

Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B4 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **15.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 1,481.0 [RPM] lo: 5.2 [A] kv: 99.6 [RPM/V] kn: -2.37 [RPM/A] kT: 10.74 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
14.9	30.0	1,421.1	447.0	396.4	266.4	88.69
14.9	36.0	1,401.5	536.4	485.6	330.9	90.54
14.9	42.0	1,382.3	625.8	572.2	395.3	91.44
14.9	48.0	1,363.4	715.2	656.5	459.8	91.79
14.8	54.0	1,344.9	799.2	738.3	524.2	92.38
14.8	60.0	1,326.8	888.0	817.8	588.6	92.10
14.8	66.0	1,309.0	976.8	895.3	653.1	91.65
14.8	72.0	1,291.4	1,065.6	970.3	717.5	91.06
14.8	78.0	1,274.2	1,154.4	1,043.3	781.9	90.38
14.8	84.0	1,257.3	1,243.2	1,114.4	846.4	89.64
14.7	90.0	1,240.6	1,323.0	1,183.3	910.8	89.44
14.7	96.0	1,224.2	1,411.2	1,250.3	975.3	88.60
14.7	102.0	1,208.0	1,499.4	1,315.2	1,039.7	87.72
14.7	108.0	1,192.0	1,587.6	1,378.2	1,104.1	86.81
14.7	114.0	1,176.2	1,675.8	1,439.4	1,168.6	85.89
14.7	120.0	1,160.7	1,764.0	1,498.7	1,233.0	84.96
14.6	126.0	1,145.2	1,839.6	1,555.9	1,297.4	84.58
14.6	132.0	1,130.0	1,927.2	1,611.6	1,361.9	83.62
14.6	138.0	1,114.9	2,014.8	1,665.2	1,426.3	82.65
14.6	144.0	1,099.9	2,102.4	1,717.1	1,490.8	81.67
14.6	150.0	1,085.1	2,190.0	1,767.2	1,555.2	80.69
14.6	156.0	1,070.3	2,277.6	1,815.3	1,619.6	79.70
14.5	162.0	1,055.6	2,349.0	1,861.6	1,684.1	79.25
14.5	168.0	1,041.0	2,436.0	1,906.1	1,748.5	78.25
14.5	174.0	1,026.5	2,523.0	1,948.9	1,813.0	77.24
14.5	180.0	1,012.0	2,610.0	1,989.6	1,877.4	76.23

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
14.5	186.0	997.5	2,697.0	2,028.4	1,941.8	75.21
14.5	192.0	983.0	2,784.0	2,065.3	2,006.3	74.18
14.4	198.0	968.5	2,851.2	2,100.1	2,070.7	73.66
14.4	204.0	954.0	2,937.6	2,133.0	2,135.1	72.61
14.4	210.0	939.5	3,024.0	2,164.1	2,199.6	71.56
14.4	216.0	924.9	3,110.4	2,192.8	2,264.0	70.50
14.4	222.0	910.3	3,196.8	2,219.7	2,328.5	69.43
14.4	228.0	895.5	3,283.2	2,244.0	2,392.9	68.35
14.3	234.0	880.7	3,346.2	2,266.3	2,457.3	67.73
14.3	240.0	865.8	3,432.0	2,286.4	2,521.8	66.62
14.3	246.0	850.7	3,517.8	2,303.9	2,586.2	65.49
14.3	252.0	835.5	3,603.6	2,319.1	2,650.6	64.36
14.3	258.0	820.2	3,689.4	2,332.0	2,715.1	63.21
14.3	264.0	804.6	3,775.2	2,341.9	2,779.5	62.03
14.2	270.0	788.9	3,834.0	2,349.5	2,844.0	61.28
14.2	276.0	773.0	3,919.2	2,354.3	2,908.4	60.07
14.2	282.0	756.9	4,004.4	2,356.3	2,972.8	58.84
14.2	288.0	740.6	4,089.6	2,355.6	3,037.3	57.60
14.2	294.0	724.0	4,174.8	2,351.6	3,101.7	56.33
14.2	300.0	707.1	4,260.0	2,344.4	3,166.1	55.03
14.1	306.0	690.0	4,314.6	2,334.3	3,230.6	54.10
14.1	312.0	672.6	4,399.2	2,320.8	3,295.0	52.76
14.1	318.0	654.8	4,483.8	2,303.6	3,359.5	51.38
14.1	324.0	636.8	4,568.4	2,283.2	3,423.9	49.98
14.1	330.0	618.4	4,653.0	2,259.0	3,488.3	48.55
14.1	336.0	599.7	4,737.6	2,231.2	3,552.8	47.10
14.0	342.0	580.6	4,788.0	2,199.3	3,617.2	45.93
14.0	348.0	561.1	4,872.0	2,163.3	3,681.7	44.40
14.0	354.0	541.3	4,956.0	2,123.5	3,746.1	42.85
14.0	360.0	521.0	5,040.0	2,079.0	3,810.5	41.25

nl = rpm with no load

lo = current with no load

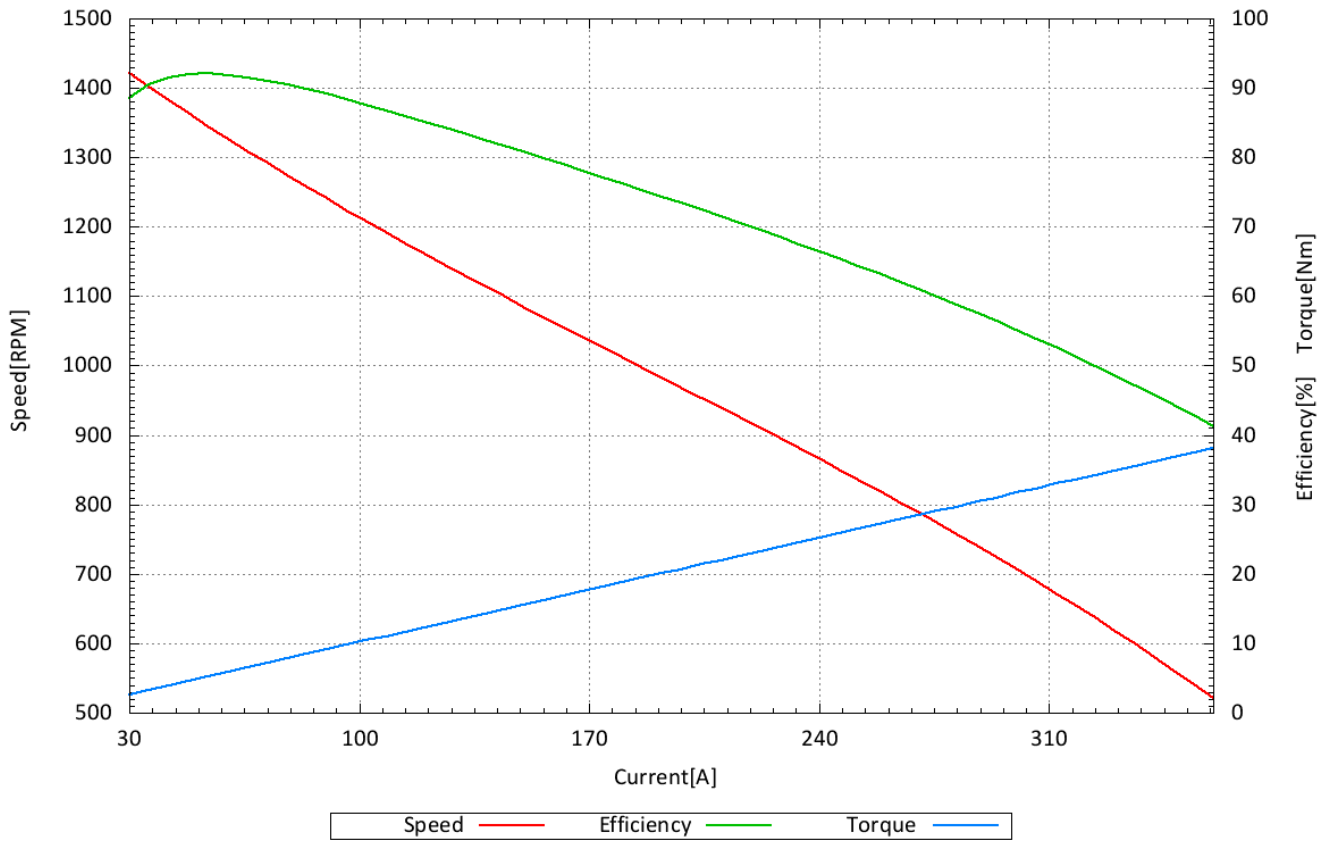
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_50_B4_P30_15V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B4 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **20.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 1,973.2 [RPM] lo: 5.7 [A] kv: 99.6 [RPM/V] kn: -3.16 [RPM/A] kT: 10.74 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
19.9	30.0	1,908.7	597.0	522.5	261.4	87.52
19.9	36.0	1,885.1	716.4	643.2	325.8	89.78
19.9	42.0	1,862.1	835.8	761.1	390.3	91.06
19.9	48.0	1,839.5	955.2	875.9	454.7	91.70
19.8	54.0	1,817.3	1,069.2	988.1	519.2	92.41
19.8	60.0	1,795.5	1,188.0	1,097.3	583.6	92.37
19.8	66.0	1,774.1	1,306.8	1,203.9	648.0	92.12
19.8	72.0	1,753.1	1,425.6	1,308.0	712.5	91.75
19.8	78.0	1,732.4	1,544.4	1,409.4	776.9	91.26
19.8	84.0	1,712.1	1,663.2	1,508.4	841.3	90.69
19.7	90.0	1,692.1	1,773.0	1,605.0	905.8	90.53
19.7	96.0	1,672.4	1,891.2	1,699.1	970.2	89.84
19.7	102.0	1,653.0	2,009.4	1,791.1	1,034.7	89.14
19.7	108.0	1,633.8	2,127.6	1,880.5	1,099.1	88.38
19.7	114.0	1,614.9	2,245.8	1,967.6	1,163.5	87.61
19.7	120.0	1,596.2	2,364.0	2,052.6	1,228.0	86.83
19.6	126.0	1,577.7	2,469.6	2,135.3	1,292.4	86.46
19.6	132.0	1,559.4	2,587.2	2,215.7	1,356.8	85.64
19.6	138.0	1,541.3	2,704.8	2,294.0	1,421.3	84.81
19.6	144.0	1,523.3	2,822.4	2,370.0	1,485.7	83.97
19.6	150.0	1,505.5	2,940.0	2,444.0	1,550.2	83.13
19.6	156.0	1,487.7	3,057.6	2,515.4	1,614.6	82.27
19.5	162.0	1,470.1	3,159.0	2,584.8	1,679.0	81.82
19.5	168.0	1,452.6	3,276.0	2,652.1	1,743.5	80.96
19.5	174.0	1,435.2	3,393.0	2,717.2	1,807.9	80.08
19.5	180.0	1,417.7	3,510.0	2,779.6	1,872.3	79.19

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
19.5	186.0	1,400.4	3,627.0	2,840.3	1,936.8	78.31
19.5	192.0	1,383.0	3,744.0	2,898.3	2,001.2	77.41
19.4	198.0	1,365.6	3,841.2	2,954.1	2,065.7	76.90
19.4	204.0	1,348.2	3,957.6	3,007.3	2,130.1	75.99
19.4	210.0	1,330.8	4,074.0	3,058.3	2,194.5	75.07
19.4	216.0	1,313.3	4,190.4	3,106.8	2,259.0	74.14
19.4	222.0	1,295.7	4,306.8	3,152.5	2,323.4	73.20
19.4	228.0	1,278.0	4,423.2	3,195.8	2,387.9	72.25
19.3	234.0	1,260.2	4,516.2	3,236.2	2,452.3	71.66
19.3	240.0	1,242.3	4,632.0	3,274.1	2,516.7	70.68
19.3	246.0	1,224.2	4,747.8	3,309.0	2,581.2	69.70
19.3	252.0	1,206.0	4,863.6	3,341.2	2,645.6	68.70
19.3	258.0	1,187.6	4,979.4	3,370.3	2,710.0	67.68
19.3	264.0	1,168.9	5,095.2	3,396.2	2,774.5	66.65
19.2	270.0	1,150.1	5,184.0	3,419.1	2,838.9	65.96
19.2	276.0	1,131.0	5,299.2	3,438.7	2,903.4	64.89
19.2	282.0	1,111.7	5,414.4	3,455.0	2,967.8	63.81
19.2	288.0	1,092.0	5,529.6	3,467.4	3,032.2	62.71
19.2	294.0	1,072.1	5,644.8	3,476.7	3,096.7	61.59
19.2	300.0	1,051.9	5,760.0	3,482.1	3,161.1	60.45
19.1	306.0	1,031.3	5,844.6	3,483.5	3,225.5	59.60
19.1	312.0	1,010.4	5,959.2	3,481.1	3,290.0	58.42
19.1	318.0	989.2	6,073.8	3,474.8	3,354.4	57.21
19.1	324.0	967.5	6,188.4	3,463.9	3,418.9	55.97
19.1	330.0	945.5	6,303.0	3,448.9	3,483.3	54.72
19.1	336.0	923.0	6,417.6	3,429.1	3,547.7	53.43
19.0	342.0	900.1	6,498.0	3,404.8	3,612.2	52.40
19.0	348.0	876.7	6,612.0	3,375.4	3,676.6	51.05
19.0	354.0	852.9	6,726.0	3,341.4	3,741.1	49.68
19.0	360.0	828.6	6,840.0	3,302.1	3,805.5	48.28

nl = rpm with no load

lo = current with no load

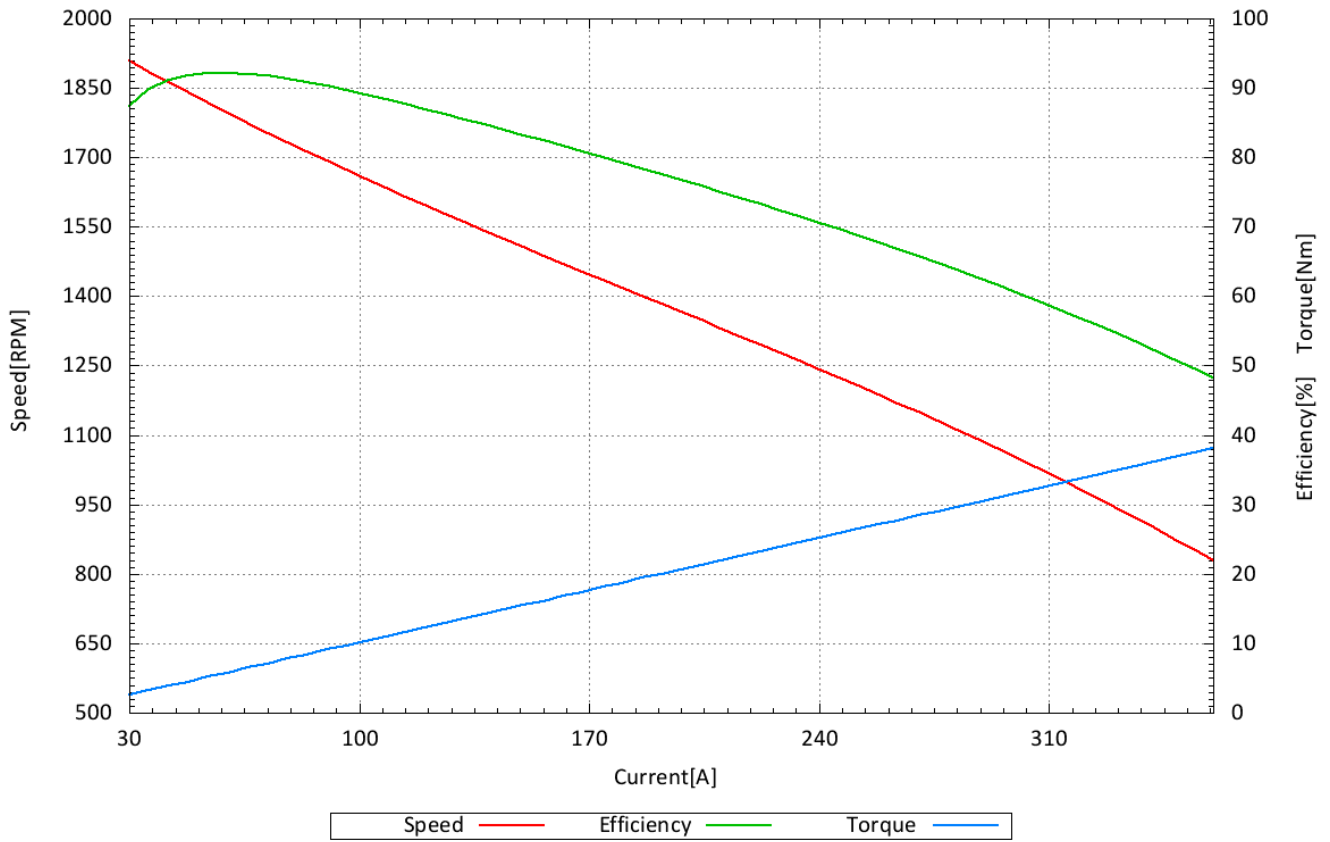
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_50_B4_P30_20V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B4 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **30.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 2,936.6 [RPM] lo: 8.0 [A] kv: 98.9 [RPM/V] kn: -3.91 [RPM/A] kT: 11.01 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
29.9	30.0	2,868.6	897.0	727.6	242.2	81.11
29.9	36.0	2,838.5	1,076.4	916.4	308.3	85.14
29.9	42.0	2,809.1	1,255.8	1,101.1	374.3	87.68
29.9	48.0	2,780.4	1,435.2	1,282.3	440.4	89.35
29.9	54.0	2,752.3	1,614.6	1,459.5	506.4	90.40
29.8	60.0	2,724.8	1,788.0	1,633.6	572.5	91.36
29.8	66.0	2,697.9	1,966.8	1,804.2	638.6	91.73
29.8	72.0	2,671.5	2,145.6	1,971.2	704.6	91.87
29.8	78.0	2,645.7	2,324.4	2,135.3	770.7	91.86
29.8	84.0	2,620.4	2,503.2	2,296.0	836.7	91.72
29.8	90.0	2,595.5	2,682.0	2,453.8	902.8	91.49
29.7	96.0	2,571.0	2,851.2	2,608.3	968.8	91.48
29.7	102.0	2,547.0	3,029.4	2,760.3	1,034.9	91.12
29.7	108.0	2,523.4	3,207.6	2,909.4	1,101.0	90.70
29.7	114.0	2,500.1	3,385.8	3,055.3	1,167.0	90.24
29.7	120.0	2,477.2	3,564.0	3,198.8	1,233.1	89.75
29.7	126.0	2,454.6	3,742.2	3,339.3	1,299.1	89.23
29.6	132.0	2,432.2	3,907.2	3,477.2	1,365.2	88.99
29.6	138.0	2,410.1	4,084.8	3,612.1	1,431.2	88.43
29.6	144.0	2,388.3	4,262.4	3,744.8	1,497.3	87.86
29.6	150.0	2,366.6	4,440.0	3,874.6	1,563.4	87.27
29.6	156.0	2,345.1	4,617.6	4,001.5	1,629.4	86.66
29.6	162.0	2,323.7	4,795.2	4,125.8	1,695.5	86.04
29.5	168.0	2,302.5	4,956.0	4,247.3	1,761.5	85.70
29.5	174.0	2,281.3	5,133.0	4,366.1	1,827.6	85.06
29.5	180.0	2,260.3	5,310.0	4,482.1	1,893.6	84.41

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
29.5	186.0	2,239.2	5,487.0	4,595.3	1,959.7	83.75
29.5	192.0	2,218.2	5,664.0	4,705.7	2,025.8	83.08
29.5	198.0	2,197.1	5,841.0	4,812.8	2,091.8	82.40
29.5	204.0	2,176.0	6,018.0	4,917.2	2,157.9	81.71
29.4	210.0	2,154.8	6,174.0	5,018.2	2,223.9	81.28
29.4	216.0	2,133.5	6,350.4	5,116.3	2,290.0	80.57
29.4	222.0	2,112.1	6,526.8	5,211.0	2,356.0	79.84
29.4	228.0	2,090.6	6,703.2	5,302.6	2,422.1	79.11
29.4	234.0	2,068.8	6,879.6	5,390.5	2,488.2	78.36
29.4	240.0	2,046.9	7,056.0	5,474.9	2,554.2	77.59
29.3	246.0	2,024.7	7,207.8	5,555.7	2,620.3	77.08
29.3	252.0	2,002.2	7,383.6	5,632.4	2,686.3	76.28
29.3	258.0	1,979.5	7,559.4	5,705.5	2,752.4	75.48
29.3	264.0	1,956.4	7,735.2	5,774.2	2,818.4	74.65
29.3	270.0	1,933.0	7,911.0	5,838.9	2,884.5	73.81
29.3	276.0	1,909.2	8,086.8	5,899.2	2,950.6	72.95
29.2	282.0	1,885.1	8,234.4	5,955.0	3,016.6	72.32
29.2	288.0	1,860.5	8,409.6	6,006.1	3,082.7	71.42
29.2	294.0	1,835.4	8,584.8	6,051.9	3,148.7	70.50
29.2	300.0	1,809.9	8,760.0	6,093.1	3,214.8	69.56
29.2	306.0	1,783.9	8,935.2	6,128.8	3,280.8	68.59
29.2	312.0	1,757.3	9,110.4	6,159.1	3,346.9	67.61
29.1	318.0	1,730.1	9,253.8	6,183.5	3,413.0	66.82
29.1	324.0	1,702.4	9,428.4	6,202.2	3,479.0	65.78
29.1	330.0	1,674.1	9,603.0	6,215.0	3,545.1	64.72
29.1	336.0	1,645.1	9,777.6	6,221.0	3,611.1	63.63
29.1	342.0	1,615.4	9,952.2	6,220.5	3,677.2	62.50
29.1	348.0	1,585.1	10,126.8	6,213.4	3,743.2	61.36
29.0	354.0	1,554.0	10,266.0	6,199.0	3,809.3	60.38
29.0	360.0	1,522.2	10,440.0	6,177.4	3,875.3	59.17

nl = rpm with no load

lo = current with no load

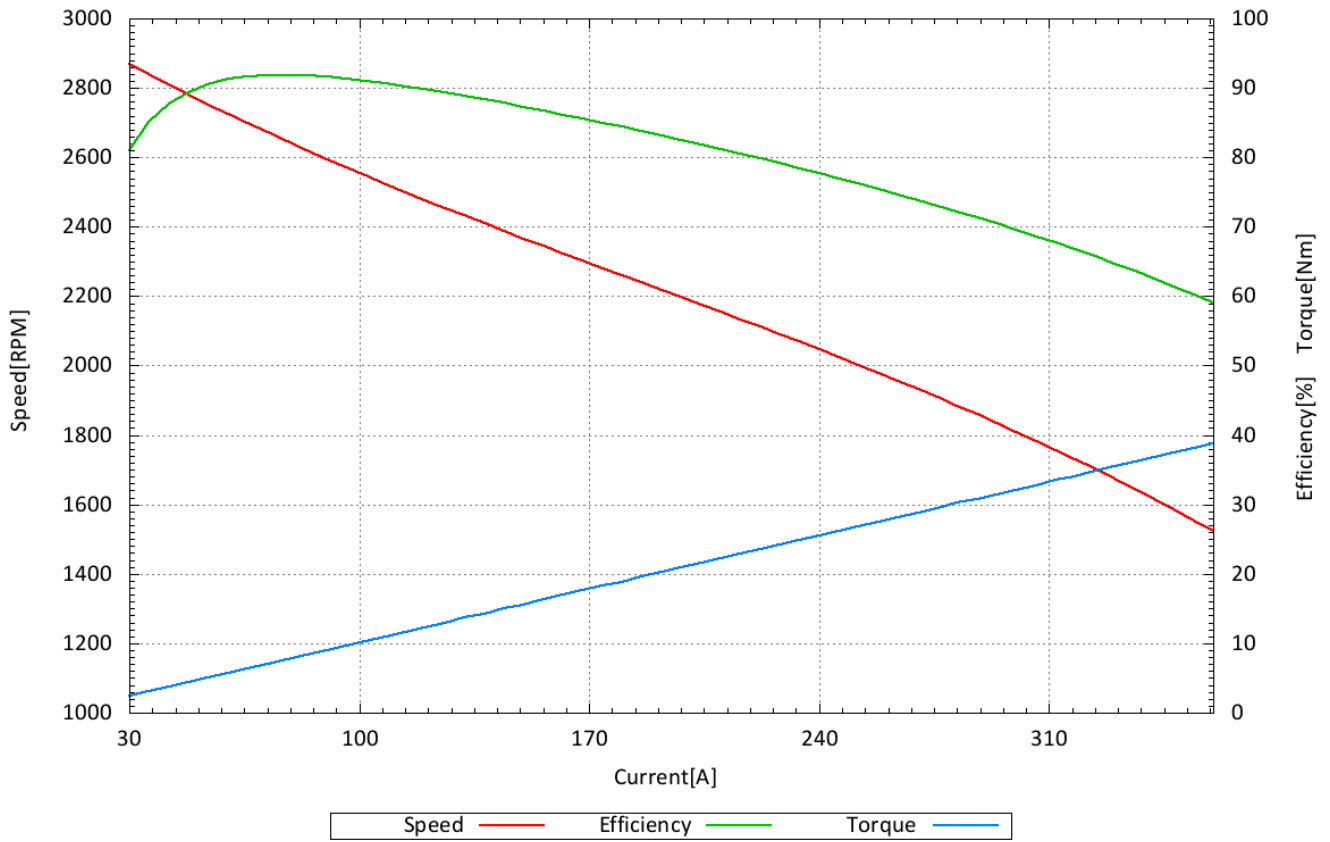
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_50_B4_P30_30V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B4 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **40.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 3,879.9 [RPM] lo: 10.1 [A] kv: 98.1 [RPM/V] kn: -4.55 [RPM/A] kT: 11.20 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
39.9	30.0	3,829.5	1,197.0	892.7	222.6	74.58
39.9	36.0	3,794.2	1,436.4	1,151.5	289.8	80.16
39.9	42.0	3,759.5	1,675.8	1,405.5	357.0	83.87
39.9	48.0	3,725.4	1,915.2	1,654.9	424.2	86.41
39.9	54.0	3,692.0	2,154.6	1,899.9	491.4	88.18
39.8	60.0	3,659.1	2,388.0	2,140.4	558.6	89.63
39.8	66.0	3,626.8	2,626.8	2,376.8	625.8	90.48
39.8	72.0	3,595.0	2,865.6	2,608.9	693.0	91.04
39.8	78.0	3,563.8	3,104.4	2,837.1	760.2	91.39
39.8	84.0	3,533.0	3,343.2	3,061.2	827.4	91.56
39.8	90.0	3,502.8	3,582.0	3,281.5	894.6	91.61
39.7	96.0	3,473.1	3,811.2	3,498.1	961.8	91.78
39.7	102.0	3,443.8	4,049.4	3,710.6	1,028.9	91.63
39.7	108.0	3,414.9	4,287.6	3,919.7	1,096.1	91.42
39.7	114.0	3,386.5	4,525.8	4,125.5	1,163.3	91.15
39.7	120.0	3,358.5	4,764.0	4,327.7	1,230.5	90.84
39.7	126.0	3,330.9	5,002.2	4,526.5	1,297.7	90.49
39.6	132.0	3,303.6	5,227.2	4,721.9	1,364.9	90.33
39.6	138.0	3,276.7	5,464.8	4,914.0	1,432.1	89.92
39.6	144.0	3,250.1	5,702.4	5,102.9	1,499.3	89.49
39.6	150.0	3,223.9	5,940.0	5,288.6	1,566.5	89.03
39.6	156.0	3,197.9	6,177.6	5,471.0	1,633.7	88.56
39.6	162.0	3,172.2	6,415.2	5,650.3	1,700.9	88.08
39.5	168.0	3,146.8	6,636.0	5,826.5	1,768.1	87.80
39.5	174.0	3,121.7	6,873.0	5,999.7	1,835.3	87.29
39.5	180.0	3,096.7	7,110.0	6,169.5	1,902.5	86.77

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
39.5	186.0	3,072.0	7,347.0	6,336.5	1,969.7	86.25
39.5	192.0	3,047.5	7,584.0	6,500.4	2,036.9	85.71
39.5	198.0	3,023.1	7,821.0	6,661.1	2,104.1	85.17
39.4	204.0	2,998.9	8,037.6	6,818.8	2,171.3	84.84
39.4	210.0	2,974.8	8,274.0	6,973.4	2,238.5	84.28
39.4	216.0	2,950.8	8,510.4	7,124.8	2,305.7	83.72
39.4	222.0	2,927.0	8,746.8	7,273.3	2,372.9	83.15
39.4	228.0	2,903.2	8,983.2	7,418.5	2,440.1	82.58
39.4	234.0	2,879.5	9,219.6	7,560.5	2,507.3	82.00
39.3	240.0	2,855.9	9,432.0	7,699.2	2,574.4	81.63
39.3	246.0	2,832.2	9,667.8	7,834.6	2,641.6	81.04
39.3	252.0	2,808.6	9,903.6	7,967.0	2,708.8	80.45
39.3	258.0	2,785.0	10,139.4	8,096.1	2,776.0	79.85
39.3	264.0	2,761.3	10,375.2	8,221.5	2,843.2	79.24
39.3	270.0	2,737.6	10,611.0	8,343.6	2,910.4	78.63
39.2	276.0	2,713.9	10,819.2	8,462.3	2,977.6	78.22
39.2	282.0	2,690.1	11,054.4	8,577.4	3,044.8	77.59
39.2	288.0	2,666.1	11,289.6	8,688.5	3,112.0	76.96
39.2	294.0	2,642.1	11,524.8	8,796.2	3,179.2	76.32
39.2	300.0	2,617.9	11,760.0	8,899.9	3,246.4	75.68
39.2	306.0	2,593.6	11,995.2	8,999.8	3,313.6	75.03
39.1	312.0	2,569.1	12,199.2	9,095.6	3,380.8	74.56
39.1	318.0	2,544.4	12,433.8	9,187.2	3,448.0	73.89
39.1	324.0	2,519.6	12,668.4	9,274.9	3,515.2	73.21
39.1	330.0	2,494.5	12,903.0	9,358.1	3,582.4	72.53
39.1	336.0	2,469.1	13,137.6	9,436.5	3,649.6	71.83
39.1	342.0	2,443.5	13,372.2	9,510.6	3,716.8	71.12
39.0	348.0	2,417.7	13,572.0	9,580.4	3,784.0	70.59
39.0	354.0	2,391.5	13,806.0	9,644.8	3,851.2	69.86
39.0	360.0	2,365.0	14,040.0	9,704.4	3,918.4	69.12

nl = rpm with no load

lo = current with no load

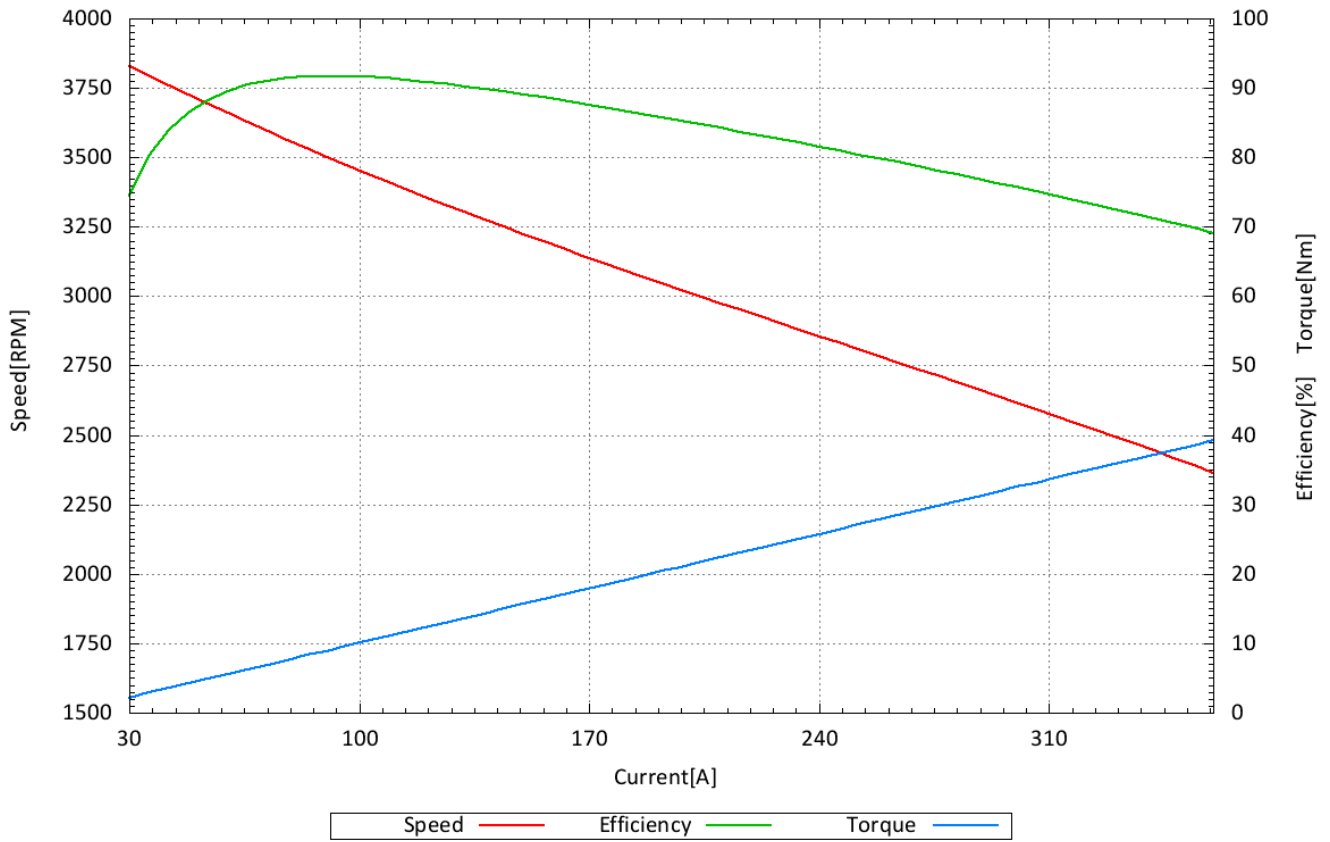
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_50_B4_P30_40V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B4 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **50.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 4,808.5 [RPM] lo: 11.3 [A] kv: 97.3 [RPM/V] kn: -5.13 [RPM/A] kT: 11.32 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
49.9	30.0	4,761.3	1,497.0	1,055.5	211.7	70.51
49.9	36.0	4,720.9	1,796.4	1,382.3	279.6	76.95
49.9	42.0	4,681.4	2,095.8	1,704.1	347.6	81.31
49.9	48.0	4,642.6	2,395.2	2,020.0	415.5	84.34
49.8	54.0	4,604.5	2,689.2	2,330.9	483.4	86.68
49.8	60.0	4,567.1	2,988.0	2,637.2	551.4	88.26
49.8	66.0	4,530.5	3,286.8	2,938.2	619.3	89.39
49.8	72.0	4,494.4	3,585.6	3,234.3	687.2	90.20
49.8	78.0	4,459.0	3,884.4	3,526.4	755.2	90.78
49.8	84.0	4,424.3	4,183.2	3,813.5	823.1	91.16
49.7	90.0	4,390.1	4,473.0	4,096.2	891.0	91.58
49.7	96.0	4,356.5	4,771.2	4,375.1	959.0	91.70
49.7	102.0	4,323.4	5,069.4	4,649.2	1,026.9	91.71
49.7	108.0	4,290.8	5,367.6	4,919.3	1,094.8	91.65
49.7	114.0	4,258.7	5,665.8	5,185.7	1,162.8	91.53
49.6	120.0	4,227.1	5,952.0	5,447.8	1,230.7	91.53
49.6	126.0	4,196.0	6,249.6	5,706.1	1,298.6	91.30
49.6	132.0	4,165.3	6,547.2	5,961.0	1,366.6	91.05
49.6	138.0	4,135.0	6,844.8	6,211.6	1,434.5	90.75
49.6	144.0	4,105.0	7,142.4	6,458.9	1,502.5	90.43
49.6	150.0	4,075.4	7,440.0	6,702.1	1,570.4	90.08
49.5	156.0	4,046.2	7,722.0	6,941.8	1,638.3	89.90
49.5	162.0	4,017.3	8,019.0	7,178.2	1,706.3	89.52
49.5	168.0	3,988.6	8,316.0	7,410.6	1,774.2	89.11
49.5	174.0	3,960.2	8,613.0	7,639.4	1,842.1	88.70
49.5	180.0	3,932.1	8,910.0	7,865.2	1,910.1	88.27

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
49.5	186.0	3,904.2	9,207.0	8,087.0	1,978.0	87.84
49.4	192.0	3,876.4	9,484.8	8,305.0	2,045.9	87.56
49.4	198.0	3,848.9	9,781.2	8,520.2	2,113.9	87.11
49.4	204.0	3,821.4	10,077.6	8,731.0	2,181.8	86.64
49.4	210.0	3,794.1	10,374.0	8,938.4	2,249.7	86.16
49.4	216.0	3,767.0	10,670.4	9,142.8	2,317.7	85.68
49.3	222.0	3,739.8	10,944.6	9,342.7	2,385.6	85.36
49.3	228.0	3,712.8	11,240.4	9,539.3	2,453.5	84.87
49.3	234.0	3,685.8	11,536.2	9,732.4	2,521.5	84.36
49.3	240.0	3,658.7	11,832.0	9,921.0	2,589.4	83.85
49.3	246.0	3,631.7	12,127.8	10,106.0	2,657.3	83.33
49.3	252.0	3,604.6	12,423.6	10,287.3	2,725.3	82.80
49.2	258.0	3,577.5	12,693.6	10,464.3	2,793.2	82.44
49.2	264.0	3,550.3	12,988.8	10,637.2	2,861.1	81.90
49.2	270.0	3,522.9	13,284.0	10,806.0	2,929.1	81.35
49.2	276.0	3,495.5	13,579.2	10,970.5	2,997.0	80.79
49.2	282.0	3,467.9	13,874.4	11,130.4	3,064.9	80.22
49.1	288.0	3,440.1	14,140.8	11,286.2	3,132.9	79.81
49.1	294.0	3,412.1	14,435.4	11,436.9	3,200.8	79.23
49.1	300.0	3,383.9	14,730.0	11,583.0	3,268.7	78.64
49.1	306.0	3,355.4	15,024.6	11,724.4	3,336.7	78.03
49.1	312.0	3,326.7	15,319.2	11,860.6	3,404.6	77.42
49.1	318.0	3,297.7	15,613.8	11,991.7	3,472.5	76.80
49.0	324.0	3,268.3	15,876.0	12,117.6	3,540.5	76.33
49.0	330.0	3,238.6	16,170.0	12,237.7	3,608.4	75.68
49.0	336.0	3,208.6	16,464.0	12,352.5	3,676.3	75.03
49.0	342.0	3,178.1	16,758.0	12,461.4	3,744.3	74.36
49.0	348.0	3,147.3	17,052.0	12,564.4	3,812.2	73.68
49.0	354.0	3,116.0	17,346.0	12,661.0	3,880.1	72.99
48.9	360.0	3,084.3	17,604.0	12,751.9	3,948.1	72.44

nl = rpm with no load

lo = current with no load

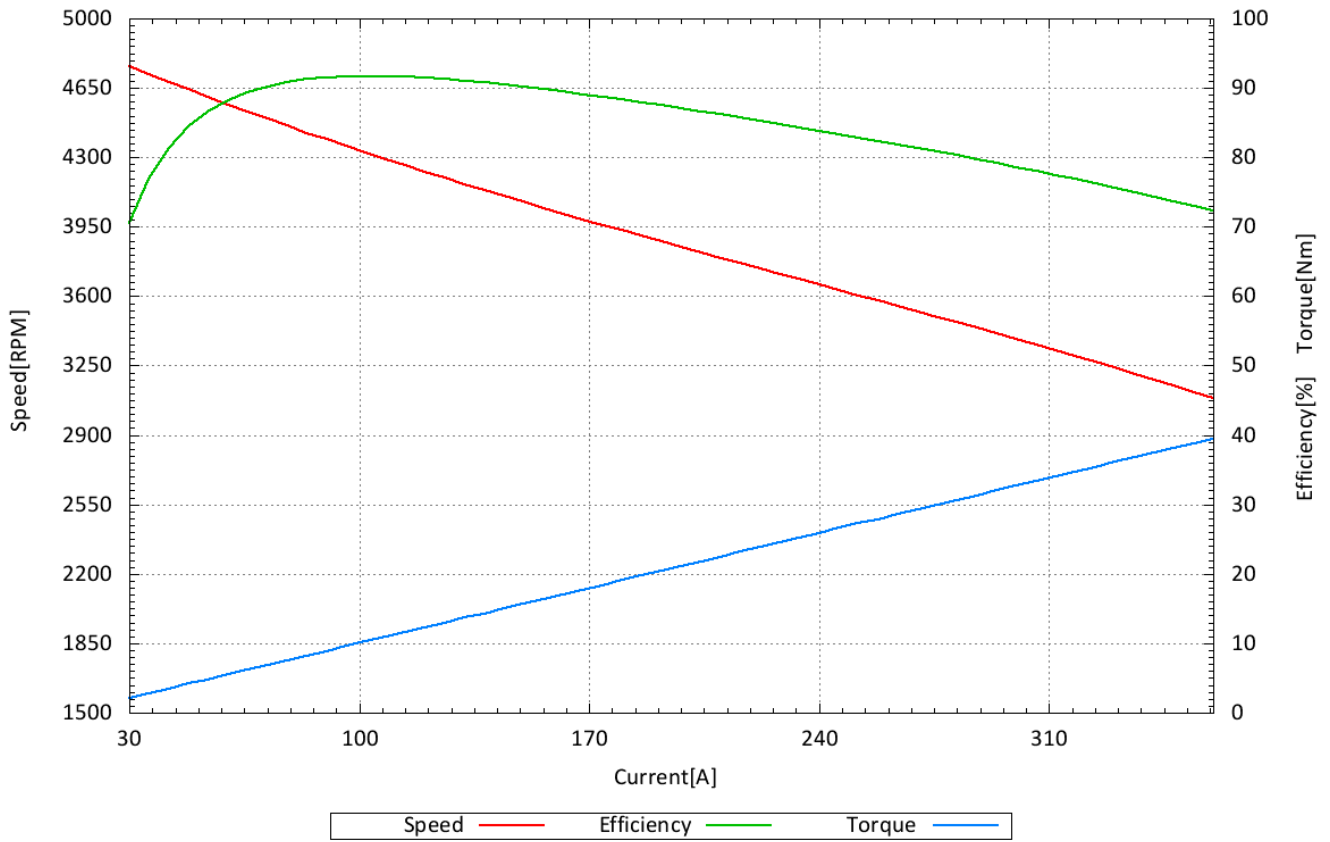
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_50_B4_P30_50V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B4 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **60.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 5,758.2 [RPM] lo: 11.3 [A] kv: 97.1 [RPM/V] kn: -5.91 [RPM/A] kT: 11.26 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
59.9	30.0	5,711.0	1,797.0	1,257.7	210.3	69.99
59.9	36.0	5,666.1	2,156.4	1,648.3	277.8	76.44
59.9	42.0	5,621.8	2,515.8	2,033.4	345.4	80.83
59.9	48.0	5,578.1	2,875.2	2,411.9	412.9	83.89
59.8	54.0	5,535.0	3,229.2	2,785.1	480.5	86.25
59.8	60.0	5,492.5	3,588.0	3,152.5	548.1	87.86
59.8	66.0	5,450.6	3,946.8	3,513.8	615.6	89.03
59.8	72.0	5,409.2	4,305.6	3,870.0	683.2	89.88
59.8	78.0	5,368.4	4,664.4	4,220.3	750.7	90.48
59.8	84.0	5,328.1	5,023.2	4,565.8	818.3	90.89
59.7	90.0	5,288.4	5,373.0	4,905.6	885.8	91.30
59.7	96.0	5,249.2	5,731.2	5,240.8	953.4	91.44
59.7	102.0	5,210.6	6,089.4	5,570.6	1,020.9	91.48
59.7	108.0	5,172.5	6,447.6	5,896.0	1,088.5	91.44
59.7	114.0	5,134.9	6,805.8	6,216.6	1,156.1	91.34
59.6	120.0	5,097.8	7,152.0	6,532.1	1,223.6	91.33
59.6	126.0	5,061.2	7,509.6	6,843.5	1,291.2	91.13
59.6	132.0	5,025.2	7,867.2	7,150.0	1,358.7	90.88
59.6	138.0	4,989.6	8,224.8	7,452.6	1,426.3	90.61
59.6	144.0	4,954.5	8,582.4	7,750.3	1,493.8	90.31
59.6	150.0	4,919.9	8,940.0	8,044.5	1,561.4	89.98
59.5	156.0	4,885.7	9,282.0	8,333.9	1,628.9	89.79
59.5	162.0	4,852.0	9,639.0	8,619.9	1,696.5	89.43
59.5	168.0	4,818.8	9,996.0	8,902.1	1,764.1	89.06
59.5	174.0	4,786.0	10,353.0	9,179.8	1,831.6	88.67
59.5	180.0	4,753.7	10,710.0	9,454.3	1,899.2	88.28

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
59.5	186.0	4,721.8	11,067.0	9,724.7	1,966.7	87.87
59.4	192.0	4,690.3	11,404.8	9,991.8	2,034.3	87.61
59.4	198.0	4,659.3	11,761.2	10,255.1	2,101.8	87.19
59.4	204.0	4,628.6	12,117.6	10,515.2	2,169.4	86.78
59.4	210.0	4,598.4	12,474.0	10,771.6	2,236.9	86.35
59.4	216.0	4,568.5	12,830.4	11,025.0	2,304.5	85.93
59.3	222.0	4,539.1	13,164.6	11,275.4	2,372.1	85.65
59.3	228.0	4,510.0	13,520.4	11,521.9	2,439.6	85.22
59.3	234.0	4,481.4	13,876.2	11,766.1	2,507.2	84.79
59.3	240.0	4,453.1	14,232.0	12,006.5	2,574.7	84.36
59.3	246.0	4,425.1	14,587.8	12,244.3	2,642.3	83.94
59.3	252.0	4,397.5	14,943.6	12,478.8	2,709.8	83.51
59.2	258.0	4,370.3	15,273.6	12,711.0	2,777.4	83.22
59.2	264.0	4,343.4	15,628.8	12,939.7	2,844.9	82.79
59.2	270.0	4,316.8	15,984.0	13,166.1	2,912.5	82.37
59.2	276.0	4,290.6	16,339.2	13,389.9	2,980.1	81.95
59.2	282.0	4,264.7	16,694.4	13,610.5	3,047.6	81.53
59.2	288.0	4,239.1	17,049.6	13,828.9	3,115.2	81.11
59.1	294.0	4,213.8	17,375.4	14,044.2	3,182.7	80.83
59.1	300.0	4,188.8	17,730.0	14,257.4	3,250.3	80.41
59.1	306.0	4,164.1	18,084.6	14,467.7	3,317.8	80.00
59.1	312.0	4,139.7	18,439.2	14,676.0	3,385.4	79.59
59.1	318.0	4,115.5	18,793.8	14,881.1	3,452.9	79.18
59.0	324.0	4,091.7	19,116.0	15,084.7	3,520.5	78.91
59.0	330.0	4,068.1	19,470.0	15,285.7	3,588.1	78.51
59.0	336.0	4,044.7	19,824.0	15,483.7	3,655.6	78.11
59.0	342.0	4,021.6	20,178.0	15,679.9	3,723.2	77.71
59.0	348.0	3,998.8	20,532.0	15,873.7	3,790.7	77.31
59.0	354.0	3,976.2	20,886.0	16,065.4	3,858.3	76.92
58.9	360.0	3,953.8	21,204.0	16,254.4	3,925.8	76.66

nl = rpm with no load

lo = current with no load

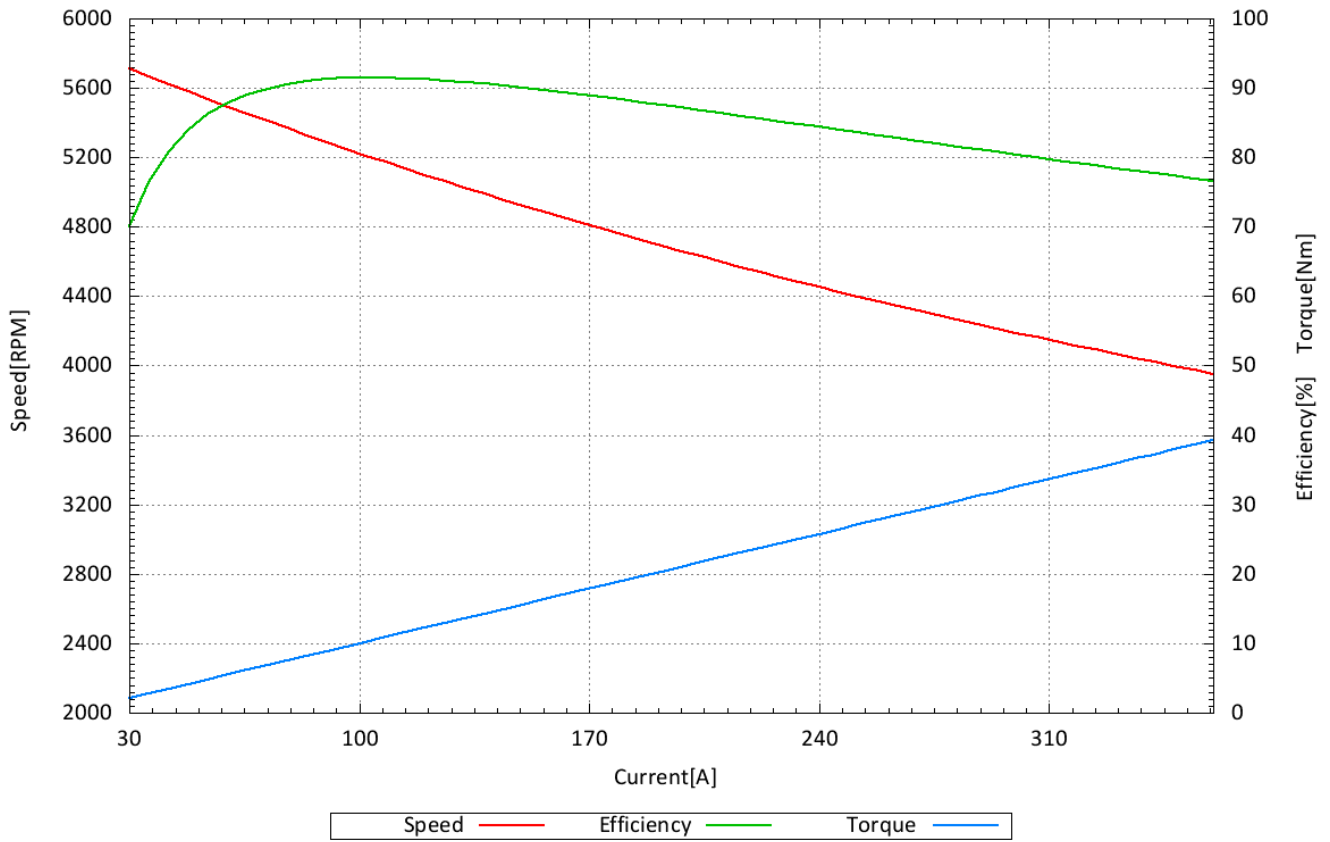
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_50_B4_P30_60V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B4 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **70.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 6,713.3 [RPM] lo: 12.0 [A] kv: 97.1 [RPM/V] kn: -6.90 [RPM/A] kT: 11.26 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
69.9	30.0	6,668.5	2,097.0	1,416.2	202.8	67.53
69.9	36.0	6,617.1	2,516.4	1,873.7	270.4	74.46
69.9	42.0	6,566.5	2,935.8	2,323.5	337.9	79.15
69.9	48.0	6,516.6	3,355.2	2,767.2	405.5	82.47
69.8	54.0	6,467.3	3,769.2	3,203.4	473.0	84.99
69.8	60.0	6,418.7	4,188.0	3,633.7	540.6	86.77
69.8	66.0	6,370.8	4,606.8	4,056.9	608.1	88.06
69.8	72.0	6,323.5	5,025.6	4,474.5	675.7	89.03
69.8	78.0	6,276.8	5,444.4	4,885.1	743.2	89.73
69.8	84.0	6,230.8	5,863.2	5,290.4	810.8	90.23
69.7	90.0	6,185.4	6,273.0	5,689.7	878.4	90.70
69.7	96.0	6,140.7	6,691.2	6,082.6	945.9	90.90
69.7	102.0	6,096.5	7,109.4	6,470.4	1,013.5	91.01
69.7	108.0	6,052.9	7,527.6	6,852.0	1,081.0	91.03
69.7	114.0	6,010.0	7,945.8	7,228.9	1,148.6	90.98
69.6	120.0	5,967.6	8,352.0	7,599.7	1,216.1	90.99
69.6	126.0	5,925.8	8,769.6	7,966.0	1,283.7	90.84
69.6	132.0	5,884.6	9,187.2	8,326.6	1,351.2	90.63
69.6	138.0	5,843.9	9,604.8	8,682.7	1,418.8	90.40
69.6	144.0	5,803.8	10,022.4	9,033.9	1,486.4	90.14
69.6	150.0	5,764.3	10,440.0	9,379.9	1,553.9	89.85
69.5	156.0	5,725.2	10,842.0	9,721.6	1,621.5	89.67
69.5	162.0	5,686.7	11,259.0	10,058.2	1,689.0	89.33
69.5	168.0	5,648.8	11,676.0	10,391.0	1,756.6	88.99
69.5	174.0	5,611.3	12,093.0	10,718.7	1,824.1	88.64
69.5	180.0	5,574.3	12,510.0	11,042.6	1,891.7	88.27

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
69.5	186.0	5,537.9	12,927.0	11,361.9	1,959.2	87.89
69.4	192.0	5,501.9	13,324.8	11,677.6	2,026.8	87.64
69.4	198.0	5,466.4	13,741.2	11,989.2	2,094.4	87.25
69.4	204.0	5,431.4	14,157.6	12,296.3	2,161.9	86.85
69.4	210.0	5,396.8	14,574.0	12,600.1	2,229.5	86.46
69.4	216.0	5,362.7	14,990.4	12,899.5	2,297.0	86.05
69.3	222.0	5,329.1	15,384.6	13,195.9	2,364.6	85.77
69.3	228.0	5,295.9	15,800.4	13,488.1	2,432.1	85.37
69.3	234.0	5,263.1	16,216.2	13,777.1	2,499.7	84.96
69.3	240.0	5,230.7	16,632.0	14,062.0	2,567.2	84.55
69.3	246.0	5,198.8	17,047.8	14,344.3	2,634.8	84.14
69.3	252.0	5,167.3	17,463.6	14,623.2	2,702.4	83.74
69.2	258.0	5,136.1	17,853.6	14,897.9	2,769.9	83.45
69.2	264.0	5,105.4	18,268.8	15,170.3	2,837.5	83.04
69.2	270.0	5,075.0	18,684.0	15,438.7	2,905.0	82.63
69.2	276.0	5,045.1	19,099.2	15,704.9	2,972.6	82.23
69.2	282.0	5,015.4	19,514.4	15,967.0	3,040.1	81.82
69.2	288.0	4,986.2	19,929.6	16,227.0	3,107.7	81.42
69.1	294.0	4,957.3	20,315.4	16,483.3	3,175.2	81.14
69.1	300.0	4,928.7	20,730.0	16,737.1	3,242.8	80.74
69.1	306.0	4,900.5	21,144.6	16,987.8	3,310.3	80.34
69.1	312.0	4,872.6	21,559.2	17,236.0	3,377.9	79.95
69.1	318.0	4,845.0	21,973.8	17,481.3	3,445.5	79.56
69.0	324.0	4,817.7	22,356.0	17,723.4	3,513.0	79.28
69.0	330.0	4,790.8	22,770.0	17,963.6	3,580.6	78.89
69.0	336.0	4,764.1	23,184.0	18,200.2	3,648.1	78.50
69.0	342.0	4,737.7	23,598.0	18,434.7	3,715.7	78.12
69.0	348.0	4,711.6	24,012.0	18,666.2	3,783.2	77.74
69.0	354.0	4,685.7	24,426.0	18,895.3	3,850.8	77.36
68.9	360.0	4,660.1	24,804.0	19,121.5	3,918.3	77.09

nl = rpm with no load

lo = current with no load

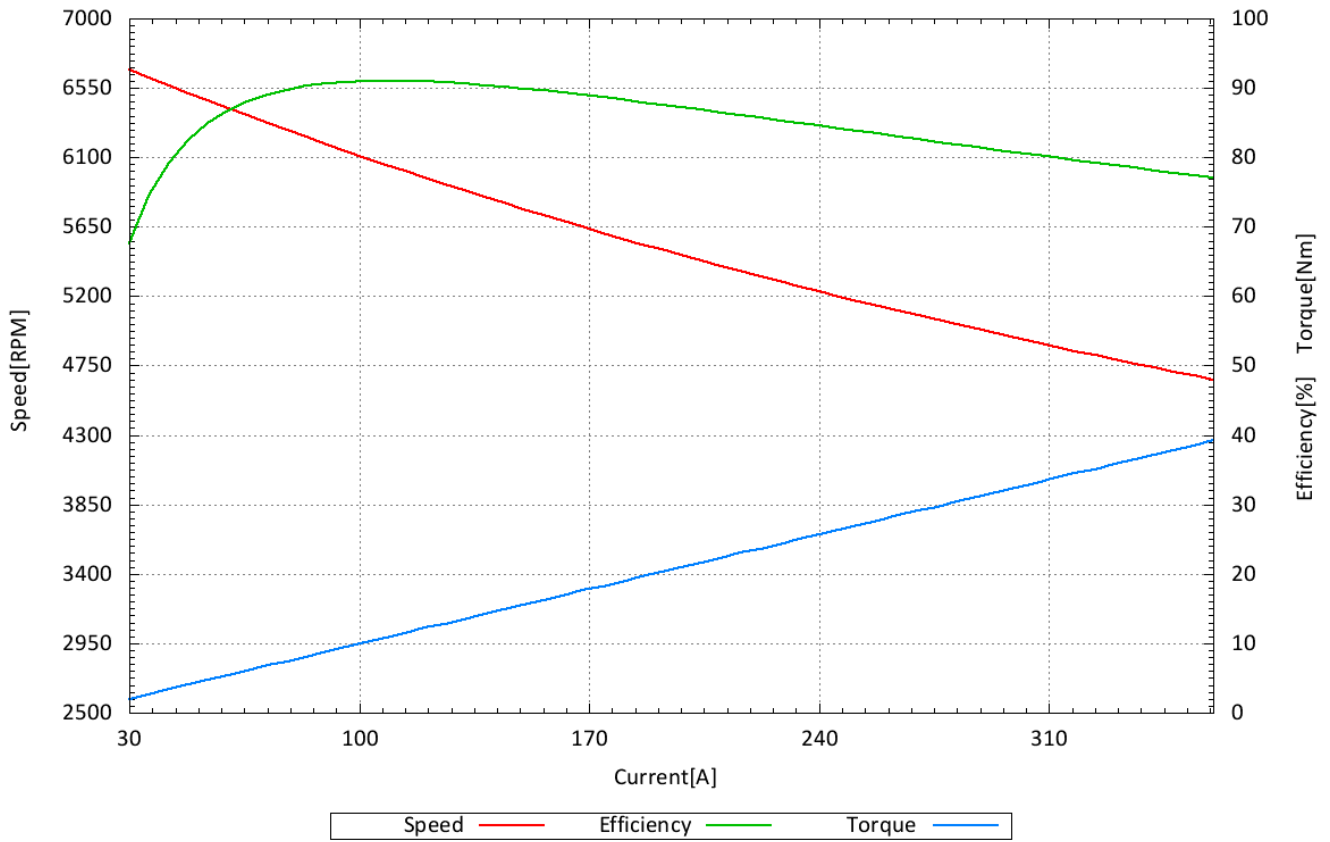
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_50_B4_P30_70V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-50-B4 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **80.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 7,667.1 [RPM] lo: 12.7 [A] kv: 97.1 [RPM/V] kn: -7.89 [RPM/A] kT: 11.26 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
79.9	30.0	7,625.9	2,397.0	1,559.6	195.3	65.07
79.9	36.0	7,568.1	2,876.4	2,083.6	262.9	72.44
79.9	42.0	7,511.2	3,355.8	2,598.8	330.4	77.44
79.9	48.0	7,455.0	3,835.2	3,107.1	398.0	81.02
79.8	54.0	7,399.6	4,309.2	3,607.1	465.5	83.71
79.8	60.0	7,344.9	4,788.0	4,100.4	533.1	85.64
79.8	66.0	7,290.9	5,266.8	4,586.4	600.7	87.08
79.8	72.0	7,237.7	5,745.6	5,064.5	668.2	88.15
79.8	78.0	7,185.3	6,224.4	5,536.5	735.8	88.95
79.8	84.0	7,133.5	6,703.2	6,000.8	803.3	89.52
79.7	90.0	7,082.4	7,173.0	6,459.2	870.9	90.05
79.7	96.0	7,032.1	7,651.2	6,910.4	938.4	90.32
79.7	102.0	6,982.4	8,129.4	7,355.8	1,006.0	90.48
79.7	108.0	6,933.4	8,607.6	7,794.3	1,073.5	90.55
79.7	114.0	6,885.1	9,085.8	8,227.4	1,141.1	90.55
79.6	120.0	6,837.4	9,552.0	8,654.4	1,208.7	90.60
79.6	126.0	6,790.4	10,029.6	9,074.9	1,276.2	90.48
79.6	132.0	6,744.0	10,507.2	9,490.3	1,343.8	90.32
79.6	138.0	6,698.3	10,984.8	9,899.5	1,411.3	90.12
79.6	144.0	6,653.1	11,462.4	10,303.7	1,478.9	89.89
79.6	150.0	6,608.6	11,940.0	10,701.9	1,546.4	89.63
79.5	156.0	6,564.7	12,402.0	11,095.5	1,614.0	89.47
79.5	162.0	6,521.4	12,879.0	11,483.3	1,681.5	89.16
79.5	168.0	6,478.7	13,356.0	11,866.7	1,749.1	88.85
79.5	174.0	6,436.6	13,833.0	12,244.6	1,816.6	88.52
79.5	180.0	6,395.0	14,310.0	12,618.2	1,884.2	88.18

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
79.5	186.0	6,354.0	14,787.0	12,987.1	1,951.8	87.83
79.4	192.0	6,313.5	15,244.8	13,350.6	2,019.3	87.57
79.4	198.0	6,273.6	15,721.2	13,710.3	2,086.9	87.21
79.4	204.0	6,234.2	16,197.6	14,064.9	2,154.4	86.83
79.4	210.0	6,195.3	16,674.0	14,415.7	2,222.0	86.46
79.4	216.0	6,156.9	17,150.4	14,761.5	2,289.5	86.07
79.3	222.0	6,119.1	17,604.6	15,104.1	2,357.1	85.80
79.3	228.0	6,081.7	18,080.4	15,441.7	2,424.6	85.41
79.3	234.0	6,044.8	18,556.2	15,775.9	2,492.2	85.02
79.3	240.0	6,008.4	19,032.0	16,106.2	2,559.8	84.63
79.3	246.0	5,972.5	19,507.8	16,432.2	2,627.3	84.23
79.3	252.0	5,937.0	19,983.6	16,754.8	2,694.9	83.84
79.2	258.0	5,902.0	20,433.6	17,073.2	2,762.4	83.55
79.2	264.0	5,867.4	20,908.8	17,388.4	2,830.0	83.16
79.2	270.0	5,833.3	21,384.0	17,699.7	2,897.5	82.77
79.2	276.0	5,799.6	21,859.2	18,008.0	2,965.1	82.38
79.2	282.0	5,766.2	22,334.4	18,311.9	3,032.6	81.99
79.2	288.0	5,733.3	22,809.6	18,613.3	3,100.2	81.60
79.1	294.0	5,700.8	23,255.4	18,911.3	3,167.8	81.32
79.1	300.0	5,668.7	23,730.0	19,205.5	3,235.3	80.93
79.1	306.0	5,636.9	24,204.6	19,496.8	3,302.9	80.55
79.1	312.0	5,605.5	24,679.2	19,784.5	3,370.4	80.17
79.1	318.0	5,574.5	25,153.8	20,069.7	3,438.0	79.79
79.0	324.0	5,543.8	25,596.0	20,351.0	3,505.5	79.51
79.0	330.0	5,513.5	26,070.0	20,630.1	3,573.1	79.13
79.0	336.0	5,483.4	26,544.0	20,905.1	3,640.6	78.76
79.0	342.0	5,453.7	27,018.0	21,177.9	3,708.2	78.38
79.0	348.0	5,424.4	27,492.0	21,448.1	3,775.8	78.02
79.0	354.0	5,395.3	27,966.0	21,714.4	3,843.3	77.65
78.9	360.0	5,366.5	28,404.0	21,978.4	3,910.9	77.38

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_B4_P30_80V_12042024

