

MAGNAMAX[®]

TYPICAL SUBMITTAL DATA

BASE MODEL: 744FSL4414

Winding: 740307

Date: 01/13/22

Kilowatt ratings at	1800 RPM	60 Hertz	4 Bus Bars		
kW (kVA)	3 Phase	0.8 Power Factor		Dripproof or Open Enclosure	
	CONTINUOUS ^{1, 2}			STANDBY ^{1, 2}	
Voltage*	NEMA B / 80 °C	NEMA F / 105 °C	NEMA H / 125 °C	NEMA F / 130 °C	NEMA H / 150 °C
480	1630 (2038)	2000 (2500)	2110 (2638)	2110 (2638)	2110 (2638)
440	1680 (2100)	1960 (2450)	2100 (2625)	2140 (2675)	2180 (2725)
416	1620 (2025)	1880 (2350)	2010 (2513)	2040 (2550)	2120 (2650)
400	1575 (1969)	1820 (2275)	1950 (2438)	1980 (2475)	2050 (2563)
380	1520 (1900)	1750 (2188)	1860 (2325)	1900 (2375)	1960 (2450)

① Rise by resistance method, Mil-Std-705, Method 680.1b.

② Machine rated for Max Ambient of 40 °C, Max Altitude 3300 ft

Submittal Data: 480 Volts*, 2110 kW, 2638 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase High Wye CONNECTION

Mil-Std-705B Method	Description	Value	Units	Mil-Std-705C Method	Description	Value	Units
301.1b	Insulation Resistance	>10 Meg	Ohms	505.3b	Overspeed	2250	RPM
302.1a	High Potential Test			507.1c	Phase Sequence CCW-ODE	ABC	
	Main Stator	1960	Volts	508.1c	Voltage Balance, L-L or L-N	0.2%	
	Main Rotor	1500	Volts	601.4a	L-L Harmonic Max - Total (Distortion Factor)	5.0%	
	Exciter Stator	1500	Volts				
	Exciter Rotor	1500	Volts	601.4a	L-L Harmonic Max - Single	3.0%	
PMG Stator	1500	Volts	601.1c	Deviation Factor	5.0%		
401.1a	Stator Resistance, Line to Line High Wye Connection	0.00180	Ohms	---	TIF (1960 Weightings)	<50	
				---	THF (IEC, BS & NEMA Weightings)	<2%	
	Rotor Resistance	1.044	Ohms	---	Winding Pitch	2/3	
	Exciter Stator	22.1	Ohms				
	Exciter Rotor	0.066	Ohms				
	PMG Stator	2.1	Ohms				
410.1a	No Load Exciter Field Amps at 480 Volts Line to Line	0.79	A DC	Additional Prototype Mil-Std Methods are Available on Request.			
420.1a	Short Circuit Ratio	0.491					
421.1a	Xd Synchronous Reactance	2.632	PU	--	Generator Frame	744	
				--	Type	MagnaMax	
422.1a	X2 Negative Sequence React.	0.234	PU	--	Insulation	Class H	
				--	Coupling - Single Bearing	Flexible	
423.1a	X0 Zero Sequence Reactance	0.078	PU	--	Amortisseur Windings	Full	
				--	Excitation	Ext. Voltage Regulated, Brushless	
425.1a	X'd Transient Reactance	0.196	PU	--	Voltage Regulator	DVR2400	
				--	Voltage Regulation	0.25%	
426.1a	X''d Subtransient Reactance	0.159	PU				
				--	Cooling Air Volume	3190	CFM
				--	Heat rejection rate	4806	Btu's/min
427.1a	T'd Transient Short Circuit Time Constant	0.196	Sec	--	Full load current	3172.4	Amps
				--	Minimum Input hp required	2941.7	HP
428.1a	T''d Subtransient Short Circuit Time Constant	0.012	Sec	--	Full load torque	8580	Lb-ft
				--	Efficiency at rated load :	96.2%	
430.1a	T'do Transient Open Circuit Time Constant	3.4	Sec				
432.1a	Ta Short Circuit Time Constant of Armature Winding	0.024	Sec				
				--	Weight	8300	lbs

* Voltages refer to wye (star) connection, unless otherwise specified.

www.regalrexnord.com/brands/Marathon-Generators



Not indicative of legal entity.



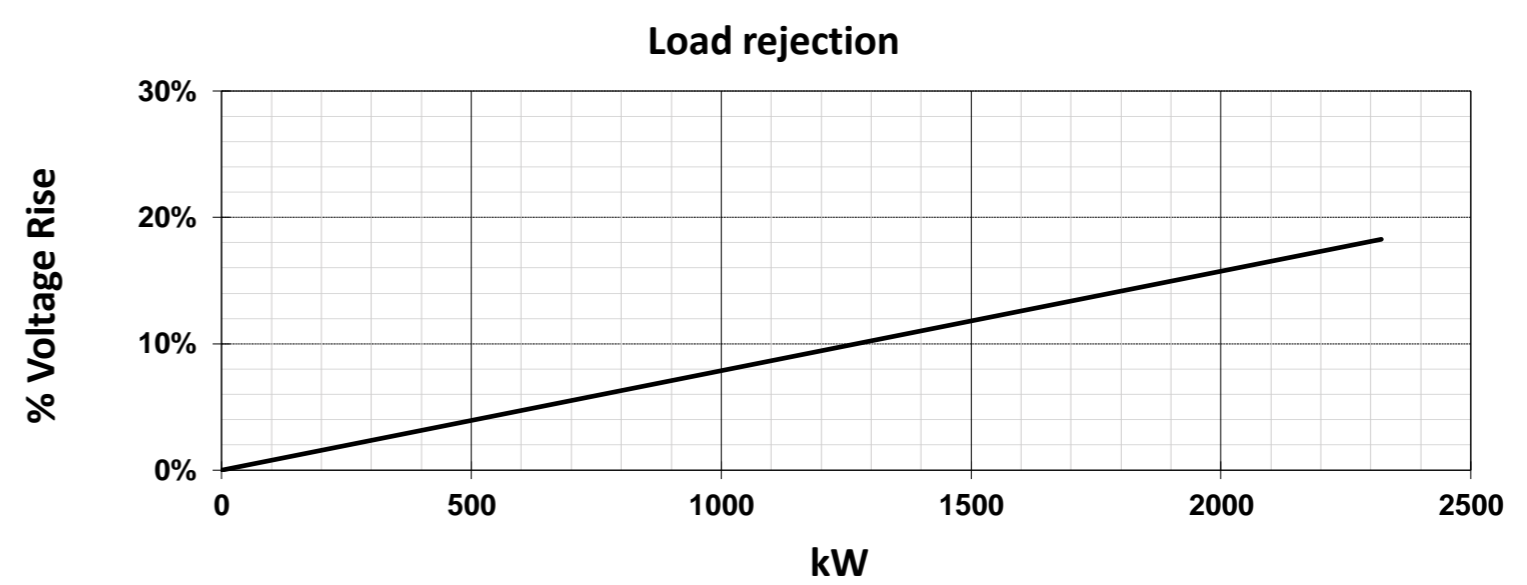
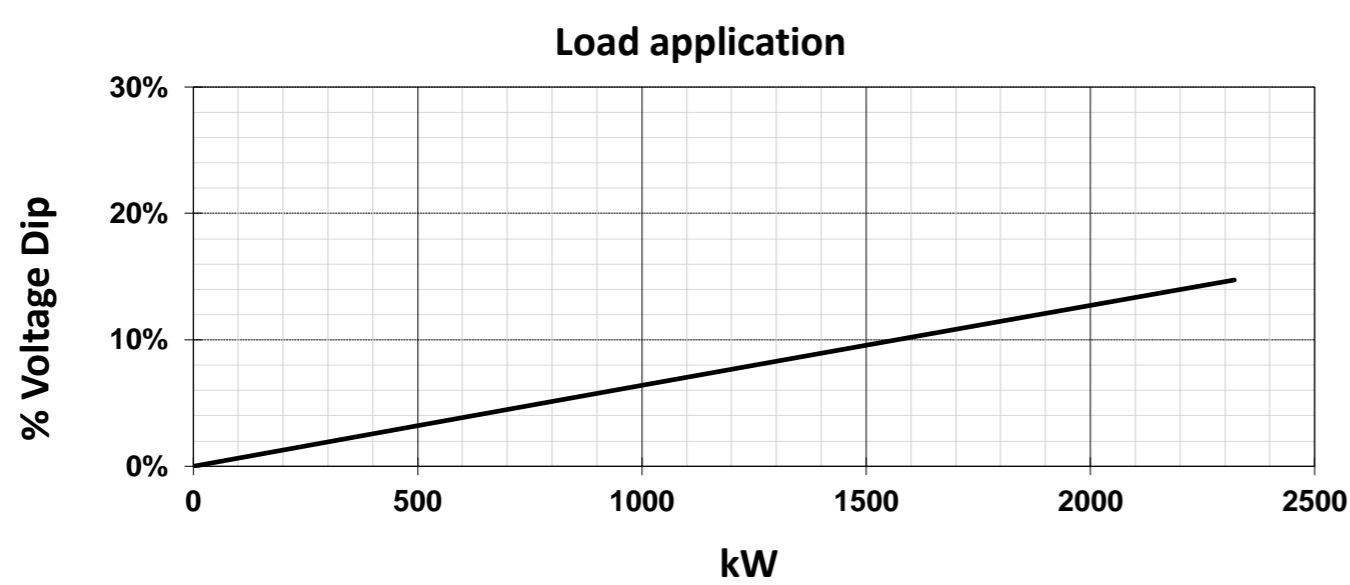
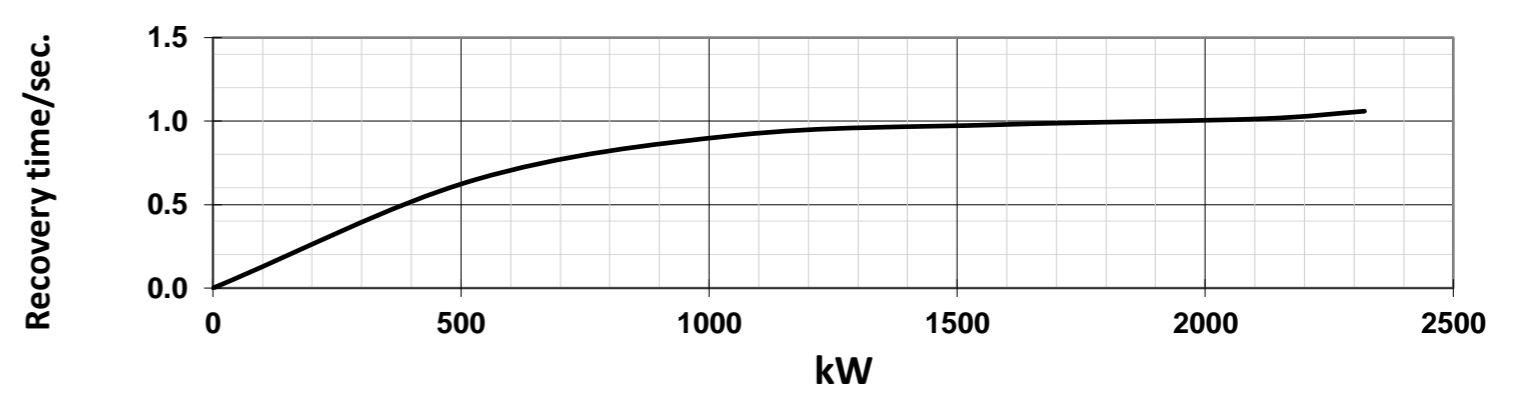
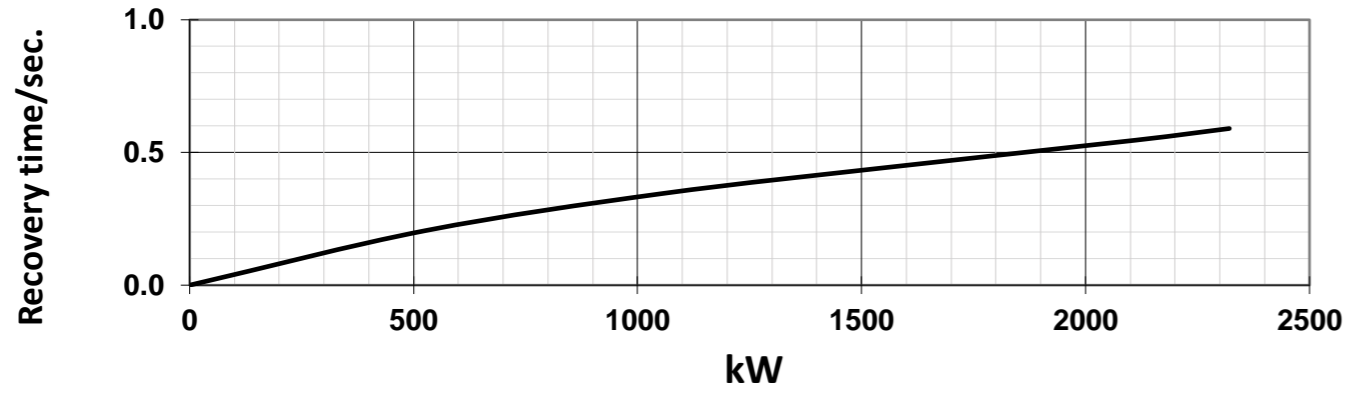
MAGNAMAX[®]

TYPICAL DYNAMIC CHARACTERISTICS

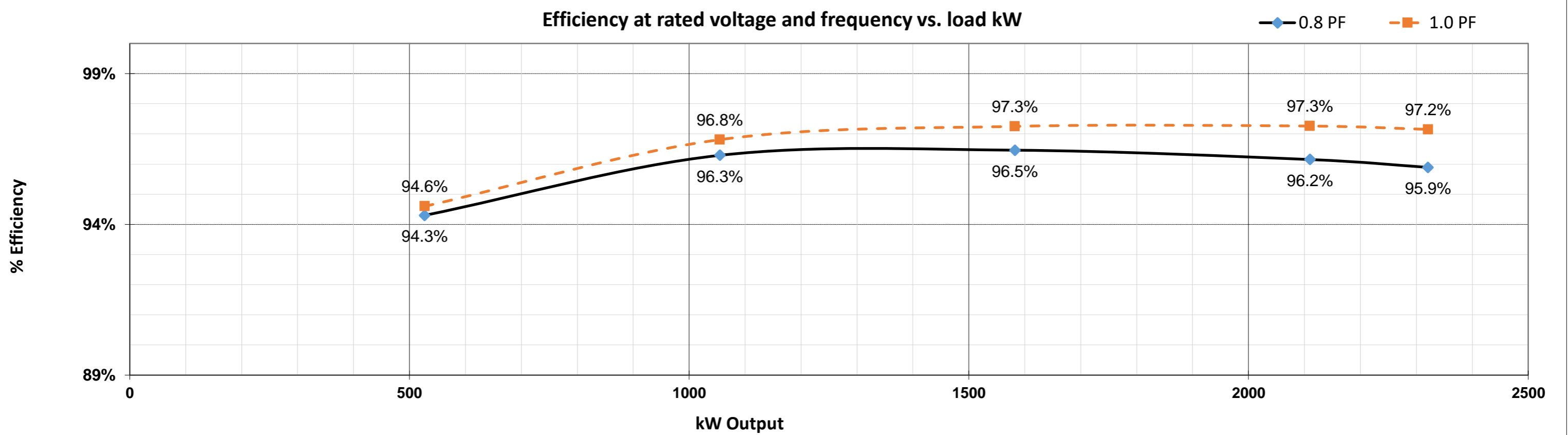
BASE MODEL: **744FSL4414**

Date: **01/13/22**

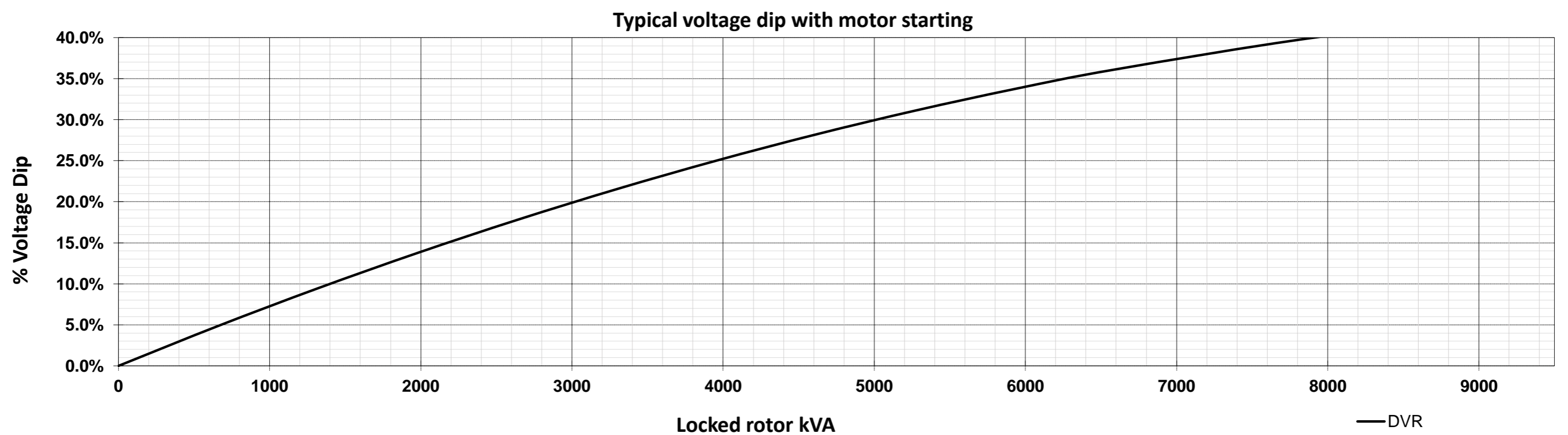
Submittal Data: **480 Volts*, 2110 kW, 2638 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase**



Efficiency at rated voltage and frequency vs. load kW



Typical voltage dip with motor starting



MAGNAMAX[®]

DECREMENT CURVE

BASE MODEL: 744FSL4414

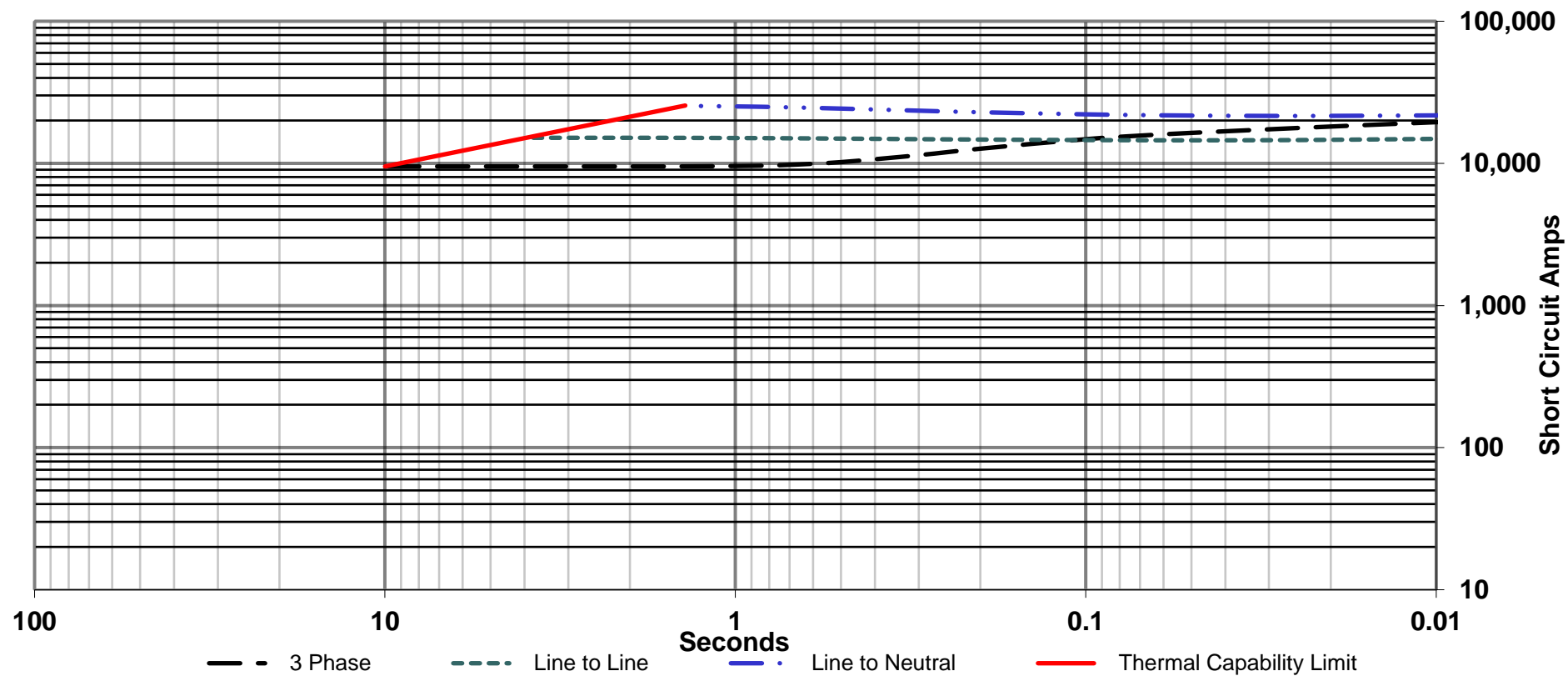
Submittal Data: 480 Volts*, 2110 kW, 2638 kVA, 0.8 P.F., 1800 RPM, 60 Hz, 3 Phase

Date : 01/13/22

Full Load Current : 3172.4 amps
Steady State S.C. Current : 9517.2 amps

Max. 3 ph. Symm. S.C. Current : 19977 amps
INCLUDES EXCITATION SUPPORT (PMG)

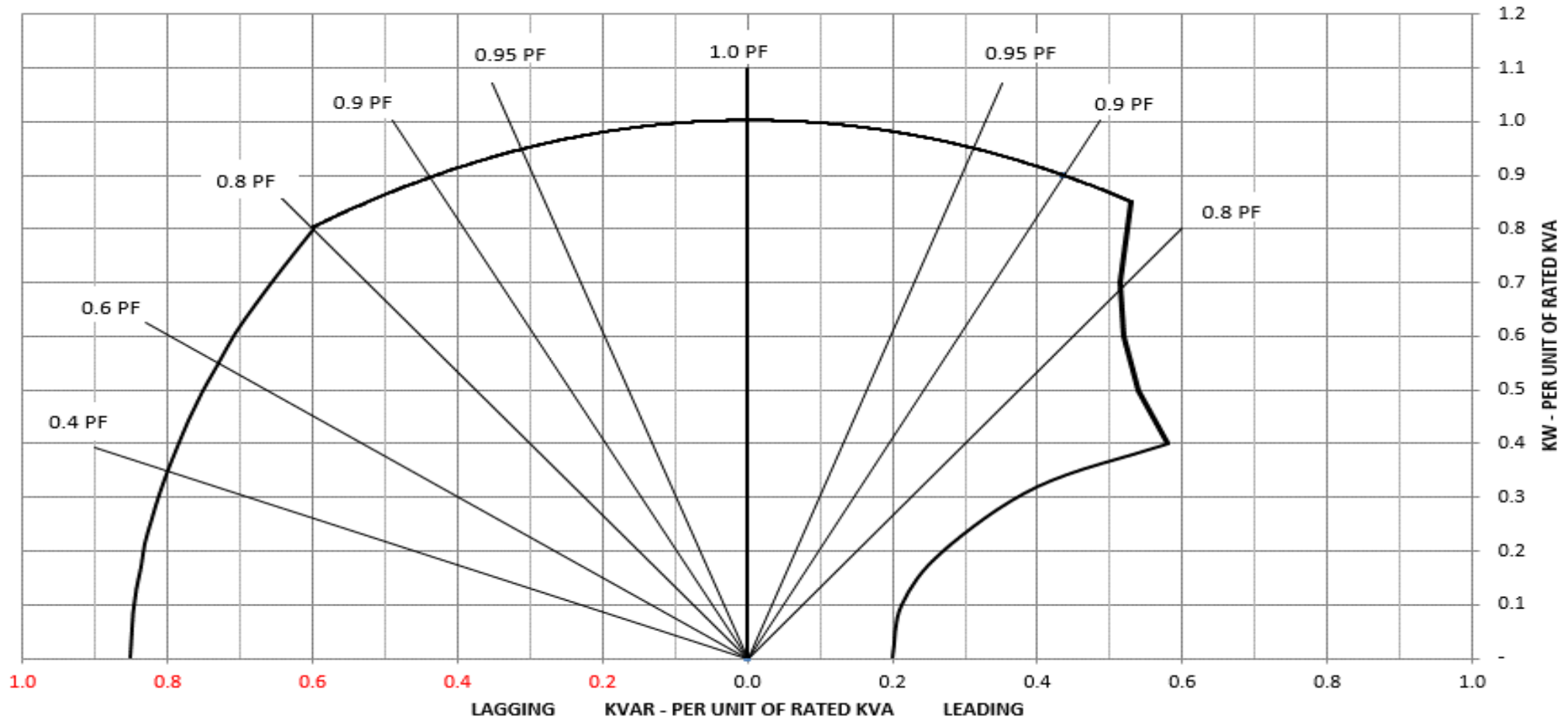
Symmetrical Component values, Maximum Asymmetrical Values Are 1.732 Times Symmetrical Values



MAGNAMAX[®]

Typical Reactive Capability Curve

Date : 01/13/22



RegalRexnord

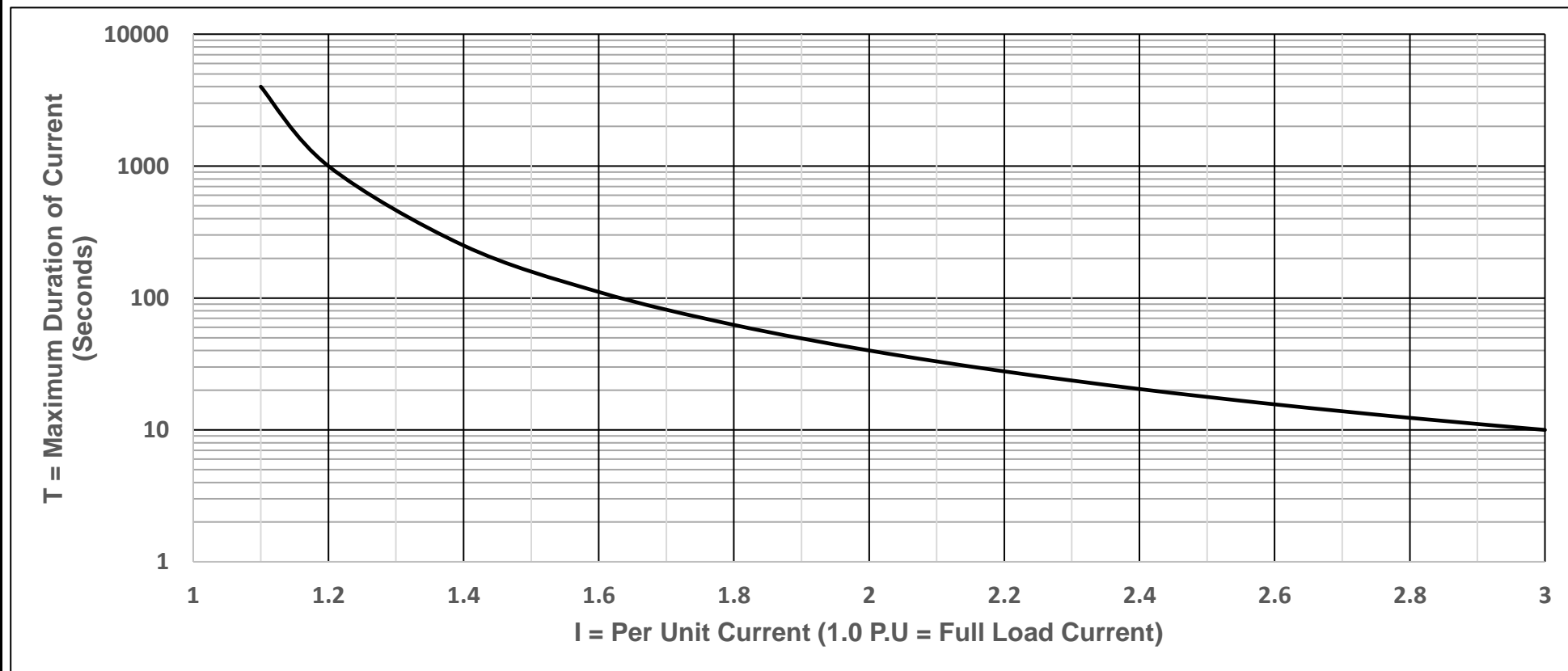
marathon[®]
Generators

MAGNAMAX[®]

THERMAL DAMAGE CURVE

Date : 01/13/22

Base is 3.0 P.U. current for 10 seconds from $T = 40/(I-1)^2$
Windings at operating temperature



RegalRexnord

marathon[®]
Generators