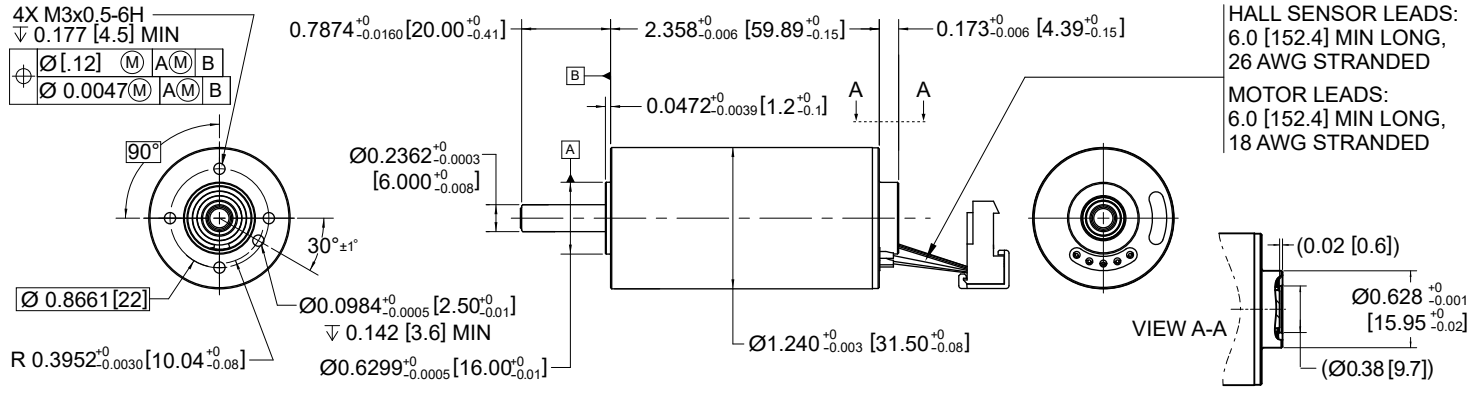
B1210N1027 Large Bone Orthopedic Saw/Reamer

Ø 1.24 inch • Brushless Slotted • 14.4 V



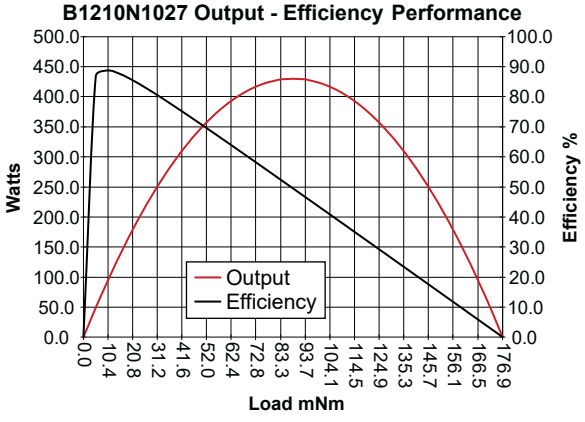
Dimensions in inches [mm]

Electrical Data		Symbol	SMX B1210N1027	Unit
1	Nominal Voltage	U_N	14.4	Volt
2	Optimization Direction	-	Bi-Directional	-
3	No Load Speed	n_o	15,700	rpm
4	Typical No Load Current	I_o	760	mA
5	Max. Continuous Mechanical Power (@25°C)	Pmax	130.4	W
6	Max. Continuous Current	Ics	11.19	A
7	Max. Continuous Torque	Tcs	95.9 (13.58)	mNm (oz-in)
8	Back EMF Constant	kE	0.93	V/1000 rpm
9	Torque Constant	k_T	8.88 (1.26)	mNm/A (oz-in/A)
10	Motor Regulation	R/k^2	976	10^3/Nms
11	Peak Torque	Tpk	1660.8 (235.2)	mNm (oz-in)
12	Motor Constant	k_M	32.01 (4.53)	mNm/W½ (oz-in/W½)
13	Line to Line Resistance	R_L	0.077	ohms
14	Inductance Phase to Phase	L	0.045	mH
15	Mechanical Time Constant	τm	1.39	ms
16	Electrical Time Constant	τe	0.584	ms
General Data				
17	Gearhead Ratio	-	N/A	Ratio
18	Ambient Working Temperature Range	-	25 (77)	°C (°F)
19	Max Operating Temperature Range	-	155 (311)	°C (°F)
20	Radial Static Force w/o Shaft Support (max)	-	80.28	lbs
21	Axial Static Force w/o Shaft Support (max)	-	27.17	lbs
22	Thermal Resistance	R_{th}	8.7	°C/W
23	Thermal Time Constant	τw	975	s
24	Weight	-	267 (9.42)	g (oz)
25	Rotor Inertia	Jm	133 (189)	kg-cm² 10^{-4} (oz-in-sec² 10^{-6})
26	Hall Sensor Electrical Phasing	-	60	Electrical °

Notes:
- Three phase motor with Wye connections
- Hall sensors: supply voltage 4.5 V - 24 V
- Typical housing material 303 SS
- Motor type has been designed and tested to achieve the stated number of autoclave cycles
- Above parameters specified for 25° C ambient temperature
- Typical shaft material 17-4 PH

Wire	Description
Blue	Phase A
Brown	Phase B
Violet	Phase C
Red	4.5 to 24 Vdc
Yellow	Hall 1
Orange	Hall 2
White	Hall 3
Black	Supply RTN

B1210N1027 Output - Efficiency Performance



B1210N1027 Speed - Current Performance