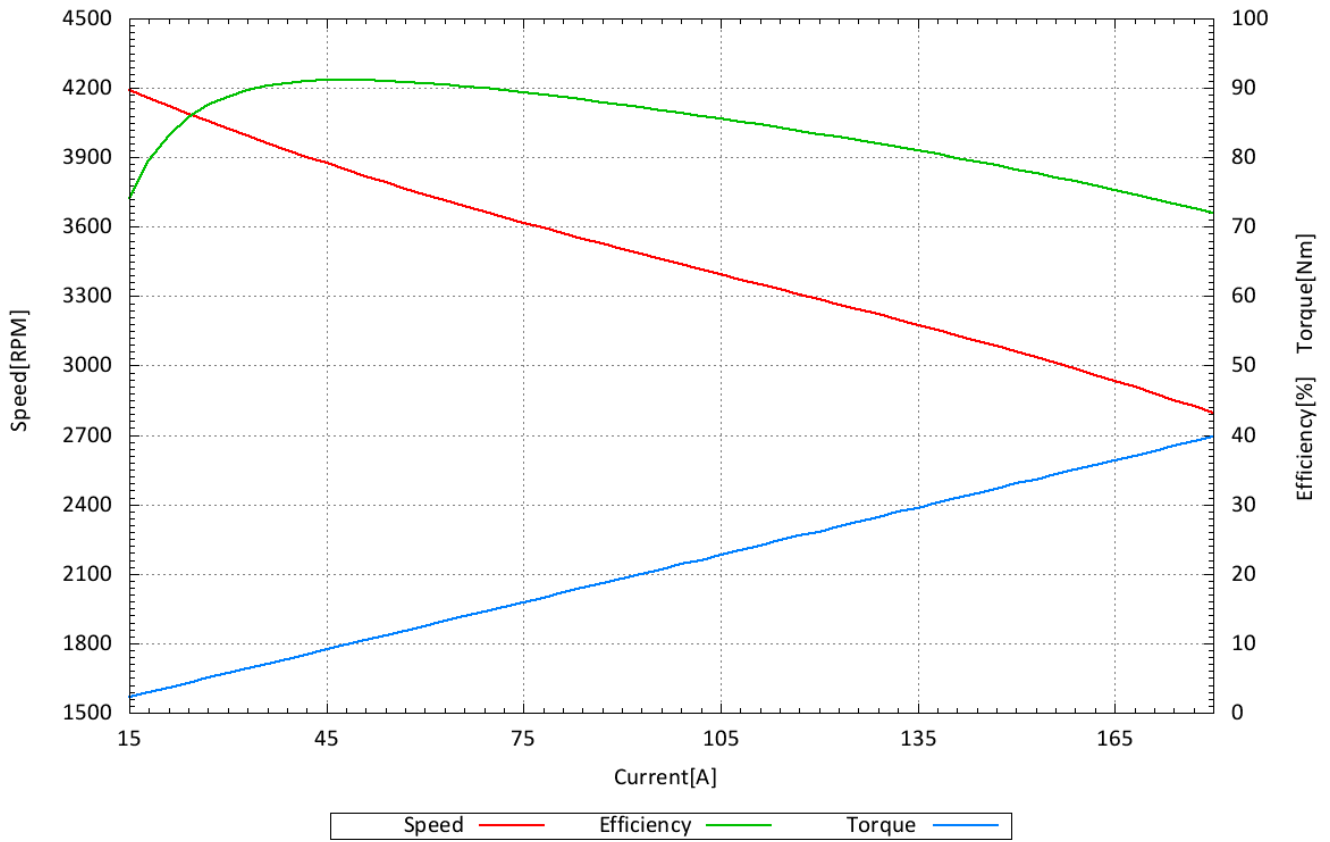
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_50_B8_P30_90V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B8 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **100.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 4,617.8 [RPM] lo: 6.8 [A] kv: 46.7 [RPM/V] kn: -8.40 [RPM/A] kT: 23.21 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
100.0	15.0	4,646.1	1,500.0	925.4	190.2	61.69
100.0	18.0	4,608.5	1,800.0	1,253.8	259.8	69.66
100.0	21.0	4,571.8	2,100.0	1,577.5	329.5	75.12
100.0	24.0	4,536.0	2,400.0	1,895.8	399.1	78.99
100.0	27.0	4,501.1	2,700.0	2,209.2	468.7	81.82
100.0	30.0	4,467.0	3,000.0	2,518.5	538.4	83.95
100.0	33.0	4,433.7	3,300.0	2,822.9	608.0	85.54
100.0	36.0	4,401.1	3,600.0	3,122.9	677.6	86.75
100.0	39.0	4,369.3	3,900.0	3,419.3	747.3	87.67
100.0	42.0	4,338.2	4,200.0	3,711.1	816.9	88.36
100.0	45.0	4,307.8	4,500.0	3,999.1	886.5	88.87
100.0	48.0	4,278.1	4,800.0	4,283.8	956.2	89.25
99.9	51.0	4,249.0	5,094.9	4,564.3	1,025.8	89.59
99.9	54.0	4,220.4	5,394.6	4,841.2	1,095.4	89.74
99.9	57.0	4,192.4	5,694.3	5,114.7	1,165.0	89.82
99.9	60.0	4,165.0	5,994.0	5,385.2	1,234.7	89.84
99.9	63.0	4,138.0	6,293.7	5,651.9	1,304.3	89.80
99.9	66.0	4,111.6	6,593.4	5,915.5	1,373.9	89.72
99.9	69.0	4,085.5	6,893.1	6,176.2	1,443.6	89.60
99.9	72.0	4,059.9	7,192.8	6,433.4	1,513.2	89.44
99.9	75.0	4,034.7	7,492.5	6,687.5	1,582.8	89.26
99.9	78.0	4,009.8	7,792.2	6,938.9	1,652.5	89.05
99.9	81.0	3,985.3	8,091.9	7,187.0	1,722.1	88.82
99.9	84.0	3,961.0	8,391.6	7,431.9	1,791.7	88.56
99.9	87.0	3,937.0	8,691.3	7,674.2	1,861.4	88.30
99.9	90.0	3,913.2	8,991.0	7,913.0	1,931.0	88.01

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
99.9	93.0	3,889.6	9,290.7	8,148.8	2,000.6	87.71
99.9	96.0	3,866.3	9,590.4	8,382.2	2,070.3	87.40
99.9	99.0	3,843.0	9,890.1	8,611.8	2,139.9	87.07
99.9	102.0	3,819.9	10,189.8	8,838.4	2,209.5	86.74
99.9	105.0	3,796.8	10,489.5	9,062.1	2,279.2	86.39
99.9	108.0	3,773.8	10,789.2	9,282.3	2,348.8	86.03
99.9	111.0	3,750.9	11,088.9	9,499.3	2,418.4	85.67
99.9	114.0	3,727.9	11,388.6	9,713.2	2,488.1	85.29
99.9	117.0	3,704.9	11,688.3	9,923.3	2,557.7	84.90
99.9	120.0	3,681.8	11,988.0	10,129.7	2,627.3	84.50
99.9	123.0	3,658.6	12,287.7	10,333.0	2,697.0	84.09
99.9	126.0	3,635.3	12,587.4	10,532.1	2,766.6	83.67
99.9	129.0	3,611.9	12,887.1	10,727.6	2,836.2	83.24
99.9	132.0	3,588.2	13,186.8	10,918.7	2,905.8	82.80
99.9	135.0	3,564.4	13,486.5	11,106.4	2,975.5	82.35
99.9	138.0	3,540.3	13,786.2	11,289.4	3,045.1	81.89
99.9	141.0	3,515.9	14,085.9	11,467.8	3,114.7	81.41
99.9	144.0	3,491.2	14,385.6	11,642.1	3,184.4	80.93
99.9	147.0	3,466.2	14,685.3	11,811.4	3,254.0	80.43
99.9	150.0	3,440.9	14,985.0	11,975.9	3,323.6	79.92
99.8	153.0	3,415.1	15,269.4	12,135.4	3,393.3	79.48
99.8	156.0	3,388.9	15,568.8	12,289.3	3,462.9	78.94
99.8	159.0	3,362.3	15,868.2	12,437.9	3,532.5	78.38
99.8	162.0	3,335.2	16,167.6	12,581.1	3,602.2	77.82
99.8	165.0	3,307.5	16,467.0	12,717.7	3,671.8	77.23
99.8	168.0	3,279.3	16,766.4	12,848.2	3,741.4	76.63
99.8	171.0	3,250.6	17,065.8	12,973.1	3,811.1	76.02
99.8	174.0	3,221.2	17,365.2	13,090.5	3,880.7	75.38
99.8	177.0	3,191.3	17,664.6	13,201.6	3,950.3	74.73
99.8	180.0	3,160.6	17,964.0	13,305.3	4,020.0	74.07

nl = rpm with no load

lo = current with no load

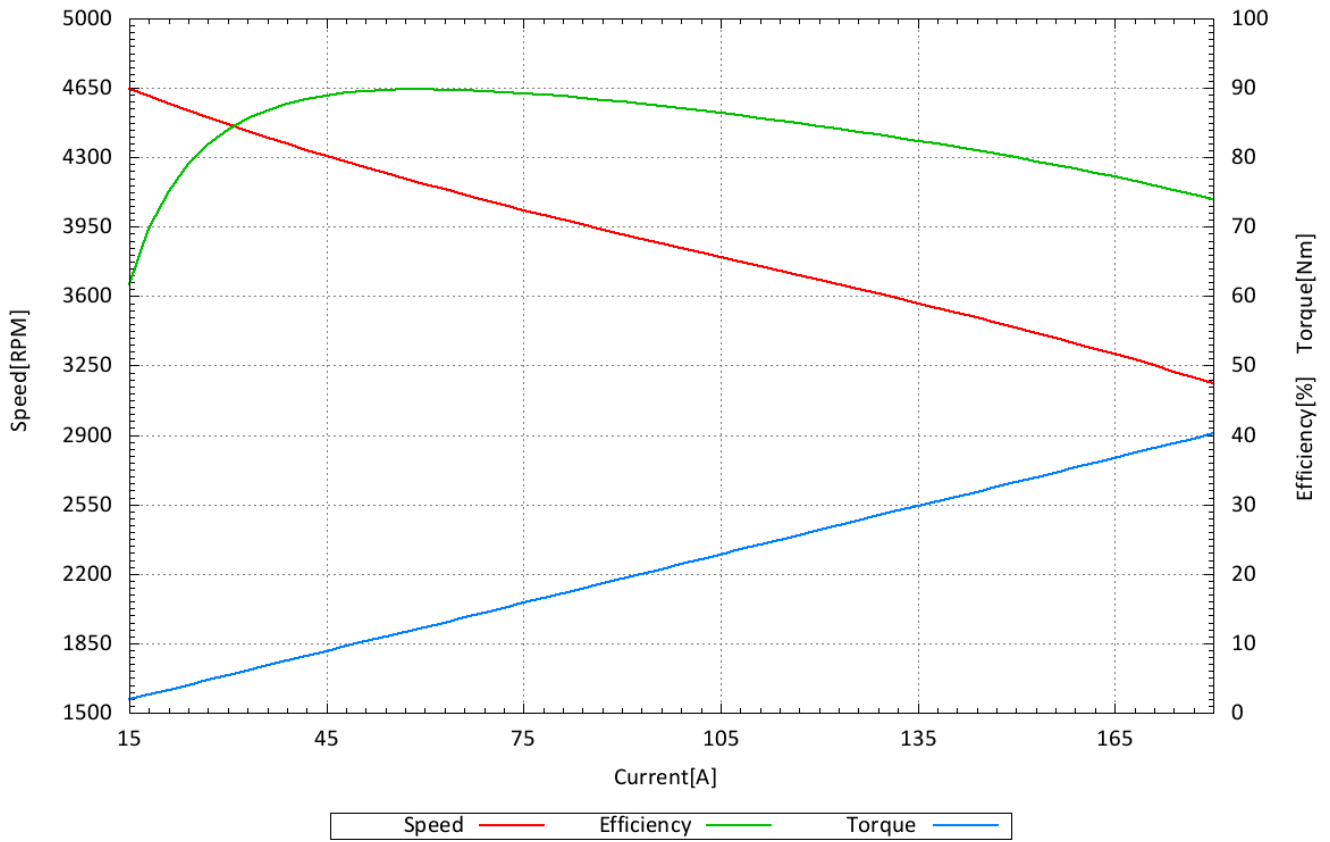
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_50_B8_P30_100V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B8 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **110.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 5,085.0 [RPM] lo: 7.5 [A] kv: 46.8 [RPM/V] kn: -9.04 [RPM/A] kT: 23.24 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
110.0	15.0	5,130.7	1,650.0	932.7	173.6	56.53
110.0	18.0	5,089.8	1,980.0	1,297.3	243.4	65.52
110.0	21.0	5,050.0	2,310.0	1,655.8	313.1	71.68
109.9	24.0	5,011.0	2,637.6	2,008.7	382.8	76.16
109.9	27.0	4,973.0	2,967.3	2,356.5	452.5	79.42
109.9	30.0	4,935.8	3,297.0	2,699.1	522.2	81.87
109.9	33.0	4,899.5	3,626.7	3,037.4	592.0	83.75
109.9	36.0	4,864.0	3,956.4	3,370.4	661.7	85.19
109.9	39.0	4,829.3	4,286.1	3,698.9	731.4	86.30
109.9	42.0	4,795.4	4,615.8	4,022.9	801.1	87.16
109.9	45.0	4,762.1	4,945.5	4,342.6	870.8	87.81
109.9	48.0	4,729.6	5,275.2	4,658.6	940.6	88.31
109.9	51.0	4,697.8	5,604.9	4,970.2	1,010.3	88.68
109.9	54.0	4,666.5	5,934.6	5,277.7	1,080.0	88.93
109.9	57.0	4,635.9	6,264.3	5,581.5	1,149.7	89.10
109.9	60.0	4,605.9	6,594.0	5,881.5	1,219.4	89.19
109.9	63.0	4,576.5	6,923.7	6,178.5	1,289.2	89.24
109.9	66.0	4,547.5	7,253.4	6,471.3	1,358.9	89.22
109.8	69.0	4,519.1	7,576.2	6,760.7	1,428.6	89.24
109.8	72.0	4,491.2	7,905.6	7,046.8	1,498.3	89.14
109.8	75.0	4,463.6	8,235.0	7,329.7	1,568.1	89.01
109.8	78.0	4,436.5	8,564.4	7,609.0	1,637.8	88.85
109.8	81.0	4,409.8	8,893.8	7,885.1	1,707.5	88.66
109.8	84.0	4,383.4	9,223.2	8,157.9	1,777.2	88.45
109.8	87.0	4,357.3	9,552.6	8,427.3	1,846.9	88.22
109.8	90.0	4,331.6	9,882.0	8,694.2	1,916.7	87.98

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
109.8	93.0	4,306.1	10,211.4	8,957.3	1,986.4	87.72
109.8	96.0	4,280.8	10,540.8	9,217.2	2,056.1	87.44
109.8	99.0	4,255.8	10,870.2	9,474.0	2,125.8	87.16
109.8	102.0	4,230.9	11,199.6	9,727.4	2,195.5	86.85
109.8	105.0	4,206.2	11,529.0	9,978.0	2,265.3	86.55
109.8	108.0	4,181.6	11,858.4	10,224.9	2,335.0	86.22
109.8	111.0	4,157.1	12,187.8	10,468.4	2,404.7	85.89
109.8	114.0	4,132.6	12,517.2	10,708.3	2,474.4	85.55
109.7	117.0	4,108.2	12,834.9	10,945.0	2,544.1	85.28
109.7	120.0	4,083.8	13,164.0	11,178.5	2,613.9	84.92
109.7	123.0	4,059.4	13,493.1	11,408.0	2,683.6	84.55
109.7	126.0	4,034.9	13,822.2	11,633.6	2,753.3	84.17
109.7	129.0	4,010.3	14,151.3	11,855.4	2,823.0	83.78
109.7	132.0	3,985.6	14,480.4	12,073.3	2,892.7	83.38
109.7	135.0	3,960.8	14,809.5	12,287.7	2,962.5	82.97
109.7	138.0	3,935.8	15,138.6	12,497.4	3,032.2	82.55
109.7	141.0	3,910.6	15,467.7	12,702.8	3,101.9	82.12
109.7	144.0	3,885.2	15,796.8	12,903.9	3,171.6	81.69
109.7	147.0	3,859.5	16,125.9	13,100.2	3,241.3	81.24
109.7	150.0	3,833.6	16,455.0	13,292.5	3,311.1	80.78
109.7	153.0	3,807.3	16,784.1	13,479.2	3,380.8	80.31
109.7	156.0	3,780.7	17,113.2	13,661.0	3,450.5	79.83
109.7	159.0	3,753.7	17,442.3	13,837.4	3,520.2	79.33
109.6	162.0	3,726.3	17,755.2	14,008.4	3,589.9	78.90
109.6	165.0	3,698.4	18,084.0	14,173.9	3,659.7	78.38
109.6	168.0	3,670.2	18,412.8	14,333.7	3,729.4	77.85
109.6	171.0	3,641.4	18,741.6	14,487.0	3,799.1	77.30
109.6	174.0	3,612.1	19,070.4	14,634.1	3,868.8	76.74
109.6	177.0	3,582.3	19,399.2	14,774.8	3,938.5	76.16
109.6	180.0	3,551.9	19,728.0	14,909.0	4,008.3	75.57

nl = rpm with no load

lo = current with no load

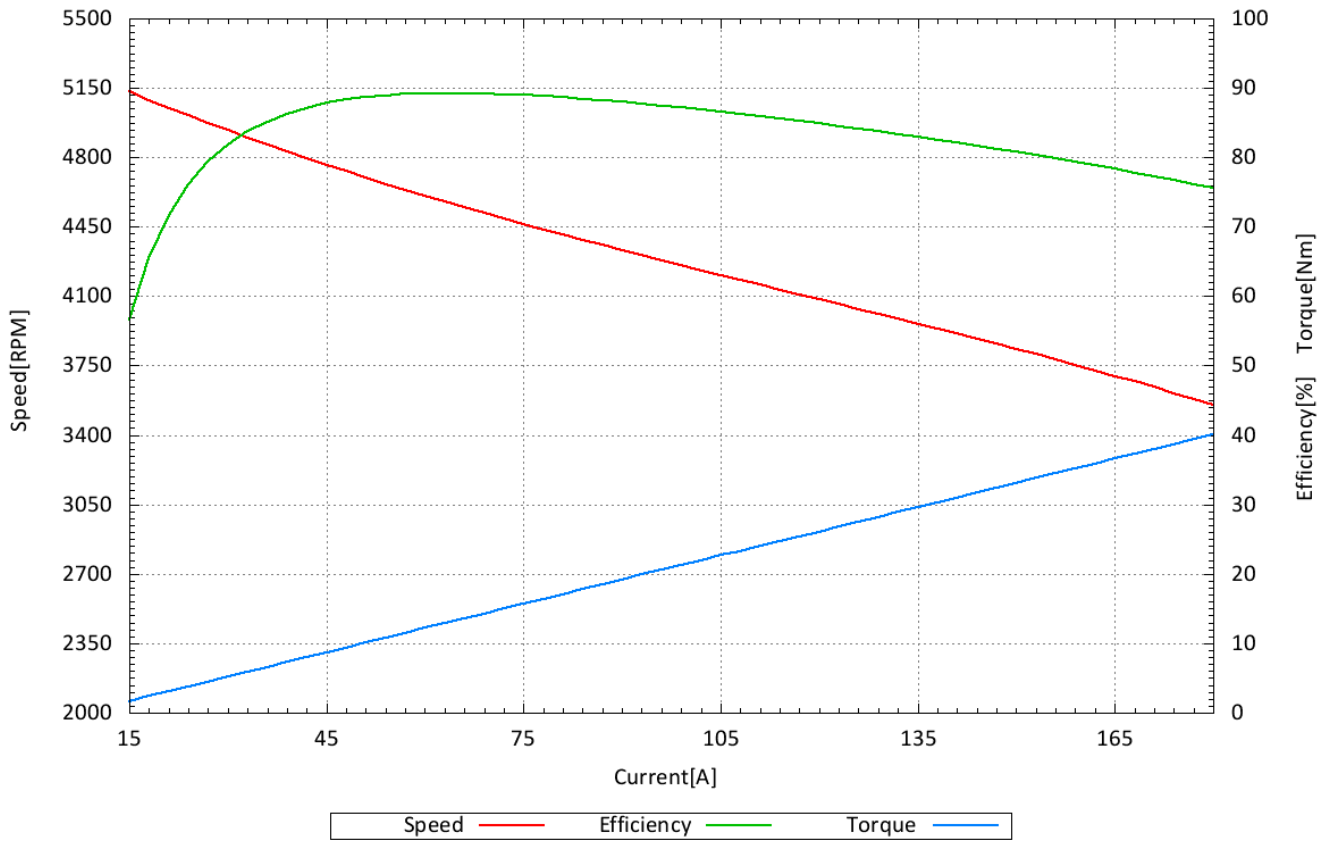
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_50_B8_P30_110V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B8 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **120.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 5,577.4 [RPM] lo: 7.0 [A] kv: 47.1 [RPM/V] kn: -9.90 [RPM/A] kT: 22.91 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
120.0	15.0	5,631.9	1,800.0	1,082.8	183.6	60.16
119.9	18.0	5,585.2	2,158.2	1,475.7	252.3	68.37
119.9	21.0	5,539.8	2,517.9	1,862.2	321.0	73.96
119.9	24.0	5,495.6	2,877.6	2,242.7	389.7	77.94
119.9	27.0	5,452.6	3,237.3	2,617.4	458.4	80.85
119.9	30.0	5,410.7	3,597.0	2,986.6	527.1	83.03
119.9	33.0	5,369.9	3,956.7	3,351.0	595.9	84.69
119.9	36.0	5,330.2	4,316.4	3,709.6	664.6	85.94
119.9	39.0	5,291.4	4,676.1	4,063.3	733.3	86.90
119.9	42.0	5,253.6	5,035.8	4,412.2	802.0	87.62
119.9	45.0	5,216.7	5,395.5	4,756.6	870.7	88.16
119.8	48.0	5,180.8	5,750.4	5,096.5	939.4	88.63
119.8	51.0	5,145.6	6,109.8	5,432.6	1,008.2	88.92
119.8	54.0	5,111.3	6,469.2	5,764.2	1,076.9	89.10
119.8	57.0	5,077.7	6,828.6	6,091.6	1,145.6	89.21
119.8	60.0	5,044.9	7,188.0	6,415.2	1,214.3	89.25
119.8	63.0	5,012.8	7,547.4	6,735.0	1,283.0	89.24
119.8	66.0	4,981.2	7,906.8	7,050.9	1,351.7	89.17
119.8	69.0	4,950.3	8,266.2	7,363.8	1,420.5	89.08
119.8	72.0	4,920.0	8,625.6	7,672.7	1,489.2	88.95
119.8	75.0	4,890.2	8,985.0	7,978.0	1,557.9	88.79
119.7	78.0	4,860.9	9,336.6	8,279.9	1,626.6	88.68
119.7	81.0	4,832.0	9,695.7	8,578.3	1,695.3	88.48
119.7	84.0	4,803.5	10,054.8	8,873.3	1,764.0	88.25
119.7	87.0	4,775.4	10,413.9	9,165.4	1,832.8	88.01
119.7	90.0	4,747.6	10,773.0	9,453.6	1,901.5	87.75

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
119.7	93.0	4,720.0	11,132.1	9,738.3	1,970.2	87.48
119.7	96.0	4,692.8	11,491.2	10,019.7	2,038.9	87.19
119.7	99.0	4,665.7	11,850.3	10,297.5	2,107.6	86.90
119.7	102.0	4,638.8	12,209.4	10,571.9	2,176.3	86.59
119.7	105.0	4,612.0	12,568.5	10,843.1	2,245.1	86.27
119.6	108.0	4,585.3	12,916.8	11,110.2	2,313.8	86.01
119.6	111.0	4,558.6	13,275.6	11,373.5	2,382.5	85.67
119.6	114.0	4,532.0	13,634.4	11,633.1	2,451.2	85.32
119.6	117.0	4,505.3	13,993.2	11,888.7	2,519.9	84.96
119.6	120.0	4,478.5	14,352.0	12,140.2	2,588.6	84.59
119.6	123.0	4,451.6	14,710.8	12,388.0	2,657.4	84.21
119.6	126.0	4,424.5	15,069.6	12,630.9	2,726.1	83.82
119.6	129.0	4,397.3	15,428.4	12,869.6	2,794.8	83.42
119.6	132.0	4,369.8	15,787.2	13,103.5	2,863.5	83.00
119.6	135.0	4,342.0	16,146.0	13,332.5	2,932.2	82.57
119.5	138.0	4,313.9	16,491.0	13,556.6	3,000.9	82.21
119.5	141.0	4,285.5	16,849.5	13,776.1	3,069.7	81.76
119.5	144.0	4,256.6	17,208.0	13,989.4	3,138.4	81.30
119.5	147.0	4,227.3	17,566.5	14,197.2	3,207.1	80.82
119.5	150.0	4,197.5	17,925.0	14,399.1	3,275.8	80.33
119.5	153.0	4,167.2	18,283.5	14,595.0	3,344.5	79.83
119.5	156.0	4,136.4	18,642.0	14,784.7	3,413.2	79.31
119.5	159.0	4,104.9	19,000.5	14,967.9	3,482.0	78.78
119.5	162.0	4,072.8	19,359.0	15,143.8	3,550.7	78.23
119.5	165.0	4,040.0	19,717.5	15,312.5	3,619.4	77.66
119.4	168.0	4,006.5	20,059.2	15,473.8	3,688.1	77.14
119.4	171.0	3,972.2	20,417.4	15,627.1	3,756.8	76.54
119.4	174.0	3,937.2	20,775.6	15,772.6	3,825.5	75.92
119.4	177.0	3,901.2	21,133.8	15,909.5	3,894.3	75.28
119.4	180.0	3,864.4	21,492.0	16,037.4	3,963.0	74.62

nl = rpm with no load

lo = current with no load

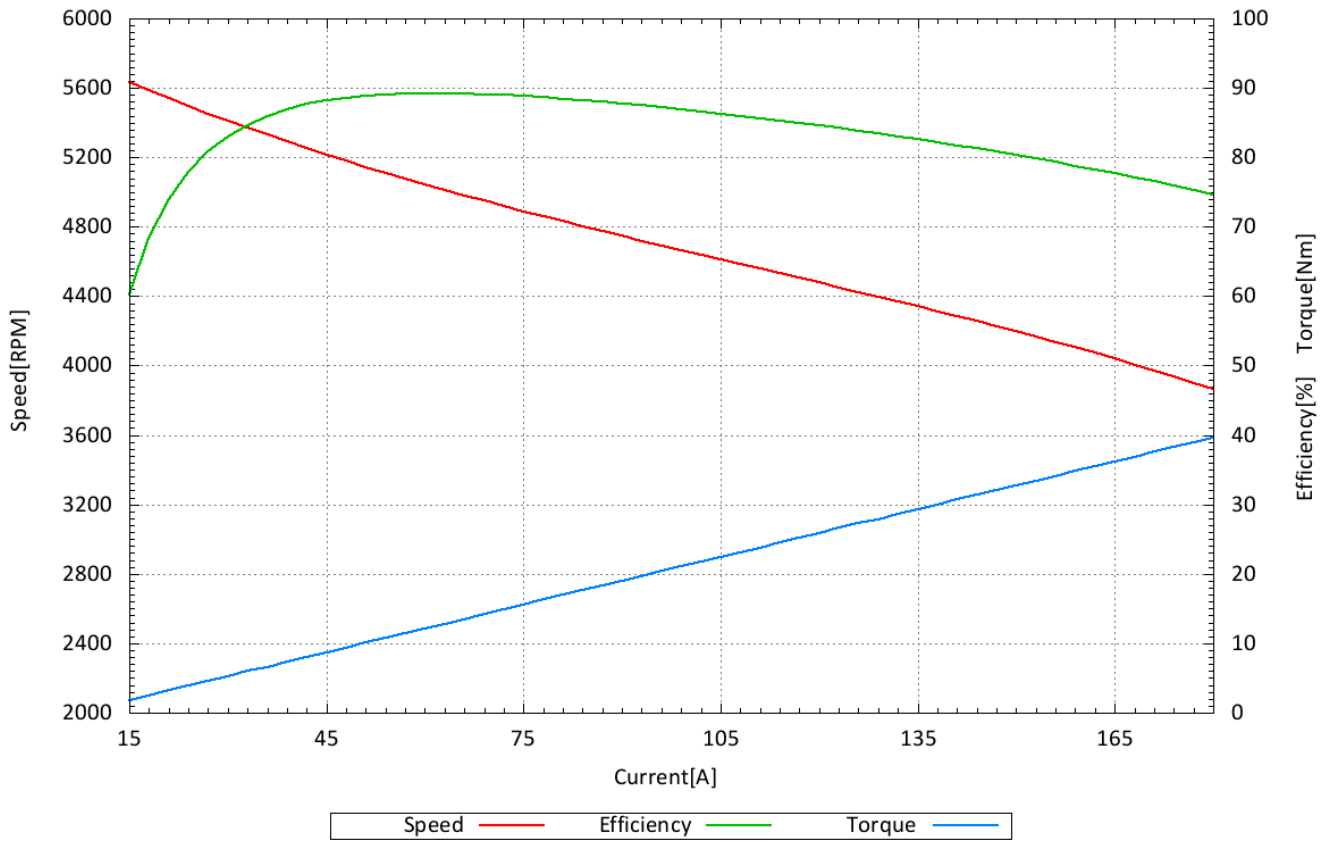
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_50_B8_P30_120V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B8 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **130.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 6,040.1 [RPM] lo: 7.2 [A] kv: 47.1 [RPM/V] kn: -10.73 [RPM/A] kT: 22.91 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
130.0	15.0	6,102.8	1,950.0	1,144.6	179.1	58.70
129.9	18.0	6,052.6	2,338.2	1,570.6	247.8	67.17
129.9	21.0	6,003.7	2,727.9	1,989.9	316.5	72.94
129.9	24.0	5,956.1	3,117.6	2,403.2	385.3	77.08
129.9	27.0	5,909.8	3,507.3	2,809.7	454.0	80.11
129.9	30.0	5,864.7	3,897.0	3,210.2	522.7	82.38
129.9	33.0	5,820.7	4,286.7	3,604.8	591.4	84.09
129.9	36.0	5,777.9	4,676.4	3,994.0	660.1	85.41
129.9	39.0	5,736.2	5,066.1	4,377.9	728.8	86.41
129.9	42.0	5,695.5	5,455.8	4,757.1	797.6	87.19
129.9	45.0	5,655.8	5,845.5	5,130.9	866.3	87.77
129.8	48.0	5,617.0	6,230.4	5,499.8	935.0	88.27
129.8	51.0	5,579.2	6,619.8	5,864.1	1,003.7	88.58
129.8	54.0	5,542.2	7,009.2	6,224.0	1,072.4	88.80
129.8	57.0	5,506.1	7,398.6	6,579.6	1,141.1	88.93
129.8	60.0	5,470.7	7,788.0	6,931.4	1,209.9	89.00
129.8	63.0	5,436.1	8,177.4	7,278.6	1,278.6	89.01
129.8	66.0	5,402.1	8,566.8	7,621.8	1,347.3	88.97
129.8	69.0	5,368.9	8,956.2	7,961.2	1,416.0	88.89
129.8	72.0	5,336.2	9,345.6	8,296.6	1,484.7	88.78
129.8	75.0	5,304.1	9,735.0	8,628.3	1,553.4	88.63
129.7	78.0	5,272.5	10,116.6	8,956.7	1,622.2	88.54
129.7	81.0	5,241.4	10,505.7	9,281.0	1,690.9	88.34
129.7	84.0	5,210.7	10,894.8	9,601.5	1,759.6	88.13
129.7	87.0	5,180.4	11,283.9	9,918.3	1,828.3	87.90
129.7	90.0	5,150.5	11,673.0	10,231.6	1,897.0	87.65

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
129.7	93.0	5,120.9	12,062.1	10,541.3	1,965.7	87.39
129.7	96.0	5,091.5	12,451.2	10,847.6	2,034.5	87.12
129.7	99.0	5,062.3	12,840.3	11,149.5	2,103.2	86.83
129.7	102.0	5,033.4	13,229.4	11,448.0	2,171.9	86.53
129.7	105.0	5,004.5	13,618.5	11,742.3	2,240.6	86.22
129.6	108.0	4,975.7	13,996.8	12,032.7	2,309.3	85.97
129.6	111.0	4,947.0	14,385.6	12,319.2	2,378.0	85.64
129.6	114.0	4,918.3	14,774.4	12,602.1	2,446.8	85.30
129.6	117.0	4,889.6	15,163.2	12,880.3	2,515.5	84.94
129.6	120.0	4,860.7	15,552.0	13,153.9	2,584.2	84.58
129.6	123.0	4,831.8	15,940.8	13,423.3	2,652.9	84.21
129.6	126.0	4,802.6	16,329.6	13,687.7	2,721.6	83.82
129.6	129.0	4,773.3	16,718.4	13,947.6	2,790.3	83.43
129.6	132.0	4,743.7	17,107.2	14,202.8	2,859.1	83.02
129.6	135.0	4,713.7	17,496.0	14,452.1	2,927.8	82.60
129.5	138.0	4,683.5	17,871.0	14,696.5	2,996.5	82.24
129.5	141.0	4,652.8	18,259.5	14,934.9	3,065.2	81.79
129.5	144.0	4,621.8	18,648.0	15,167.9	3,133.9	81.34
129.5	147.0	4,590.2	19,036.5	15,394.4	3,202.6	80.87
129.5	150.0	4,558.1	19,425.0	15,615.1	3,271.4	80.39
129.5	153.0	4,525.5	19,813.5	15,829.0	3,340.1	79.89
129.5	156.0	4,492.3	20,202.0	16,036.1	3,408.8	79.38
129.5	159.0	4,458.4	20,590.5	16,235.8	3,477.5	78.85
129.5	162.0	4,423.8	20,979.0	16,428.1	3,546.2	78.31
129.5	165.0	4,388.5	21,367.5	16,612.7	3,614.9	77.75
129.4	168.0	4,352.4	21,739.2	16,789.7	3,683.7	77.23
129.4	171.0	4,315.5	22,127.4	16,957.8	3,752.4	76.64
129.4	174.0	4,277.7	22,515.6	17,117.0	3,821.1	76.02
129.4	177.0	4,239.1	22,903.8	17,267.5	3,889.8	75.39
129.4	180.0	4,199.4	23,292.0	17,407.9	3,958.5	74.74

nl = rpm with no load

lo = current with no load

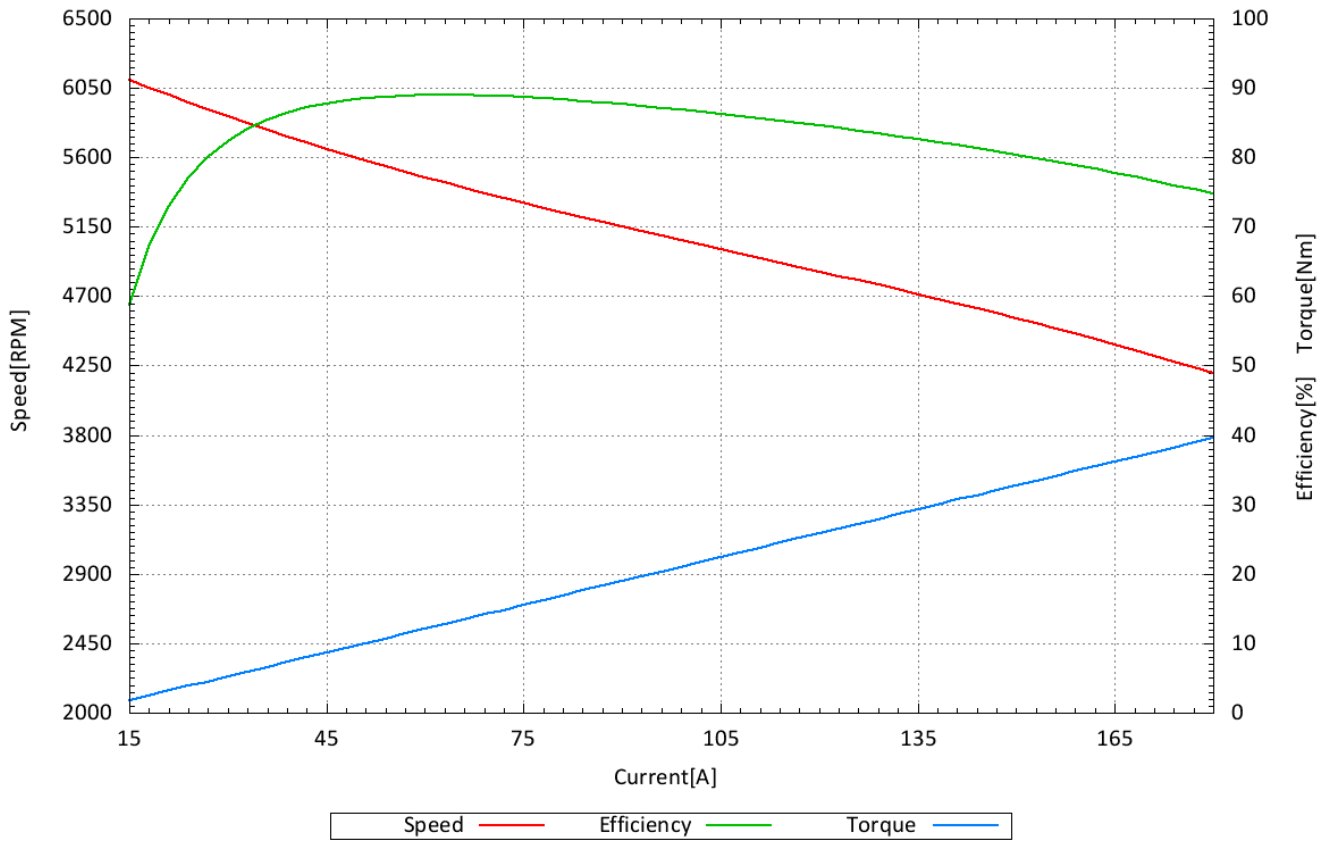
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_50_B8_P30_130V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B8 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **140.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 6,502.4 [RPM] lo: 7.4 [A] kv: 47.1 [RPM/V] kn: -11.55 [RPM/A] kT: 22.91 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
140.0	15.0	6,573.8	2,100.0	1,202.6	174.7	57.27
139.9	18.0	6,519.9	2,518.2	1,661.8	243.4	65.99
139.9	21.0	6,467.6	2,937.9	2,113.8	312.1	71.95
139.9	24.0	6,416.6	3,357.6	2,558.8	380.8	76.21
139.9	27.0	6,366.9	3,777.3	2,997.0	449.5	79.34
139.9	30.0	6,318.6	4,197.0	3,428.8	518.2	81.70
139.9	33.0	6,271.5	4,616.7	3,855.1	587.0	83.50
139.9	36.0	6,225.6	5,036.4	4,274.8	655.7	84.88
139.9	39.0	6,180.9	5,456.1	4,688.8	724.4	85.94
139.9	42.0	6,137.3	5,875.8	5,097.2	793.1	86.75
139.9	45.0	6,094.8	6,295.5	5,500.4	861.8	87.37
139.8	48.0	6,053.3	6,710.4	5,898.4	930.5	87.90
139.8	51.0	6,012.7	7,129.8	6,292.1	999.3	88.25
139.8	54.0	5,973.1	7,549.2	6,680.4	1,068.0	88.49
139.8	57.0	5,934.4	7,968.6	7,064.0	1,136.7	88.65
139.8	60.0	5,896.5	8,388.0	7,443.1	1,205.4	88.74
139.8	63.0	5,859.4	8,807.4	7,817.8	1,274.1	88.76
139.8	66.0	5,823.0	9,226.8	8,188.2	1,342.8	88.74
139.8	69.0	5,787.4	9,646.2	8,555.1	1,411.6	88.69
139.8	72.0	5,752.4	10,065.6	8,917.2	1,480.3	88.59
139.8	75.0	5,718.0	10,485.0	9,275.2	1,549.0	88.46
139.7	78.0	5,684.1	10,896.6	9,629.2	1,617.7	88.37
139.7	81.0	5,650.8	11,315.7	9,979.3	1,686.4	88.19
139.7	84.0	5,617.9	11,734.8	10,325.3	1,755.1	87.99
139.7	87.0	5,585.5	12,153.9	10,668.2	1,823.9	87.78
139.7	90.0	5,553.4	12,573.0	11,006.4	1,892.6	87.54

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
139.7	93.0	5,521.7	12,992.1	11,340.8	1,961.3	87.29
139.7	96.0	5,490.2	13,411.2	11,671.1	2,030.0	87.03
139.7	99.0	5,459.0	13,830.3	11,997.5	2,098.7	86.75
139.7	102.0	5,427.9	14,249.4	12,319.7	2,167.4	86.46
139.7	105.0	5,397.0	14,668.5	12,638.4	2,236.2	86.16
139.6	108.0	5,366.2	15,076.8	12,952.3	2,304.9	85.91
139.6	111.0	5,335.4	15,495.6	13,261.8	2,373.6	85.58
139.6	114.0	5,304.7	15,914.4	13,567.1	2,442.3	85.25
139.6	117.0	5,273.9	16,333.2	13,867.8	2,511.0	84.91
139.6	120.0	5,243.0	16,752.0	14,163.7	2,579.7	84.55
139.6	123.0	5,211.9	17,170.8	14,455.2	2,648.5	84.18
139.6	126.0	5,180.7	17,589.6	14,741.4	2,717.2	83.81
139.6	129.0	5,149.3	18,008.4	15,022.5	2,785.9	83.42
139.6	132.0	5,117.5	18,427.2	15,297.9	2,854.6	83.02
139.6	135.0	5,085.5	18,846.0	15,568.1	2,923.3	82.61
139.5	138.0	5,053.1	19,251.0	15,832.4	2,992.0	82.24
139.5	141.0	5,020.2	19,669.5	16,091.1	3,060.8	81.81
139.5	144.0	4,986.9	20,088.0	16,343.1	3,129.5	81.36
139.5	147.0	4,953.1	20,506.5	16,588.7	3,198.2	80.89
139.5	150.0	4,918.8	20,925.0	16,827.7	3,266.9	80.42
139.5	153.0	4,883.8	21,343.5	17,059.3	3,335.6	79.93
139.5	156.0	4,848.2	21,762.0	17,283.7	3,404.3	79.42
139.5	159.0	4,811.9	22,180.5	17,501.0	3,473.1	78.90
139.5	162.0	4,774.8	22,599.0	17,709.6	3,541.8	78.36
139.5	165.0	4,737.0	23,017.5	17,910.2	3,610.5	77.81
139.4	168.0	4,698.3	23,419.2	18,101.8	3,679.2	77.29
139.4	171.0	4,658.8	23,837.4	18,284.8	3,747.9	76.71
139.4	174.0	4,618.3	24,255.6	18,458.1	3,816.6	76.10
139.4	177.0	4,576.9	24,673.8	18,622.4	3,885.4	75.47
139.4	180.0	4,534.4	25,092.0	18,775.7	3,954.1	74.83

nl = rpm with no load

lo = current with no load

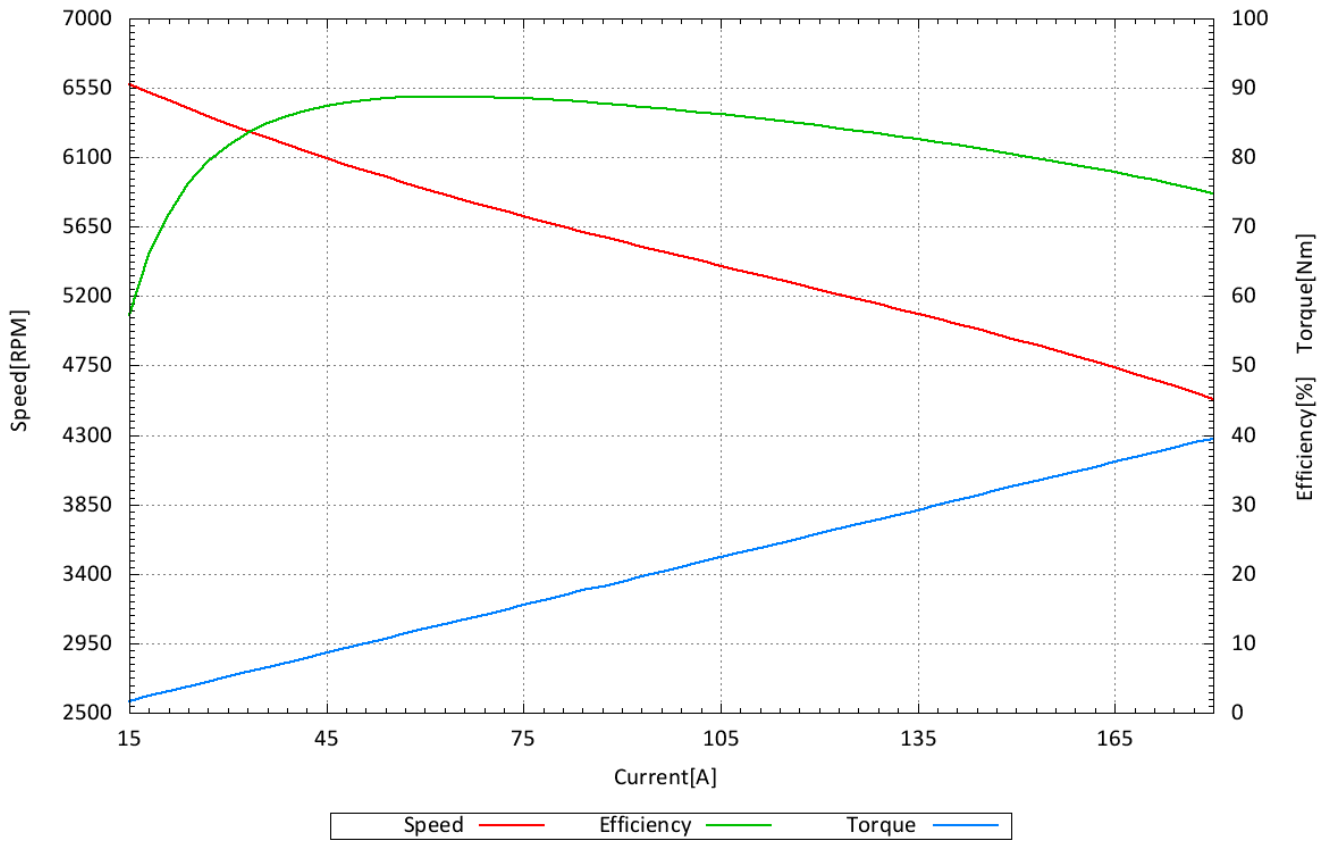
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_50_B8_P30_140V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B8 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **150.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 6,964.5 [RPM] lo: 7.6 [A] kv: 47.1 [RPM/V] kn: -12.38 [RPM/A] kT: 22.91 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
150.0	15.0	7,044.7	2,250.0	1,255.6	170.2	55.80
149.9	18.0	6,987.3	2,698.2	1,748.1	238.9	64.79
149.9	21.0	6,931.4	3,147.9	2,232.7	307.6	70.93
149.9	24.0	6,877.0	3,597.6	2,710.7	376.4	75.35
149.9	27.0	6,824.1	4,047.3	3,180.8	445.1	78.59
149.9	30.0	6,772.5	4,497.0	3,643.9	513.8	81.03
149.9	33.0	6,722.3	4,946.7	4,100.6	582.5	82.89
149.9	36.0	6,673.4	5,396.4	4,550.8	651.2	84.33
149.9	39.0	6,625.7	5,846.1	4,995.0	719.9	85.44
149.9	42.0	6,579.2	6,295.8	5,433.9	788.7	86.31
149.9	45.0	6,533.8	6,745.5	5,866.5	857.4	86.97
149.8	48.0	6,489.5	7,190.4	6,293.6	926.1	87.53
149.8	51.0	6,446.3	7,639.8	6,715.4	994.8	87.90
149.8	54.0	6,404.0	8,089.2	7,132.1	1,063.5	88.17
149.8	57.0	6,362.7	8,538.6	7,543.9	1,132.2	88.35
149.8	60.0	6,322.3	8,988.0	7,951.5	1,201.0	88.47
149.8	63.0	6,282.7	9,437.4	8,353.6	1,269.7	88.52
149.8	66.0	6,243.9	9,886.8	8,751.3	1,338.4	88.51
149.8	69.0	6,205.9	10,336.2	9,144.5	1,407.1	88.47
149.8	72.0	6,168.6	10,785.6	9,533.3	1,475.8	88.39
149.8	75.0	6,131.9	11,235.0	9,917.7	1,544.5	88.28
149.7	78.0	6,095.8	11,676.6	10,298.5	1,613.3	88.20
149.7	81.0	6,060.2	12,125.7	10,674.4	1,682.0	88.03
149.7	84.0	6,025.2	12,574.8	11,046.2	1,750.7	87.84
149.7	87.0	5,990.5	13,023.9	11,413.5	1,819.4	87.64
149.7	90.0	5,956.3	13,473.0	11,776.9	1,888.1	87.41

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
149.7	93.0	5,922.5	13,922.1	12,136.1	1,956.8	87.17
149.7	96.0	5,888.9	14,371.2	12,491.6	2,025.6	86.92
149.7	99.0	5,855.6	14,820.3	12,842.2	2,094.3	86.65
149.7	102.0	5,822.5	15,269.4	13,188.5	2,163.0	86.37
149.7	105.0	5,789.5	15,718.5	13,530.2	2,231.7	86.08
149.6	108.0	5,756.6	16,156.8	13,867.5	2,300.4	85.83
149.6	111.0	5,723.8	16,605.6	14,200.3	2,369.1	85.51
149.6	114.0	5,691.0	17,054.4	14,528.9	2,437.9	85.19
149.6	117.0	5,658.1	17,503.2	14,852.0	2,506.6	84.85
149.6	120.0	5,625.2	17,952.0	15,170.3	2,575.3	84.50
149.6	123.0	5,592.1	18,400.8	15,483.4	2,644.0	84.14
149.6	126.0	5,558.8	18,849.6	15,791.1	2,712.7	83.77
149.6	129.0	5,525.2	19,298.4	16,093.1	2,781.4	83.39
149.6	132.0	5,491.4	19,747.2	16,390.3	2,850.2	83.00
149.6	135.0	5,457.2	20,196.0	16,680.8	2,918.9	82.59
149.5	138.0	5,422.6	20,631.0	16,965.2	2,987.6	82.23
149.5	141.0	5,387.6	21,079.5	17,243.3	3,056.3	81.80
149.5	144.0	5,352.1	21,528.0	17,514.7	3,125.0	81.36
149.5	147.0	5,316.0	21,976.5	17,779.0	3,193.7	80.90
149.5	150.0	5,279.4	22,425.0	18,037.0	3,262.5	80.43
149.5	153.0	5,242.1	22,873.5	18,286.7	3,331.2	79.95
149.5	156.0	5,204.1	23,322.0	18,528.5	3,399.9	79.45
149.5	159.0	5,165.4	23,770.5	18,762.3	3,468.6	78.93
149.5	162.0	5,125.9	24,219.0	18,987.6	3,537.3	78.40
149.5	165.0	5,085.5	24,667.5	19,203.8	3,606.0	77.85
149.4	168.0	5,044.3	25,099.2	19,411.7	3,674.8	77.34
149.4	171.0	5,002.1	25,547.4	19,609.2	3,743.5	76.76
149.4	174.0	4,958.9	25,995.6	19,796.6	3,812.2	76.15
149.4	177.0	4,914.7	26,443.8	19,973.7	3,880.9	75.53
149.4	180.0	4,869.4	26,892.0	20,139.9	3,949.6	74.89

nl = rpm with no load

lo = current with no load

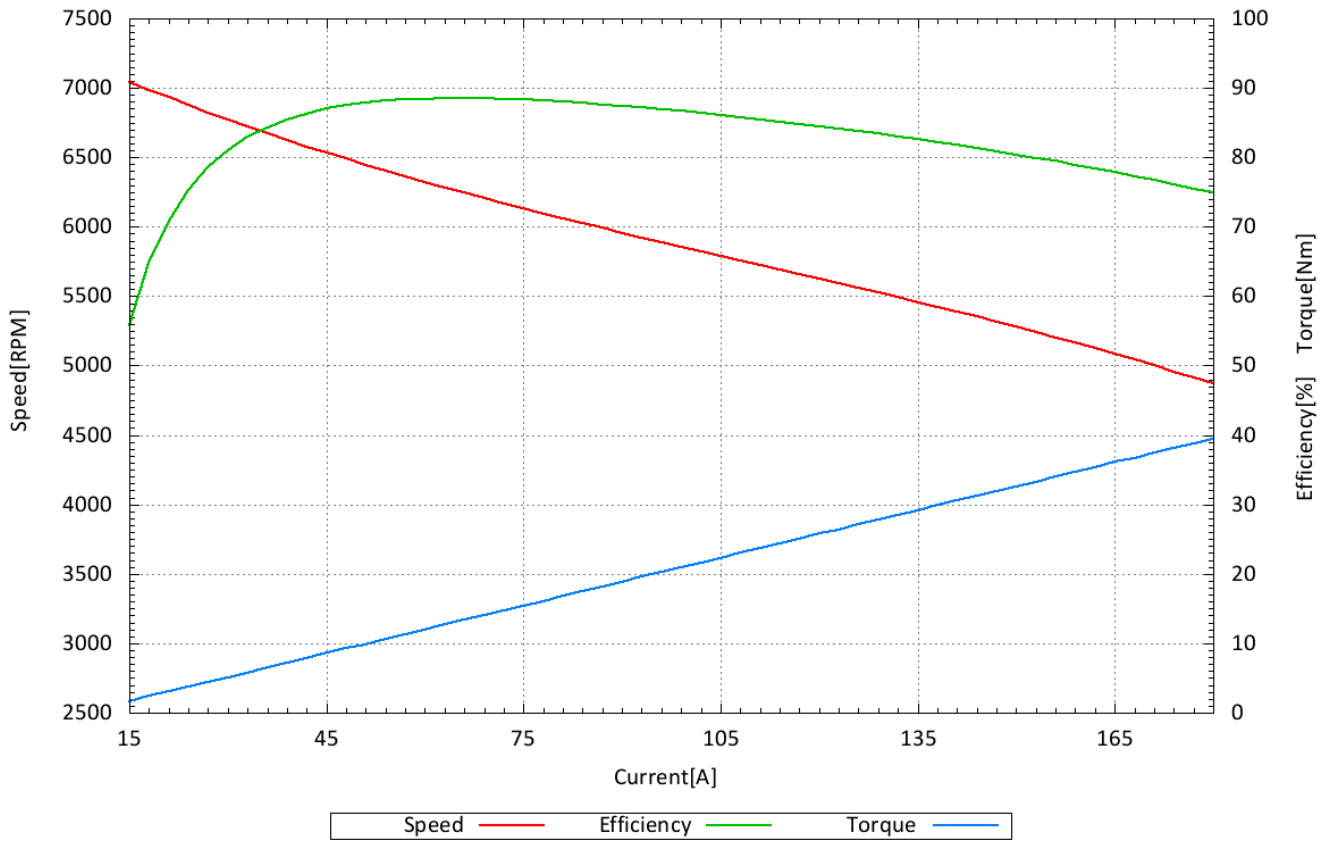
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_50_B8_P30_150V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B8 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **160.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 7,426.2 [RPM] lo: 7.8 [A] kv: 47.1 [RPM/V] kn: -13.20 [RPM/A] kT: 22.91 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
160.0	15.0	7,515.7	2,400.0	1,304.9	165.8	54.37
159.9	18.0	7,454.7	2,878.2	1,830.6	234.5	63.60
159.9	21.0	7,395.3	3,357.9	2,348.1	303.2	69.93
159.9	24.0	7,337.5	3,837.6	2,857.6	371.9	74.46
159.9	27.0	7,281.3	4,317.3	3,359.6	440.6	77.82
159.9	30.0	7,226.5	4,797.0	3,854.2	509.3	80.35
159.9	33.0	7,173.1	5,276.7	4,342.5	578.1	82.30
159.9	36.0	7,121.1	5,756.4	4,823.3	646.8	83.79
159.9	39.0	7,070.4	6,236.1	5,297.6	715.5	84.95
159.9	42.0	7,021.0	6,715.8	5,765.7	784.2	85.85
159.9	45.0	6,972.8	7,195.5	6,227.8	852.9	86.55
159.8	48.0	6,925.7	7,670.4	6,684.0	921.6	87.14
159.8	51.0	6,879.8	8,149.8	7,135.3	990.4	87.55
159.8	54.0	6,834.9	8,629.2	7,580.5	1,059.1	87.85
159.8	57.0	6,791.0	9,108.6	8,020.4	1,127.8	88.05
159.8	60.0	6,748.1	9,588.0	8,455.2	1,196.5	88.19
159.8	63.0	6,706.0	10,067.4	8,884.9	1,265.2	88.25
159.8	66.0	6,664.8	10,546.8	9,309.8	1,333.9	88.27
159.8	69.0	6,624.4	11,026.2	9,730.6	1,402.7	88.25
159.8	72.0	6,584.7	11,505.6	10,146.0	1,471.4	88.18
159.8	75.0	6,545.8	11,985.0	10,557.0	1,540.1	88.09
159.7	78.0	6,507.4	12,456.6	10,963.2	1,608.8	88.01
159.7	81.0	6,469.6	12,935.7	11,365.0	1,677.5	87.86
159.7	84.0	6,432.4	13,414.8	11,762.4	1,746.2	87.68
159.7	87.0	6,395.6	13,893.9	12,155.9	1,815.0	87.49
159.7	90.0	6,359.3	14,373.0	12,544.4	1,883.7	87.28

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
159.7	93.0	6,323.3	14,852.1	12,928.3	1,952.4	87.05
159.7	96.0	6,287.6	15,331.2	13,307.6	2,021.1	86.80
159.7	99.0	6,252.2	15,810.3	13,682.5	2,089.8	86.54
159.7	102.0	6,217.0	16,289.4	14,052.8	2,158.5	86.27
159.7	105.0	6,182.0	16,768.5	14,419.0	2,227.3	85.99
159.6	108.0	6,147.1	17,236.8	14,779.9	2,296.0	85.75
159.6	111.0	6,112.2	17,715.6	15,135.7	2,364.7	85.44
159.6	114.0	6,077.3	18,194.4	15,486.5	2,433.4	85.12
159.6	117.0	6,042.4	18,673.2	15,832.3	2,502.1	84.79
159.6	120.0	6,007.4	19,152.0	16,172.7	2,570.8	84.44
159.6	123.0	5,972.2	19,630.8	16,508.3	2,639.6	84.09
159.6	126.0	5,936.9	20,109.6	16,837.8	2,708.3	83.73
159.6	129.0	5,901.2	20,588.4	17,161.1	2,777.0	83.35
159.6	132.0	5,865.3	21,067.2	17,478.7	2,845.7	82.97
159.6	135.0	5,828.9	21,546.0	17,789.5	2,914.4	82.57
159.5	138.0	5,792.2	22,011.0	18,094.2	2,983.1	82.21
159.5	141.0	5,755.0	22,489.5	18,392.6	3,051.9	81.78
159.5	144.0	5,717.2	22,968.0	18,683.2	3,120.6	81.34
159.5	147.0	5,678.9	23,446.5	18,966.5	3,189.3	80.89
159.5	150.0	5,640.0	23,925.0	19,242.4	3,258.0	80.43
159.5	153.0	5,600.4	24,403.5	19,510.2	3,326.7	79.95
159.5	156.0	5,560.0	24,882.0	19,769.4	3,395.4	79.45
159.5	159.0	5,518.9	25,360.5	20,020.9	3,464.2	78.95
159.5	162.0	5,476.9	25,839.0	20,262.6	3,532.9	78.42
159.5	165.0	5,434.0	26,317.5	20,494.8	3,601.6	77.88
159.4	168.0	5,390.2	26,779.2	20,717.4	3,670.3	77.36
159.4	171.0	5,345.4	27,257.4	20,929.8	3,739.0	76.79
159.4	174.0	5,299.5	27,735.6	21,131.3	3,807.7	76.19
159.4	177.0	5,252.5	28,213.8	21,322.3	3,876.5	75.57
159.4	180.0	5,204.4	28,692.0	21,501.5	3,945.2	74.94

nl = rpm with no load

lo = current with no load

kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

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