

MAGNAMAX®

TYPICAL SUBMITTAL DATA

BASE MODEL: 740RSL4046

Winding: 570111

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	950 (1188)	1120 (1400)	1200 (1500)	1220 (1525)	1250 (1563)
440	915 (1144)	1070 (1338)	1140 (1425)	1160 (1450)	1240 (1550)
416	880 (1100)	1020 (1275)	1090 (1363)	1110 (1388)	1180 (1475)
400	856 (1070)	987 (1234)	1025 (1281)	1035 (1294)	1072 (1340)
380	825 (1031)	945 (1181)	945 (1181)	945 (1181)	945 (1181)

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*, 1110 kW, 1388 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	0.00300	Ohms	---	TIF (1960 Weightings)	<50	
				---	THF (IEC, BS & NEMA Weightings)	<2%	
	Rotor Resistance	0.704	Ohms	---	Winding Pitch	2/3	
	Exciter Stator	23	Ohms				
	Exciter Rotor	0.7	Ohms				
	PMG Stator	2.1	Ohms				
410.1a	No Load Exciter Field Amps at 416 Volts Line to Line	0.58	A DC	Additional Prototype Mil-Std Methods are Available on Request.			
420.1a	Short Circuit Ratio	0.481					
421.1a	Xd Synchronous Reactance	3.772	PU	--	Generator Frame	740	
		0.470	Ohms	--	Type	MagnaMax	
422.1a	X2 Negative Sequence React.	0.264	PU	--	Insulation	Class H	
		0.033	Ohms	--	Coupling - Single Bearing	Flexible	
423.1a	X0 Zero Sequence Reactance	0.086	PU	--	Amortisseur Windings	Full	
		0.011	Ohms	--	Excitation	Ext. Voltage Regulated, Brushless	
425.1a	X'd Transient Reactance	0.178	PU	--	Voltage Regulator	DVR2400	
		0.022	Ohms	--	Voltage Regulation	0.25%	
426.1a	X''d Subtransient Reactance	0.143	PU				
		0.018	Ohms				
--	Xq Quadrature Synchronous Reactance	0.963	PU	--	Cooling Air Volume	1150	CFM
		0.120	Ohms	--	Heat rejection rate	3246	Btu's/min
427.1a	T'd Transient Short Circuit Time Constant	0.127	Sec	--	Full load current	1925.7	Amps
				--	Minimum Input hp required	1564.4	HP
428.1a	T''d Subtransient Short Circuit Time Constant	0.011	Sec	--	Full load torque	4563	Lb-ft
				--	Efficiency at rated load :	95.1%	
430.1a	T'do Transient Open Circuit Time Constant	2.38	Sec				
432.1a	Ta Short Circuit Time Constant of Armature Winding	0.024	Sec	--	Weight	5200	lbs

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

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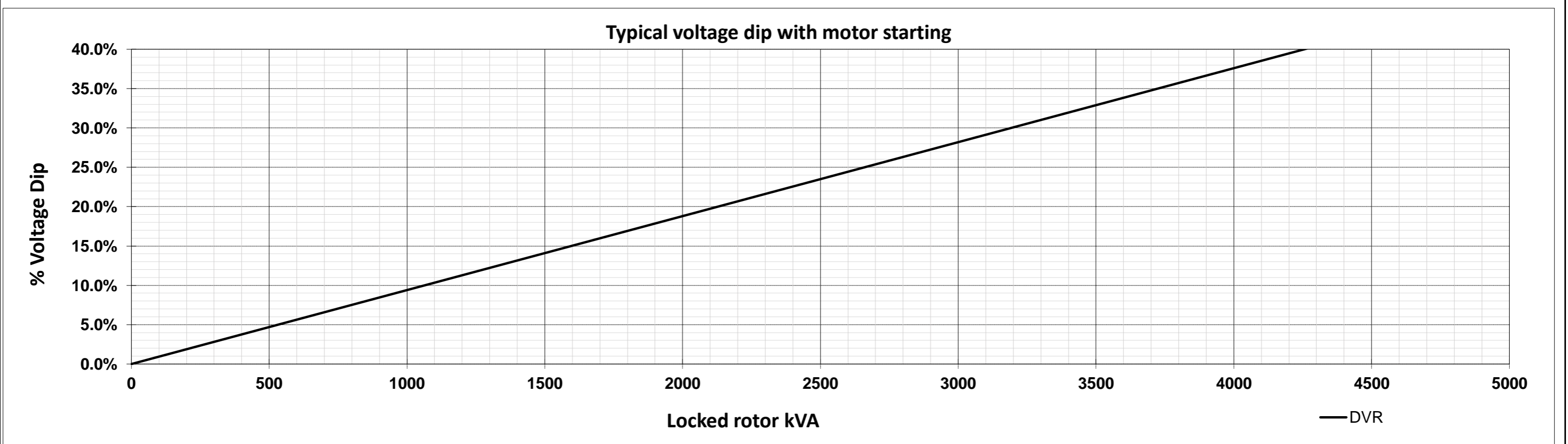
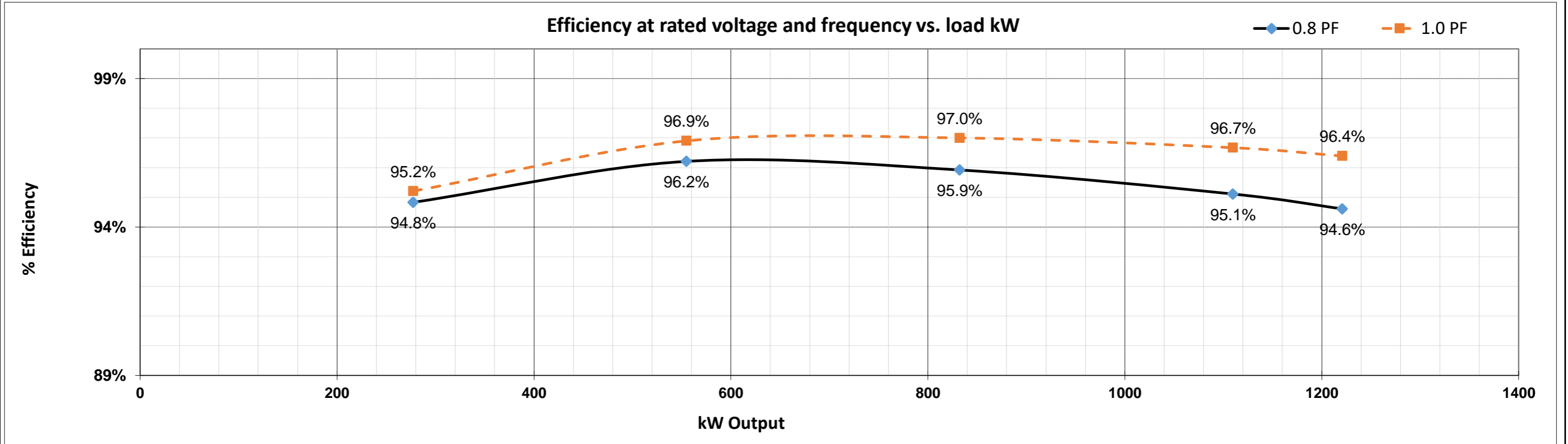
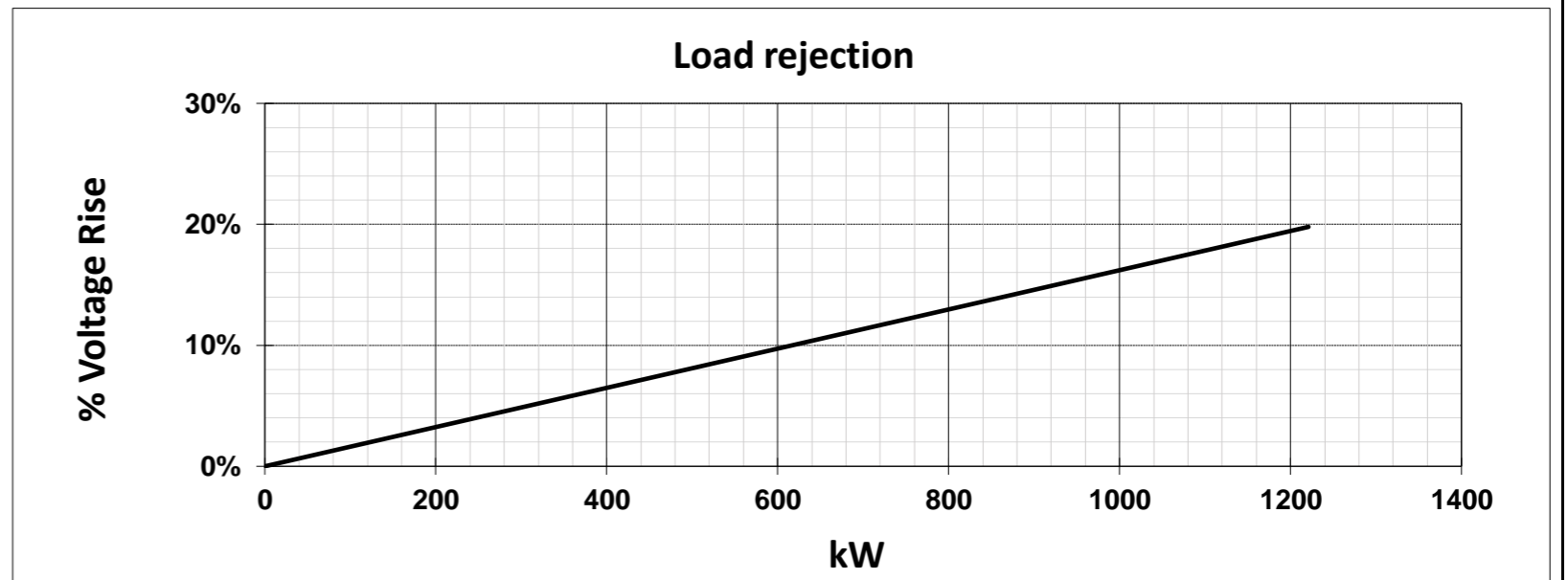
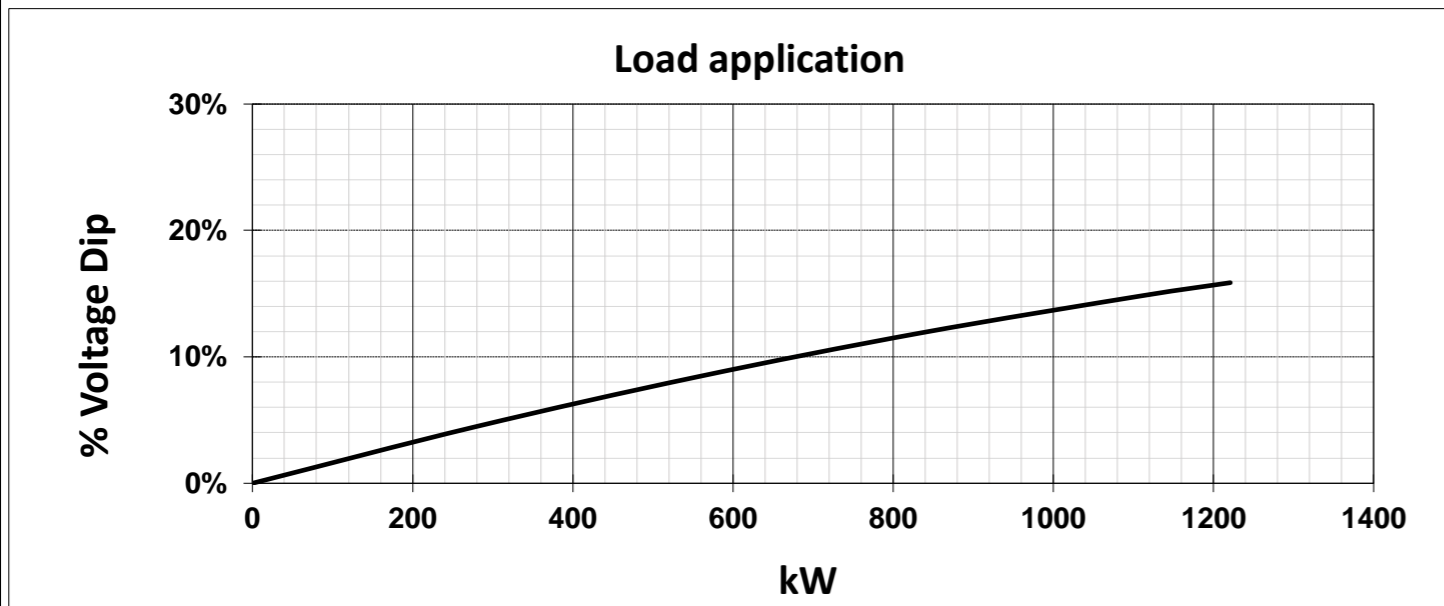
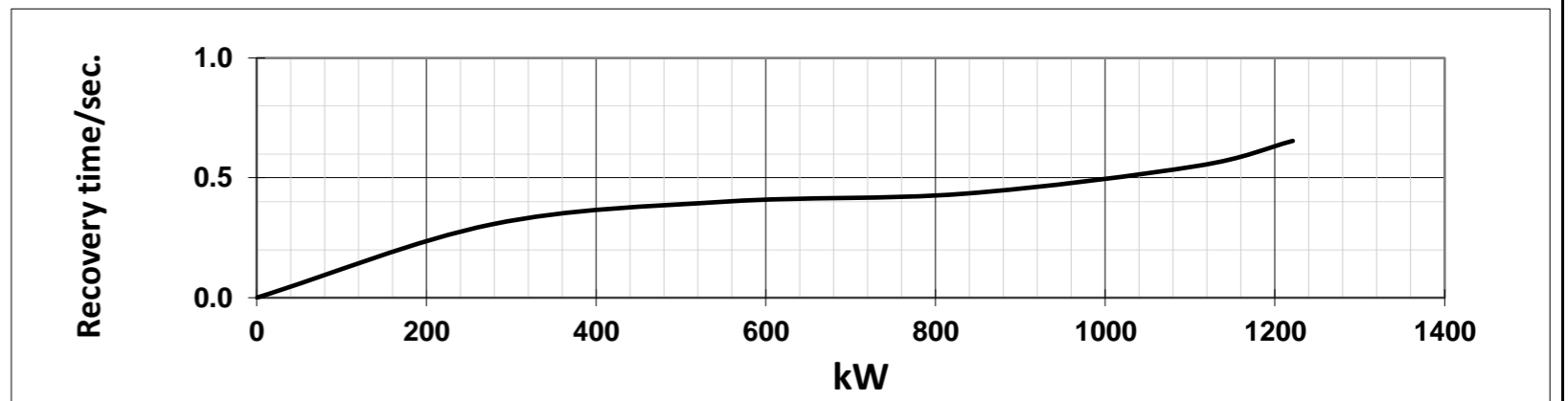
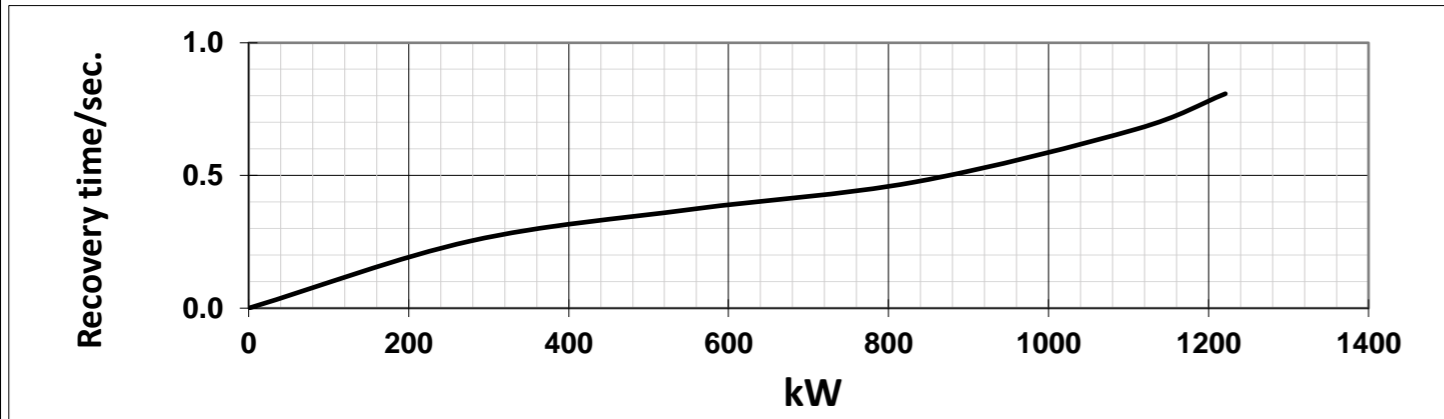
MAGNAMAX[®]

TYPICAL DYNAMIC CHARACTERISTICS

BASE MODEL: 740RSL4046

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DECREMENT CURVE

BASE MODEL: 740RSL4046

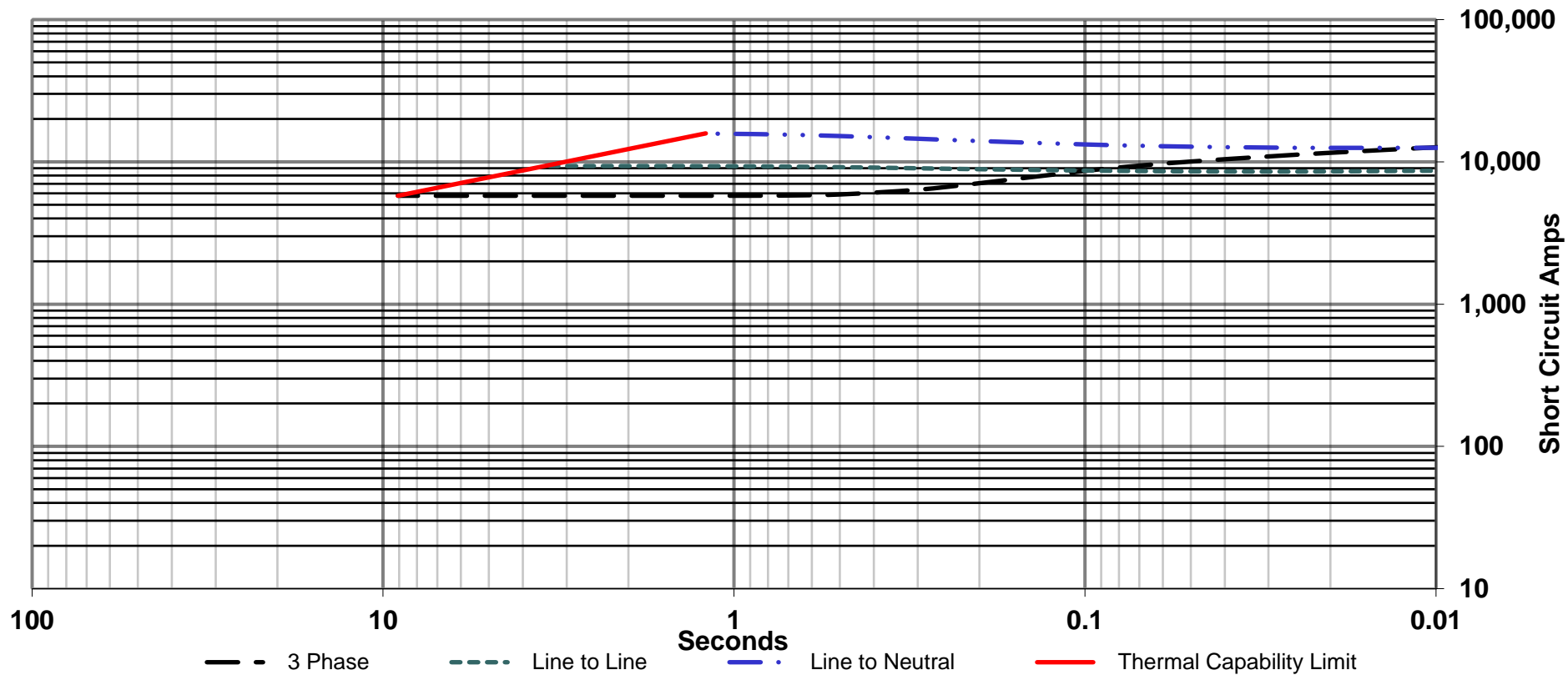
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Date : 02/10/22

Full Load Current : 1925.7 amps
Steady State S.C. Current : 5777.1 amps

Max. 3 ph. Symm. S.C. Current : 13473 amps
INCLUDES EXCITATION SUPPORT (PMG)

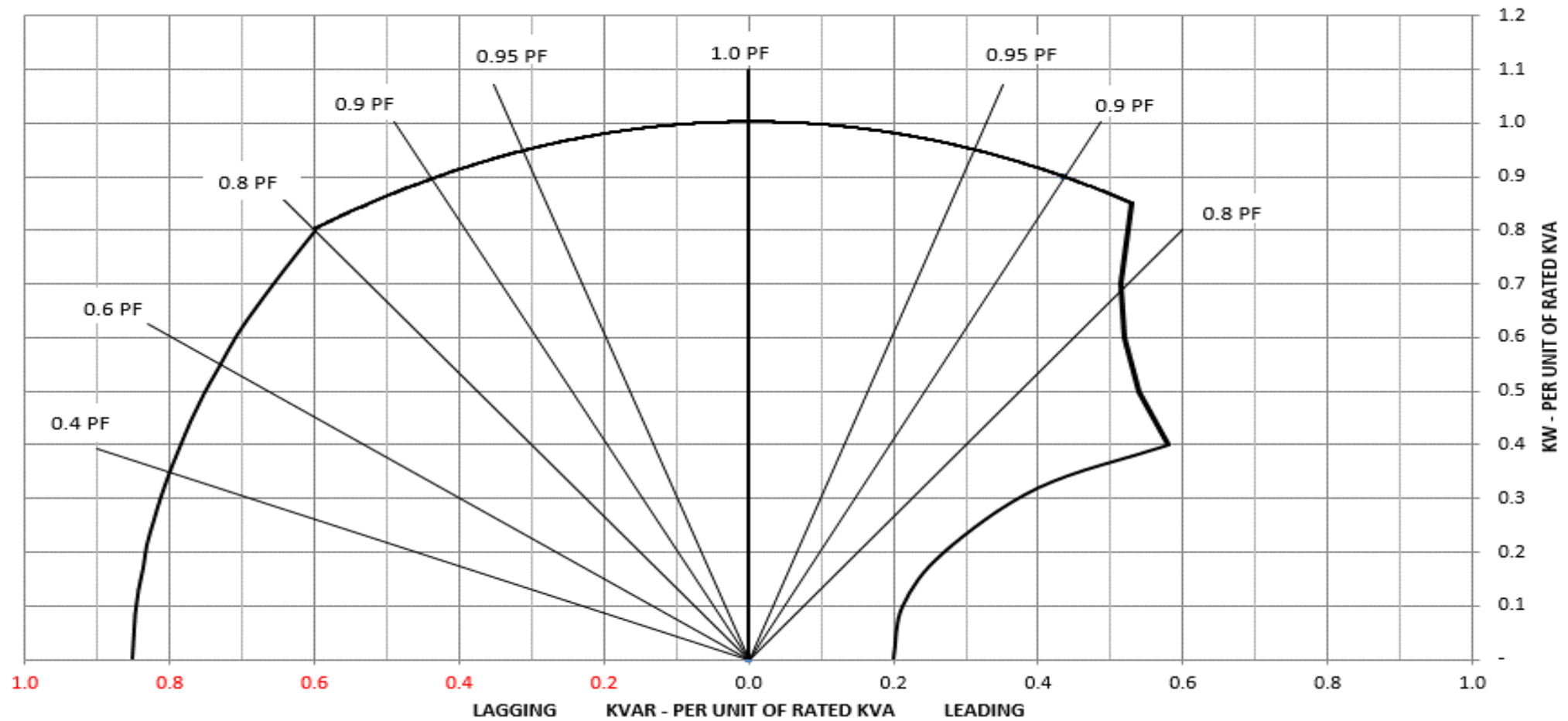
Symmetrical Component values, Maximum Asymmetrical Values Are 1.732 Times Symmetrical Values



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Typical Reactive Capability Curve

Date : 02/10/22



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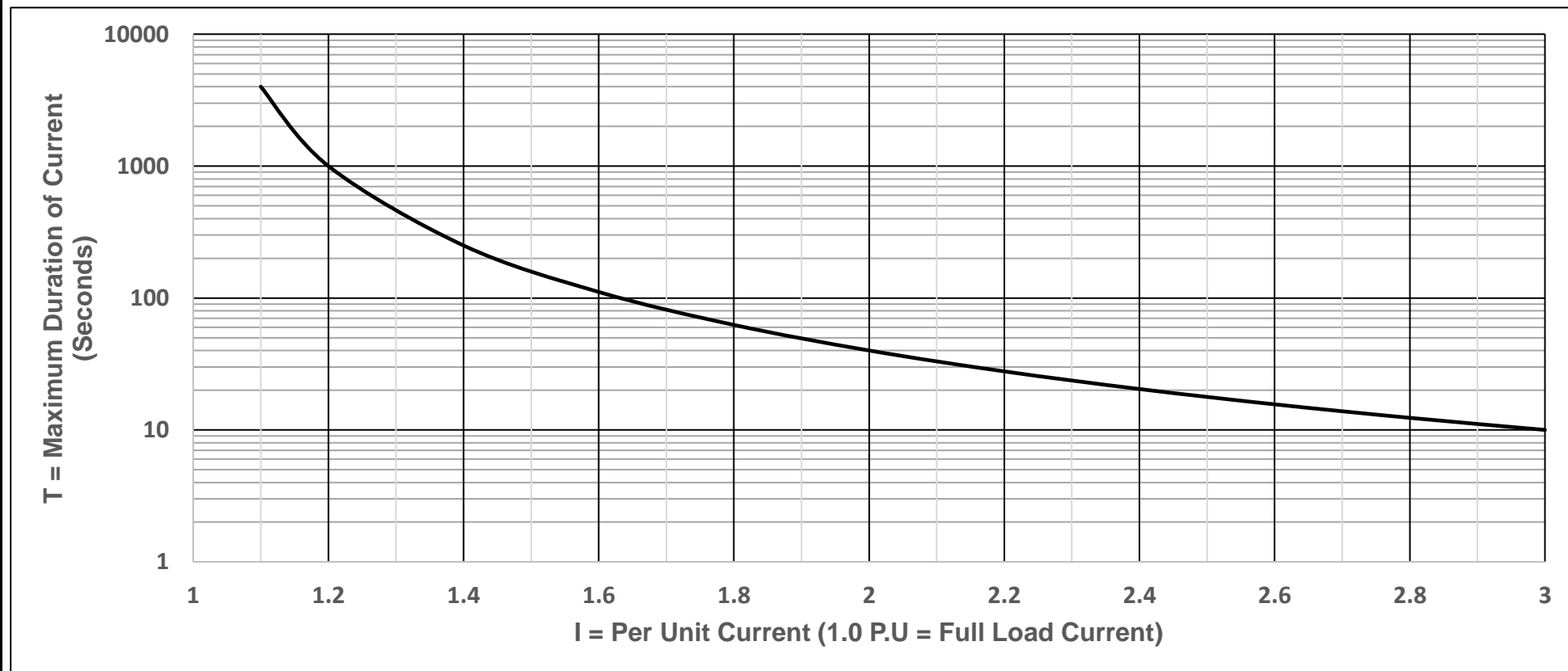
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THERMAL DAMAGE CURVE

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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