

MAGNAMAX®

TYPICAL SUBMITTAL DATA

BASE MODEL: 744RSL4054

Winding: 740046

Date: 02/10/22

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	1500 (1875)	1850 (2313)	1960 (2450)	2000 (2500)	2000 (2500)
440	1460 (1825)	1750 (2188)	1880 (2350)	1920 (2400)	1920 (2400)
416	1420 (1775)	1680 (2100)	1800 (2250)	1840 (2300)	1840 (2300)
400	1394 (1743)	1640 (2050)	1706 (2133)	1727 (2159)	1727 (2159)
380	1360 (1700)	1590 (1988)	1590 (1988)	1590 (1988)	1590 (1988)

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: 416 Volts*, 1840 kW, 2300 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	>1.5 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	0.00150	Ohms	---	TIF (1960 Weightings)	<50	
				---	THF (IEC, BS & NEMA Weightings)	<2%	
	Rotor Resistance	1.1	Ohms	---	Winding Pitch	2/3	
	Exciter Stator	22.1	Ohms				
	Exciter Rotor	0.048	Ohms				
	PMG Stator	2.1	Ohms				
410.1a	No Load Exciter Field Amps at 416 Volts Line to Line	0.59	A DC	Additional Prototype Mil-Std Methods are Available on Request.			
420.1a	Short Circuit Ratio	0.551					
421.1a	Xd Synchronous Reactance	2.450	PU	--	Generator Frame	744	
		0.184	Ohms	--	Type	MagnaMax	
422.1a	X2 Negative Sequence React.	0.233	PU	--	Insulation	Class H	
		0.018	Ohms	--	Coupling - Single Bearing	Flexible	
423.1a	X0 Zero Sequence Reactance	0.086	PU	--	Amortisseur Windings	Full	
		0.006	Ohms	--	Excitation	Ext. Voltage Regulated, Brushless	
425.1a	X'd Transient Reactance	0.141	PU	--	Voltage Regulator	DVR2400	
		0.011	Ohms	--	Voltage Regulation	0.25%	
426.1a	X''d Subtransient Reactance	0.098	PU				
		0.007	Ohms				
--	Xq Quadrature Synchronous Reactance	1.225	PU	--	Cooling Air Volume	3150	CFM
		0.092	Ohms	--	Heat rejection rate	4338	Btu's/min
427.1a	T'd Transient Short Circuit Time Constant	0.187	Sec	--	Full load current	3192.1	Amps
				--	Minimum Input hp required	2568.7	HP
428.1a	T''d Subtransient Short Circuit Time Constant	0.011	Sec	--	Full load torque	7492	Lb-ft
				--	Efficiency at rated load :	96.0%	
430.1a	T'do Transient Open Circuit Time Constant	2.93	Sec				
432.1a	Ta Short Circuit Time Constant of Armature Winding	0.031	Sec	--	Weight	8600	lbs

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

www.regalrexnord.com/brands/Marathon-Generators



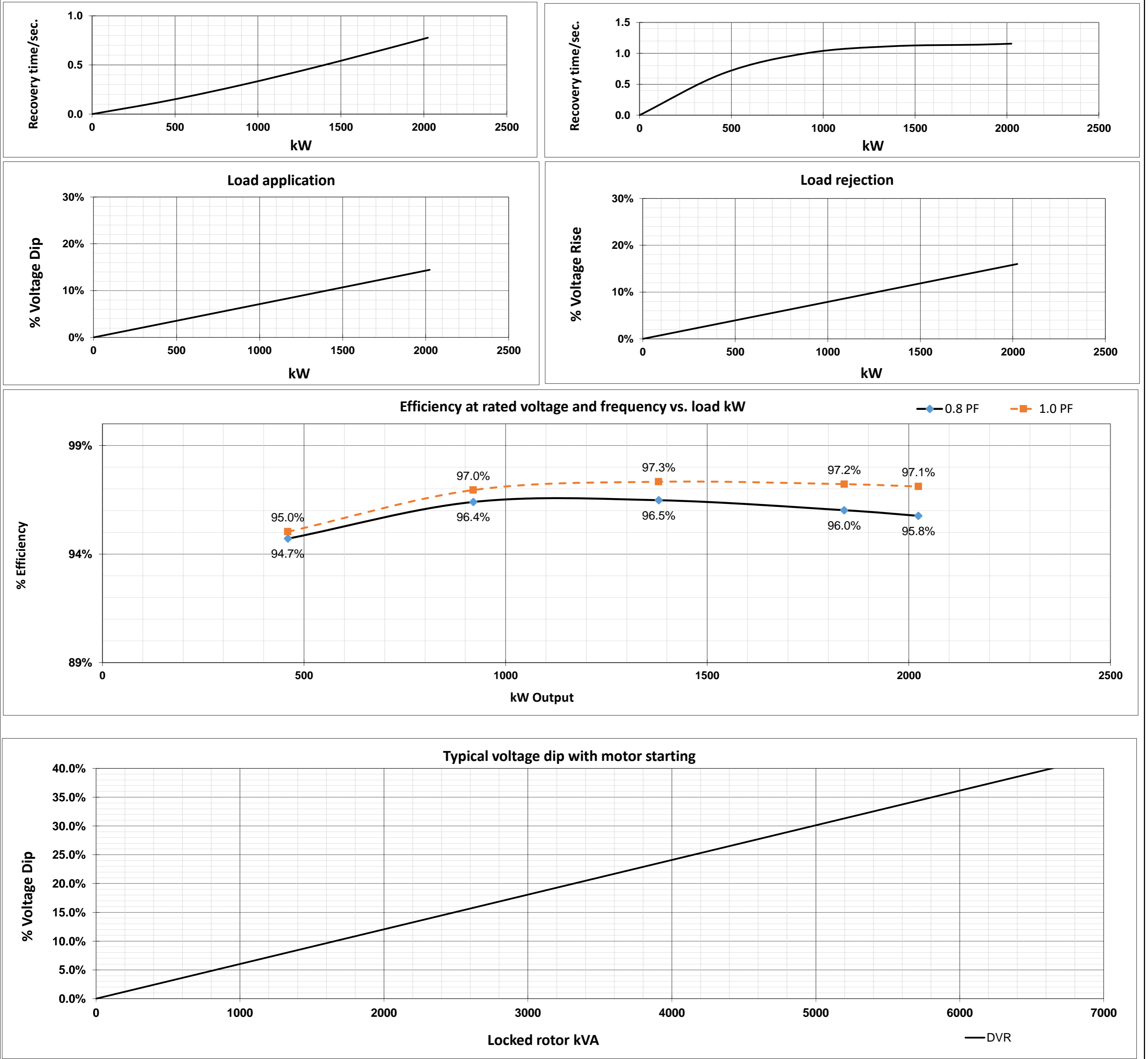
MAGNAMAX[®]

TYPICAL DYNAMIC CHARACTERISTICS

BASE MODEL: 744RSL4054

Date: 02/10/22

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DECREMENT CURVE

BASE MODEL: 744RSL4054

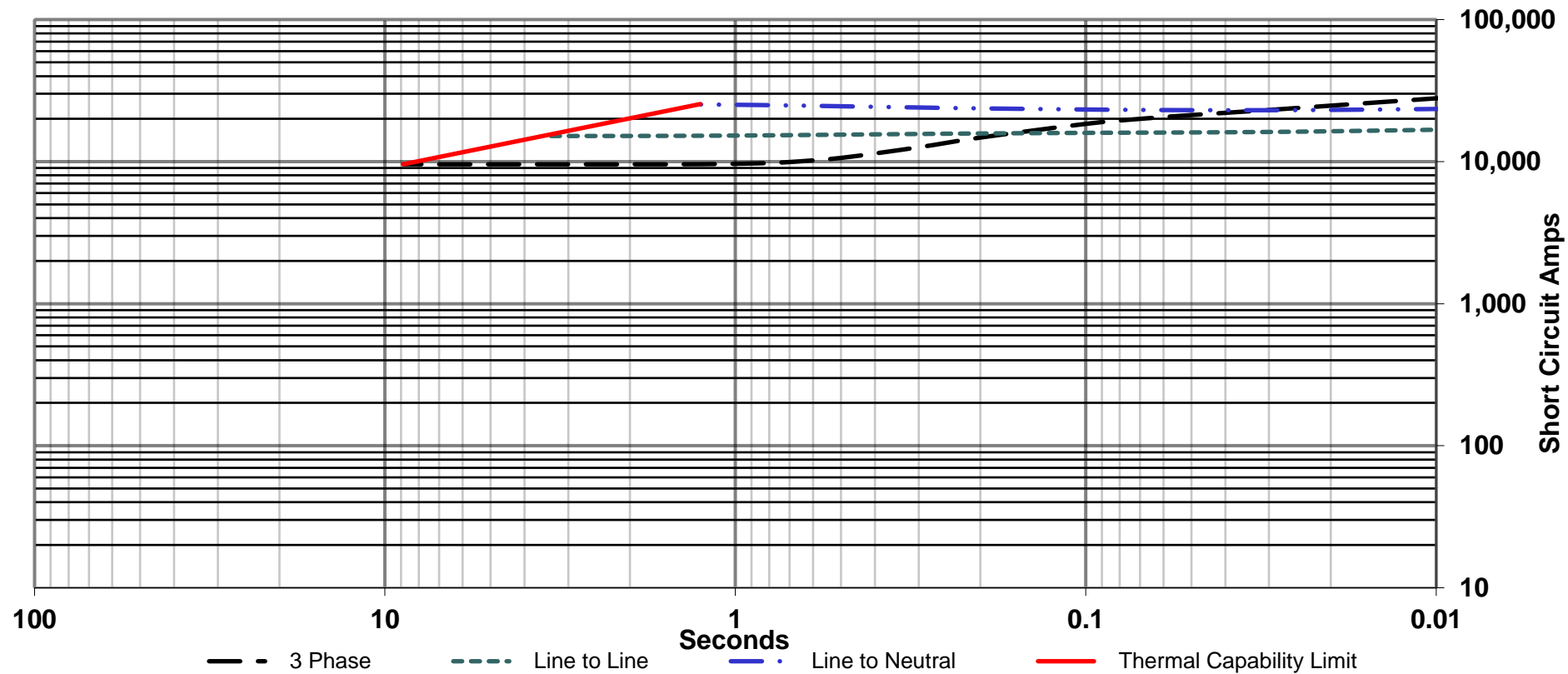
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Date : 02/10/22

Full Load Current : 3192.1 amps
Steady State S.C. Current : 9576.3 amps

Max. 3 ph. Symm. S.C. Current : 32575 amps
INCLUDES EXCITATION SUPPORT (PMG)

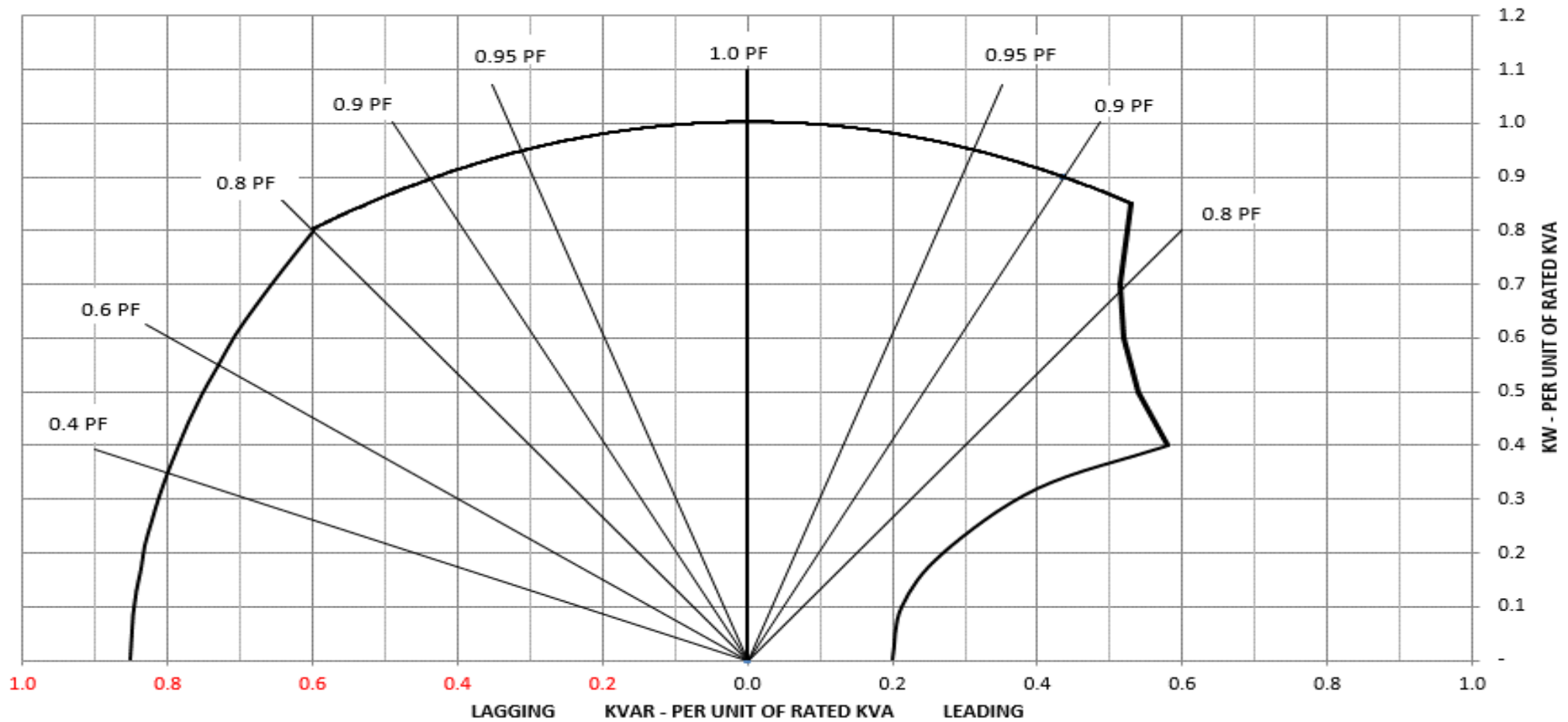
Symmetrical Component values, Maximum Asymmetrical Values Are 1.732 Times Symmetrical Values



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Typical Reactive Capability Curve

Date : 02/10/22



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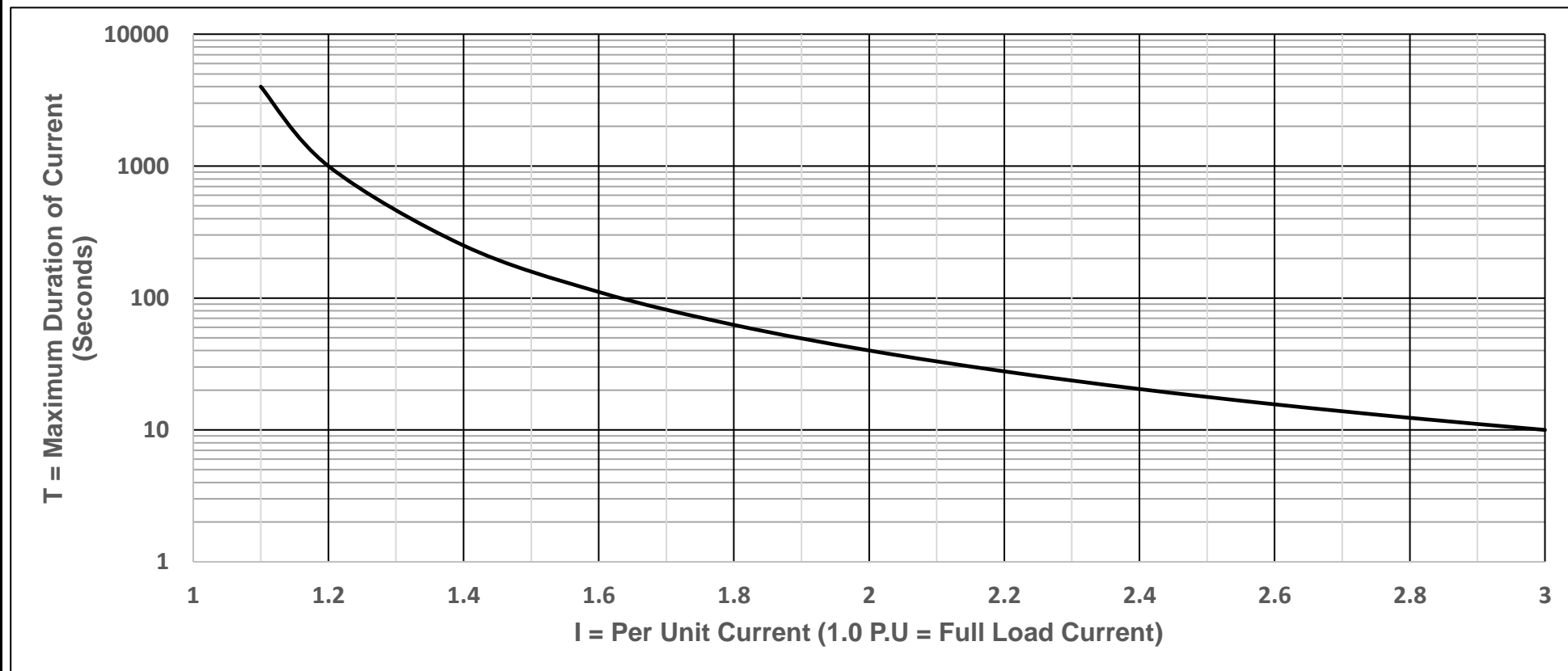
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THERMAL DAMAGE CURVE

Date : 02/10/22

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



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