

Report calculated on Test Bench Results

Motor type: **NOVA 15-40-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: 1,837.8 [RPM] lo: 8.2 [A] kv: 123.8 [RPM/V] kn: -2.38 [RPM/A] kT: 8.85 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
15.0	30.0	1,792.8	450.0	361.8	192.7	80.40
15.0	36.0	1,768.1	540.0	455.1	245.8	84.28
15.0	42.0	1,743.9	630.0	545.9	298.9	86.64
15.0	48.0	1,720.2	720.0	634.1	352.0	88.07
15.0	54.0	1,697.1	810.0	719.9	405.1	88.88
15.0	60.0	1,674.4	900.0	803.4	458.2	89.27
15.0	66.0	1,652.3	990.0	884.7	511.3	89.36
14.9	72.0	1,630.6	1,072.8	963.7	564.4	89.83
14.9	78.0	1,609.3	1,162.2	1,040.6	617.5	89.54
14.9	84.0	1,588.5	1,251.6	1,115.5	670.6	89.13
14.9	90.0	1,568.2	1,341.0	1,188.6	723.8	88.64
14.9	96.0	1,548.2	1,430.4	1,259.6	776.9	88.06
14.9	102.0	1,528.6	1,519.8	1,328.6	830.0	87.42
14.9	108.0	1,509.3	1,609.2	1,395.8	883.1	86.74
14.9	114.0	1,490.4	1,698.6	1,461.2	936.2	86.02
14.9	120.0	1,471.8	1,788.0	1,524.8	989.3	85.28
14.9	126.0	1,453.6	1,877.4	1,586.7	1,042.4	84.52
14.9	132.0	1,435.6	1,966.8	1,646.9	1,095.5	83.74
14.9	138.0	1,417.9	2,056.2	1,705.5	1,148.6	82.94
14.9	144.0	1,400.5	2,145.6	1,762.4	1,201.7	82.14
14.9	150.0	1,383.3	2,235.0	1,817.7	1,254.8	81.33
14.9	156.0	1,366.4	2,324.4	1,871.5	1,307.9	80.51
14.9	162.0	1,349.6	2,413.8	1,923.5	1,361.0	79.69
14.9	168.0	1,333.0	2,503.2	1,974.0	1,414.1	78.86
14.9	174.0	1,316.7	2,592.6	2,023.0	1,467.2	78.03
14.9	180.0	1,300.4	2,682.0	2,070.3	1,520.3	77.19

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
14.9	186.0	1,284.3	2,771.4	2,116.1	1,573.4	76.35
14.9	192.0	1,268.4	2,860.8	2,160.4	1,626.5	75.52
14.9	198.0	1,252.5	2,950.2	2,203.0	1,679.6	74.67
14.8	204.0	1,236.7	3,019.2	2,244.0	1,732.7	74.32
14.8	210.0	1,221.0	3,108.0	2,283.4	1,785.8	73.47
14.8	216.0	1,205.3	3,196.8	2,321.0	1,838.9	72.60
14.8	222.0	1,189.7	3,285.6	2,357.1	1,892.0	71.74
14.8	228.0	1,174.0	3,374.4	2,391.3	1,945.1	70.87
14.8	234.0	1,158.4	3,463.2	2,424.1	1,998.3	70.00
14.8	240.0	1,142.8	3,552.0	2,455.0	2,051.4	69.12
14.8	246.0	1,127.1	3,640.8	2,483.9	2,104.5	68.22
14.8	252.0	1,111.4	3,729.6	2,511.1	2,157.6	67.33
14.8	258.0	1,095.6	3,818.4	2,536.4	2,210.7	66.42
14.8	264.0	1,079.7	3,907.2	2,559.6	2,263.8	65.51
14.8	270.0	1,063.7	3,996.0	2,580.8	2,316.9	64.58
14.8	276.0	1,047.6	4,084.8	2,600.0	2,370.0	63.65
14.8	282.0	1,031.3	4,173.6	2,616.9	2,423.1	62.70
14.8	288.0	1,014.9	4,262.4	2,631.7	2,476.2	61.74
14.8	294.0	998.3	4,351.2	2,644.2	2,529.3	60.77
14.8	300.0	981.6	4,440.0	2,654.5	2,582.4	59.79
14.8	306.0	964.6	4,528.8	2,662.2	2,635.5	58.78
14.8	312.0	947.4	4,617.6	2,667.4	2,688.6	57.77
14.8	318.0	929.9	4,706.4	2,669.8	2,741.7	56.73
14.8	324.0	912.2	4,795.2	2,669.7	2,794.8	55.68
14.8	330.0	894.2	4,884.0	2,666.8	2,847.9	54.60
14.8	336.0	875.9	4,972.8	2,660.9	2,901.0	53.51
14.7	342.0	857.3	5,027.4	2,652.1	2,954.1	52.75
14.7	348.0	838.3	5,115.6	2,639.9	3,007.2	51.61
14.7	354.0	819.0	5,203.8	2,624.7	3,060.3	50.44
14.7	360.0	799.4	5,292.0	2,606.3	3,113.4	49.25

nl = rpm with no load

lo = current with no load

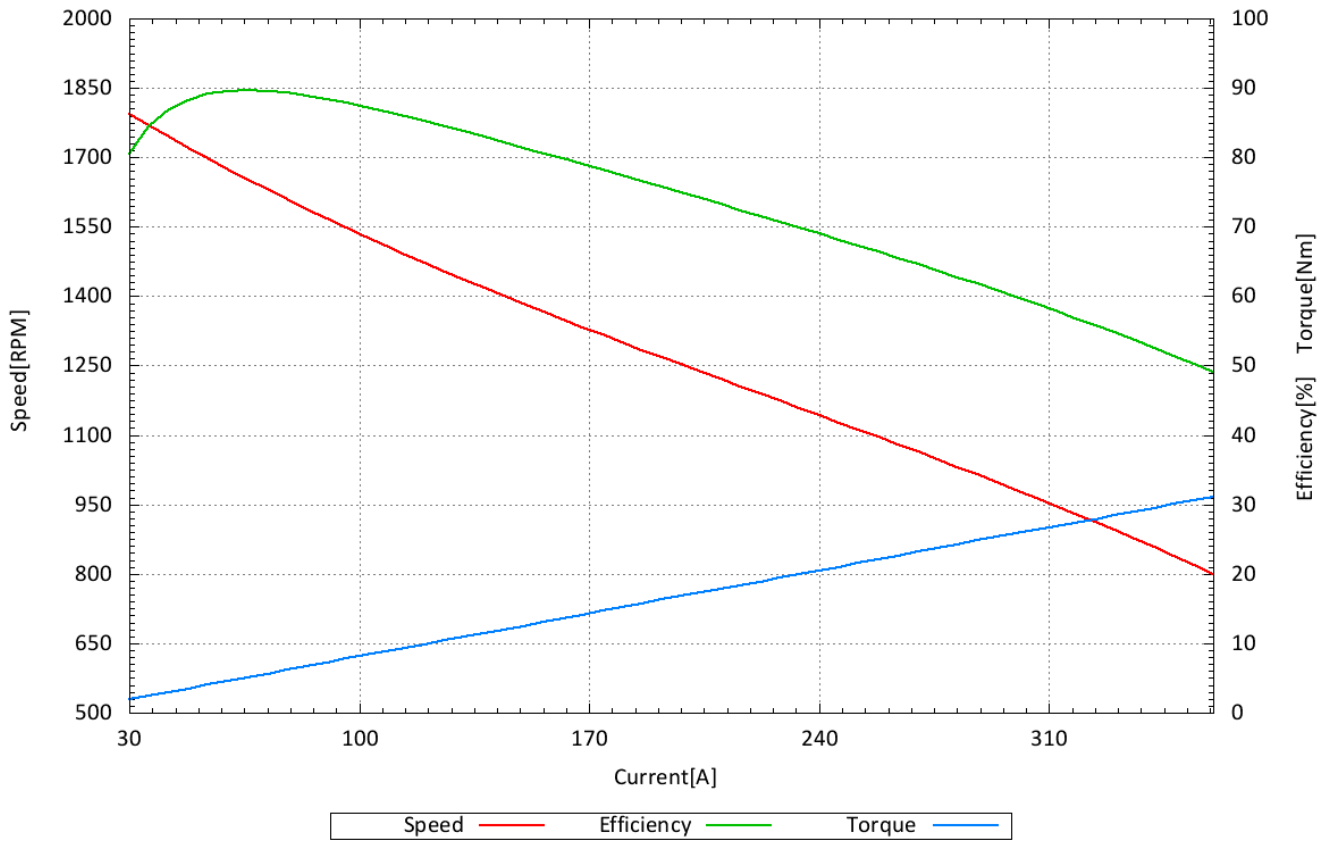
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_40_B4_P30_15V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-40-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: 2,448.6 [RPM] lo: 8.8 [A] kv: 123.8 [RPM/V] kn: -3.18 [RPM/A] kT: 8.85 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
20.0	30.0	2,408.2	600.0	473.9	187.9	78.98
20.0	36.0	2,378.4	720.0	600.2	241.0	83.37
20.0	42.0	2,349.4	840.0	723.6	294.1	86.14
20.0	48.0	2,321.0	960.0	843.9	347.2	87.90
20.0	54.0	2,293.2	1,080.0	961.3	400.3	89.01
20.0	60.0	2,266.1	1,200.0	1,075.9	453.4	89.66
20.0	66.0	2,239.5	1,320.0	1,187.8	506.5	89.99
19.9	72.0	2,213.4	1,432.8	1,297.1	559.6	90.53
19.9	78.0	2,188.0	1,552.2	1,403.9	612.7	90.44
19.9	84.0	2,163.0	1,671.6	1,508.1	665.8	90.22
19.9	90.0	2,138.5	1,791.0	1,609.9	718.9	89.89
19.9	96.0	2,114.5	1,910.4	1,709.4	772.0	89.48
19.9	102.0	2,091.0	2,029.8	1,806.7	825.1	89.01
19.9	108.0	2,067.9	2,149.2	1,901.7	878.2	88.49
19.9	114.0	2,045.2	2,268.6	1,994.6	931.3	87.92
19.9	120.0	2,023.0	2,388.0	2,085.4	984.4	87.33
19.9	126.0	2,001.0	2,507.4	2,174.0	1,037.5	86.70
19.9	132.0	1,979.5	2,626.8	2,260.7	1,090.6	86.06
19.9	138.0	1,958.3	2,746.2	2,345.6	1,143.8	85.41
19.9	144.0	1,937.4	2,865.6	2,428.3	1,196.9	84.74
19.9	150.0	1,916.7	2,985.0	2,509.0	1,250.0	84.05
19.9	156.0	1,896.4	3,104.4	2,587.8	1,303.1	83.36
19.9	162.0	1,876.3	3,223.8	2,664.7	1,356.2	82.66
19.9	168.0	1,856.4	3,343.2	2,739.7	1,409.3	81.95
19.9	174.0	1,836.7	3,462.6	2,812.8	1,462.4	81.23
19.9	180.0	1,817.2	3,582.0	2,883.9	1,515.5	80.51

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
19.9	186.0	1,797.9	3,701.4	2,953.3	1,568.6	79.79
19.9	192.0	1,778.8	3,820.8	3,020.8	1,621.7	79.06
19.9	198.0	1,759.7	3,940.2	3,086.2	1,674.8	78.33
19.8	204.0	1,740.8	4,039.2	3,149.9	1,727.9	77.98
19.8	210.0	1,721.9	4,158.0	3,211.4	1,781.0	77.24
19.8	216.0	1,703.1	4,276.8	3,271.1	1,834.1	76.48
19.8	222.0	1,684.3	4,395.6	3,328.6	1,887.2	75.73
19.8	228.0	1,665.6	4,514.4	3,384.3	1,940.3	74.97
19.8	234.0	1,646.9	4,633.2	3,437.9	1,993.4	74.20
19.8	240.0	1,628.1	4,752.0	3,489.2	2,046.5	73.43
19.8	246.0	1,609.3	4,870.8	3,538.4	2,099.6	72.64
19.8	252.0	1,590.4	4,989.6	3,585.2	2,152.7	71.85
19.8	258.0	1,571.4	5,108.4	3,629.8	2,205.8	71.06
19.8	264.0	1,552.4	5,227.2	3,672.2	2,258.9	70.25
19.8	270.0	1,533.2	5,346.0	3,712.1	2,312.0	69.44
19.8	276.0	1,513.9	5,464.8	3,749.5	2,365.1	68.61
19.8	282.0	1,494.3	5,583.6	3,784.2	2,418.3	67.77
19.8	288.0	1,474.7	5,702.4	3,816.6	2,471.4	66.93
19.8	294.0	1,454.7	5,821.2	3,845.7	2,524.5	66.06
19.8	300.0	1,434.6	5,940.0	3,872.4	2,577.6	65.19
19.8	306.0	1,414.2	6,058.8	3,895.9	2,630.7	64.30
19.8	312.0	1,393.6	6,177.6	3,916.7	2,683.8	63.40
19.8	318.0	1,372.6	6,296.4	3,934.0	2,736.9	62.48
19.8	324.0	1,351.3	6,415.2	3,948.1	2,790.0	61.54
19.8	330.0	1,329.7	6,534.0	3,958.9	2,843.1	60.59
19.8	336.0	1,307.8	6,652.8	3,966.4	2,896.2	59.62
19.7	342.0	1,285.4	6,737.4	3,970.0	2,949.3	58.92
19.7	348.0	1,262.7	6,855.6	3,970.1	3,002.4	57.91
19.7	354.0	1,239.6	6,973.8	3,966.4	3,055.5	56.88
19.7	360.0	1,216.0	7,092.0	3,958.5	3,108.6	55.82

nl = rpm with no load

lo = current with no load

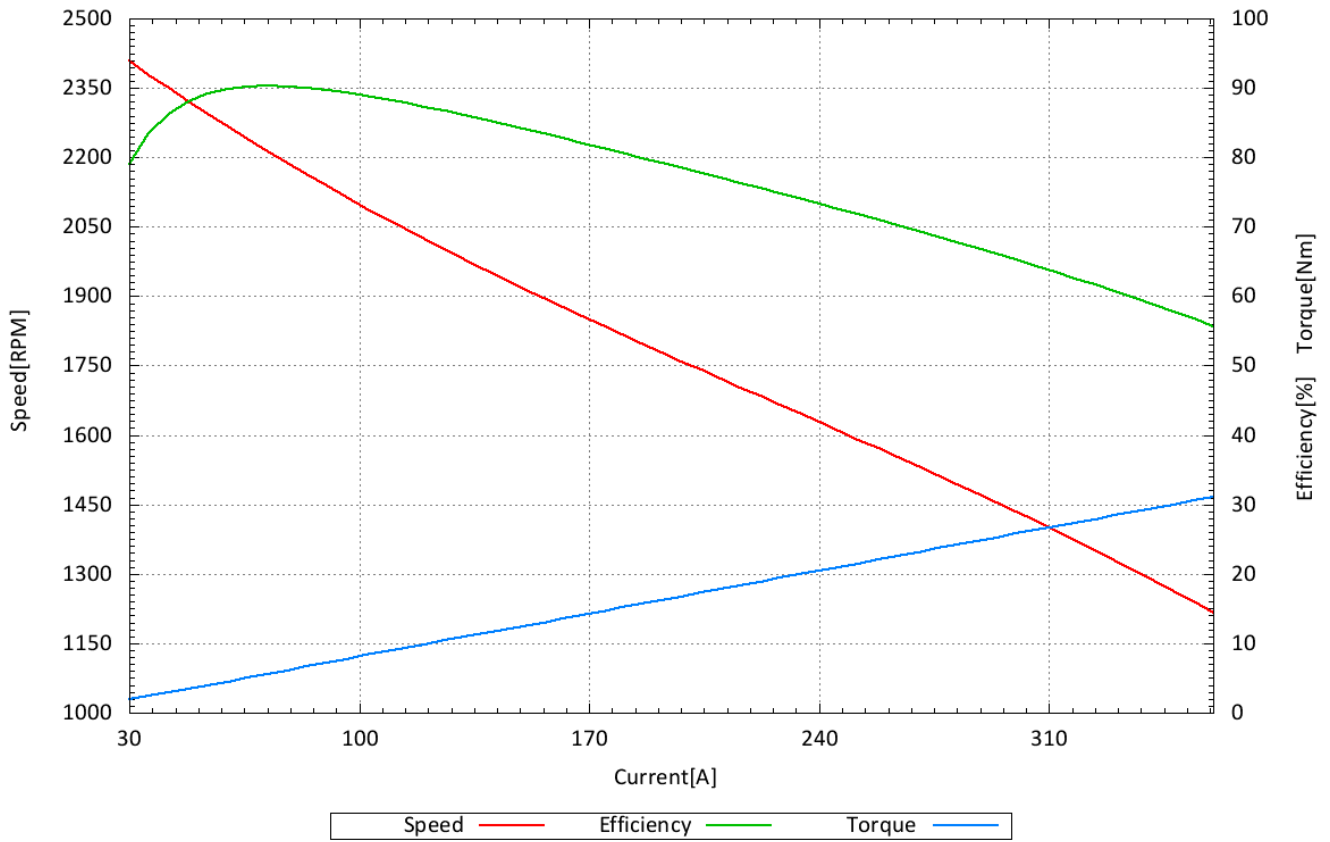
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_40_B4_P30_20V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-40-B4 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **25.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 3,058.6 [RPM] lo: 9.3 [A] kv: 123.8 [RPM/V] kn: -3.97 [RPM/A] kT: 8.85 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
25.0	30.0	3,023.5	750.0	579.4	183.0	77.26
25.0	36.0	2,988.8	900.0	739.0	236.1	82.11
25.0	42.0	2,954.9	1,050.0	895.2	289.3	85.26
25.0	48.0	2,921.8	1,200.0	1,047.6	342.4	87.30
25.0	54.0	2,889.4	1,350.0	1,196.7	395.5	88.64
25.0	60.0	2,857.7	1,500.0	1,342.5	448.6	89.50
25.0	66.0	2,826.7	1,650.0	1,485.1	501.7	90.01
24.9	72.0	2,796.3	1,792.8	1,624.6	554.8	90.62
24.9	78.0	2,766.6	1,942.2	1,761.2	607.9	90.68
24.9	84.0	2,737.4	2,091.6	1,894.8	661.0	90.59
24.9	90.0	2,708.9	2,241.0	2,025.7	714.1	90.39
24.9	96.0	2,680.9	2,390.4	2,153.9	767.2	90.10
24.9	102.0	2,653.5	2,539.8	2,279.4	820.3	89.75
24.9	108.0	2,626.5	2,689.2	2,402.3	873.4	89.33
24.9	114.0	2,600.1	2,838.6	2,522.7	926.5	88.87
24.9	120.0	2,574.1	2,988.0	2,640.6	979.6	88.37
24.9	126.0	2,548.5	3,137.4	2,756.1	1,032.7	87.85
24.9	132.0	2,523.4	3,286.8	2,869.2	1,085.8	87.30
24.9	138.0	2,498.6	3,436.2	2,980.0	1,138.9	86.72
24.9	144.0	2,474.2	3,585.6	3,088.4	1,192.0	86.13
24.9	150.0	2,450.1	3,735.0	3,194.6	1,245.1	85.53
24.9	156.0	2,426.4	3,884.4	3,298.6	1,298.2	84.92
24.9	162.0	2,402.9	4,033.8	3,400.3	1,351.3	84.29
24.9	168.0	2,379.8	4,183.2	3,499.9	1,404.4	83.67
24.9	174.0	2,356.8	4,332.6	3,597.2	1,457.5	83.03
24.9	180.0	2,334.1	4,482.0	3,692.3	1,510.6	82.38

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
24.9	186.0	2,311.5	4,631.4	3,785.3	1,563.8	81.73
24.9	192.0	2,289.2	4,780.8	3,876.1	1,616.9	81.08
24.9	198.0	2,267.0	4,930.2	3,964.6	1,670.0	80.41
24.8	204.0	2,244.8	5,059.2	4,050.6	1,723.1	80.06
24.8	210.0	2,222.8	5,208.0	4,134.5	1,776.2	79.39
24.8	216.0	2,200.9	5,356.8	4,216.1	1,829.3	78.71
24.8	222.0	2,179.0	5,505.6	4,295.3	1,882.4	78.02
24.8	228.0	2,157.1	5,654.4	4,372.1	1,935.5	77.32
24.8	234.0	2,135.3	5,803.2	4,446.7	1,988.6	76.62
24.8	240.0	2,113.4	5,952.0	4,518.6	2,041.7	75.92
24.8	246.0	2,091.4	6,100.8	4,587.8	2,094.8	75.20
24.8	252.0	2,069.4	6,249.6	4,654.7	2,147.9	74.48
24.8	258.0	2,047.3	6,398.4	4,718.8	2,201.0	73.75
24.8	264.0	2,025.1	6,547.2	4,780.2	2,254.1	73.01
24.8	270.0	2,002.7	6,696.0	4,838.7	2,307.2	72.26
24.8	276.0	1,980.1	6,844.8	4,894.2	2,360.3	71.50
24.8	282.0	1,957.4	6,993.6	4,946.9	2,413.4	70.74
24.8	288.0	1,934.4	7,142.4	4,996.4	2,466.5	69.95
24.8	294.0	1,911.2	7,291.2	5,042.7	2,519.6	69.16
24.8	300.0	1,887.7	7,440.0	5,085.7	2,572.7	68.36
24.8	306.0	1,863.9	7,588.8	5,125.2	2,625.8	67.54
24.8	312.0	1,839.8	7,737.6	5,161.3	2,678.9	66.70
24.8	318.0	1,815.3	7,886.4	5,193.5	2,732.0	65.85
24.8	324.0	1,790.5	8,035.2	5,222.1	2,785.1	64.99
24.8	330.0	1,765.3	8,184.0	5,246.9	2,838.3	64.11
24.8	336.0	1,739.7	8,332.8	5,267.6	2,891.4	63.22
24.7	342.0	1,713.6	8,447.4	5,283.8	2,944.5	62.55
24.7	348.0	1,687.1	8,595.6	5,295.9	2,997.6	61.61
24.7	354.0	1,660.1	8,743.8	5,303.5	3,050.7	60.65
24.7	360.0	1,632.6	8,892.0	5,306.4	3,103.8	59.68

nl = rpm with no load

lo = current with no load

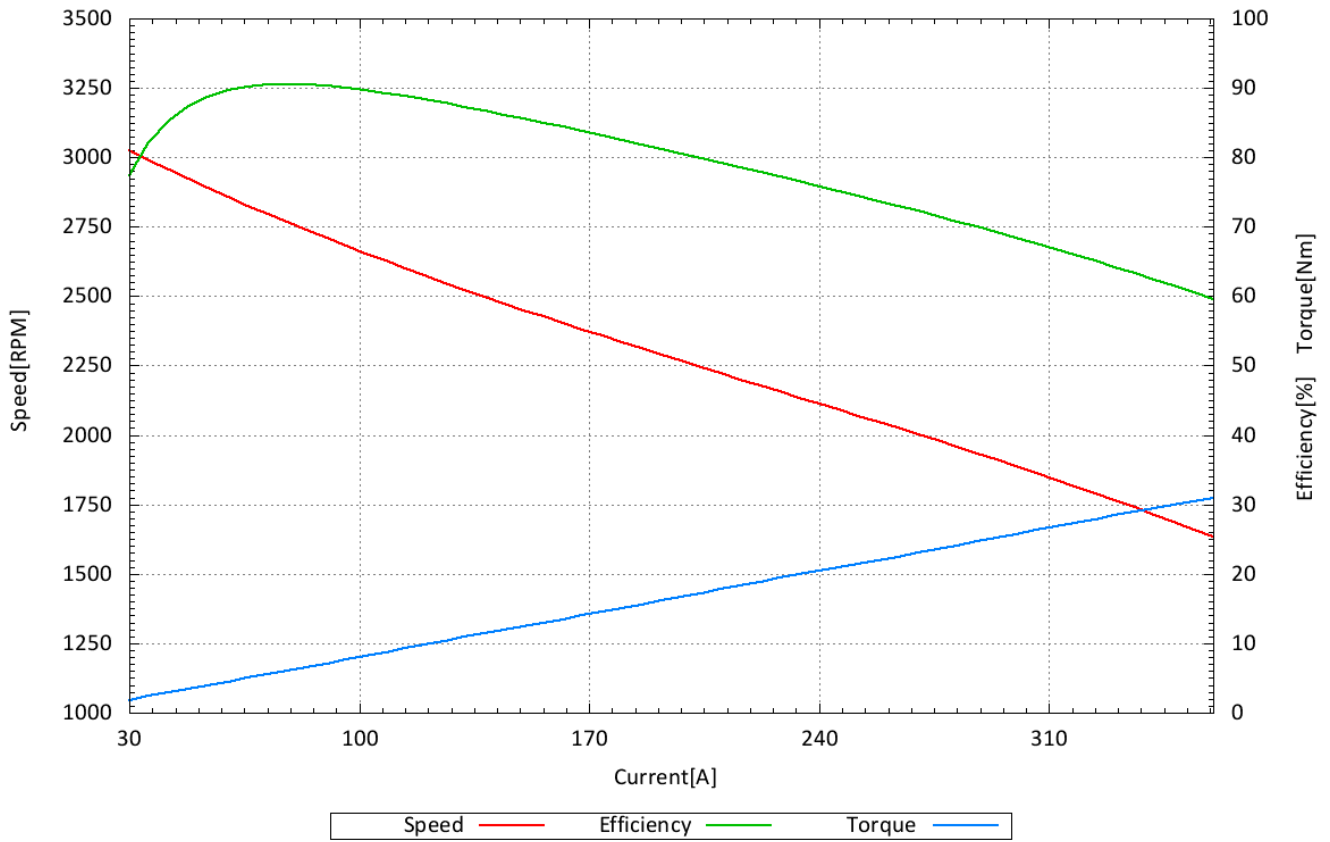
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_40_B4_P30_25V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-40-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: 3,667.7 [RPM] lo: 9.9 [A] kv: 123.8 [RPM/V] kn: -4.77 [RPM/A] kT: 8.85 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
30.0	30.0	3,638.8	900.0	679.0	178.2	75.45
30.0	36.0	3,599.2	1,080.0	871.8	231.3	80.72
30.0	42.0	3,560.4	1,260.0	1,060.4	284.4	84.16
30.0	48.0	3,522.6	1,440.0	1,245.0	337.5	86.46
30.0	54.0	3,485.5	1,620.0	1,425.7	390.6	88.01
30.0	60.0	3,449.3	1,800.0	1,602.7	443.7	89.04
30.0	66.0	3,413.9	1,980.0	1,776.1	496.8	89.70
29.9	72.0	3,379.2	2,152.8	1,945.9	549.9	90.39
29.9	78.0	3,345.2	2,332.2	2,112.4	603.0	90.57
29.9	84.0	3,311.9	2,511.6	2,275.5	656.1	90.60
29.9	90.0	3,279.3	2,691.0	2,435.8	709.3	90.52
29.9	96.0	3,247.3	2,870.4	2,592.6	762.4	90.32
29.9	102.0	3,215.9	3,049.8	2,746.3	815.5	90.05
29.9	108.0	3,185.1	3,229.2	2,897.2	868.6	89.72
29.9	114.0	3,154.9	3,408.6	3,045.1	921.7	89.34
29.9	120.0	3,125.2	3,588.0	3,190.2	974.8	88.91
29.9	126.0	3,096.0	3,767.4	3,332.6	1,027.9	88.46
29.9	132.0	3,067.2	3,946.8	3,472.1	1,081.0	87.97
29.9	138.0	3,038.9	4,126.2	3,609.1	1,134.1	87.47
29.9	144.0	3,011.0	4,305.6	3,743.4	1,187.2	86.94
29.9	150.0	2,983.5	4,485.0	3,875.1	1,240.3	86.40
29.9	156.0	2,956.4	4,664.4	4,004.3	1,293.4	85.85
29.9	162.0	2,929.6	4,843.8	4,130.9	1,346.5	85.28
29.9	168.0	2,903.1	5,023.2	4,255.0	1,399.6	84.71
29.9	174.0	2,876.9	5,202.6	4,376.5	1,452.7	84.12
29.9	180.0	2,850.9	5,382.0	4,495.5	1,505.8	83.53

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
29.9	186.0	2,825.1	5,561.4	4,611.9	1,558.9	82.93
29.9	192.0	2,799.6	5,740.8	4,726.0	1,612.0	82.32
29.9	198.0	2,774.2	5,920.2	4,837.3	1,665.1	81.71
29.8	204.0	2,748.9	6,079.2	4,946.1	1,718.2	81.36
29.8	210.0	2,723.8	6,258.0	5,052.4	1,771.3	80.73
29.8	216.0	2,698.7	6,436.8	5,155.9	1,824.4	80.10
29.8	222.0	2,673.7	6,615.6	5,256.8	1,877.5	79.46
29.8	228.0	2,648.7	6,794.4	5,354.9	1,930.6	78.81
29.8	234.0	2,623.7	6,973.2	5,450.6	1,983.8	78.16
29.8	240.0	2,598.7	7,152.0	5,543.1	2,036.9	77.50
29.8	246.0	2,573.6	7,330.8	5,632.7	2,090.0	76.84
29.8	252.0	2,548.4	7,509.6	5,719.2	2,143.1	76.16
29.8	258.0	2,523.2	7,688.4	5,803.0	2,196.2	75.48
29.8	264.0	2,497.7	7,867.2	5,883.2	2,249.3	74.78
29.8	270.0	2,472.2	8,046.0	5,960.6	2,302.4	74.08
29.8	276.0	2,446.4	8,224.8	6,034.5	2,355.5	73.37
29.8	282.0	2,420.4	8,403.6	6,104.9	2,408.6	72.65
29.8	288.0	2,394.1	8,582.4	6,171.7	2,461.7	71.91
29.8	294.0	2,367.6	8,761.2	6,235.1	2,514.8	71.17
29.8	300.0	2,340.7	8,940.0	6,294.4	2,567.9	70.41
29.8	306.0	2,313.5	9,118.8	6,349.9	2,621.0	69.63
29.8	312.0	2,286.0	9,297.6	6,401.5	2,674.1	68.85
29.8	318.0	2,258.0	9,476.4	6,448.7	2,727.2	68.05
29.8	324.0	2,229.7	9,655.2	6,491.8	2,780.3	67.24
29.8	330.0	2,200.9	9,834.0	6,530.4	2,833.4	66.41
29.8	336.0	2,171.6	10,012.8	6,564.2	2,886.5	65.56
29.7	342.0	2,141.8	10,157.4	6,593.2	2,939.6	64.91
29.7	348.0	2,111.5	10,335.6	6,617.3	2,992.7	64.02
29.7	354.0	2,080.6	10,513.8	6,636.2	3,045.8	63.12
29.7	360.0	2,049.2	10,692.0	6,650.0	3,098.9	62.20

nl = rpm with no load

lo = current with no load

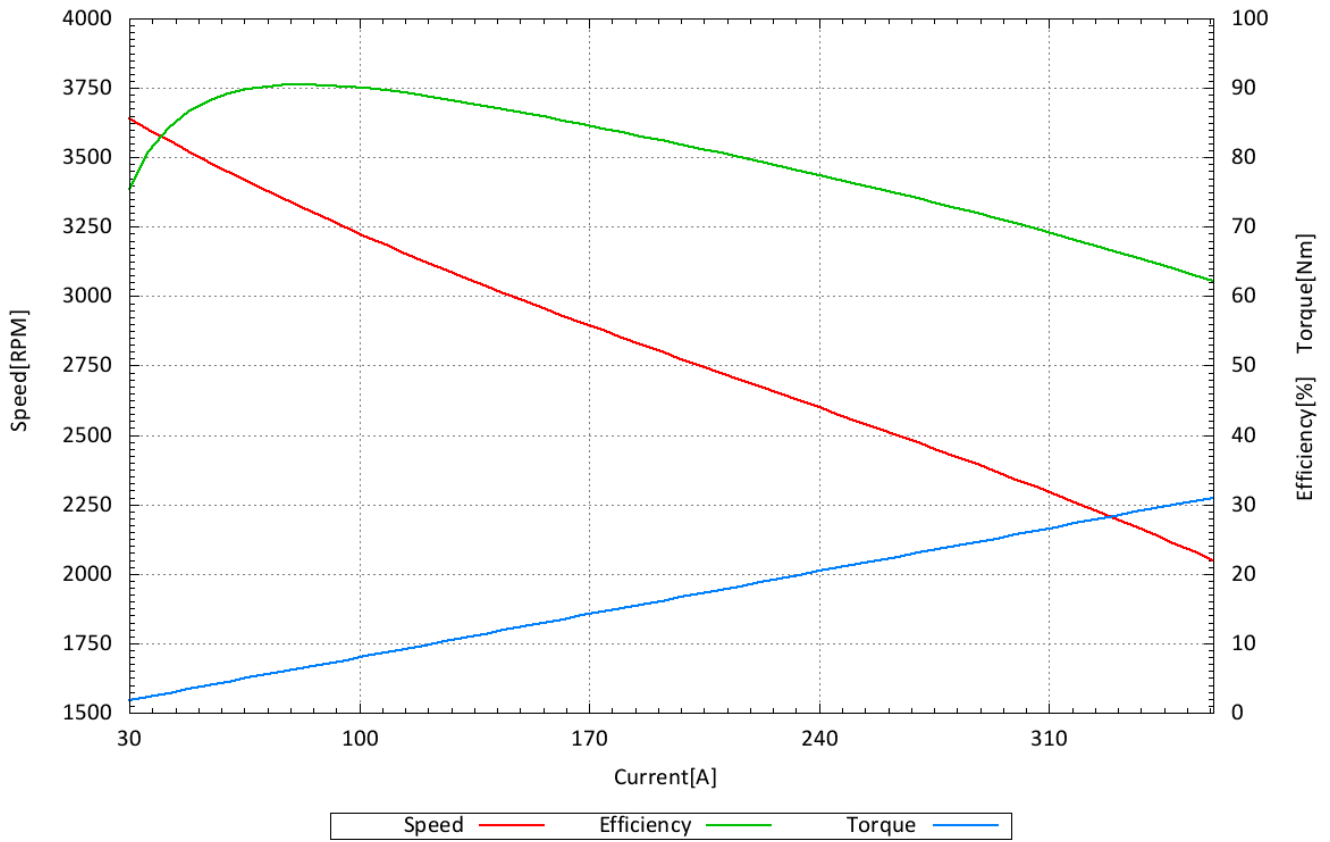
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_40_B4_P30_30V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-40-B4 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **35.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 4,288.8 [RPM] lo: 9.1 [A] kv: 124.0 [RPM/V] kn: -5.43 [RPM/A] kT: 8.85 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
35.0	30.0	4,209.9	1,050.0	815.6	185.0	77.68
35.0	36.0	4,167.5	1,260.0	1,039.1	238.1	82.47
35.0	42.0	4,126.3	1,470.0	1,258.3	291.2	85.60
35.0	48.0	4,086.0	1,680.0	1,473.2	344.3	87.69
35.0	54.0	4,046.6	1,890.0	1,684.4	397.5	89.12
35.0	60.0	4,008.2	2,100.0	1,891.3	450.6	90.06
34.9	66.0	3,970.7	2,303.4	2,094.4	503.7	90.93
34.9	72.0	3,934.1	2,512.8	2,293.9	556.8	91.29
34.9	78.0	3,898.2	2,722.2	2,490.1	610.0	91.48
34.9	84.0	3,863.1	2,931.6	2,682.5	663.1	91.50
34.9	90.0	3,828.8	3,141.0	2,871.6	716.2	91.42
34.9	96.0	3,795.2	3,350.4	3,057.4	769.3	91.26
34.9	102.0	3,762.3	3,559.8	3,240.5	822.5	91.03
34.9	108.0	3,730.0	3,769.2	3,420.1	875.6	90.74
34.9	114.0	3,698.3	3,978.6	3,596.7	928.7	90.40
34.9	120.0	3,667.2	4,188.0	3,770.4	981.8	90.03
34.9	126.0	3,636.6	4,397.4	3,941.5	1,035.0	89.63
34.9	132.0	3,606.5	4,606.8	4,109.4	1,088.1	89.20
34.9	138.0	3,576.9	4,816.2	4,274.6	1,141.2	88.75
34.9	144.0	3,547.7	5,025.6	4,437.4	1,194.4	88.30
34.9	150.0	3,518.9	5,235.0	4,597.0	1,247.5	87.81
34.9	156.0	3,490.5	5,444.4	4,754.0	1,300.6	87.32
34.9	162.0	3,462.4	5,653.8	4,908.3	1,353.7	86.81
34.9	168.0	3,434.6	5,863.2	5,060.2	1,406.9	86.30
34.9	174.0	3,407.0	6,072.6	5,209.0	1,460.0	85.78
34.9	180.0	3,379.6	6,282.0	5,355.0	1,513.1	85.24

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
34.9	186.0	3,352.5	6,491.4	5,498.5	1,566.2	84.70
34.8	192.0	3,325.5	6,681.6	5,639.5	1,619.4	84.40
34.8	198.0	3,298.6	6,890.4	5,777.3	1,672.5	83.85
34.8	204.0	3,271.7	7,099.2	5,912.1	1,725.6	83.28
34.8	210.0	3,244.9	7,308.0	6,044.1	1,778.7	82.71
34.8	216.0	3,218.2	7,516.8	6,173.7	1,831.9	82.13
34.8	222.0	3,191.4	7,725.6	6,299.7	1,885.0	81.54
34.8	228.0	3,164.5	7,934.4	6,422.6	1,938.1	80.95
34.8	234.0	3,137.5	8,143.2	6,542.3	1,991.2	80.34
34.8	240.0	3,110.4	8,352.0	6,659.0	2,044.4	79.73
34.8	246.0	3,083.2	8,560.8	6,772.2	2,097.5	79.11
34.8	252.0	3,055.7	8,769.6	6,881.8	2,150.6	78.47
34.8	258.0	3,028.0	8,978.4	6,987.7	2,203.7	77.83
34.8	264.0	3,000.0	9,187.2	7,090.3	2,256.9	77.18
34.8	270.0	2,971.7	9,396.0	7,188.6	2,310.0	76.51
34.8	276.0	2,943.0	9,604.8	7,282.8	2,363.1	75.83
34.8	282.0	2,914.0	9,813.6	7,373.1	2,416.2	75.13
34.8	288.0	2,884.6	10,022.4	7,459.4	2,469.4	74.43
34.8	294.0	2,854.7	10,231.2	7,540.8	2,522.5	73.70
34.8	300.0	2,824.3	10,440.0	7,617.6	2,575.6	72.97
34.8	306.0	2,793.4	10,648.8	7,689.9	2,628.8	72.21
34.8	312.0	2,761.9	10,857.6	7,756.7	2,681.9	71.44
34.7	318.0	2,729.9	11,034.6	7,818.7	2,735.0	70.86
34.7	324.0	2,697.2	11,242.8	7,875.0	2,788.1	70.04
34.7	330.0	2,663.9	11,451.0	7,926.2	2,841.3	69.22
34.7	336.0	2,629.9	11,659.2	7,971.2	2,894.4	68.37
34.7	342.0	2,595.1	11,867.4	8,010.1	2,947.5	67.50
34.7	348.0	2,559.6	12,075.6	8,042.8	3,000.6	66.60
34.7	354.0	2,523.2	12,283.8	8,069.0	3,053.8	65.69
34.7	360.0	2,486.0	12,492.0	8,088.3	3,106.9	64.75

nl = rpm with no load

lo = current with no load

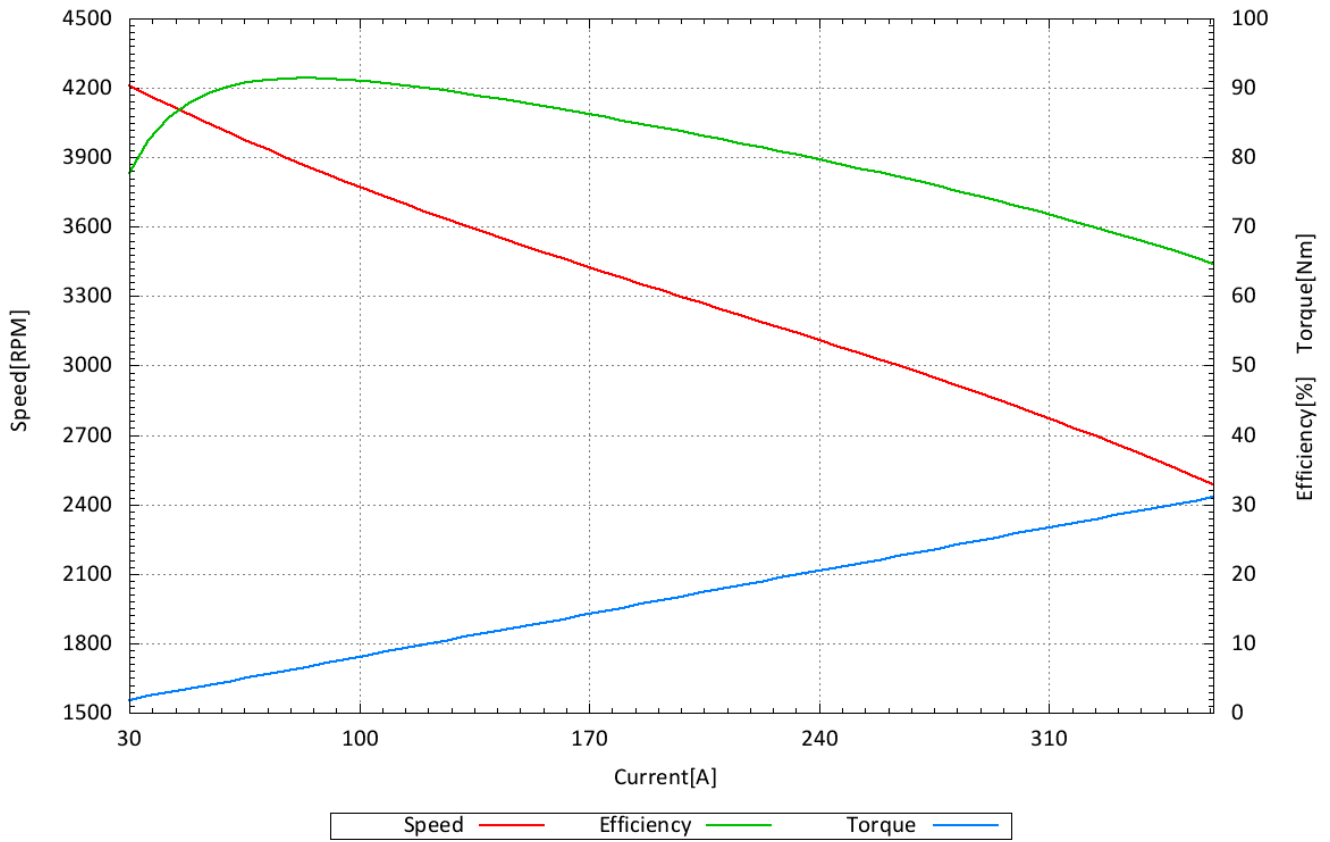
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_40_B4_P30_35V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-40-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: 4,938.2 [RPM] lo: 9.6 [A] kv: 124.9 [RPM/V] kn: -6.18 [RPM/A] kT: 8.84 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
40.0	30.0	4,843.7	1,200.0	916.6	180.7	76.38
40.0	36.0	4,794.9	1,440.0	1,173.5	233.7	81.49
40.0	42.0	4,747.4	1,680.0	1,425.8	286.8	84.87
40.0	48.0	4,701.1	1,920.0	1,672.8	339.8	87.13
40.0	54.0	4,656.0	2,160.0	1,915.7	392.9	88.69
40.0	60.0	4,612.1	2,400.0	2,153.6	445.9	89.73
40.0	66.0	4,569.3	2,640.0	2,387.2	498.9	90.42
40.0	72.0	4,527.6	2,880.0	2,617.2	552.0	90.87
40.0	78.0	4,486.9	3,120.0	2,842.7	605.0	91.11
40.0	84.0	4,447.2	3,360.0	3,064.8	658.1	91.22
40.0	90.0	4,408.5	3,600.0	3,282.8	711.1	91.19
40.0	96.0	4,370.6	3,840.0	3,497.7	764.2	91.08
40.0	102.0	4,333.6	4,080.0	3,708.6	817.2	90.90
40.0	108.0	4,297.4	4,320.0	3,916.1	870.2	90.65
40.0	114.0	4,262.0	4,560.0	4,120.8	923.3	90.37
40.0	120.0	4,227.3	4,800.0	4,321.9	976.3	90.04
40.0	126.0	4,193.3	5,040.0	4,520.3	1,029.4	89.69
40.0	132.0	4,159.9	5,280.0	4,715.2	1,082.4	89.30
40.0	138.0	4,127.1	5,520.0	4,907.5	1,135.5	88.90
40.0	144.0	4,094.8	5,760.0	5,096.4	1,188.5	88.48
40.0	150.0	4,063.0	6,000.0	5,282.7	1,241.6	88.05
40.0	156.0	4,031.7	6,240.0	5,465.8	1,294.6	87.59
40.0	162.0	4,000.8	6,480.0	5,645.9	1,347.6	87.13
40.0	168.0	3,970.3	6,720.0	5,823.7	1,400.7	86.66
40.0	174.0	3,940.1	6,960.0	5,998.1	1,453.7	86.18
40.0	180.0	3,910.2	7,200.0	6,170.0	1,506.8	85.69

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
40.0	186.0	3,880.5	7,440.0	6,338.5	1,559.8	85.19
40.0	192.0	3,850.9	7,680.0	6,504.3	1,612.9	84.69
40.0	198.0	3,821.6	7,920.0	6,666.9	1,665.9	84.18
40.0	204.0	3,792.3	8,160.0	6,826.2	1,718.9	83.65
40.0	210.0	3,763.1	8,400.0	6,982.9	1,772.0	83.13
40.0	216.0	3,733.9	8,640.0	7,136.0	1,825.0	82.59
40.0	222.0	3,704.7	8,880.0	7,286.2	1,878.1	82.05
40.0	228.0	3,675.4	9,120.0	7,432.6	1,931.1	81.50
40.0	234.0	3,645.9	9,360.0	7,575.6	1,984.2	80.94
40.0	240.0	3,616.3	9,600.0	7,714.8	2,037.2	80.36
40.0	246.0	3,586.5	9,840.0	7,850.7	2,090.3	79.78
40.0	252.0	3,556.4	10,080.0	7,982.2	2,143.3	79.19
40.0	258.0	3,526.1	10,320.0	8,109.9	2,196.3	78.58
40.0	264.0	3,495.4	10,560.0	8,233.6	2,249.4	77.97
40.0	270.0	3,464.3	10,800.0	8,352.7	2,302.4	77.34
40.0	276.0	3,432.7	11,040.0	8,467.4	2,355.5	76.70
40.0	282.0	3,400.7	11,280.0	8,577.2	2,408.5	76.04
40.0	288.0	3,368.2	11,520.0	8,682.5	2,461.6	75.37
40.0	294.0	3,335.1	11,760.0	8,782.3	2,514.6	74.68
40.0	300.0	3,301.4	12,000.0	8,877.1	2,567.7	73.98
40.0	306.0	3,267.0	12,240.0	8,965.9	2,620.7	73.25
40.0	312.0	3,231.9	12,480.0	9,049.0	2,673.7	72.51
40.0	318.0	3,196.1	12,720.0	9,126.5	2,726.8	71.75
40.0	324.0	3,159.5	12,960.0	9,197.3	2,779.8	70.97
40.0	330.0	3,122.1	13,200.0	9,262.0	2,832.9	70.17
40.0	336.0	3,083.8	13,440.0	9,319.6	2,885.9	69.34
40.0	342.0	3,044.6	13,680.0	9,370.4	2,939.0	68.50
40.0	348.0	3,004.4	13,920.0	9,413.4	2,992.0	67.63
40.0	354.0	2,963.2	14,160.0	9,448.8	3,045.0	66.73
40.0	360.0	2,920.9	14,400.0	9,476.3	3,098.1	65.81

nl = rpm with no load

lo = current with no load

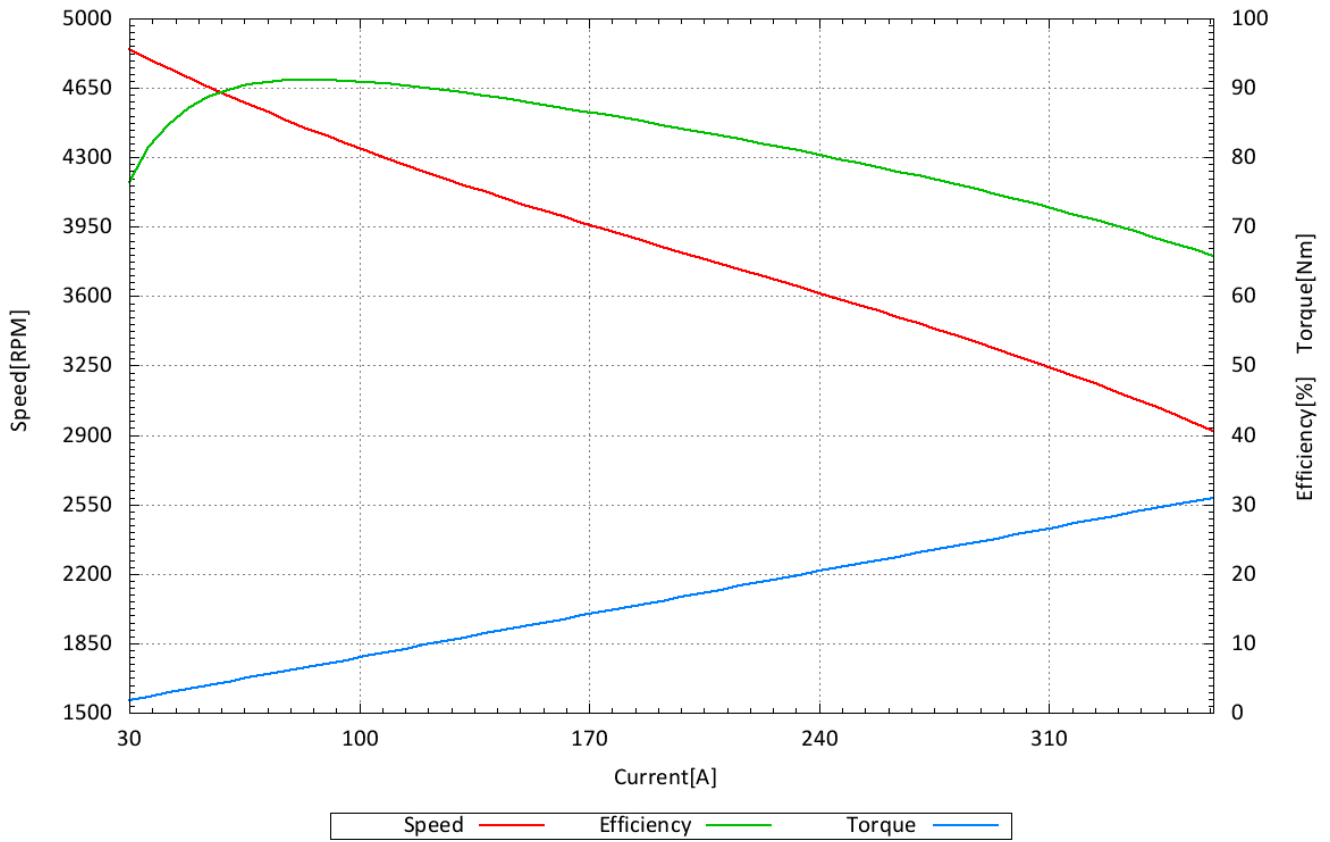
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_40_B4_P30_40V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-40-B4 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **45.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 5,540.4 [RPM] lo: 10.4 [A] kv: 124.7 [RPM/V] kn: -6.67 [RPM/A] kT: 8.85 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
45.0	30.0	5,456.1	1,350.0	993.0	173.8	73.56
45.0	36.0	5,402.2	1,620.0	1,283.6	226.9	79.24
45.0	42.0	5,349.6	1,890.0	1,568.0	279.9	82.96
45.0	48.0	5,298.4	2,160.0	1,847.6	333.0	85.54
45.0	54.0	5,248.6	2,430.0	2,122.1	386.1	87.33
45.0	60.0	5,200.1	2,700.0	2,391.7	439.2	88.58
45.0	66.0	5,152.9	2,970.0	2,656.5	492.3	89.44
44.9	72.0	5,106.8	3,232.8	2,916.7	545.4	90.22
44.9	78.0	5,061.9	3,502.2	3,172.5	598.5	90.59
44.9	84.0	5,018.1	3,771.6	3,424.1	651.6	90.79
44.9	90.0	4,975.4	4,041.0	3,671.6	704.7	90.86
44.9	96.0	4,933.7	4,310.4	3,914.7	757.7	90.82
44.9	102.0	4,892.9	4,579.8	4,154.4	810.8	90.71
44.9	108.0	4,853.1	4,849.2	4,390.5	863.9	90.54
44.9	114.0	4,814.2	5,118.6	4,623.0	917.0	90.32
44.9	120.0	4,776.0	5,388.0	4,851.9	970.1	90.05
44.9	126.0	4,738.7	5,657.4	5,077.5	1,023.2	89.75
44.9	132.0	4,702.1	5,926.8	5,299.7	1,076.3	89.42
44.9	138.0	4,666.2	6,196.2	5,518.7	1,129.4	89.07
44.9	144.0	4,630.9	6,465.6	5,734.5	1,182.5	88.69
44.9	150.0	4,596.2	6,735.0	5,947.1	1,235.6	88.30
44.9	156.0	4,562.0	7,004.4	6,156.0	1,288.6	87.89
44.9	162.0	4,528.3	7,273.8	6,362.4	1,341.7	87.47
44.9	168.0	4,495.1	7,543.2	6,565.7	1,394.8	87.04
44.9	174.0	4,462.3	7,812.6	6,765.9	1,447.9	86.60
44.9	180.0	4,429.9	8,082.0	6,963.1	1,501.0	86.16

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
44.9	186.0	4,397.7	8,351.4	7,157.0	1,554.1	85.70
44.9	192.0	4,365.8	8,620.8	7,347.9	1,607.2	85.23
44.9	198.0	4,334.1	8,890.2	7,535.5	1,660.3	84.76
44.9	204.0	4,302.6	9,159.6	7,720.0	1,713.4	84.28
44.9	210.0	4,271.2	9,429.0	7,900.7	1,766.4	83.79
44.8	216.0	4,239.8	9,676.8	8,078.4	1,819.5	83.48
44.8	222.0	4,208.5	9,945.6	8,252.8	1,872.6	82.98
44.8	228.0	4,177.2	10,214.4	8,423.7	1,925.7	82.47
44.8	234.0	4,145.8	10,483.2	8,590.9	1,978.8	81.95
44.8	240.0	4,114.3	10,752.0	8,754.4	2,031.9	81.42
44.8	246.0	4,082.6	11,020.8	8,914.0	2,085.0	80.88
44.8	252.0	4,050.7	11,289.6	9,069.6	2,138.1	80.34
44.8	258.0	4,018.5	11,558.4	9,220.9	2,191.2	79.78
44.8	264.0	3,986.0	11,827.2	9,368.0	2,244.3	79.21
44.8	270.0	3,953.2	12,096.0	9,510.3	2,297.3	78.62
44.8	276.0	3,919.9	12,364.8	9,648.2	2,350.4	78.03
44.8	282.0	3,886.2	12,633.6	9,781.3	2,403.5	77.42
44.8	288.0	3,852.0	12,902.4	9,909.4	2,456.6	76.80
44.8	294.0	3,817.3	13,171.2	10,032.4	2,509.7	76.17
44.8	300.0	3,782.0	13,440.0	10,150.0	2,562.8	75.52
44.8	306.0	3,746.0	13,708.8	10,261.7	2,615.9	74.85
44.8	312.0	3,709.4	13,977.6	10,367.7	2,669.0	74.17
44.8	318.0	3,672.0	14,246.4	10,467.3	2,722.1	73.47
44.8	324.0	3,633.8	14,515.2	10,560.1	2,775.1	72.75
44.8	330.0	3,594.8	14,784.0	10,646.7	2,828.2	72.01
44.8	336.0	3,554.9	15,052.8	10,726.2	2,881.3	71.26
44.8	342.0	3,514.1	15,321.6	10,798.5	2,934.4	70.48
44.8	348.0	3,472.4	15,590.4	10,863.4	2,987.5	69.68
44.8	354.0	3,429.6	15,859.2	10,920.2	3,040.6	68.86
44.7	360.0	3,385.7	16,092.0	10,968.7	3,093.7	68.16

nl = rpm with no load

lo = current with no load

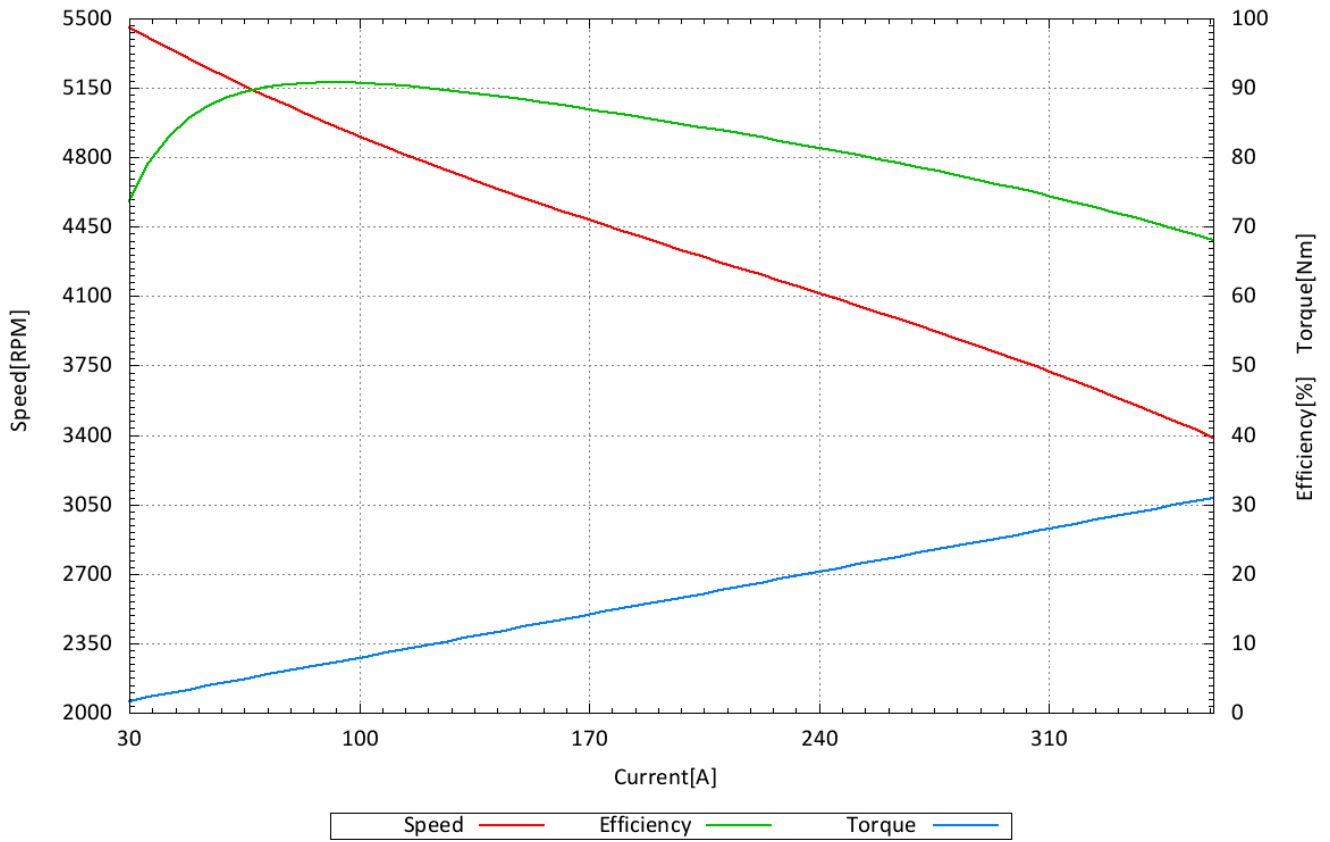
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_40_B4_P30_45V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-40-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: 6,122.1 [RPM] lo: 9.7 [A] kv: 123.8 [RPM/V] kn: -6.97 [RPM/A] kT: 8.81 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
50.0	30.0	6,029.6	1,500.0	1,131.5	179.2	75.43
50.0	36.0	5,971.9	1,800.0	1,451.5	232.1	80.64
50.0	42.0	5,915.8	2,100.0	1,765.0	284.9	84.05
50.0	48.0	5,861.3	2,400.0	2,073.4	337.8	86.39
50.0	54.0	5,808.3	2,700.0	2,375.8	390.6	87.99
50.0	60.0	5,756.8	3,000.0	2,673.6	443.5	89.12
50.0	66.0	5,706.7	3,300.0	2,966.5	496.4	89.89
49.9	72.0	5,657.9	3,592.8	3,254.0	549.2	90.57
49.9	78.0	5,610.4	3,892.2	3,537.5	602.1	90.89
49.9	84.0	5,564.2	4,191.6	3,816.0	654.9	91.04
49.9	90.0	5,519.1	4,491.0	4,090.8	707.8	91.09
49.9	96.0	5,475.2	4,790.4	4,361.0	760.6	91.04
49.9	102.0	5,432.3	5,089.8	4,627.8	813.5	90.92
49.9	108.0	5,390.5	5,389.2	4,890.8	866.4	90.75
49.9	114.0	5,349.6	5,688.6	5,149.4	919.2	90.52
49.9	120.0	5,309.6	5,988.0	5,405.1	972.1	90.27
49.9	126.0	5,270.5	6,287.4	5,656.7	1,024.9	89.97
49.9	132.0	5,232.2	6,586.8	5,905.4	1,077.8	89.66
49.9	138.0	5,194.6	6,886.2	6,150.8	1,130.7	89.32
49.9	144.0	5,157.7	7,185.6	6,392.2	1,183.5	88.96
49.9	150.0	5,121.4	7,485.0	6,631.0	1,236.4	88.59
49.9	156.0	5,085.7	7,784.4	6,865.9	1,289.2	88.20
49.9	162.0	5,050.5	8,083.8	7,098.2	1,342.1	87.81
49.9	168.0	5,015.8	8,383.2	7,326.8	1,394.9	87.40
49.9	174.0	4,981.5	8,682.6	7,552.6	1,447.8	86.99
49.9	180.0	4,947.5	8,982.0	7,775.1	1,500.7	86.56

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
49.9	186.0	4,913.8	9,281.4	7,993.9	1,553.5	86.13
49.9	192.0	4,880.4	9,580.8	8,209.9	1,606.4	85.69
49.9	198.0	4,847.2	9,880.2	8,422.1	1,659.2	85.24
49.9	204.0	4,814.1	10,179.6	8,631.2	1,712.1	84.79
49.9	210.0	4,781.0	10,479.0	8,836.7	1,765.0	84.33
49.8	216.0	4,748.0	10,756.8	9,038.3	1,817.8	84.02
49.8	222.0	4,715.0	11,055.6	9,236.6	1,870.7	83.55
49.8	228.0	4,681.8	11,354.4	9,430.5	1,923.5	83.06
49.8	234.0	4,648.5	11,653.2	9,620.9	1,976.4	82.56
49.8	240.0	4,615.0	11,952.0	9,806.8	2,029.2	82.05
49.8	246.0	4,581.3	12,250.8	9,988.9	2,082.1	81.54
49.8	252.0	4,547.2	12,549.6	10,166.5	2,135.0	81.01
49.8	258.0	4,512.8	12,848.4	10,339.1	2,187.8	80.47
49.8	264.0	4,477.9	13,147.2	10,507.2	2,240.7	79.92
49.8	270.0	4,442.6	13,446.0	10,670.0	2,293.5	79.35
49.8	276.0	4,406.7	13,744.8	10,827.9	2,346.4	78.78
49.8	282.0	4,370.2	14,043.6	10,980.3	2,399.3	78.19
49.8	288.0	4,333.1	14,342.4	11,126.7	2,452.1	77.58
49.8	294.0	4,295.3	14,641.2	11,267.6	2,505.0	76.96
49.8	300.0	4,256.7	14,940.0	11,401.7	2,557.8	76.32
49.8	306.0	4,217.3	15,238.8	11,529.8	2,610.7	75.66
49.8	312.0	4,177.1	15,537.6	11,650.8	2,663.5	74.98
49.8	318.0	4,135.9	15,836.4	11,765.0	2,716.4	74.29
49.8	324.0	4,093.8	16,135.2	11,872.0	2,769.3	73.58
49.8	330.0	4,050.6	16,434.0	11,970.7	2,822.1	72.84
49.8	336.0	4,006.3	16,732.8	12,061.7	2,875.0	72.08
49.8	342.0	3,960.9	17,031.6	12,144.1	2,927.8	71.30
49.8	348.0	3,914.2	17,330.4	12,217.7	2,980.7	70.50
49.7	354.0	3,866.4	17,593.8	12,282.7	3,033.6	69.81
49.7	360.0	3,817.2	17,892.0	12,337.5	3,086.4	68.96

nl = rpm with no load

lo = current with no load

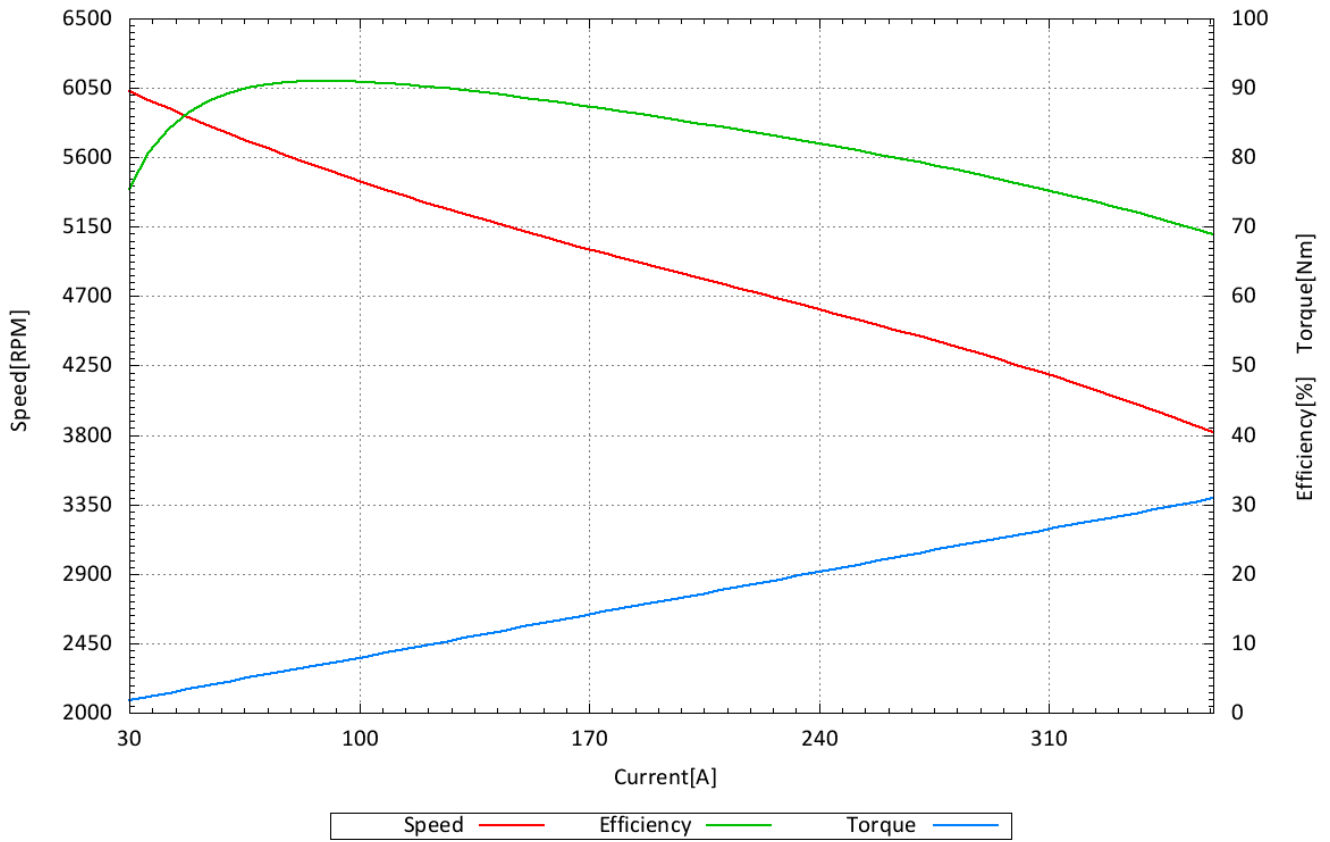
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_40_B4_P30_50V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-40-B4 P30**

Date: 12.04.2024

Bearing type: regular

Controller: Common ESC

Measuring Parameter

Voltage: **55.0 [V]**

Throttle setting: 100%

Calculated Motor Constants

nl: 6,772.8 [RPM] lo: 9.0 [A] kv: 124.4 [RPM/V] kn: -7.76 [RPM/A] kT: 8.74 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
55.0	30.0	6,664.9	1,650.0	1,280.7	183.5	77.62
55.0	36.0	6,601.3	1,980.0	1,631.4	236.0	82.40
55.0	42.0	6,539.5	2,310.0	1,975.0	288.4	85.50
55.0	48.0	6,479.4	2,640.0	2,312.4	340.8	87.59
55.0	54.0	6,421.0	2,970.0	2,644.6	393.3	89.04
55.0	60.0	6,364.1	3,300.0	2,970.4	445.7	90.01
55.0	66.0	6,308.8	3,630.0	3,291.4	498.2	90.67
54.9	72.0	6,255.0	3,952.8	3,606.6	550.6	91.24
54.9	78.0	6,202.6	4,282.2	3,916.7	603.0	91.46
54.9	84.0	6,151.5	4,611.6	4,222.6	655.5	91.57
54.9	90.0	6,101.7	4,941.0	4,523.3	707.9	91.55
54.9	96.0	6,053.2	5,270.4	4,820.1	760.4	91.46
54.9	102.0	6,005.9	5,599.8	5,112.0	812.8	91.29
54.9	108.0	5,959.7	5,929.2	5,399.7	865.2	91.07
54.9	114.0	5,914.6	6,258.6	5,684.0	917.7	90.82
54.9	120.0	5,870.5	6,588.0	5,963.8	970.1	90.52
54.9	126.0	5,827.4	6,917.4	6,240.4	1,022.6	90.21
54.9	132.0	5,785.2	7,246.8	6,512.6	1,075.0	89.87
54.9	138.0	5,743.8	7,576.2	6,781.2	1,127.4	89.51
54.9	144.0	5,703.2	7,905.6	7,046.8	1,179.9	89.14
54.9	150.0	5,663.3	8,235.0	7,308.3	1,232.3	88.75
54.9	156.0	5,624.1	8,564.4	7,566.9	1,284.8	88.35
54.9	162.0	5,585.5	8,893.8	7,821.4	1,337.2	87.94
54.9	168.0	5,547.5	9,223.2	8,072.6	1,389.6	87.53
54.9	174.0	5,510.0	9,552.6	8,321.0	1,442.1	87.11
54.9	180.0	5,472.9	9,882.0	8,565.3	1,494.5	86.68

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
54.9	186.0	5,436.2	10,211.4	8,806.7	1,547.0	86.24
54.9	192.0	5,399.8	10,540.8	9,044.1	1,599.4	85.80
54.9	198.0	5,363.7	10,870.2	9,277.9	1,651.8	85.35
54.9	204.0	5,327.9	11,199.6	9,508.9	1,704.3	84.90
54.8	210.0	5,292.1	11,508.0	9,735.4	1,756.7	84.60
54.8	216.0	5,256.5	11,836.8	9,958.9	1,809.2	84.14
54.8	222.0	5,220.9	12,165.6	10,178.0	1,861.6	83.66
54.8	228.0	5,185.3	12,494.4	10,393.1	1,914.0	83.18
54.8	234.0	5,149.7	12,823.2	10,604.8	1,966.5	82.70
54.8	240.0	5,113.9	13,152.0	10,811.7	2,018.9	82.21
54.8	246.0	5,077.9	13,480.8	11,014.8	2,071.4	81.71
54.8	252.0	5,041.7	13,809.6	11,212.9	2,123.8	81.20
54.8	258.0	5,005.1	14,138.4	11,406.2	2,176.2	80.68
54.8	264.0	4,968.2	14,467.2	11,595.2	2,228.7	80.15
54.8	270.0	4,930.9	14,796.0	11,778.7	2,281.1	79.61
54.8	276.0	4,893.2	15,124.8	11,957.7	2,333.6	79.06
54.8	282.0	4,854.8	15,453.6	12,130.3	2,386.0	78.49
54.8	288.0	4,815.9	15,782.4	12,297.3	2,438.4	77.92
54.8	294.0	4,776.4	16,111.2	12,459.1	2,490.9	77.33
54.8	300.0	4,736.1	16,440.0	12,613.8	2,543.3	76.73
54.8	306.0	4,695.1	16,768.8	12,762.8	2,595.8	76.11
54.8	312.0	4,653.3	17,097.6	12,904.5	2,648.2	75.48
54.8	318.0	4,610.6	17,426.4	13,039.1	2,700.6	74.82
54.8	324.0	4,567.0	17,755.2	13,166.8	2,753.1	74.16
54.8	330.0	4,522.3	18,084.0	13,286.1	2,805.5	73.47
54.8	336.0	4,476.7	18,412.8	13,398.3	2,858.0	72.77
54.8	342.0	4,429.9	18,741.6	13,501.3	2,910.4	72.04
54.7	348.0	4,381.9	19,035.6	13,595.4	2,962.8	71.42
54.7	354.0	4,332.8	19,363.8	13,681.3	3,015.3	70.65
54.7	360.0	4,282.3	19,692.0	13,756.8	3,067.7	69.86

nl = rpm with no load

lo = current with no load

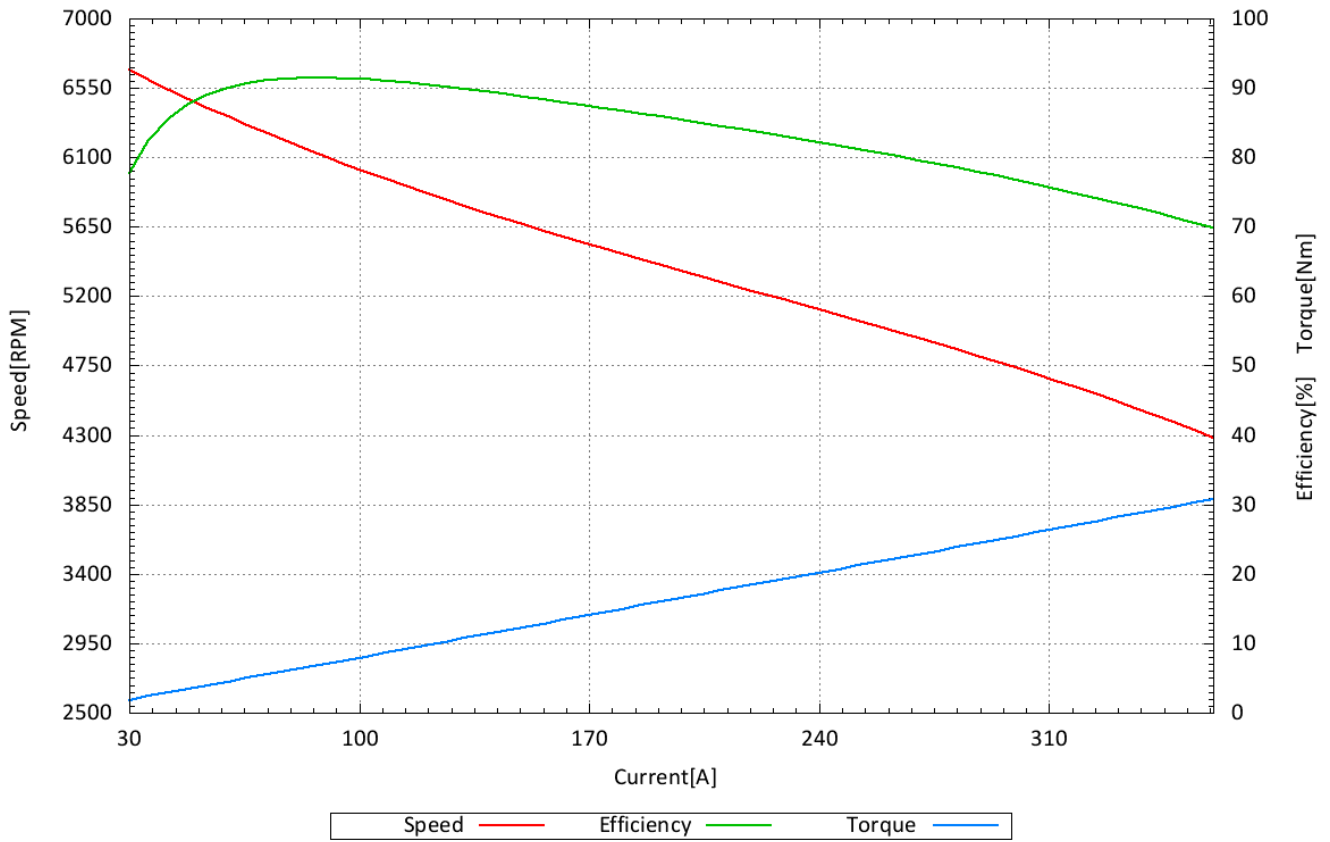
kV = specific rpm

kn = rpm drop per Amp

kT = torque constant

¹ incl. Controller

HP875_40_B4_P30_55V_12042024



Report calculated on Test Bench Results

Motor type: **NOVA 15-40-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: 7,429.2 [RPM] lo: 10.0 [A] kv: 125.2 [RPM/V] kn: -8.43 [RPM/A] kT: 8.83 [Ncm/A]

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
60.0	30.0	7,330.2	1,800.0	1,355.6	176.6	75.31
60.0	36.0	7,258.1	2,160.0	1,745.1	229.6	80.79
60.0	42.0	7,188.2	2,520.0	2,127.3	282.6	84.42
60.0	48.0	7,120.3	2,880.0	2,502.4	335.6	86.89
60.0	54.0	7,054.5	3,240.0	2,870.0	388.5	88.58
60.0	60.0	6,990.6	3,600.0	3,232.0	441.5	89.78
60.0	66.0	6,928.6	3,960.0	3,587.9	494.5	90.60
59.9	72.0	6,868.3	4,312.8	3,937.9	547.5	91.31
59.9	78.0	6,809.8	4,672.2	4,281.6	600.4	91.64
59.9	84.0	6,753.0	5,031.6	4,620.7	653.4	91.83
59.9	90.0	6,697.7	5,391.0	4,954.6	706.4	91.90
59.9	96.0	6,644.0	5,750.4	5,283.6	759.4	91.88
59.9	102.0	6,591.7	6,109.8	5,607.2	812.3	91.77
59.9	108.0	6,540.7	6,469.2	5,926.8	865.3	91.62
59.9	114.0	6,491.1	6,828.6	6,242.1	918.3	91.41
59.9	120.0	6,442.8	7,188.0	6,553.2	971.3	91.17
59.9	126.0	6,395.5	7,547.4	6,859.4	1,024.2	90.88
59.9	132.0	6,349.4	7,906.8	7,162.4	1,077.2	90.59
59.9	138.0	6,304.3	8,266.2	7,461.4	1,130.2	90.26
59.9	144.0	6,260.2	8,625.6	7,756.0	1,183.1	89.92
59.9	150.0	6,217.0	8,985.0	8,047.5	1,236.1	89.57
59.9	156.0	6,174.5	9,344.4	8,335.2	1,289.1	89.20
59.9	162.0	6,132.8	9,703.8	8,619.3	1,342.1	88.82
59.9	168.0	6,091.8	10,063.2	8,899.1	1,395.0	88.43
59.9	174.0	6,051.4	10,422.6	9,176.0	1,448.0	88.04
59.9	180.0	6,011.6	10,782.0	9,449.3	1,501.0	87.64

Voltage [V]	Current [A]	Speed [RPM]	Input Power [W]	Output Power [W]	Torque [Ncm]	Efficiency ¹ [%]
59.9	186.0	5,972.2	11,141.4	9,718.8	1,554.0	87.23
59.9	192.0	5,933.1	11,500.8	9,983.9	1,606.9	86.81
59.9	198.0	5,894.5	11,860.2	10,246.1	1,659.9	86.39
59.9	204.0	5,856.0	12,219.6	10,504.2	1,712.9	85.96
59.9	210.0	5,817.8	12,579.0	10,758.5	1,765.9	85.53
59.8	216.0	5,779.7	12,916.8	11,008.3	1,818.8	85.22
59.8	222.0	5,741.6	13,275.6	11,254.4	1,871.8	84.77
59.8	228.0	5,703.5	13,634.4	11,496.2	1,924.8	84.32
59.8	234.0	5,665.3	13,993.2	11,733.1	1,977.7	83.85
59.8	240.0	5,626.9	14,352.0	11,965.9	2,030.7	83.37
59.8	246.0	5,588.3	14,710.8	12,193.9	2,083.7	82.89
59.8	252.0	5,549.4	15,069.6	12,417.0	2,136.7	82.40
59.8	258.0	5,510.1	15,428.4	12,634.3	2,189.6	81.89
59.8	264.0	5,470.3	15,787.2	12,846.7	2,242.6	81.37
59.8	270.0	5,430.1	16,146.0	13,053.7	2,295.6	80.85
59.8	276.0	5,389.2	16,504.8	13,254.5	2,348.6	80.31
59.8	282.0	5,347.7	16,863.6	13,448.6	2,401.5	79.75
59.8	288.0	5,305.5	17,222.4	13,637.0	2,454.5	79.18
59.8	294.0	5,262.5	17,581.2	13,818.5	2,507.5	78.60
59.8	300.0	5,218.6	17,940.0	13,992.9	2,560.5	78.00
59.8	306.0	5,173.8	18,298.8	14,159.4	2,613.4	77.38
59.8	312.0	5,127.9	18,657.6	14,318.4	2,666.4	76.74
59.8	318.0	5,081.0	19,016.4	14,469.4	2,719.4	76.09
59.8	324.0	5,033.0	19,375.2	14,612.1	2,772.4	75.42
59.8	330.0	4,983.7	19,734.0	14,745.0	2,825.3	74.72
59.8	336.0	4,933.1	20,092.8	14,869.1	2,878.3	74.00
59.8	342.0	4,881.2	20,451.6	14,983.6	2,931.3	73.26
59.8	348.0	4,827.9	20,810.4	15,087.4	2,984.2	72.50
59.8	354.0	4,773.0	21,169.2	15,180.8	3,037.2	71.71
59.7	360.0	4,716.6	21,492.0	15,263.2	3,090.2	71.02

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_40_B4_P30_60V_12042024

