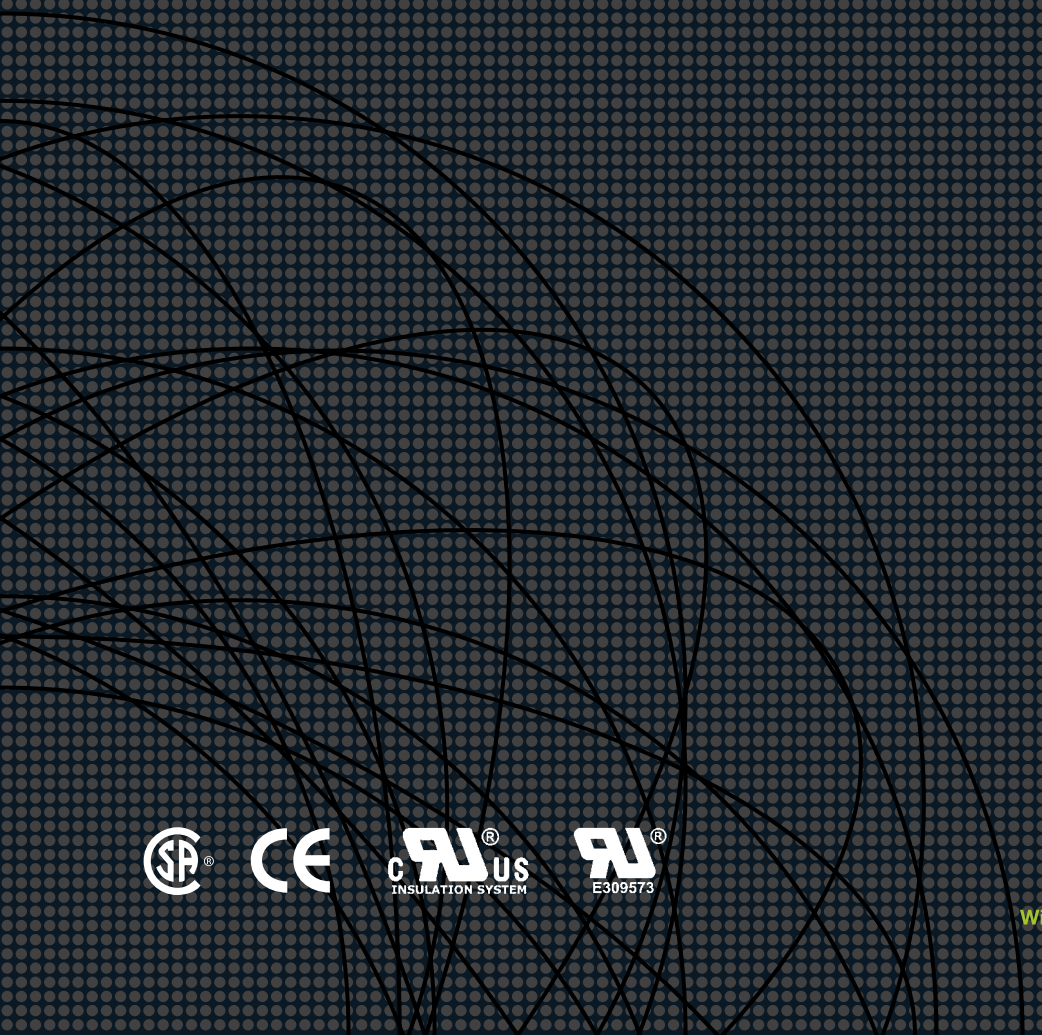
Guida Tecnica:
Capacità di spunto

Techical Guide:
Motor Starting Capability



INSULATION SYSTEM

E309573

mecc alte

With Great Knowledge Comes Great Power

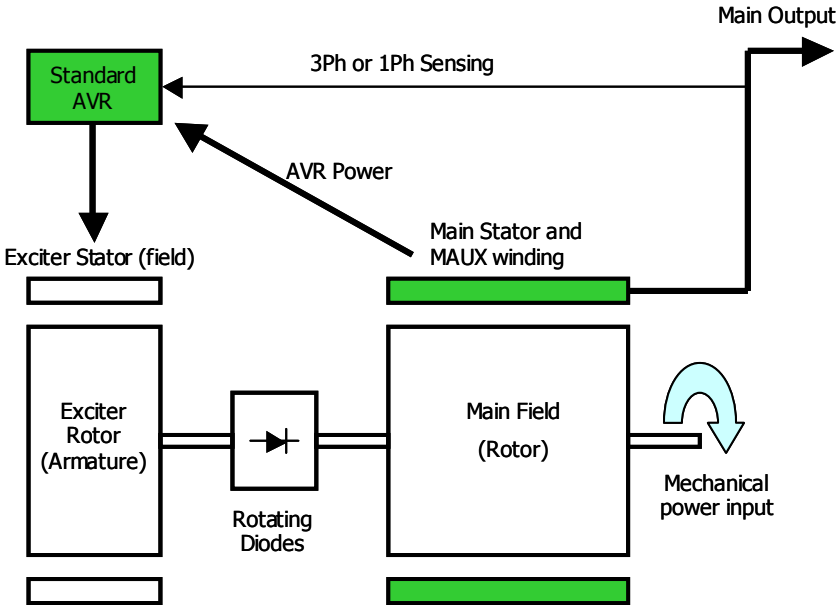
Motor starting capability and MeccAlte Auxiliary Winding (MAUX)

The ability to maintain fault current during short circuit conditions is a common requirement in the world wide marketplace. The purpose of course is to allow for downstream circuit breakers to see a high enough level of current to be able to trip and thus remove the fault from the system. There are several ways to accomplish this. In the past, external electronic modules such as the Current Boost System and Series Boost Option were the norm. More recently, the market has adopted the Permanent Magnet Generator (PMG) excitation system as a way of meeting fault current support requirements.
Mecc Alte meets the fault current support requirement by using an auxiliary winding to provide positive power to the automatic voltage regulator (AVR). The auxiliary winding is a separate single phase winding which is inserted into the main stator along side of the main output winding. By design, the mutual inductance with the main winding is minimized. The auxiliary winding picks up the third harmonic to power the AVR. Because of this and in conjunction with smart regulator design, waveform distortions in the main winding due to non-linear loads will not affect AVR performance.

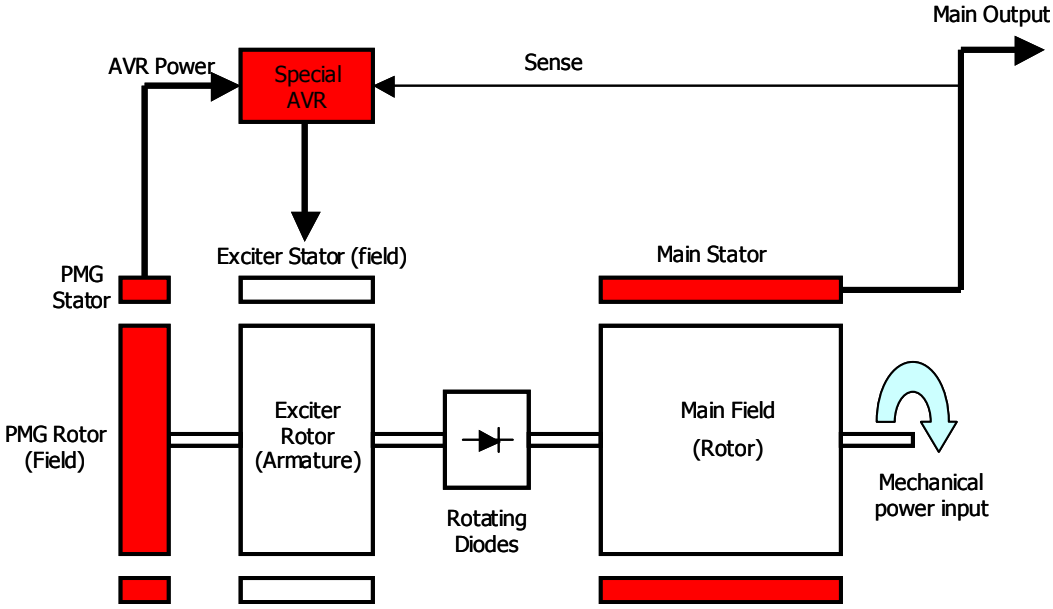
There are many benefits to the MAUX system when compared to the standard PMG:

- The auxiliary winding is built into all Mecc Alte generators. It does not need to be specially ordered and is included in the base price. The MAUX system provides in excess of 300% fault current on all models for up to 20 seconds. This is twice the amount of time that most PMG systems will provide short circuit maintenance. Copper wire used for the MAUX is specially insulated with four layers of a custom polyamide enamel. MAUX系統提供了所有(Mecc alte)型號於超載300%故障電流時長達20秒的保護短路功能。這是大部分PMG系統能提供短路的時間量的兩倍。
- The auxiliary winding does not add length or weight to the generator thus providing for a compact design.
- Just like with a PMG, motor starting capability is significantly enhanced as the AVR has a positive power supply. After the initial transient response, the system voltage recovers extremely quickly allowing for electric motors to come up to speed much faster. The generator can tolerate higher voltage dips at the stator output while still being able to supply very high currents. The Maux system can provide for 300% of nominal output current (minimum) even when high voltage dips are expected.
- Only one AVR is needed to power our entire line of 2, 4 and 6 pole industrial products. Most PMG systems require a different AVR than their standard non-PMG systems use. Mecc Alte eliminates the need to carry different AVR's in stock.
- If for any reason the auxiliary winding should fail, the AVR can be reconnected to take power from the main generator output leads. You lose the fault current support and increased motor start capability, but you do not lose the generator function. In many PMG systems, should the PMG fail you will not be able to power the AVR from the main stator output and thus the system goes down until repair personnel can visit the site to fix the problem.
- Changing the rotating diodes is easy with the MAUX system as there is no PMG to interfere with servicing. In MeccAlte machines, the diodes are immediately accessible by removing the rearpanel of the machine.

Today, the Mecc Alte auxiliary winding system is the most economical and space efficient way in the market to provide fault current support and enhanced motor start capability. Find more on www.meccalte.it

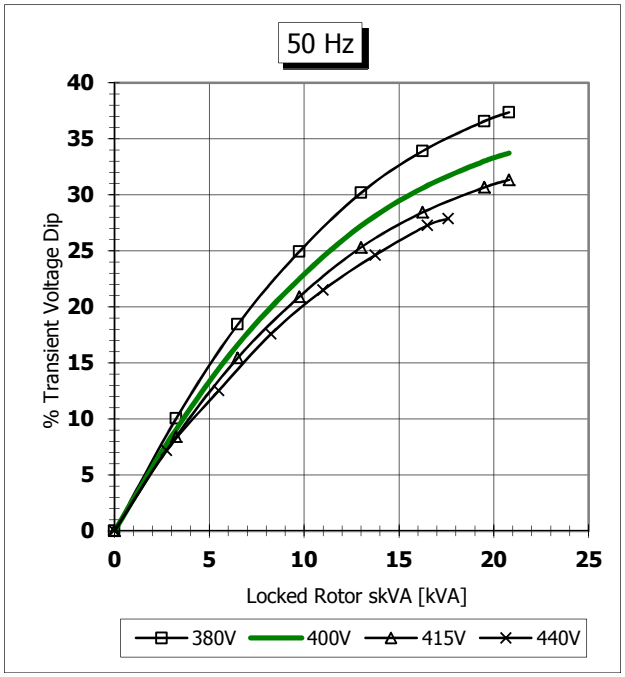


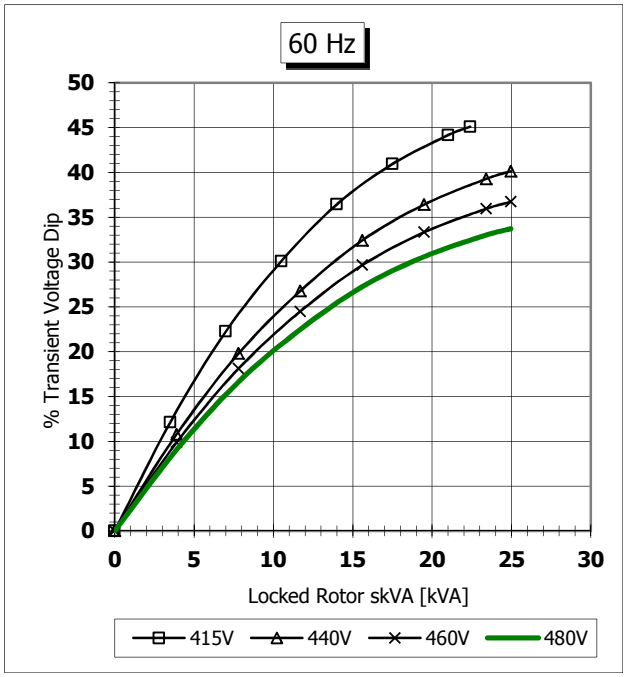
MAUX Lay out. Standard on MeccAlte products.



PMG Lay out. Optional on many competitor products.

ECP 3 1S/4 3Phase 12 lead machine





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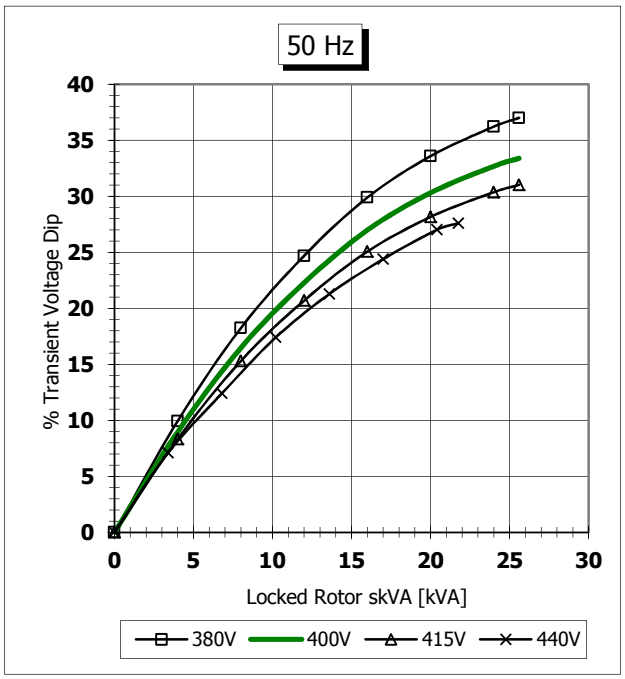

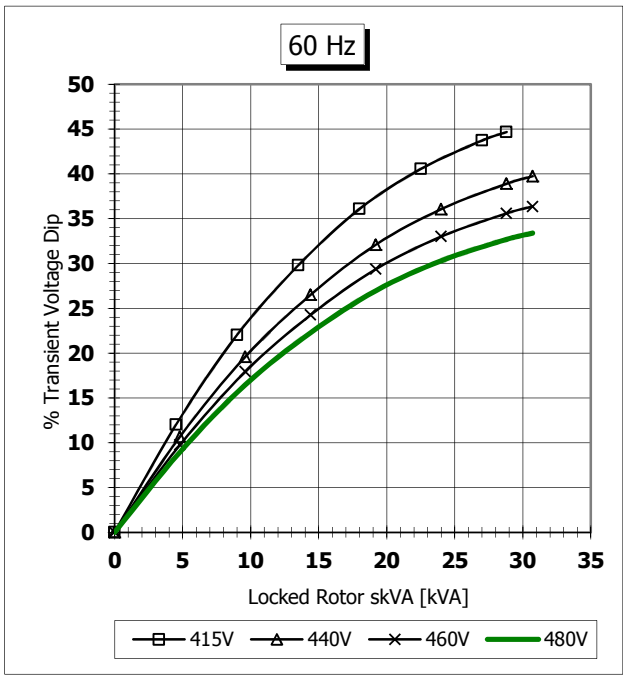

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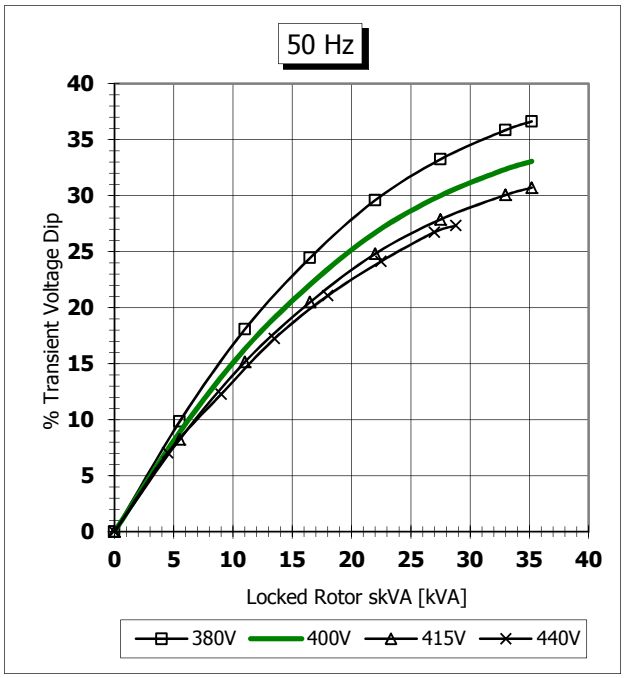

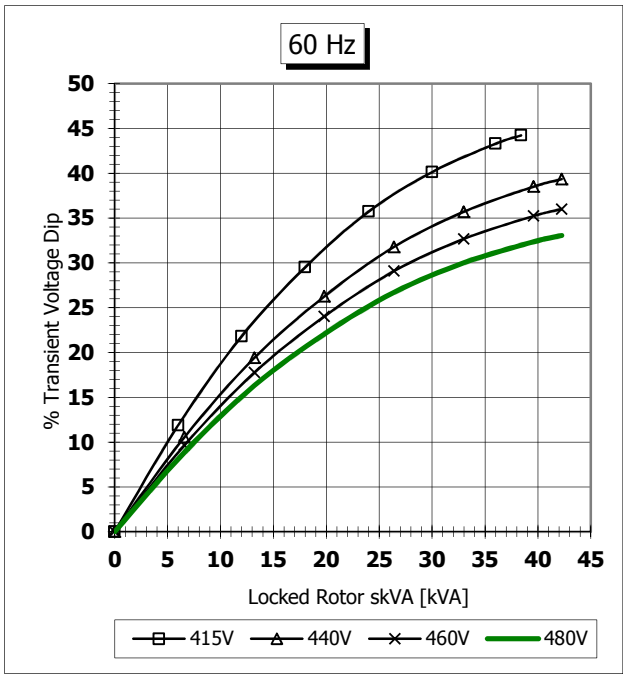

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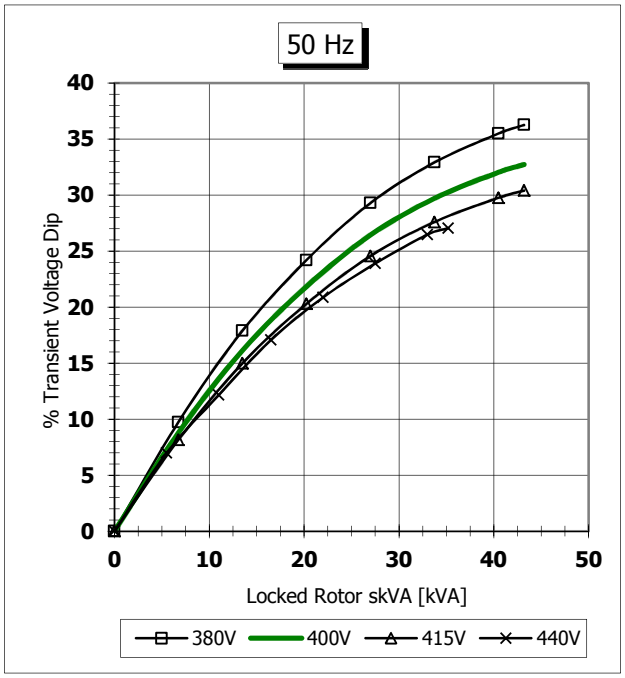

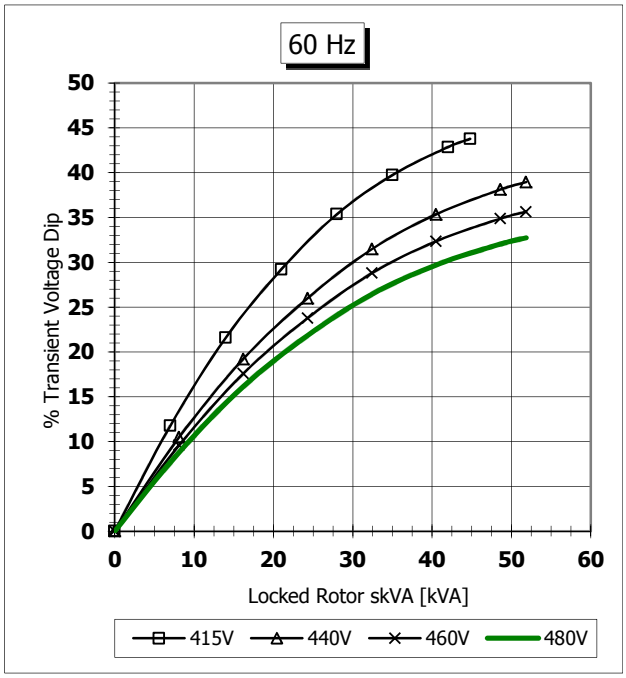

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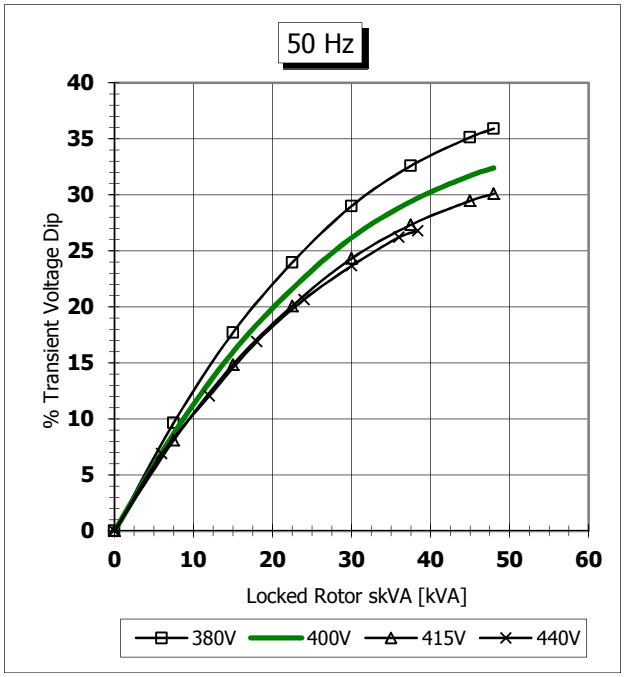
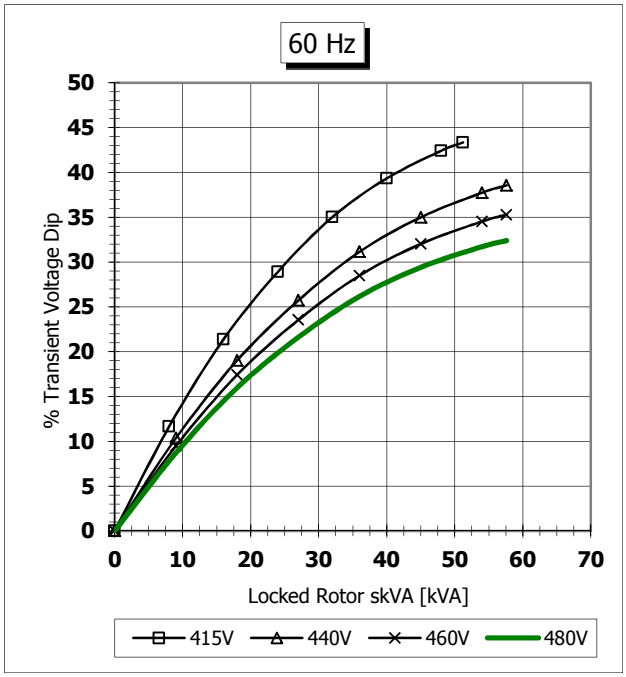
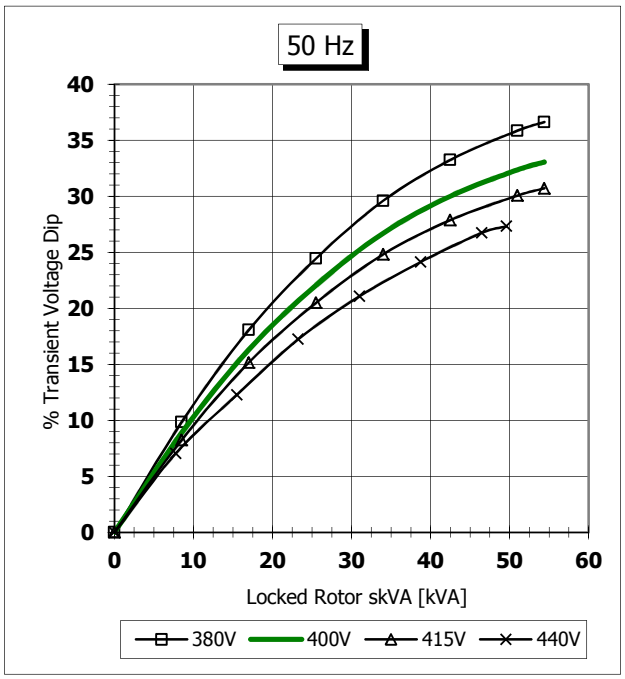
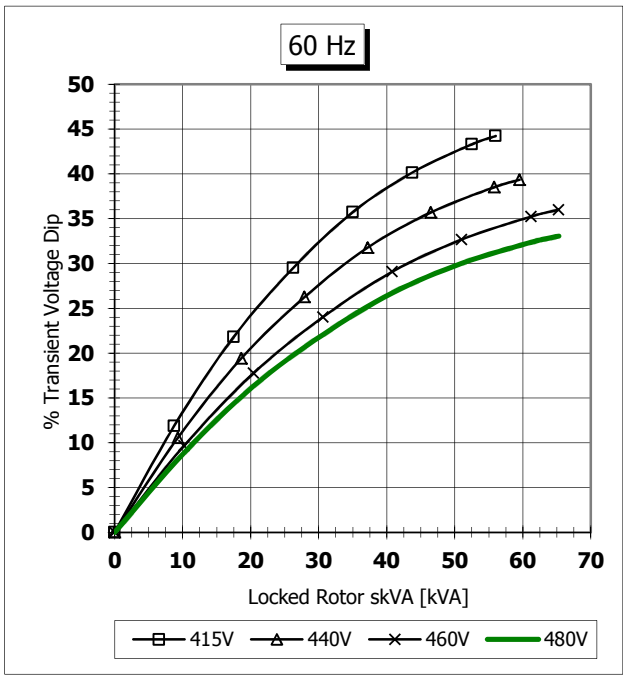




ECO 28 S/4 3Phase 12 lead machine





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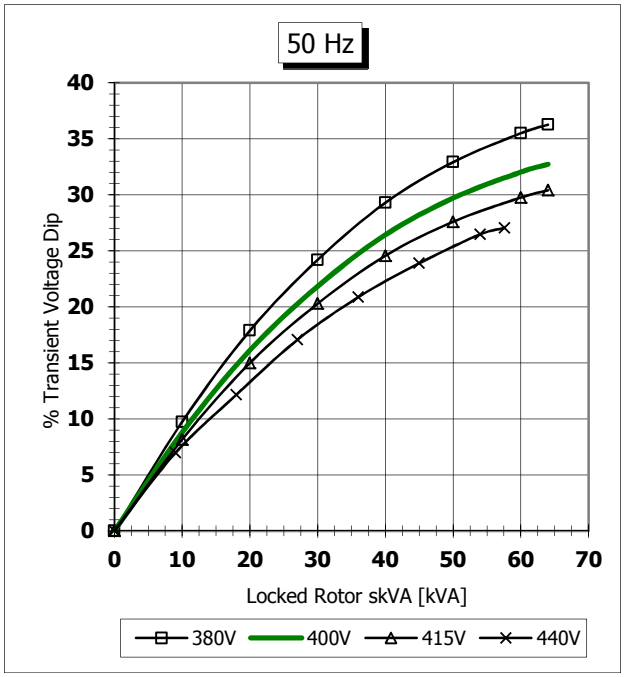

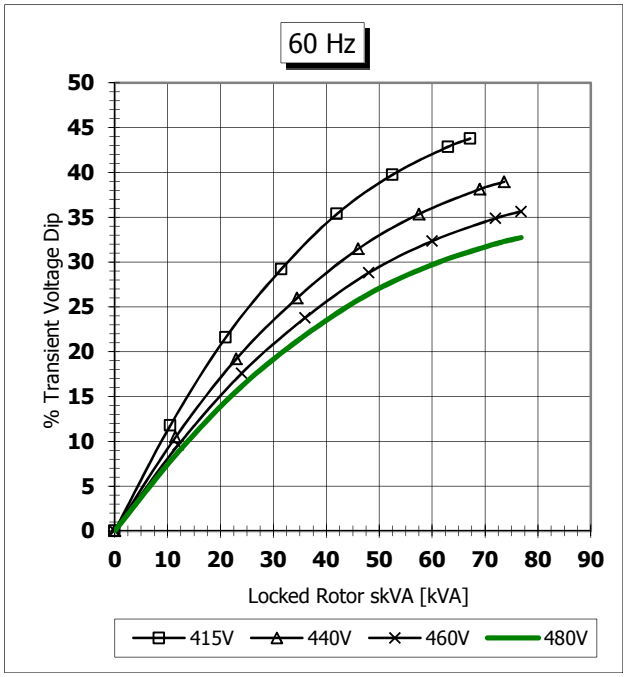

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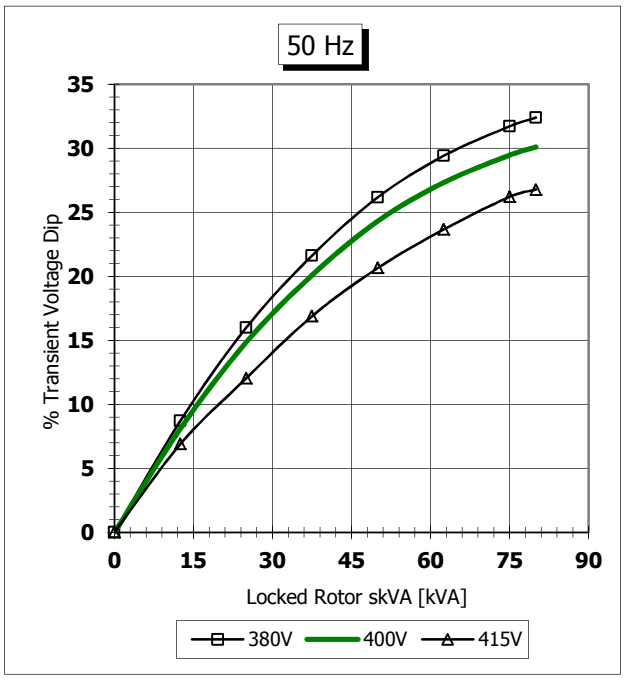

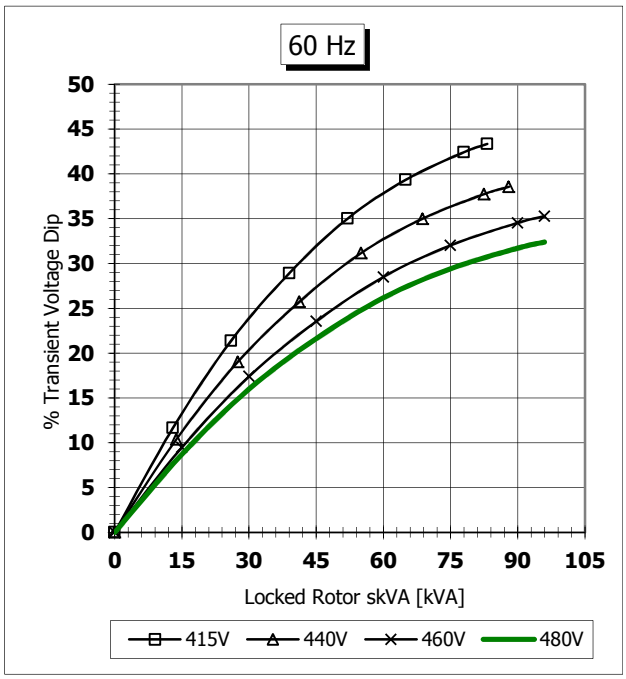

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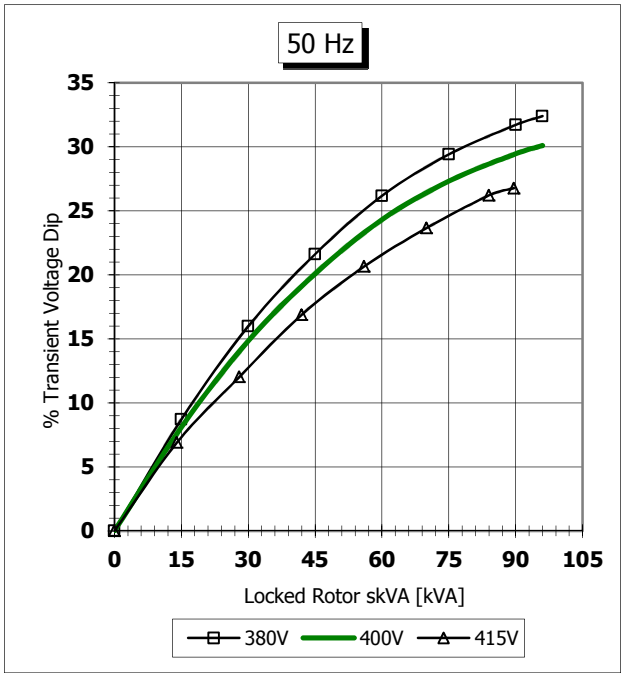

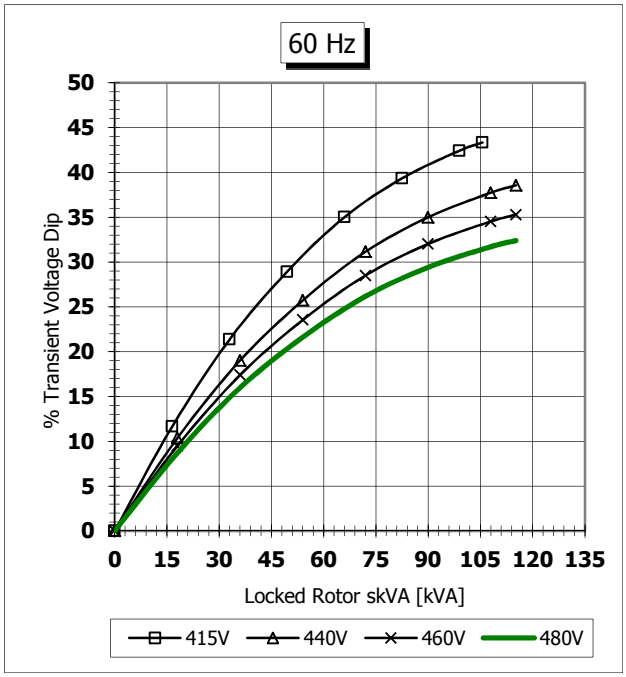

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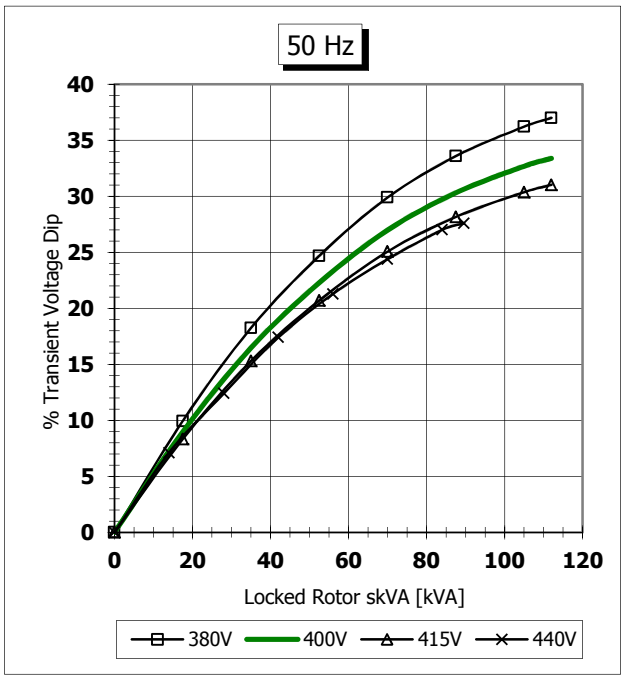

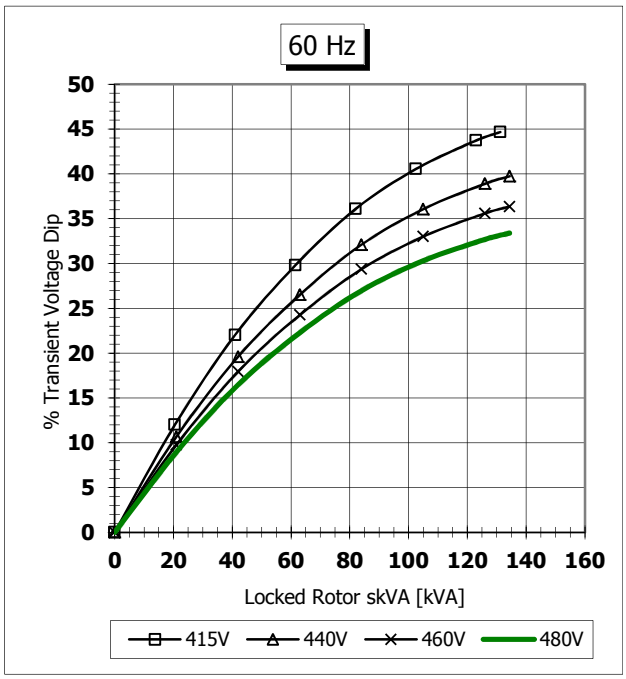

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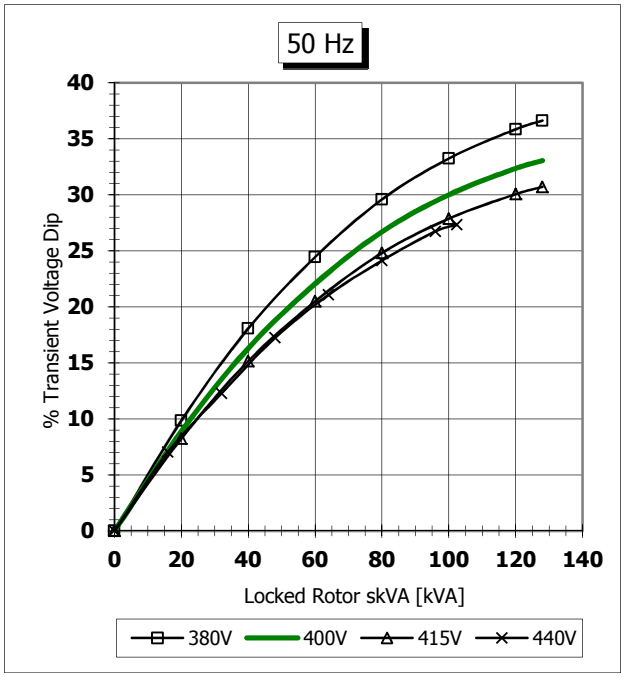

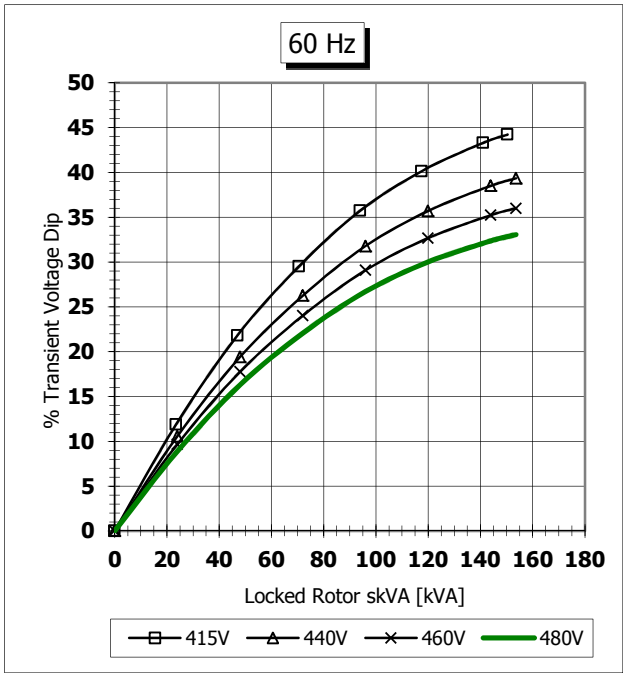

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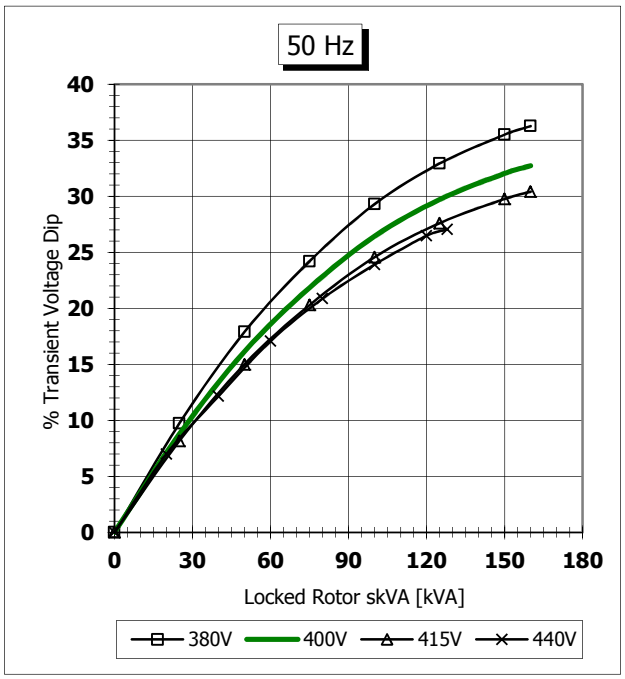

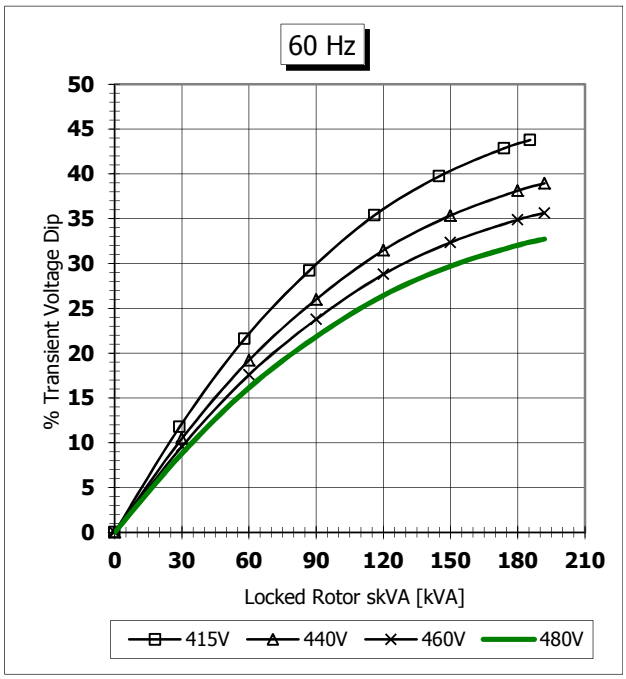

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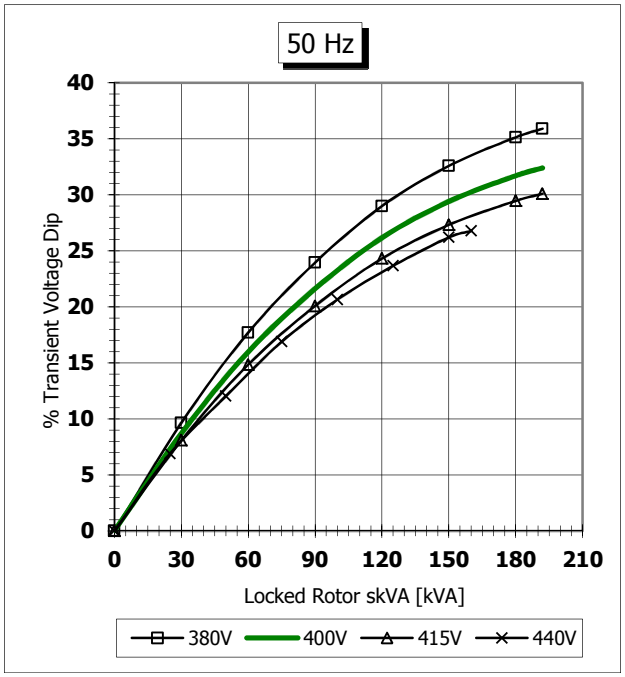

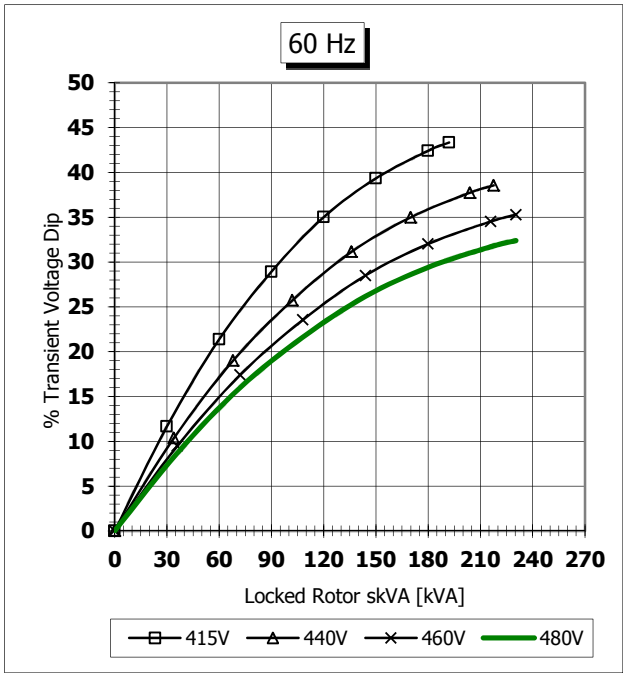

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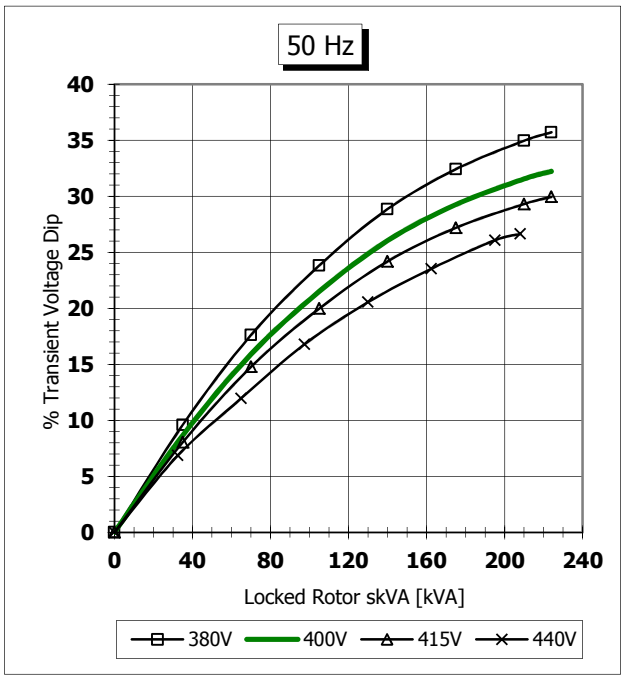
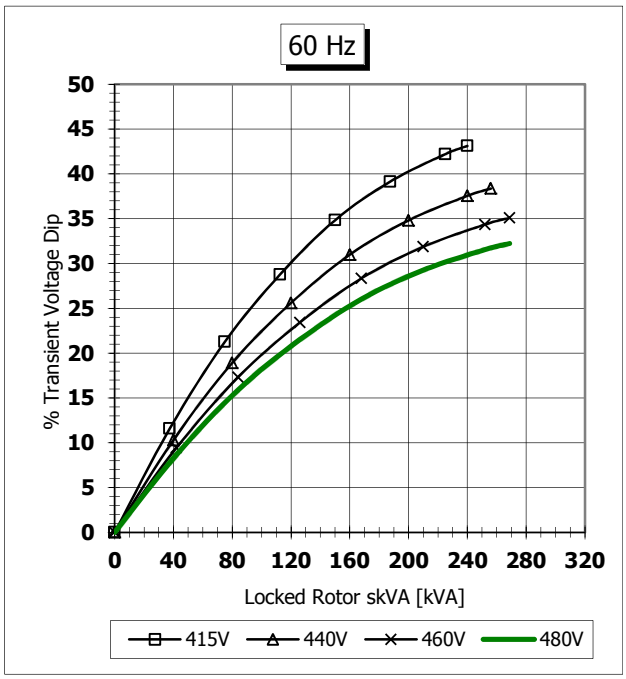
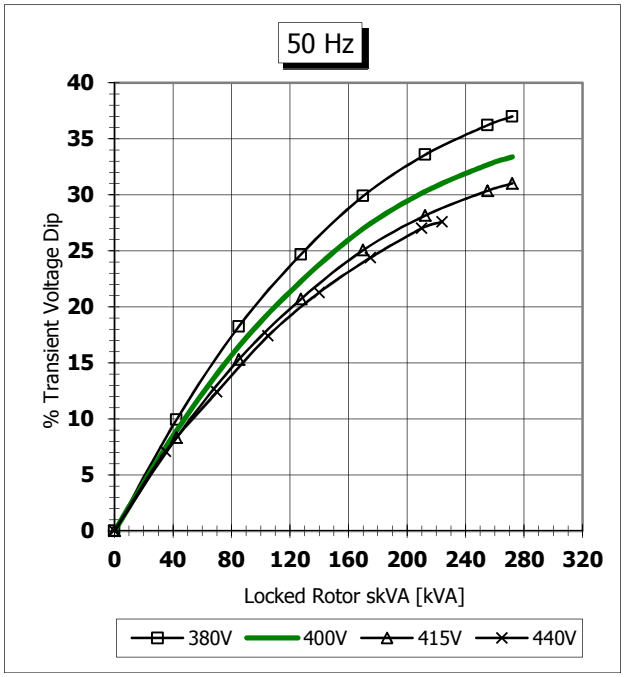
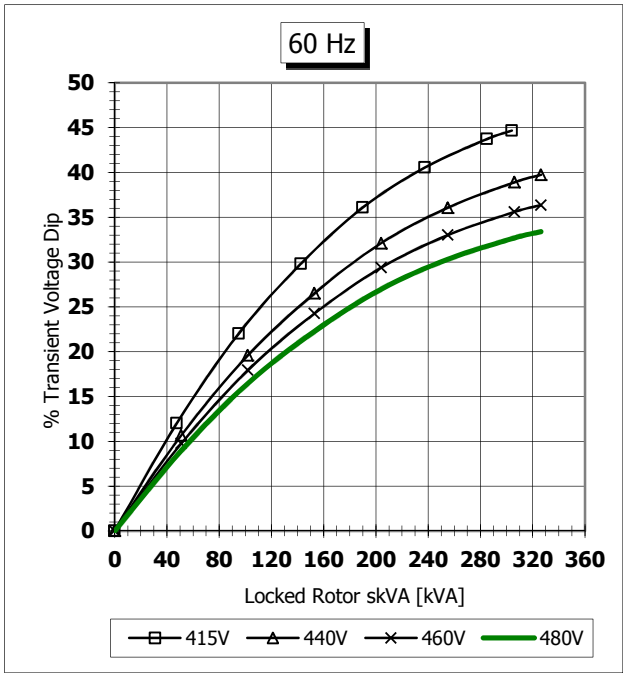




ECP 34 1S/4 3Phase 12 lead machine





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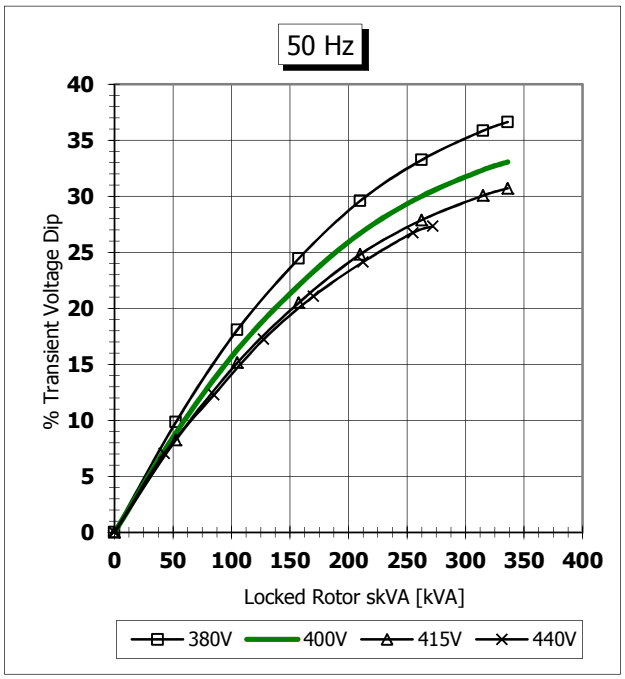

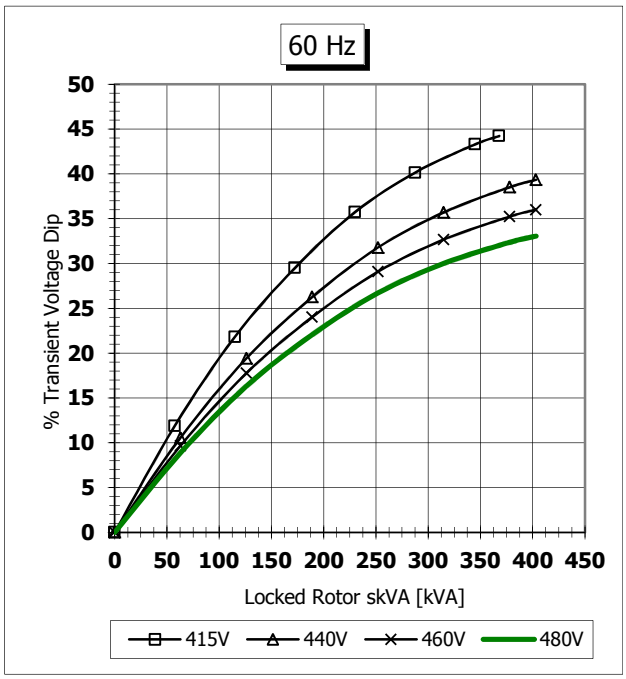

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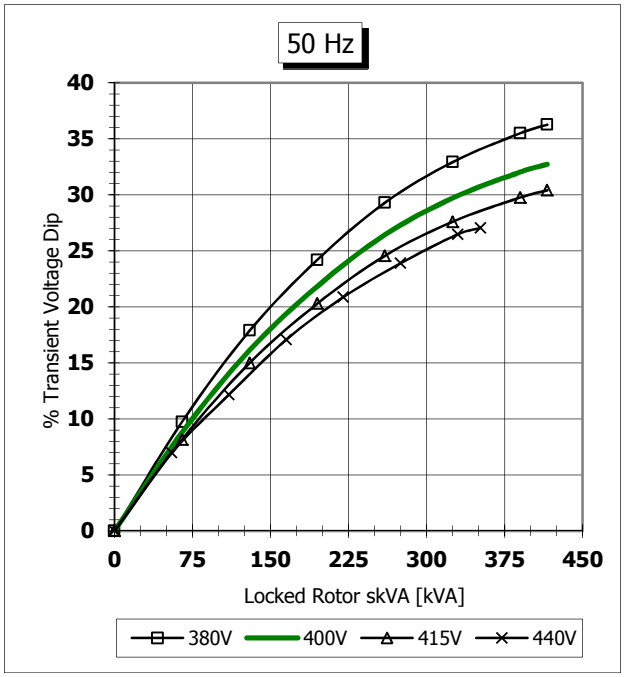

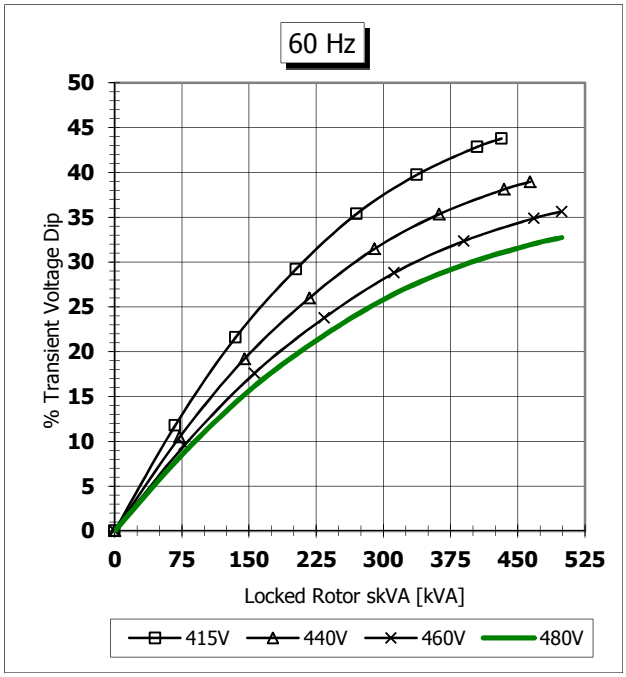

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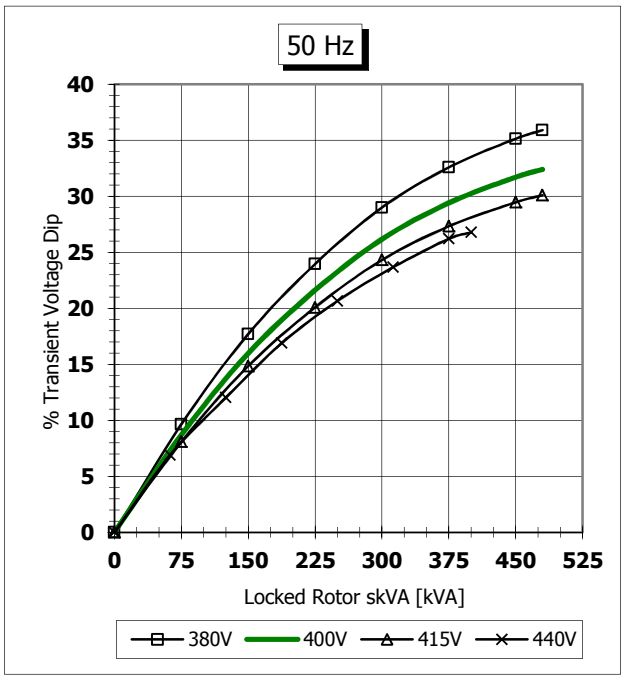
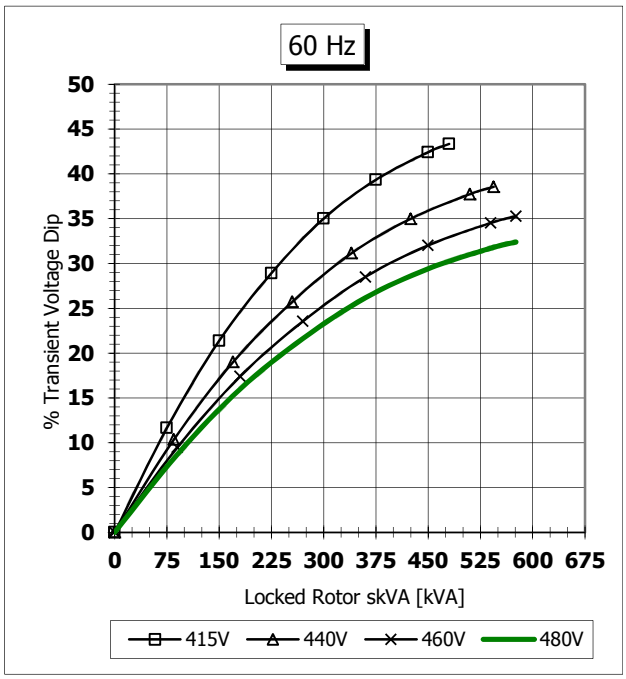
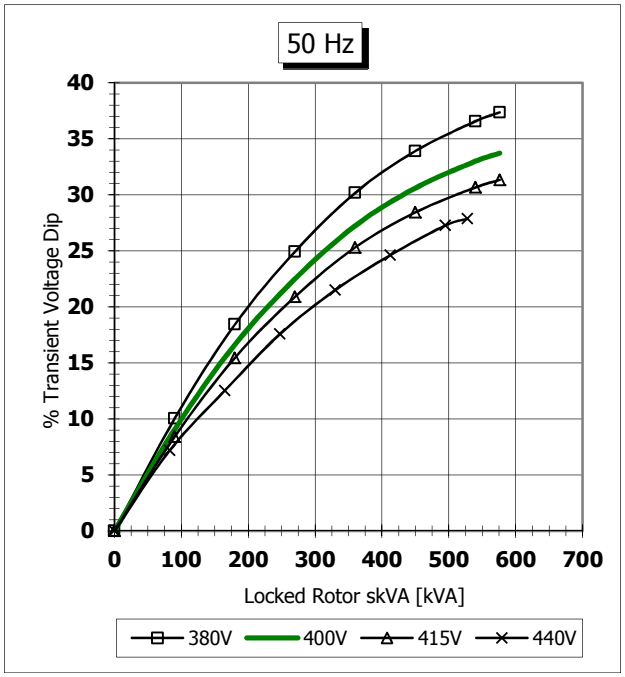
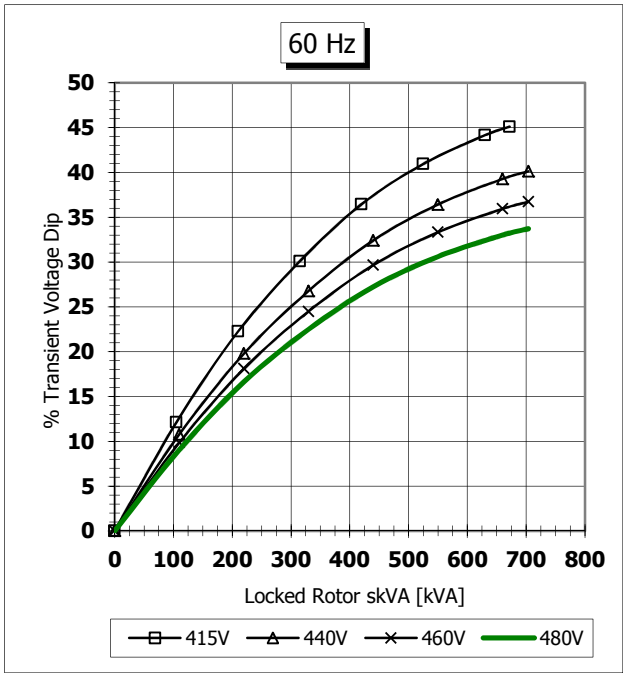




ECO 38 1S/4 3Phase 12 lead machine





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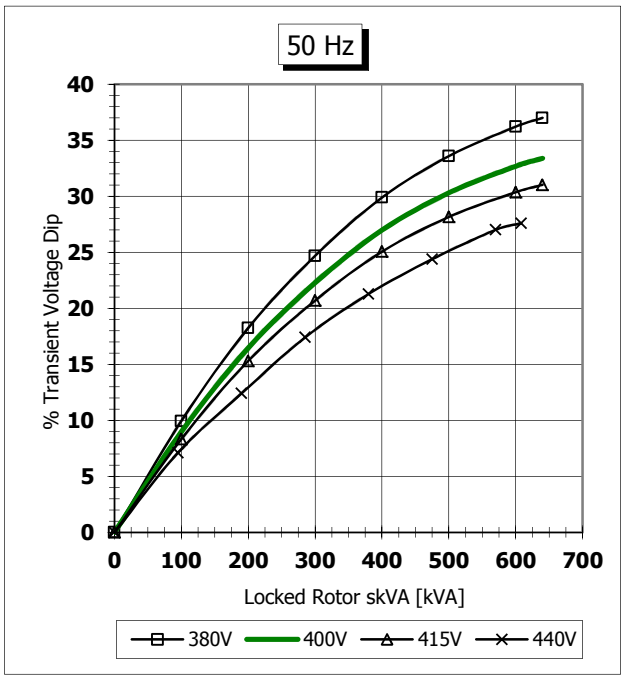

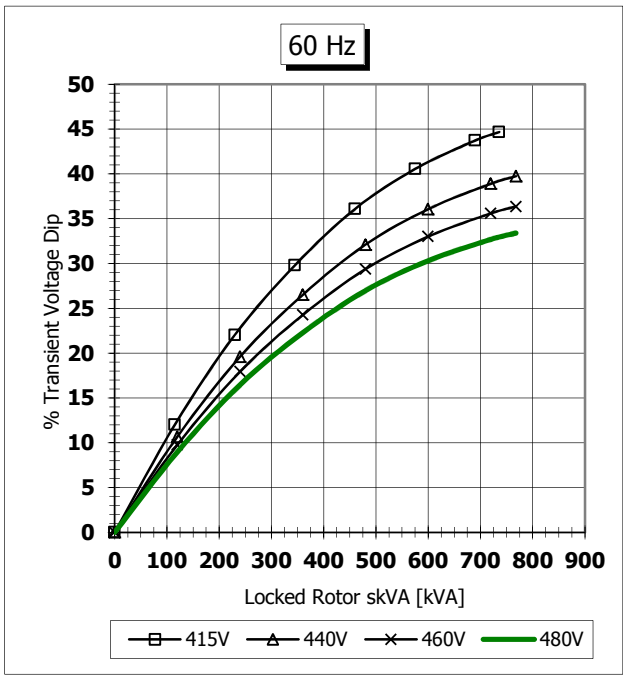

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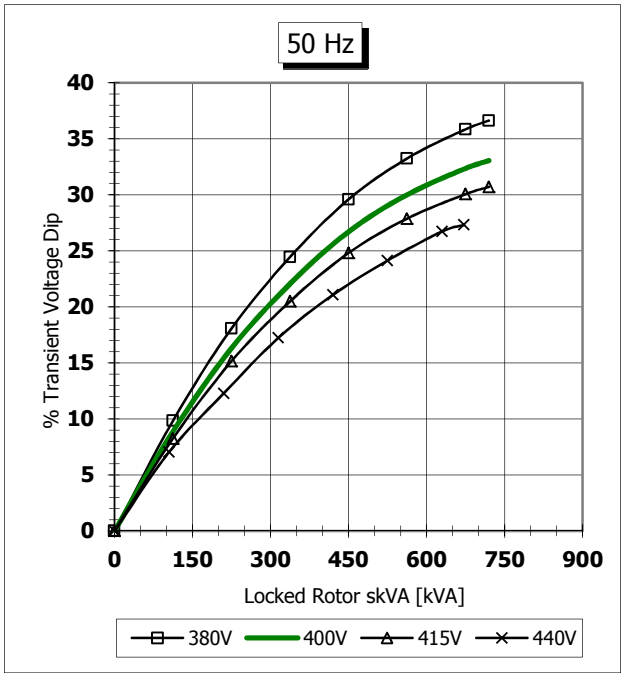
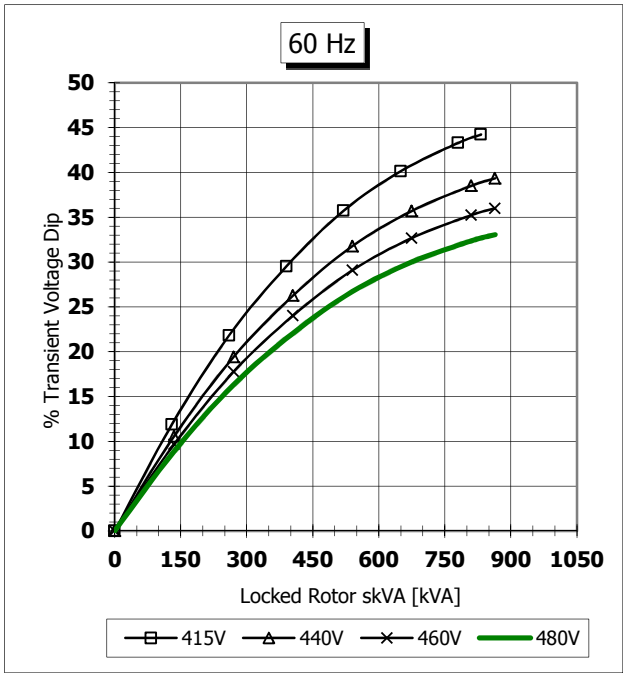
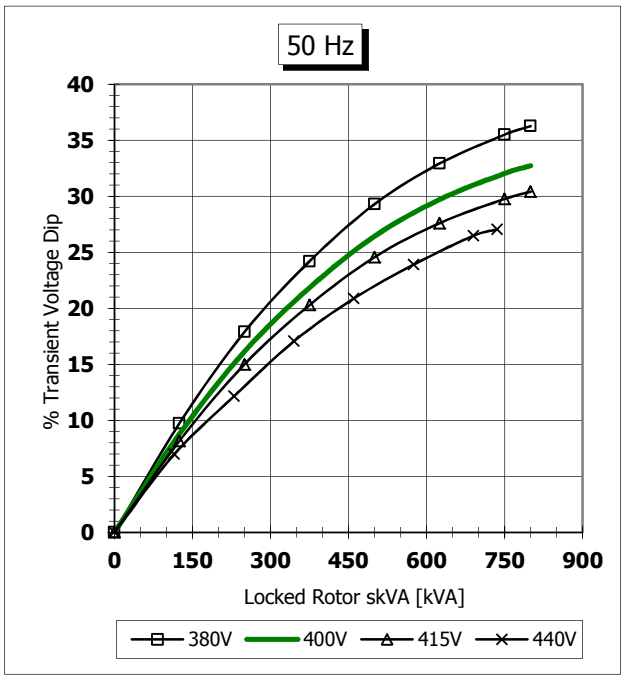
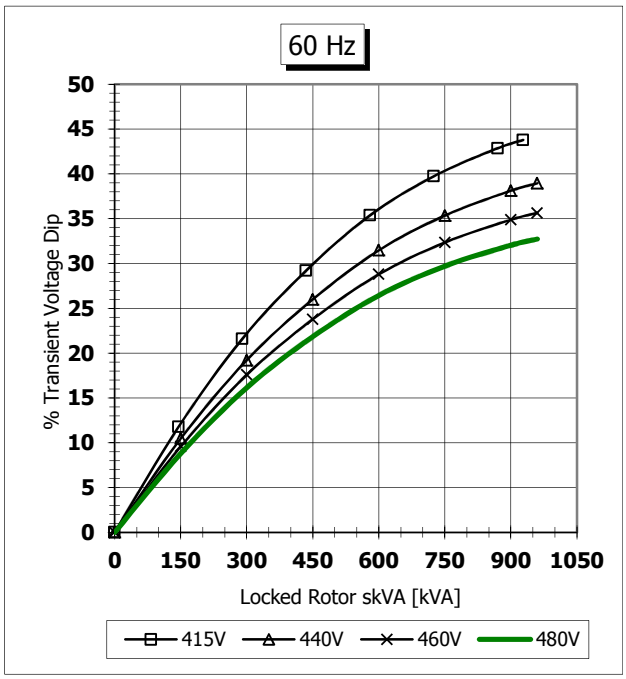


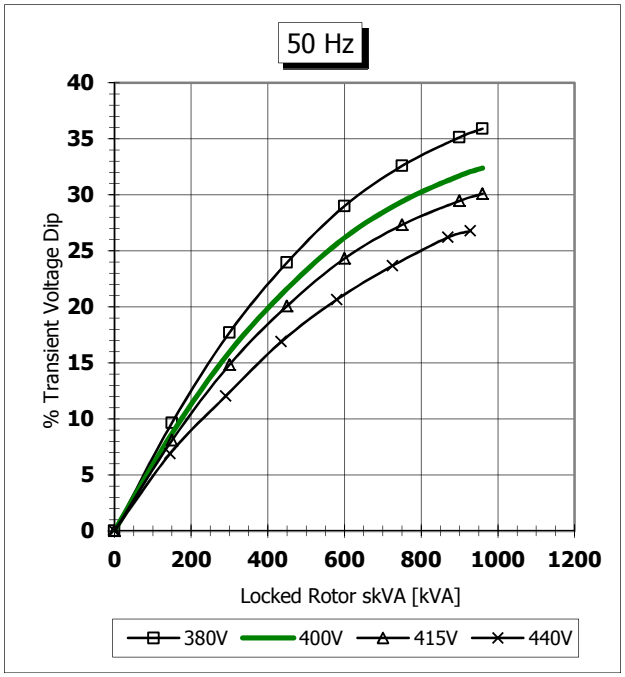


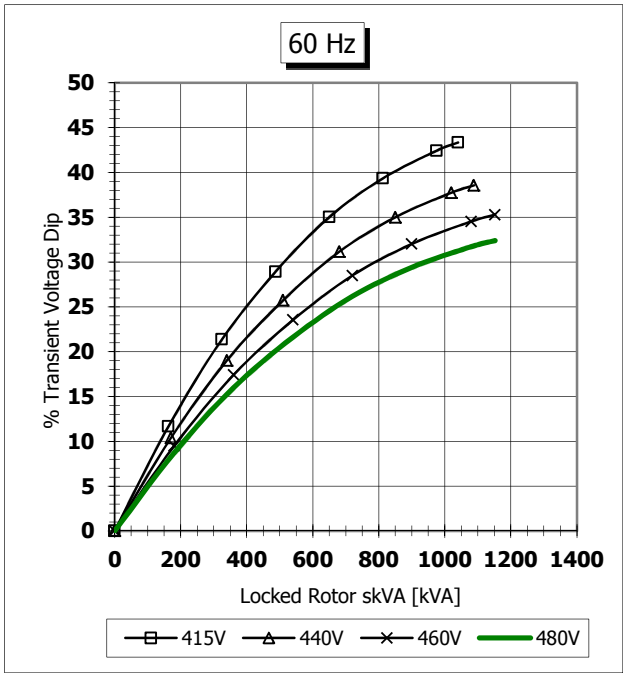
ECO 38 1L/4 3Phase 12 lead machine



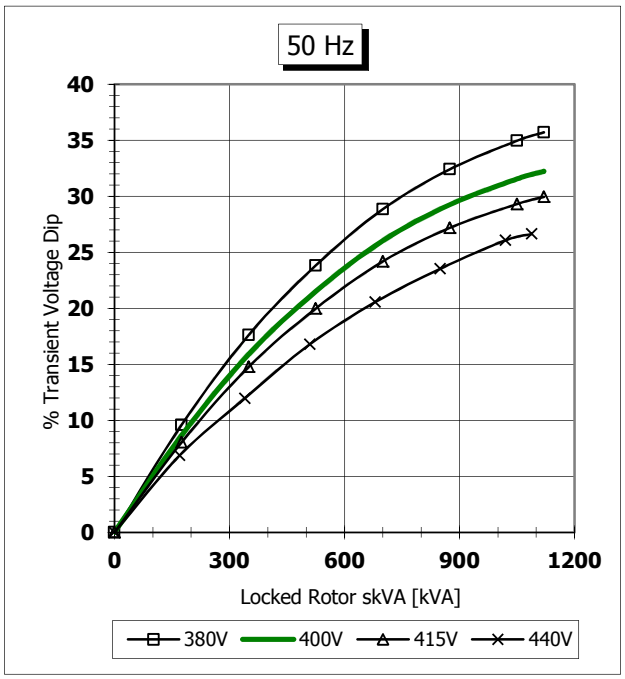


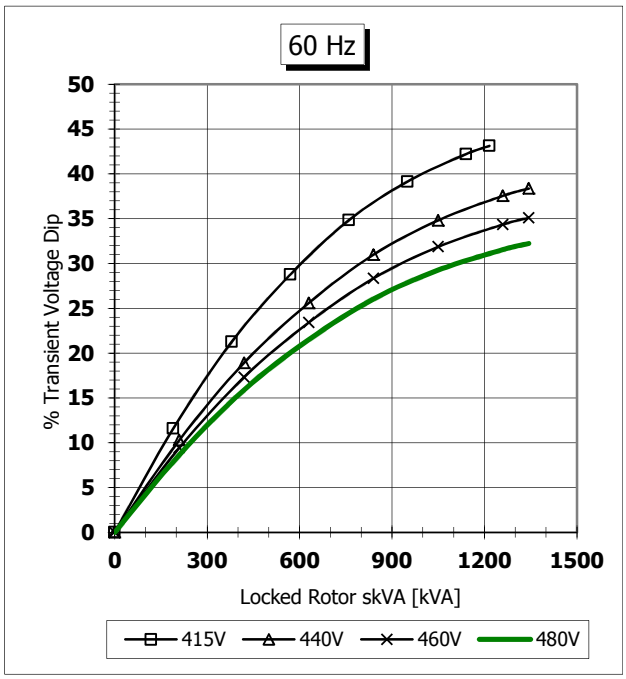
ECO 38 2L/4 3Phase 12 lead machine



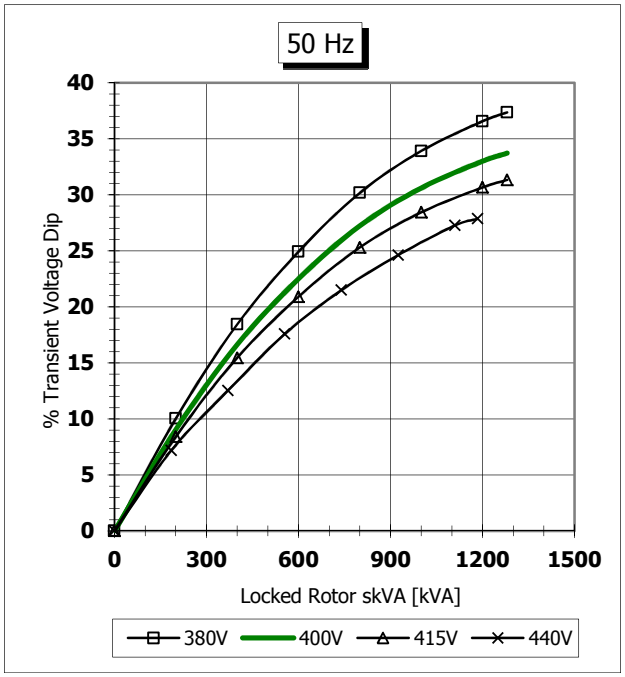


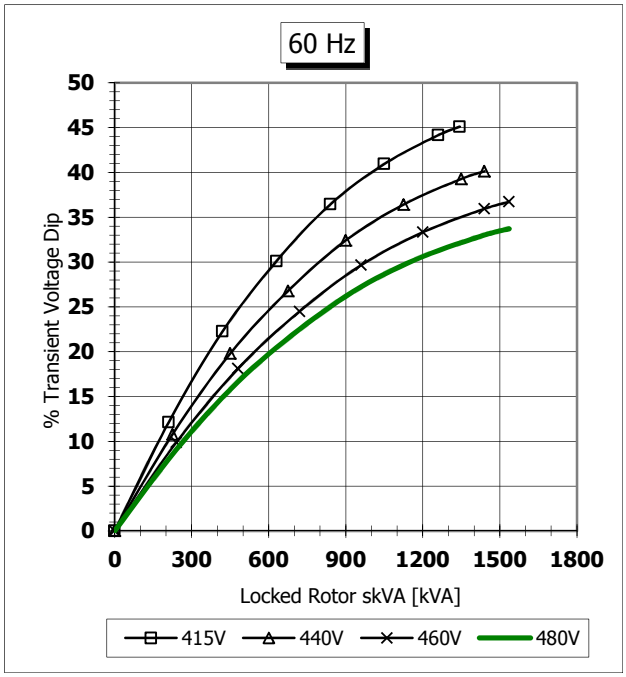
ECO 38 3L/4 3Phase 12 lead machine



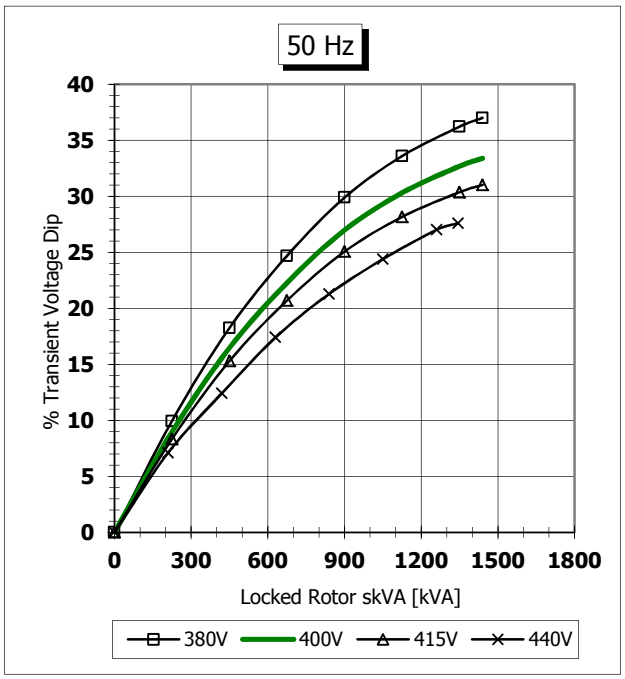


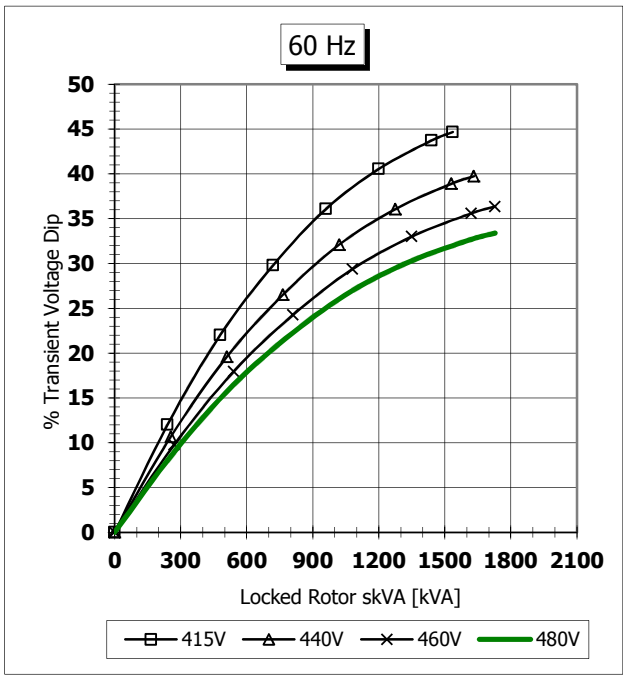
ECO 40 1S/4 3Phase 12 lead machine



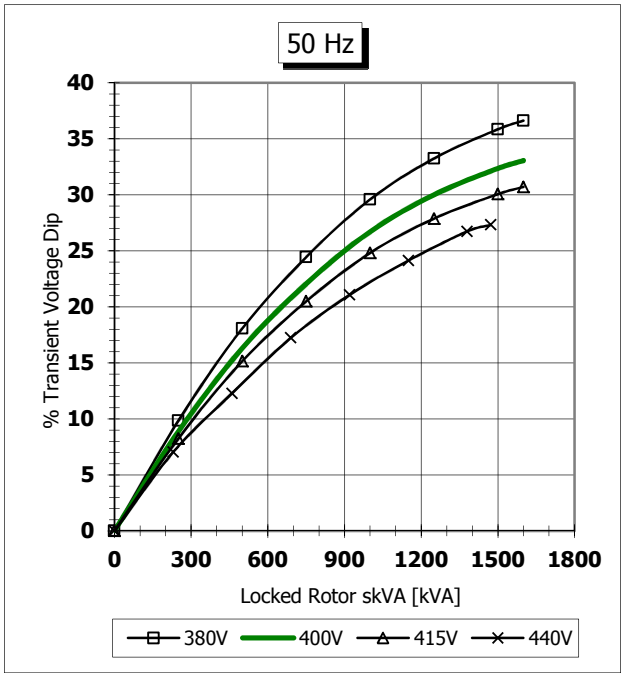


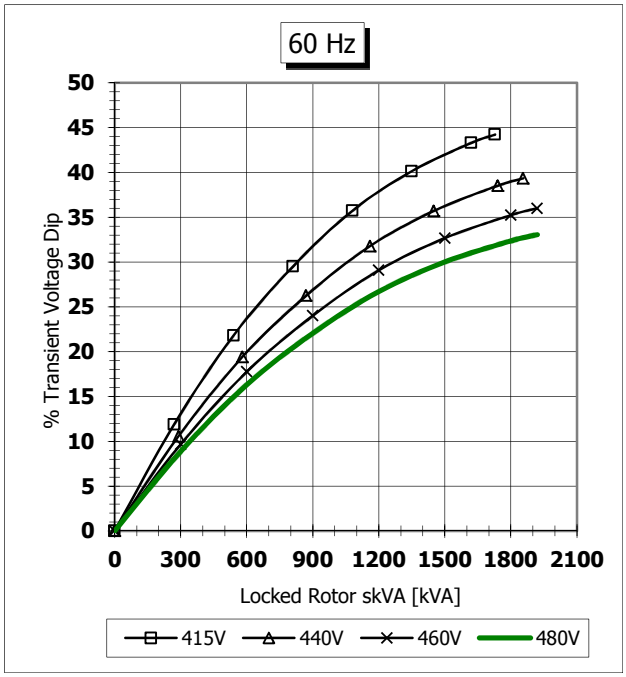
ECO 40 2S/4 3Phase 12 lead machine



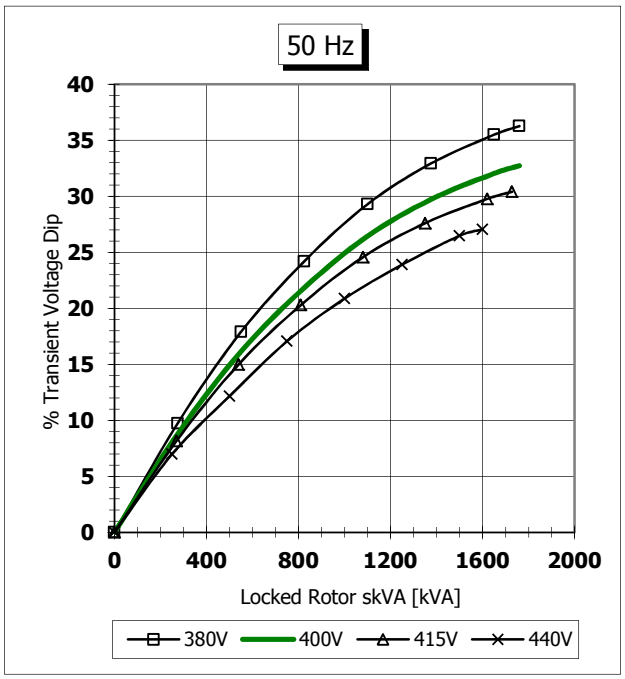


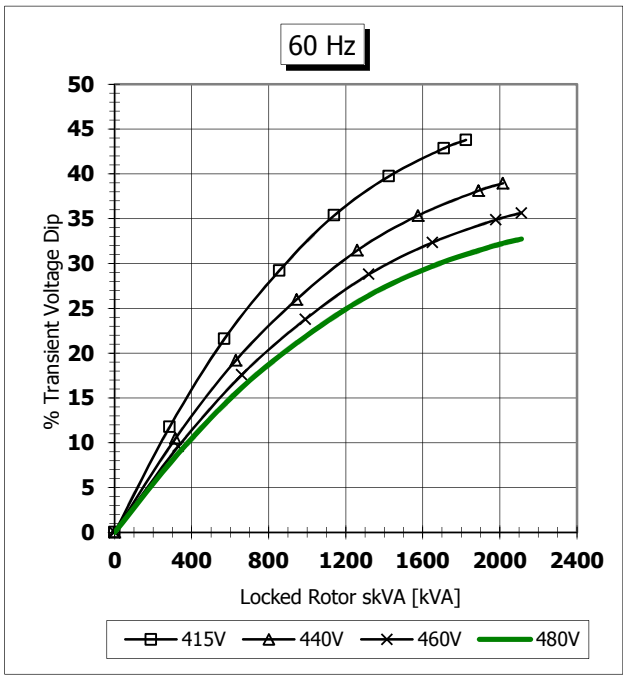
ECO 40 3S/4 3Phase 12 lead machine



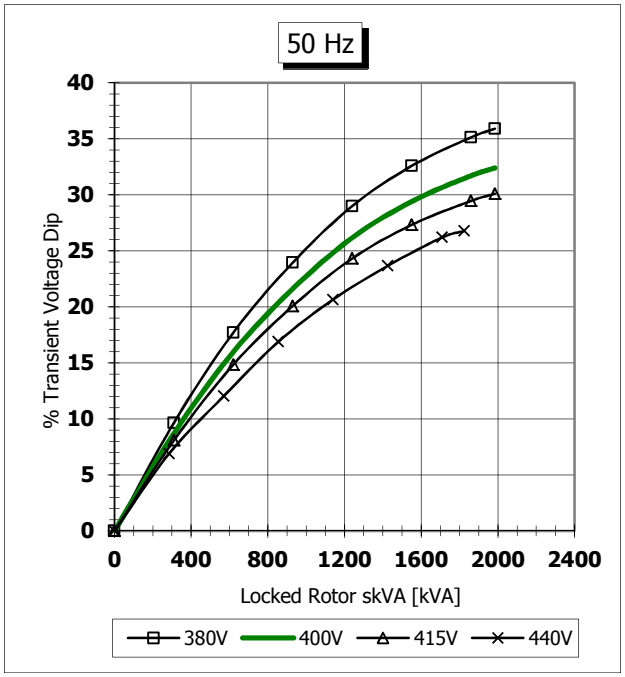


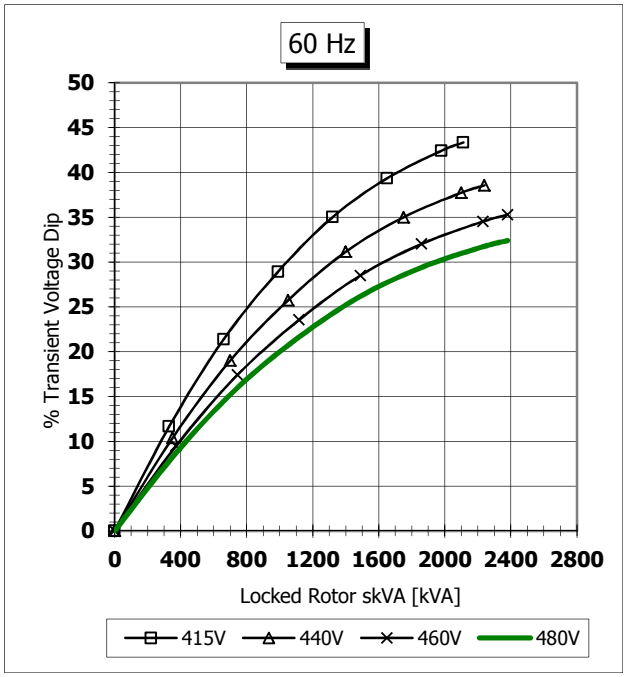
ECO 40 1L/4 3Phase 12 lead machine



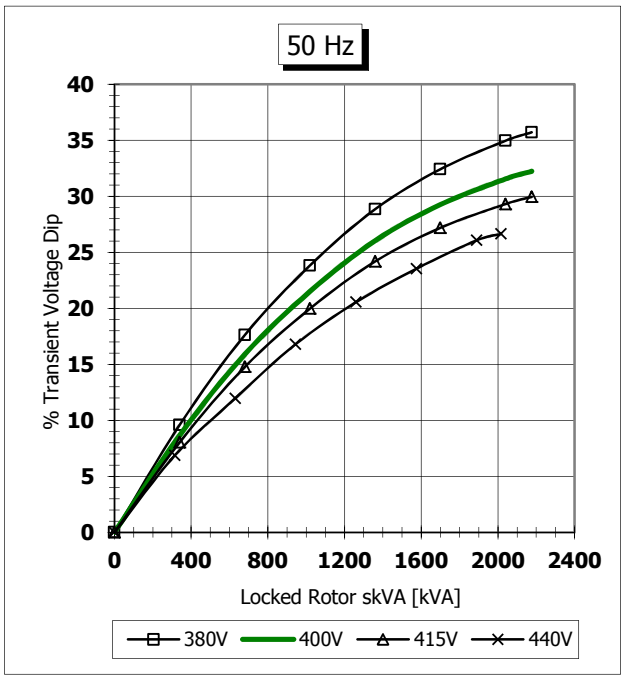


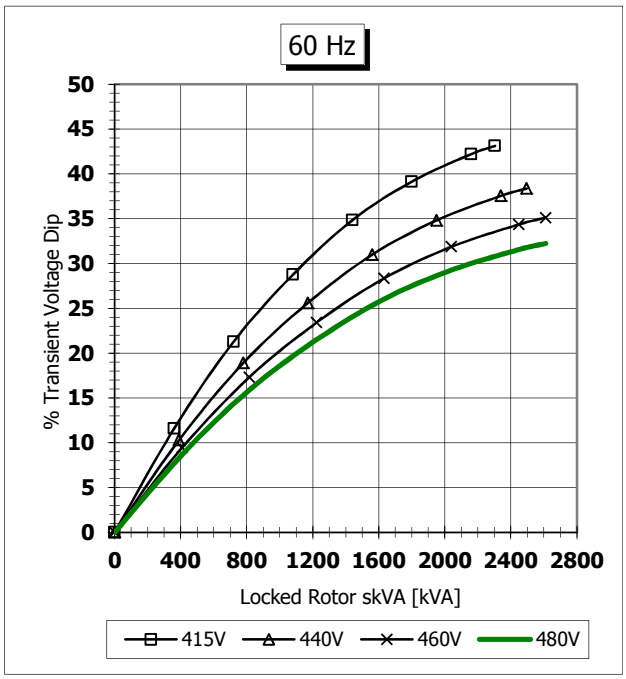
ECO 40 1.5L/4 3Phase 12 lead machine



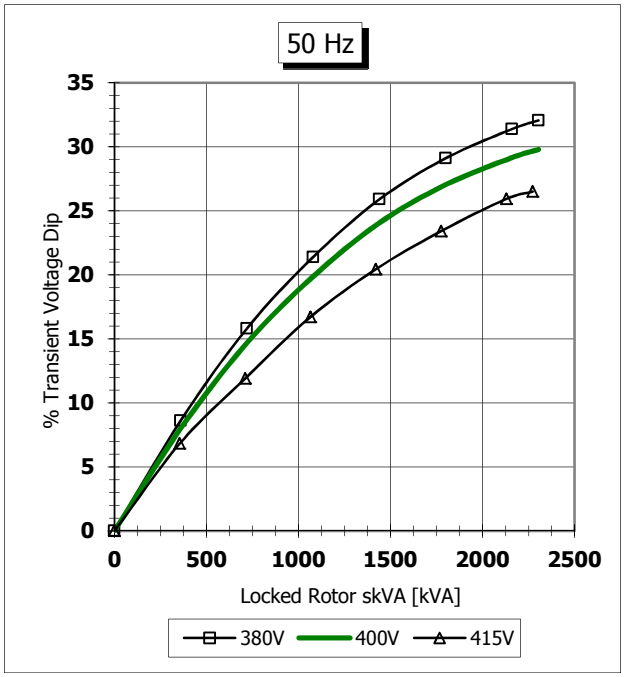


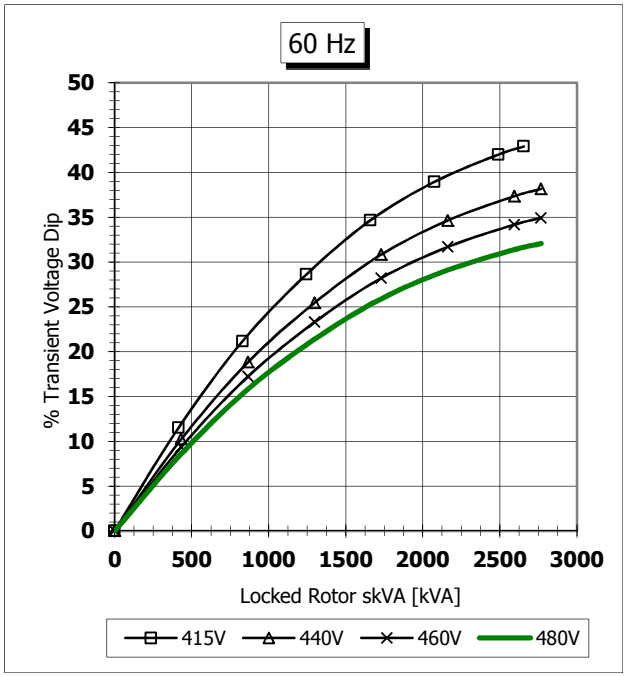
ECO 40 2L/4 3Phase 12 lead machine



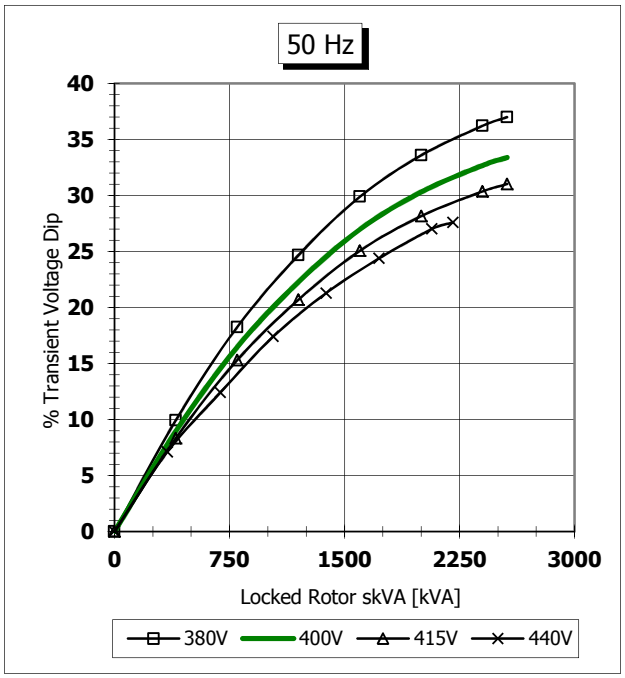


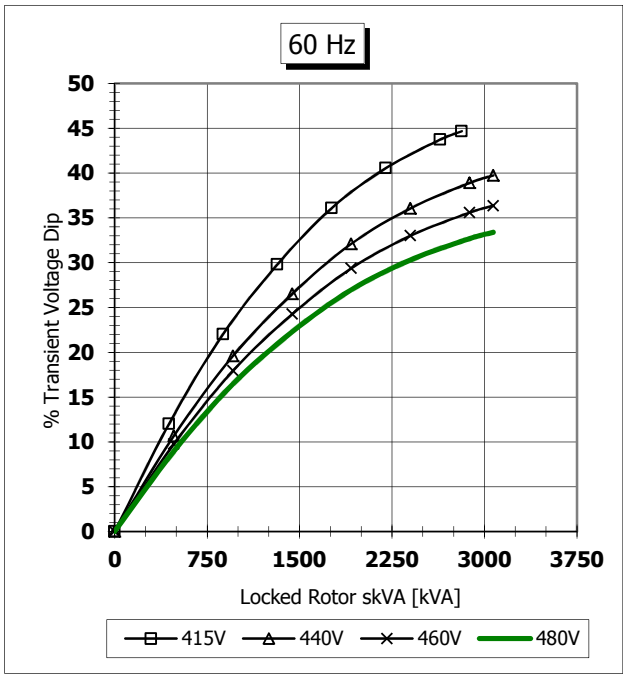
ECO 40 VL/4 3Phase 12 lead machine



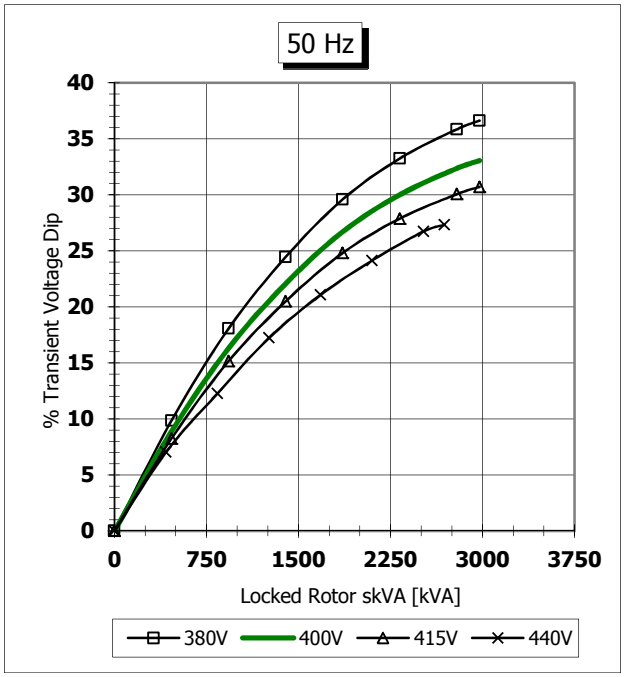


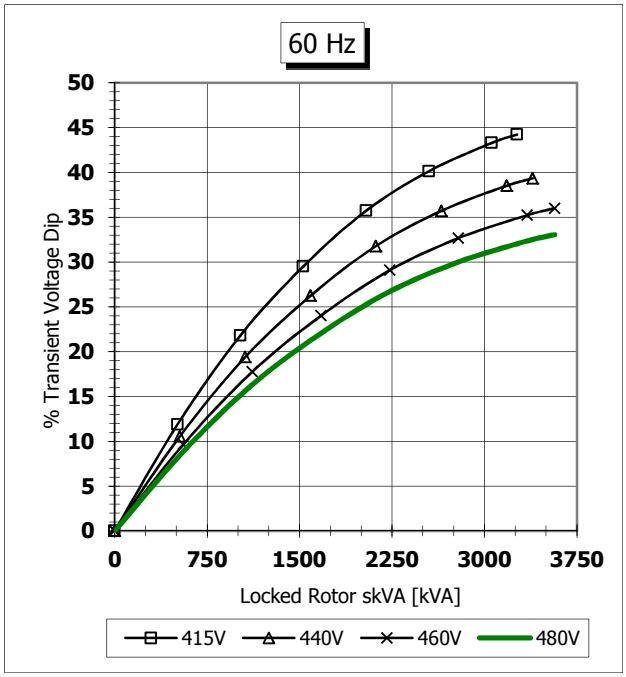
ECO 43 1S/4 3Phase 12 lead machine



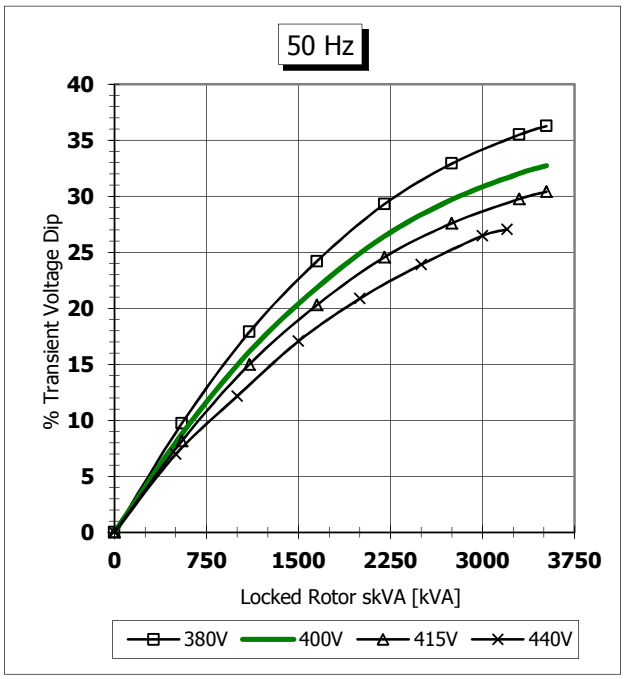


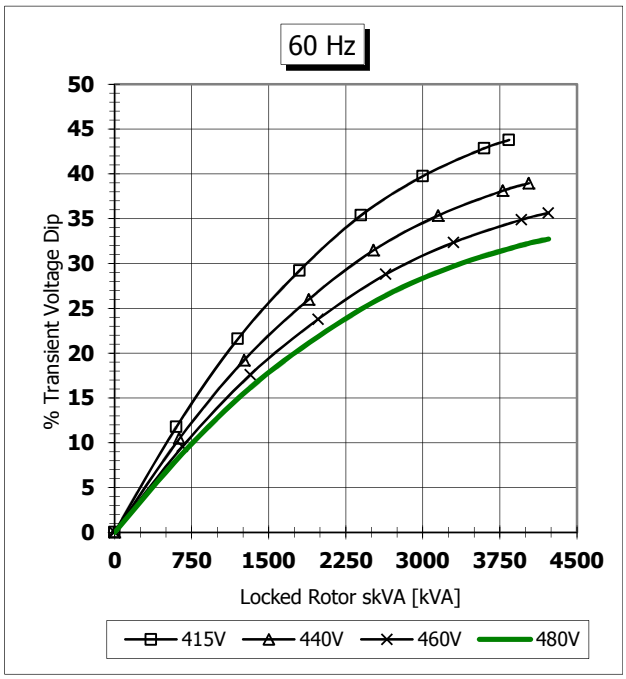
ECO 43 2S/4 3Phase 12 lead machine



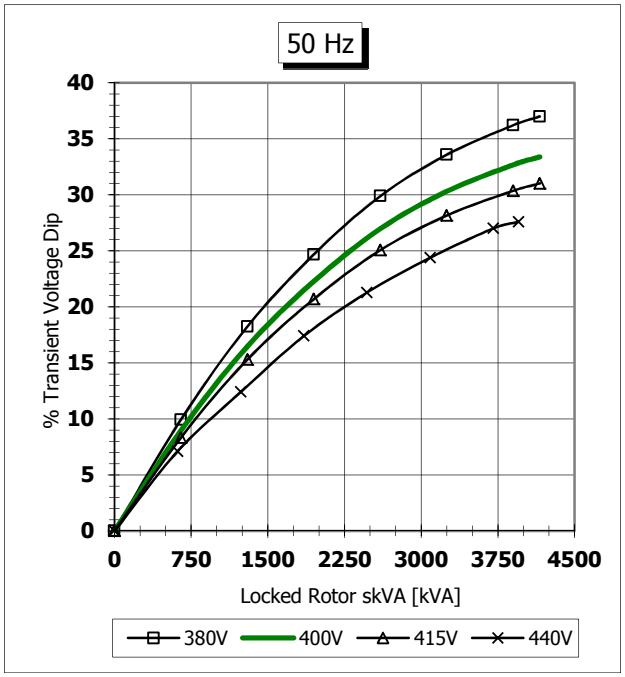


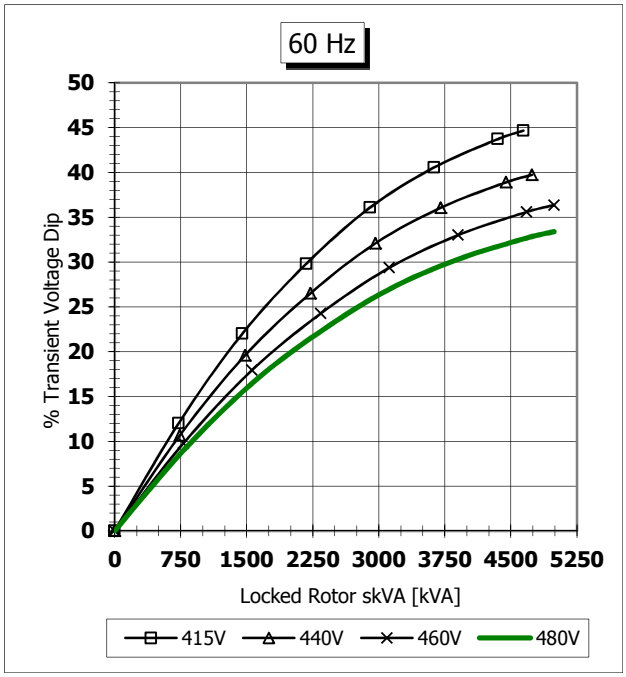
ECO 43 1L/4 3Phase 12 lead machine



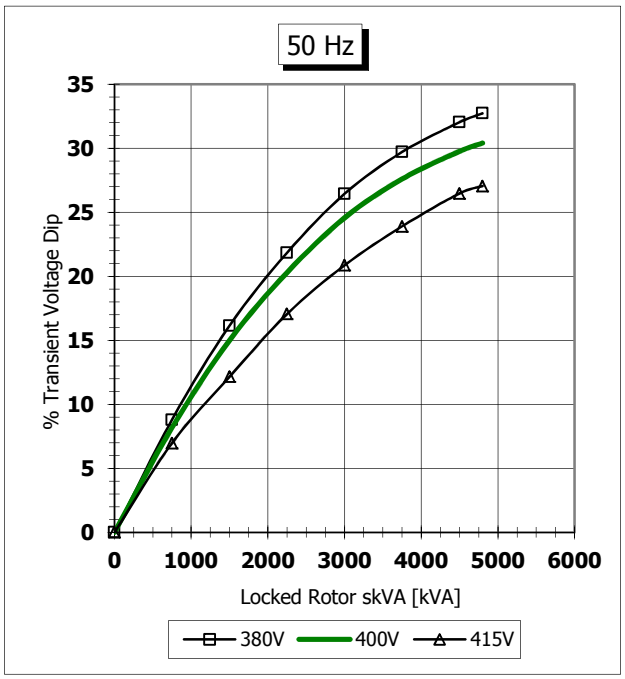


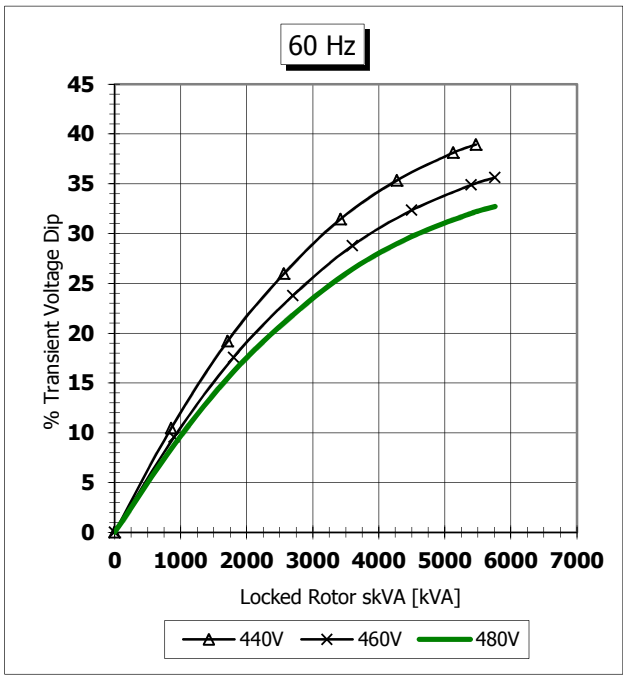
ECO 43 2L/4 3Phase 12 lead machine



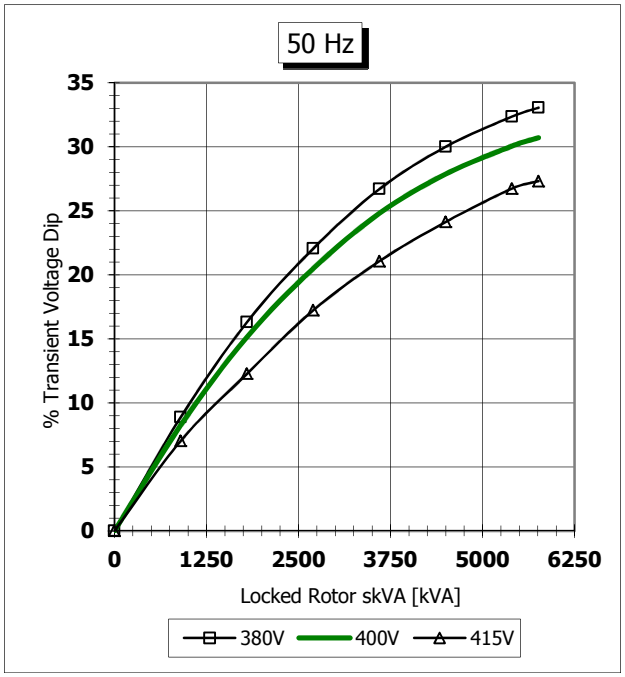


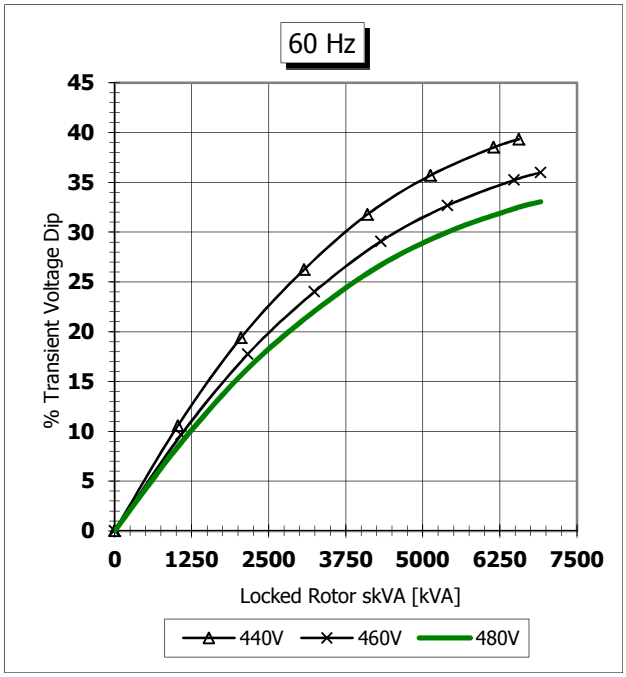
ECO 46 1S/4 3Phase 12 lead machine



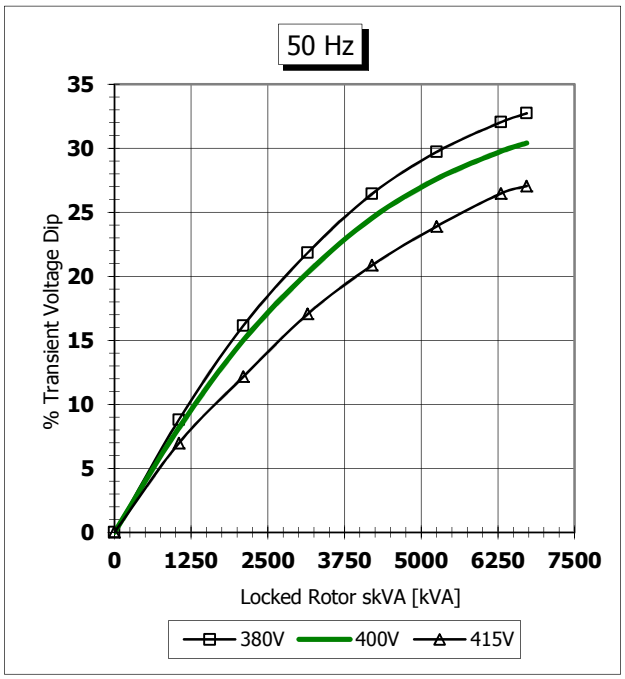


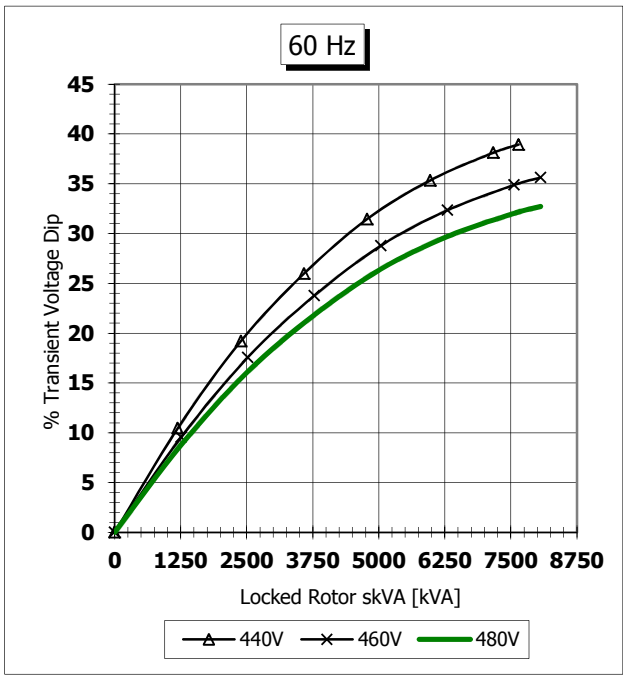
ECO 46 2S/4 3Phase 12 lead machine



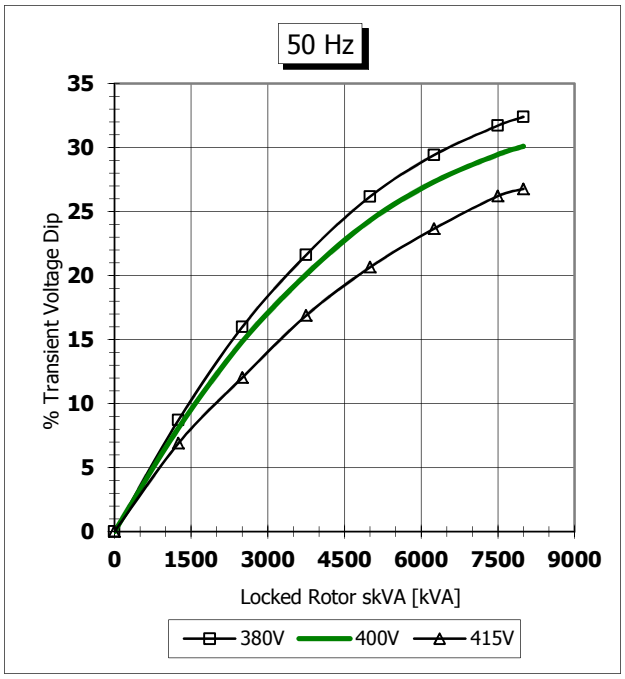


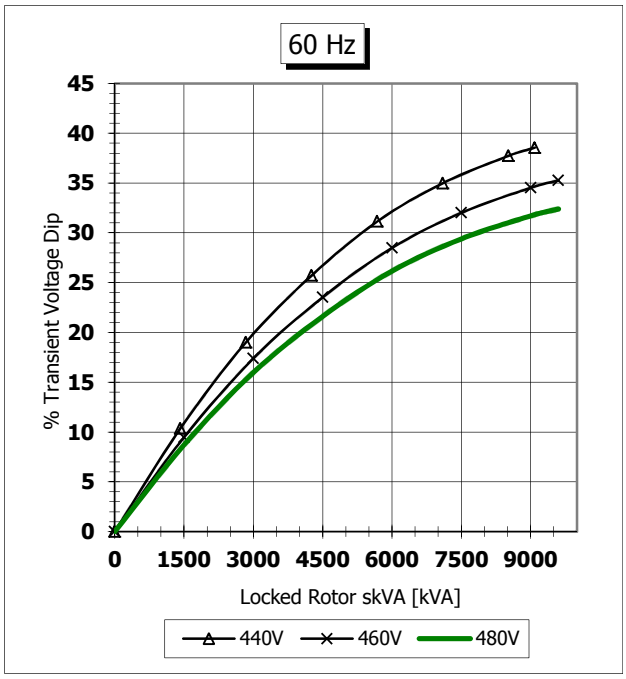
ECO 46 1L/4 3Phase 12 lead machine



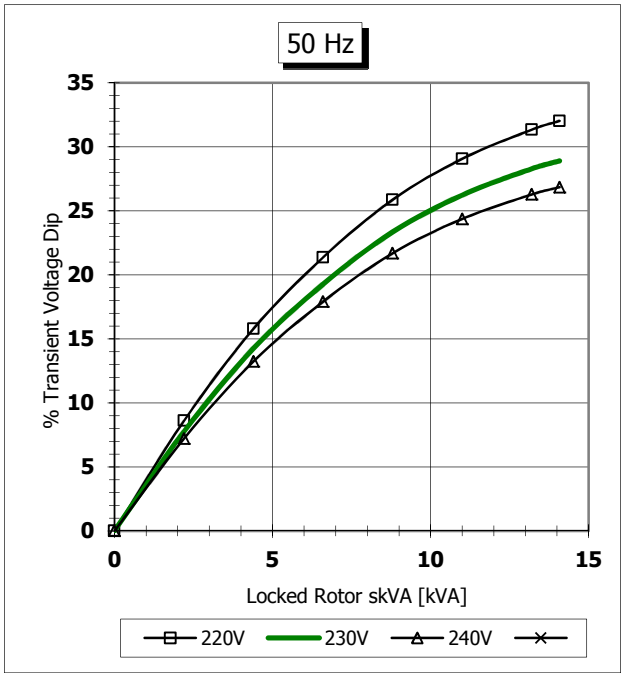


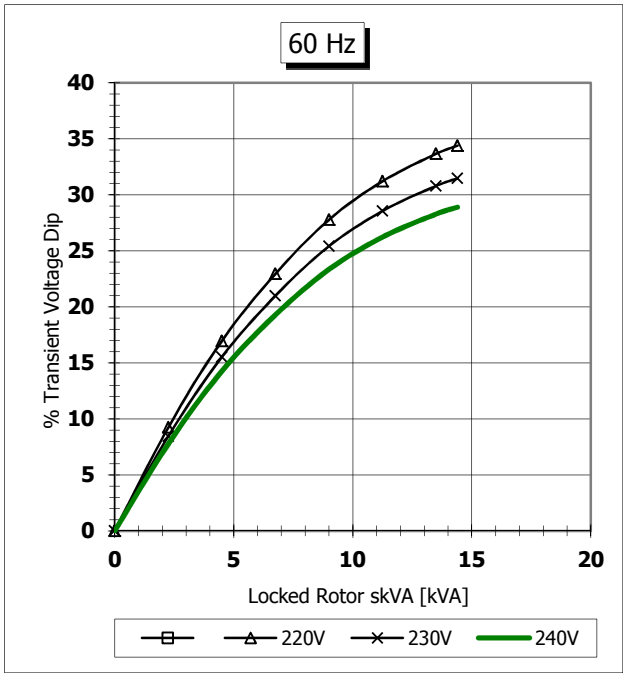
ECO 46 2L/4 3Phase 12 lead machine



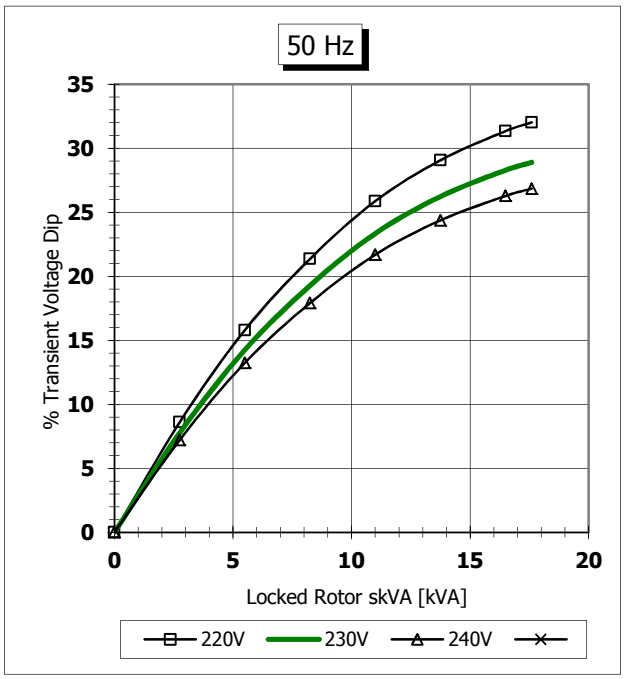


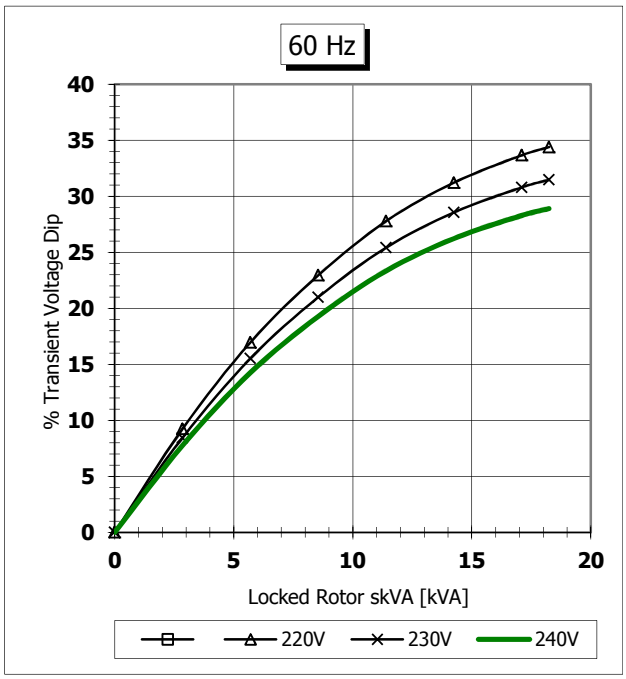
ECP 3 1S/4 1phase, reconnected 12 lead machine



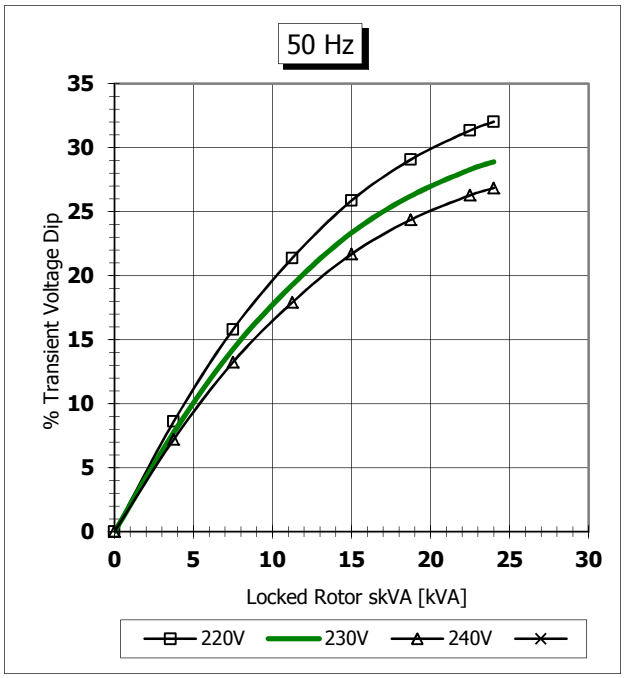


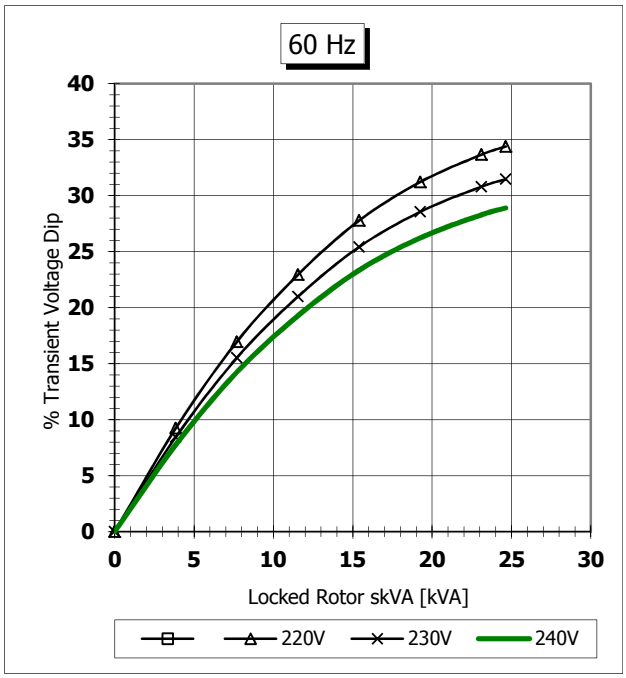
ECP 3 2S/4 1phase, reconnected 12 lead machine



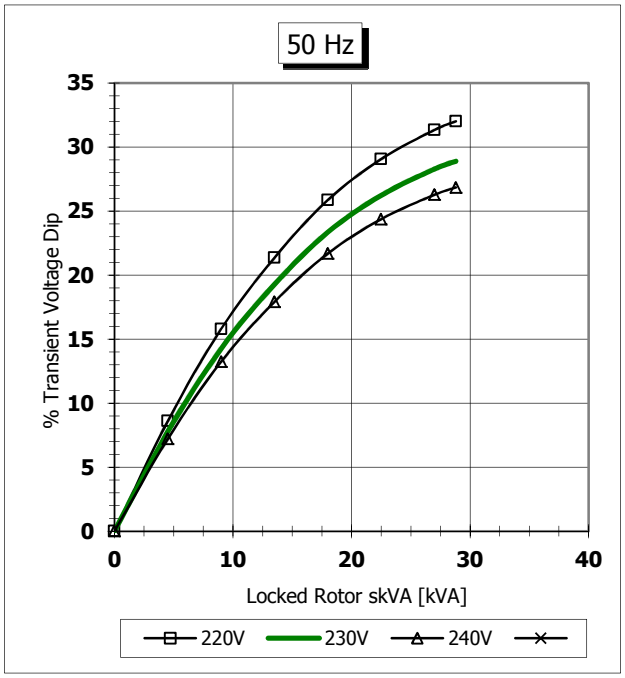


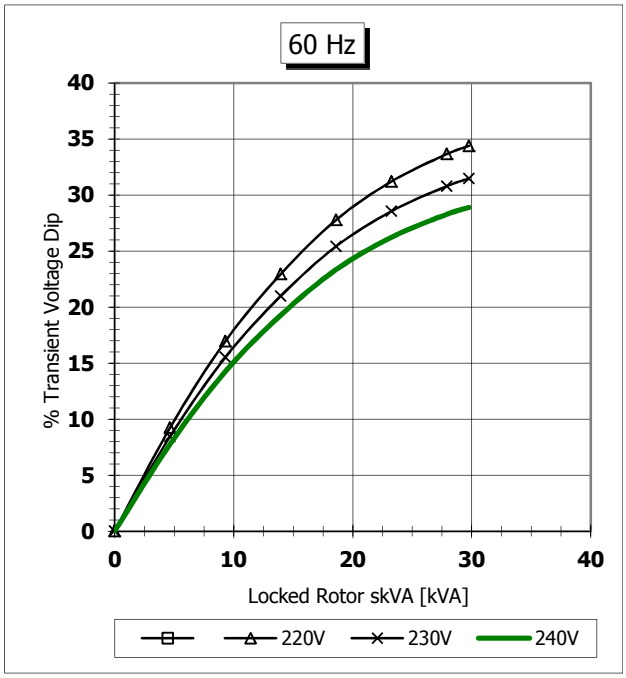
ECP 3 1L/4 1phase, reconnected 12 lead machine



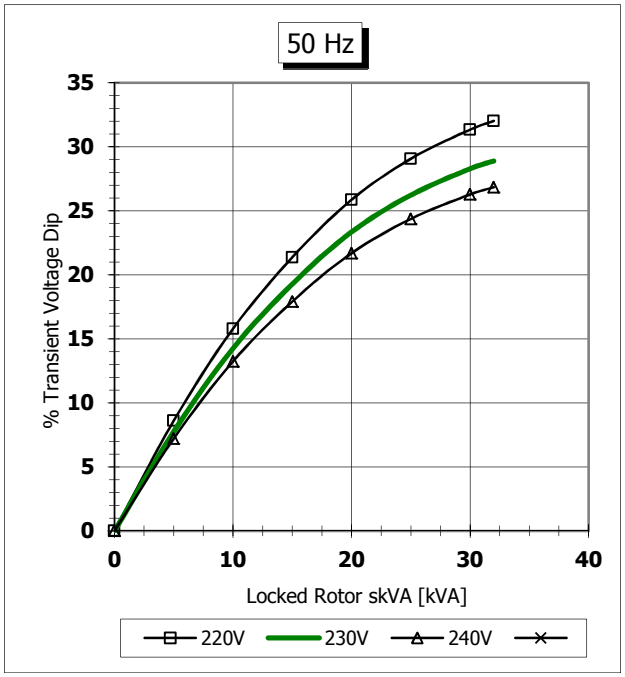


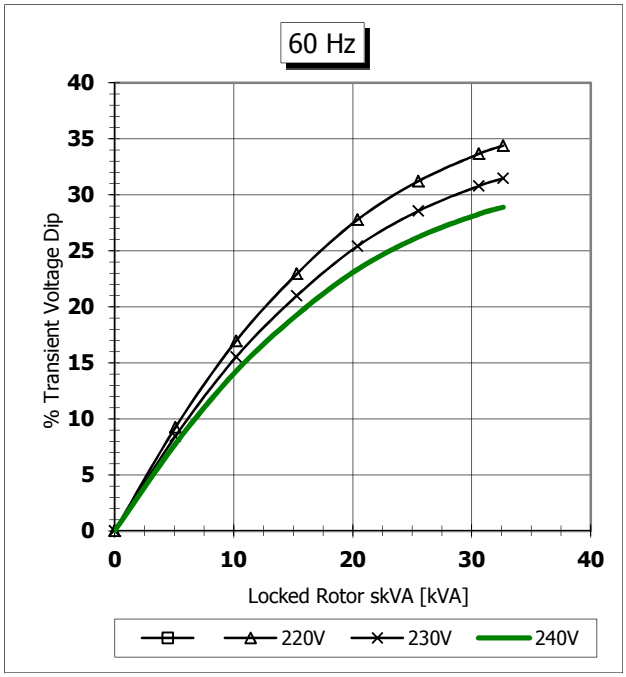
ECP 3 2L/4 1phase, reconnected 12 lead machine



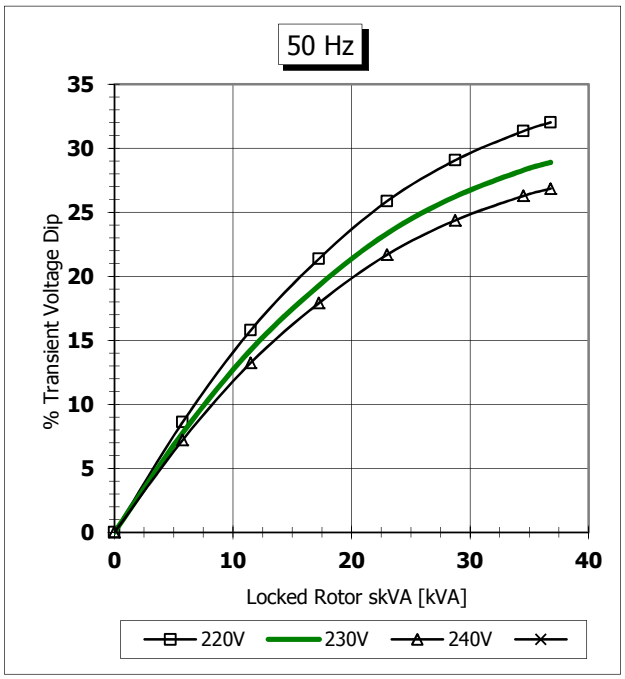


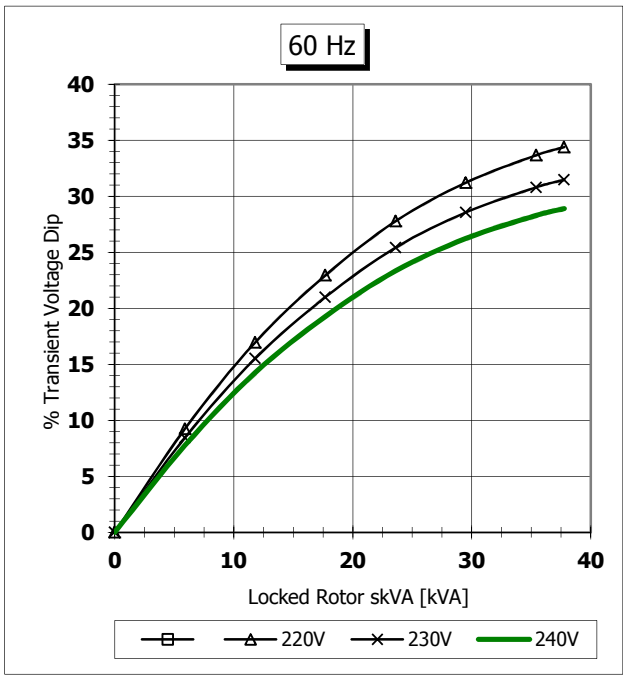
ECP 3 3L/4 1phase, reconnected 12 lead machine



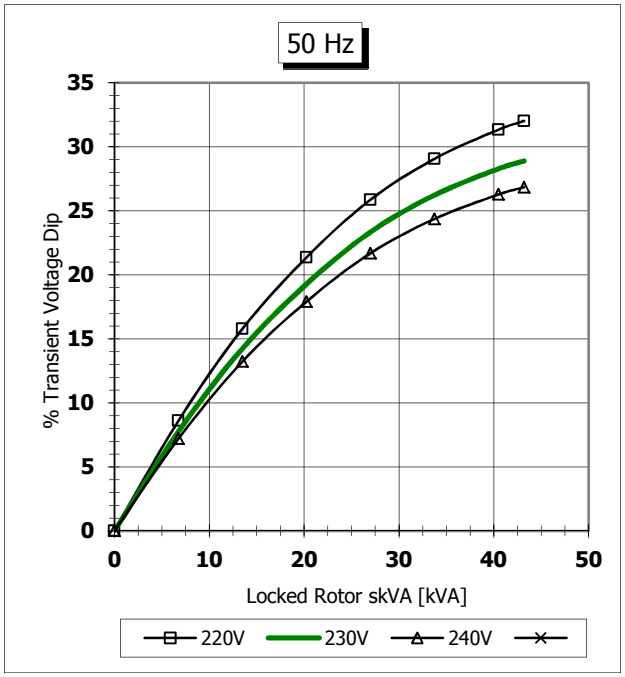


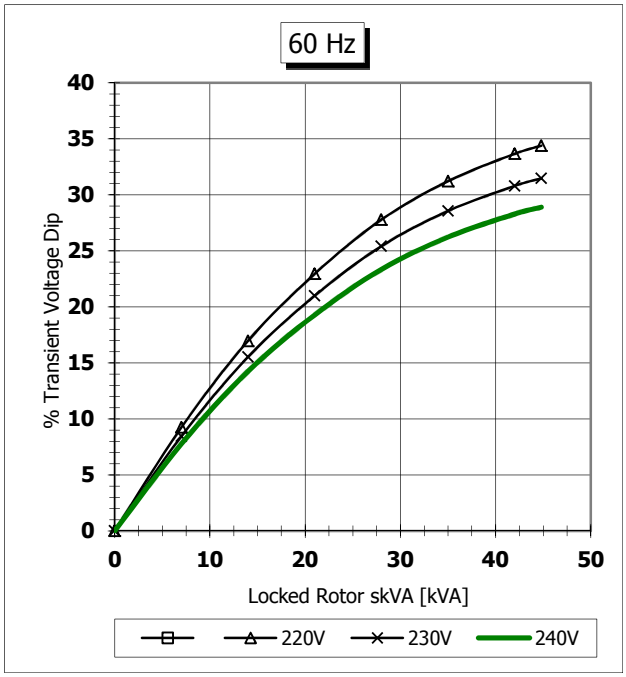
ECO 28 S/4 1phase, reconnected 12 lead machine



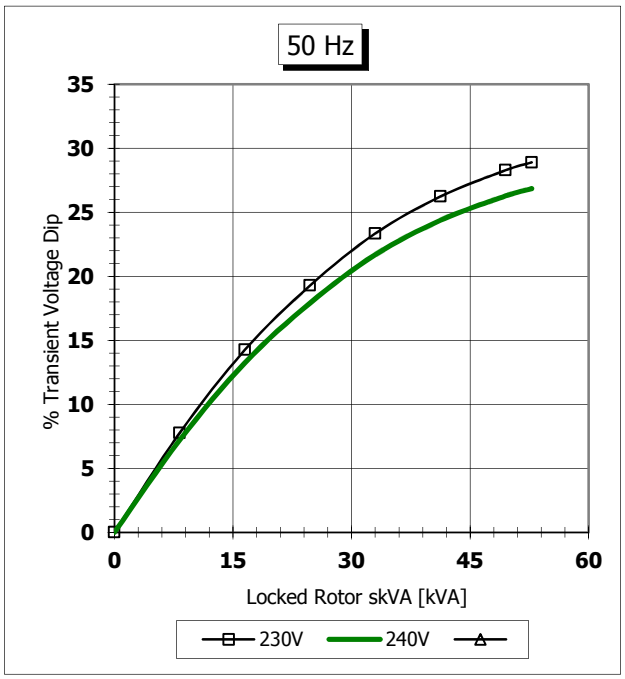


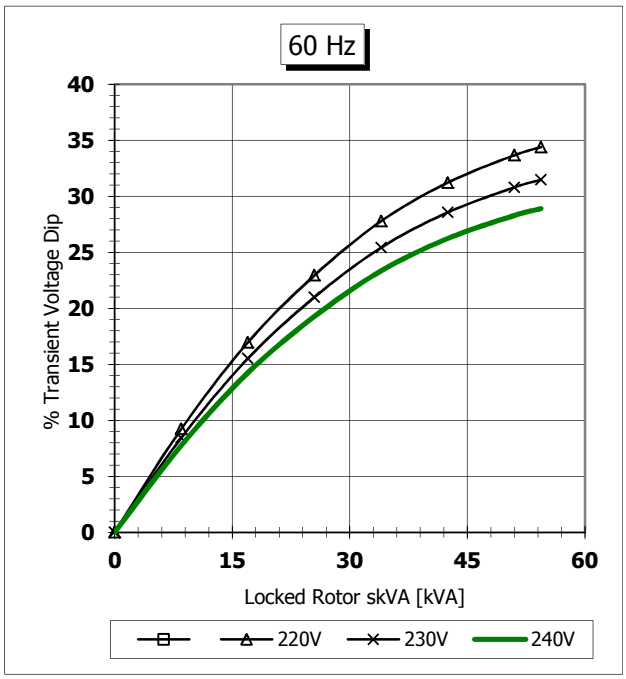
ECO 28 1L/4 1phase, reconnected 12 lead machine



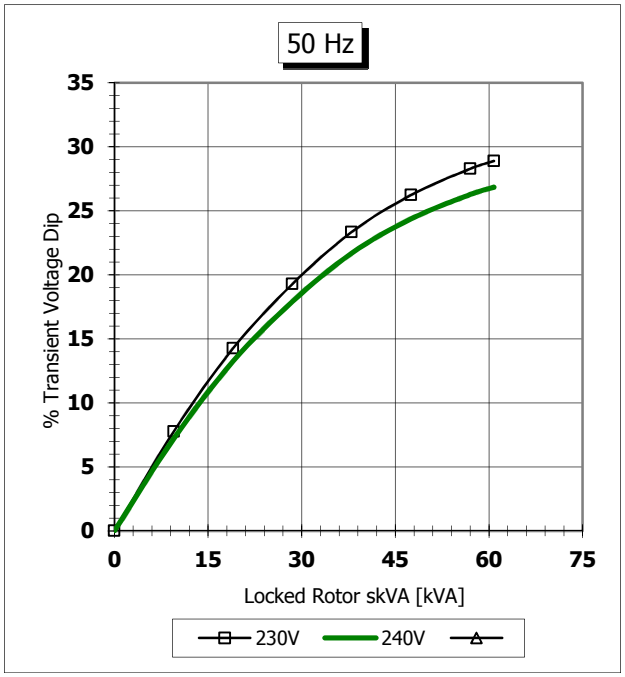


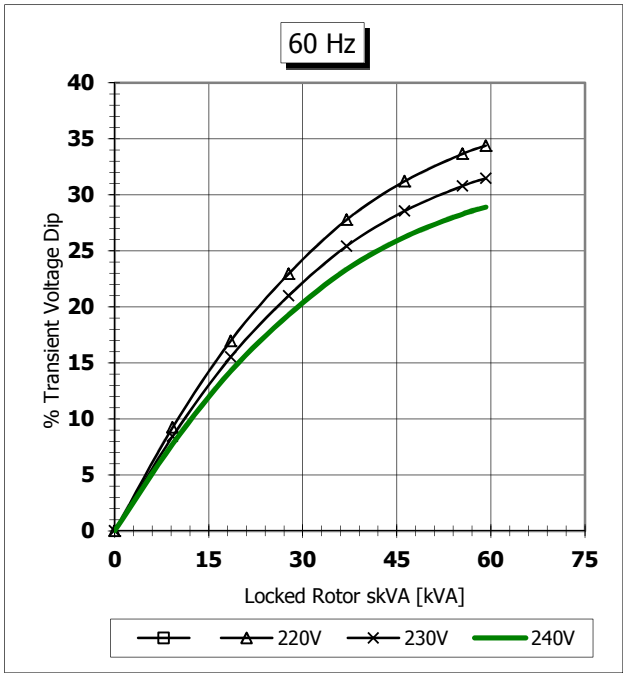
ECO 28 2L/4 1phase, reconnected 12 lead machine



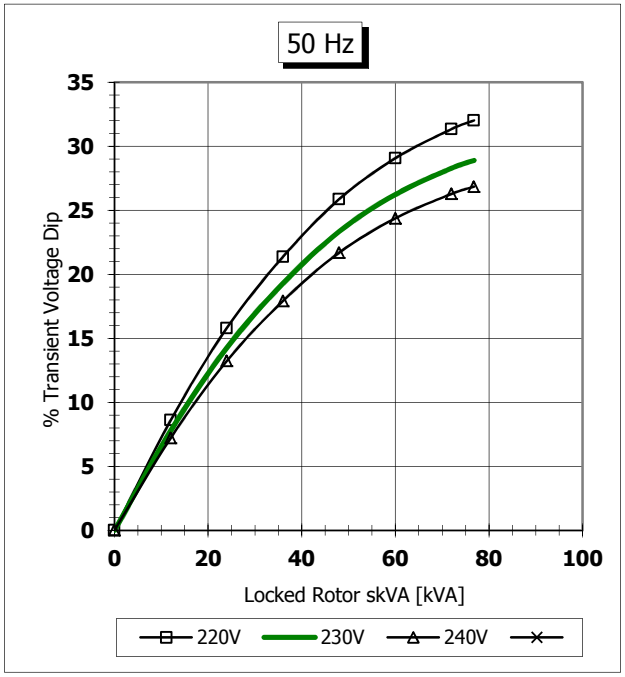


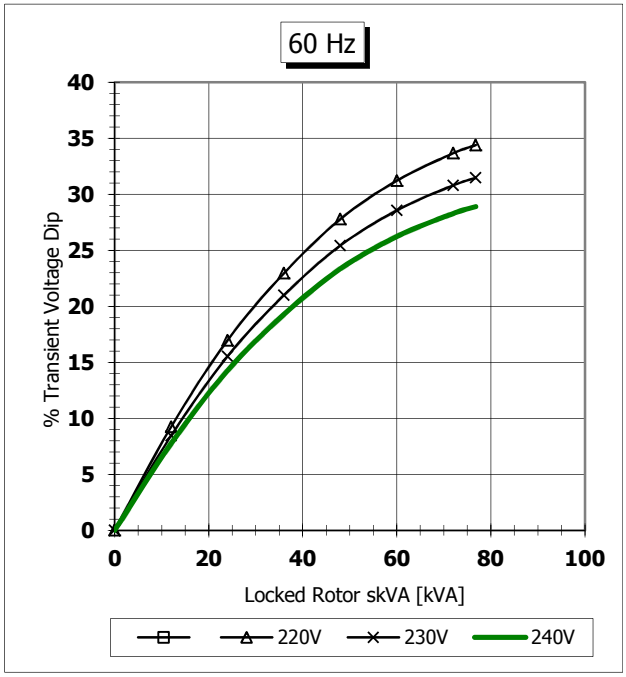
ECO 28 VL/4 1phase, reconnected 12 lead machine



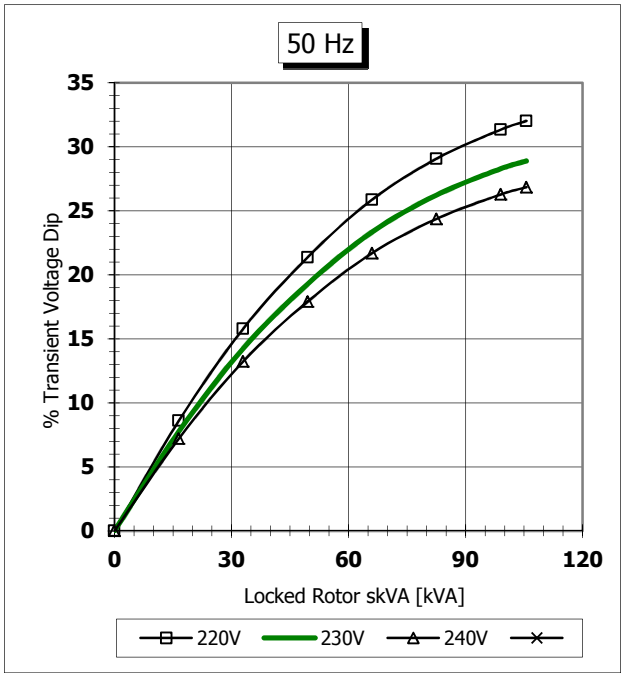


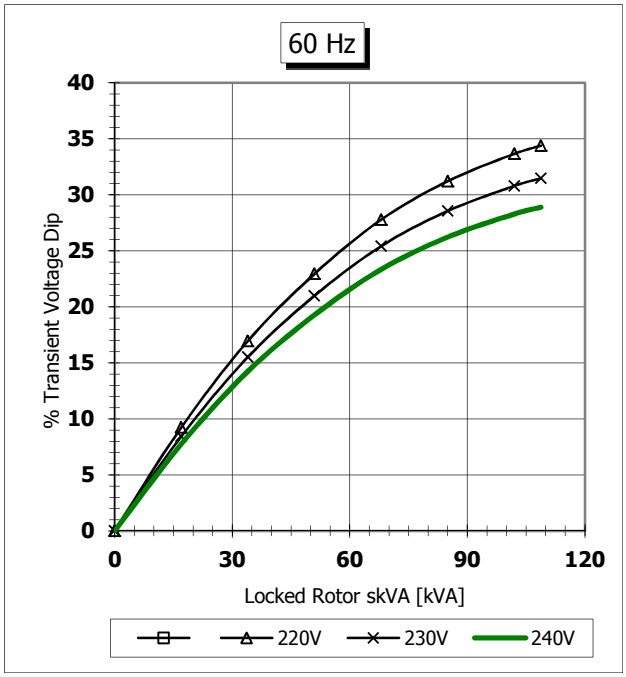
ECO 32 2S/4 1phase, reconnected 12 lead machine



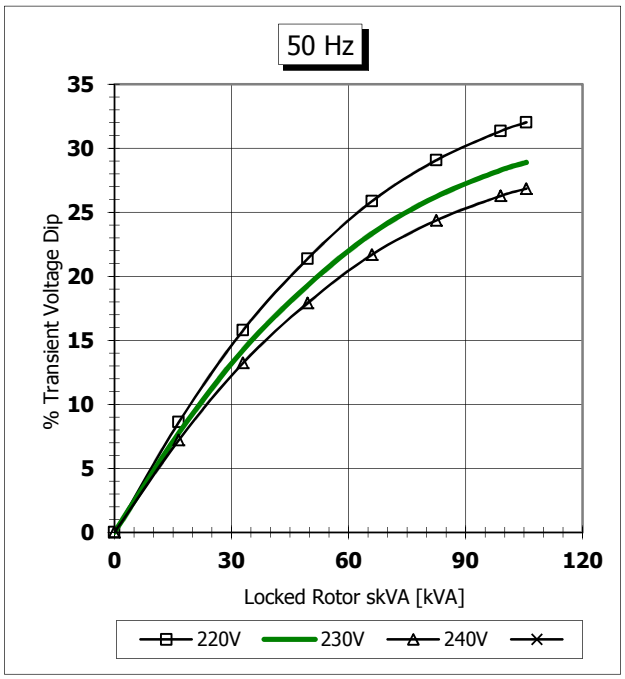


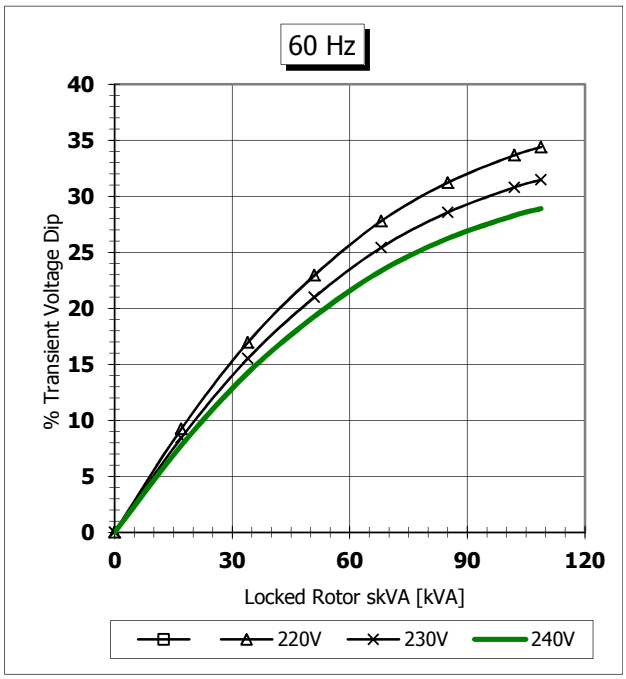
ECO 32 3S/4 1phase, reconnected 12 lead machine



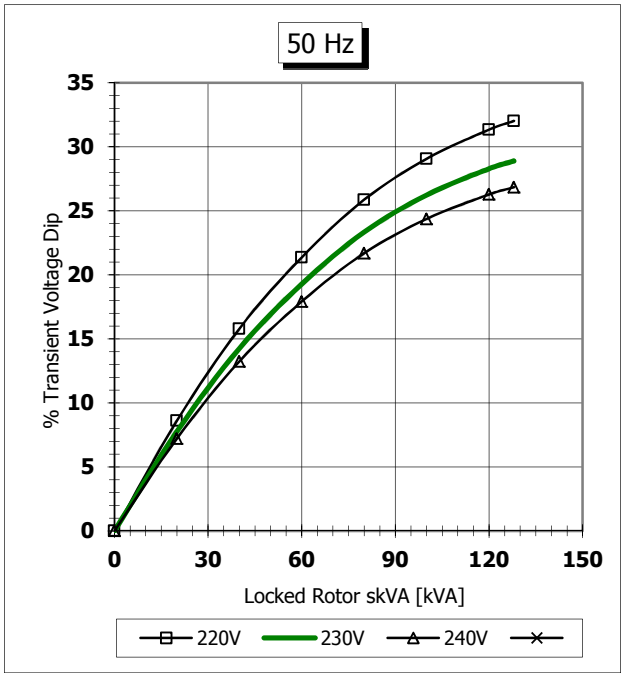


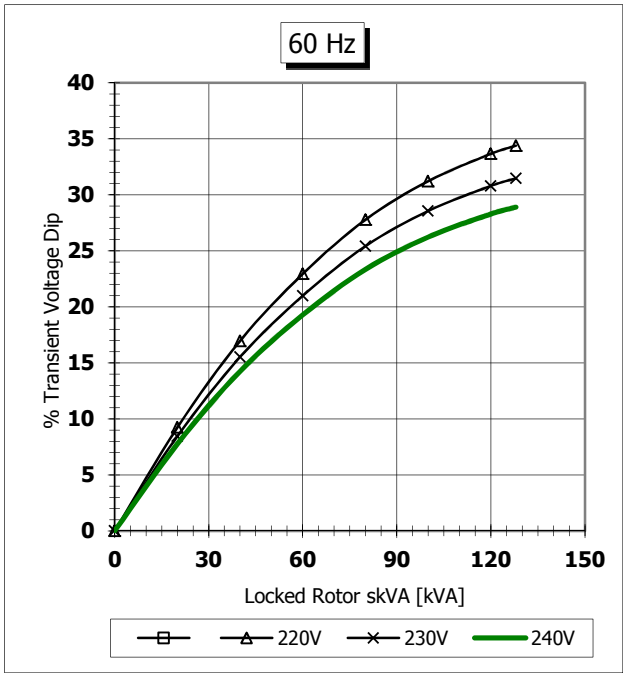
ECO 32 1L/4 1phase, reconnected 12 lead machine



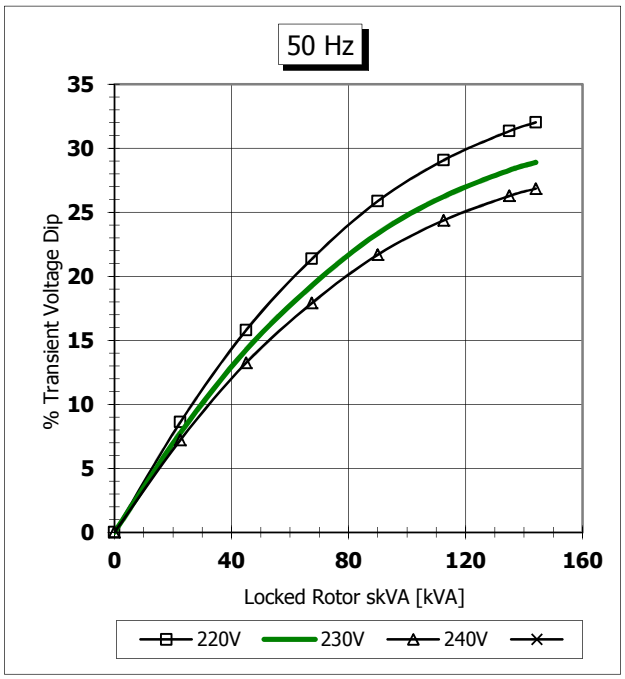


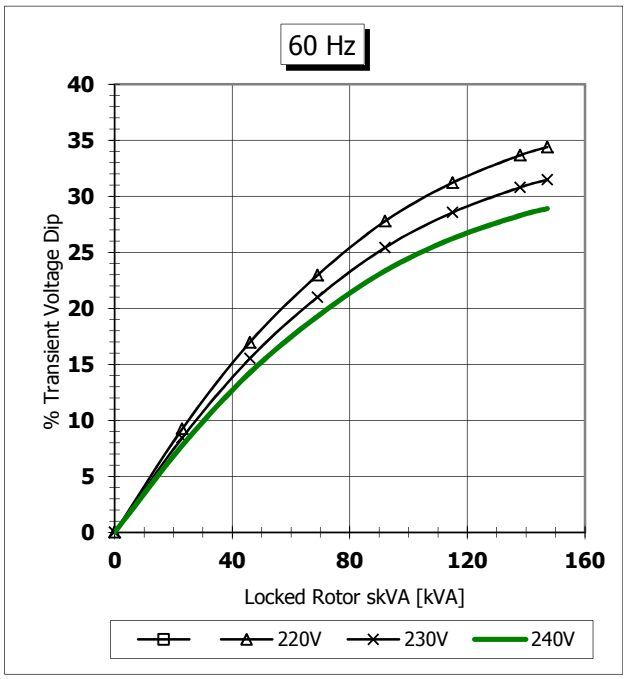
ECO 32 2L/4 1phase, reconnected 12 lead machine



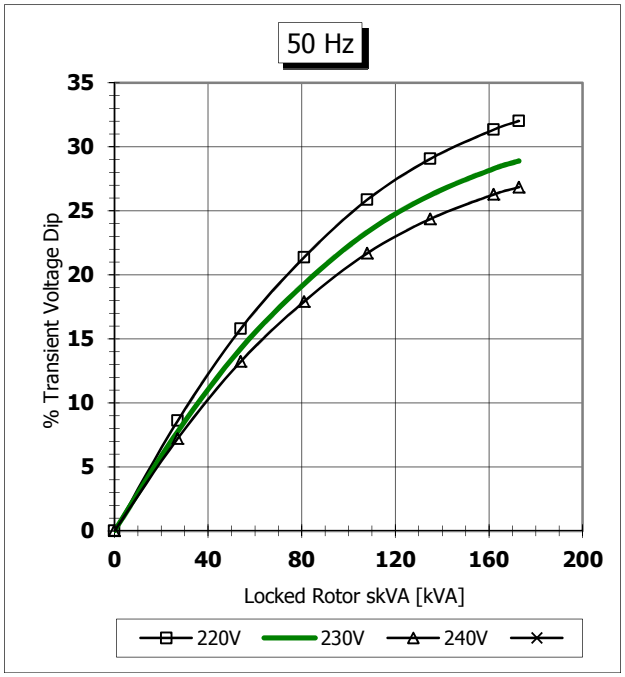


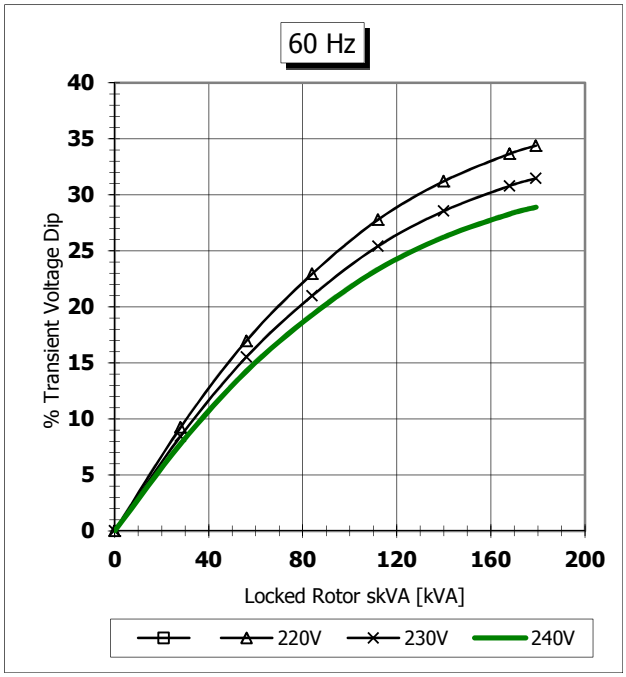
ECO 32 3L/4 1phase, reconnected 12 lead machine



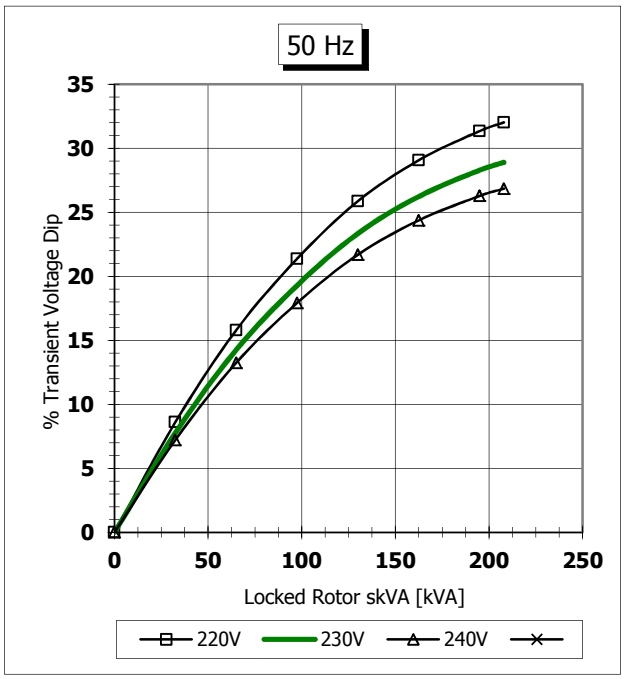


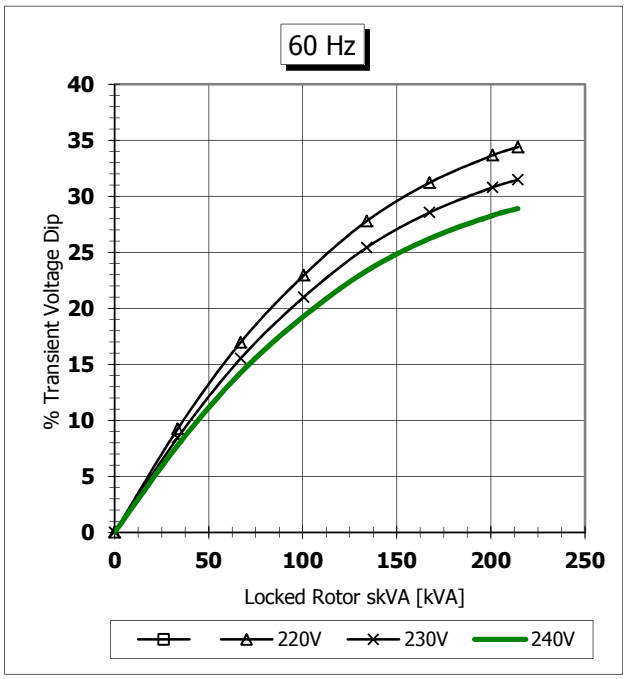
ECP 34 1S/4 1phase, reconnected 12 lead machine



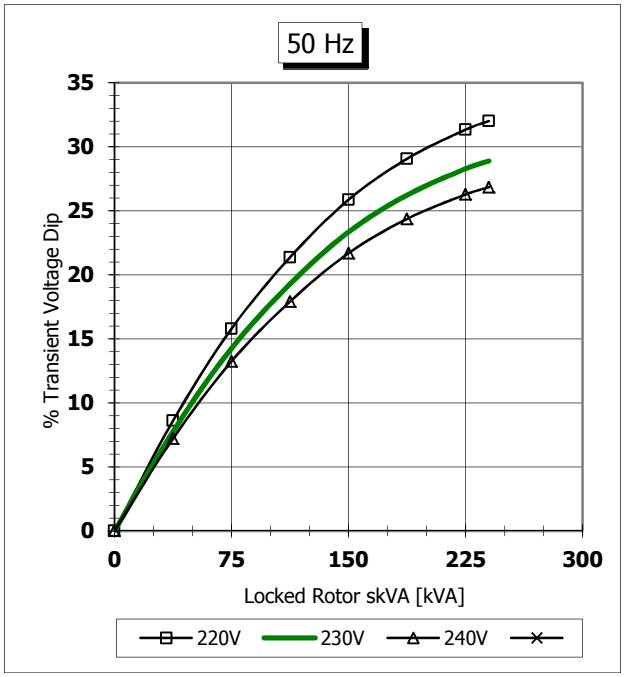


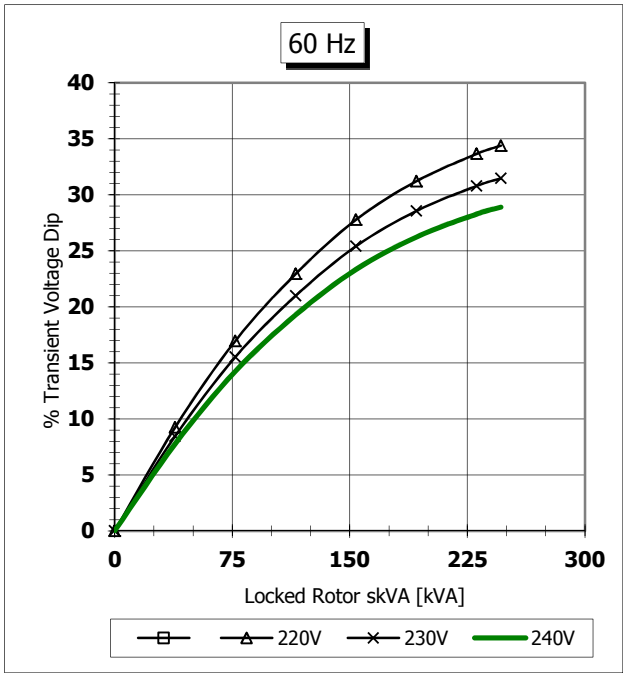
ECP 34 2S/4 1phase, reconnected 12 lead machine



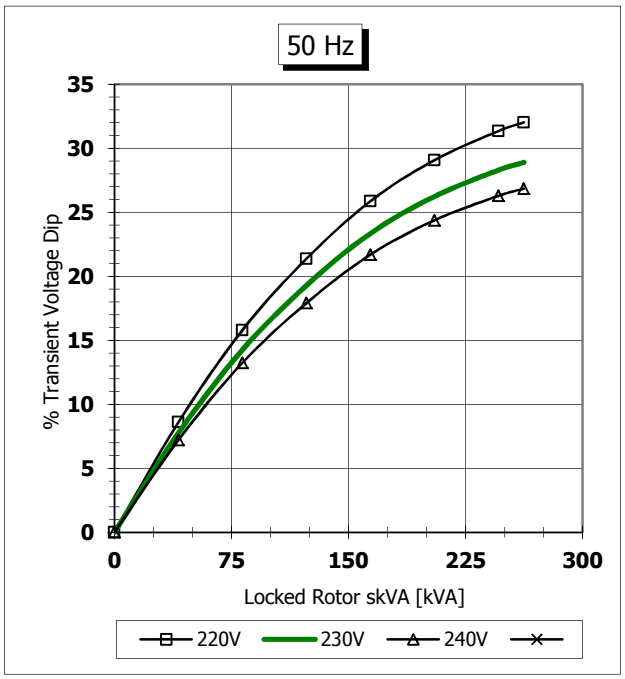


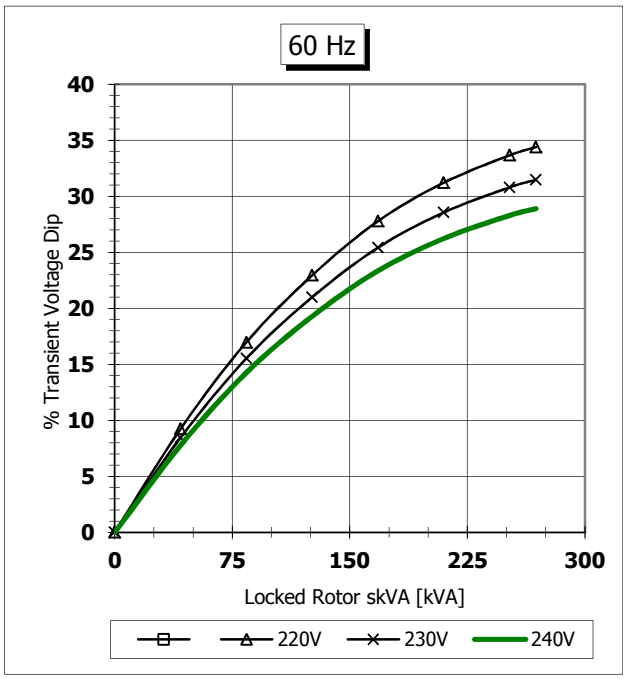
ECP 34 1L/4 1phase, reconnected 12 lead machine



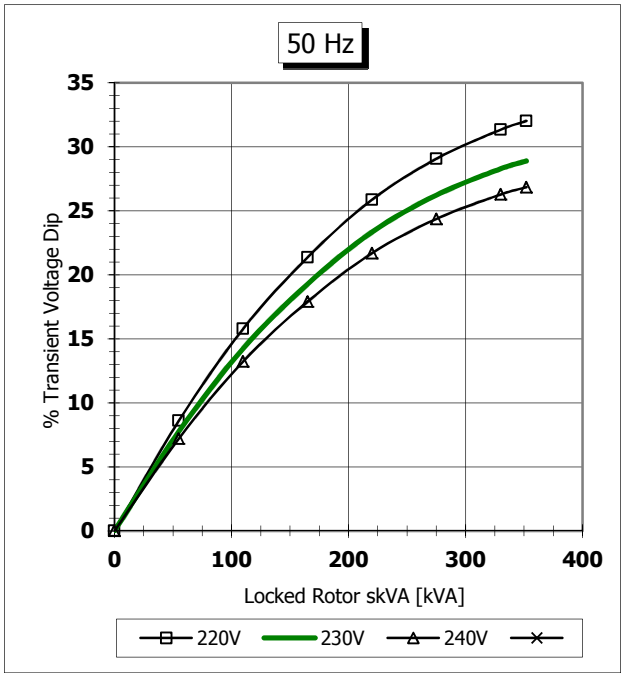


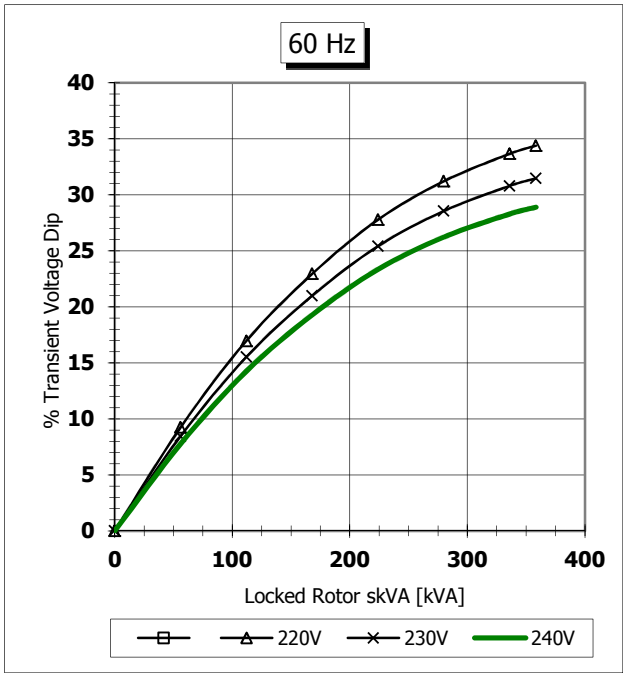
ECP 34 2L/4 1phase, reconnected 12 lead machine



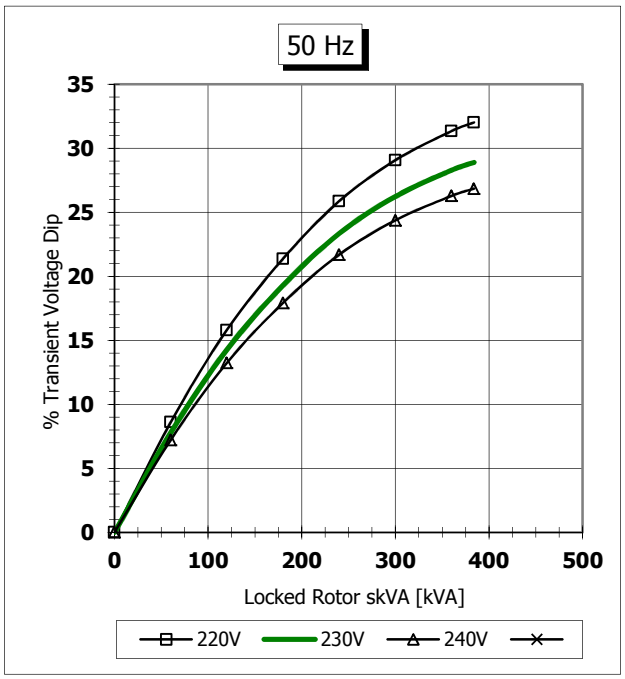


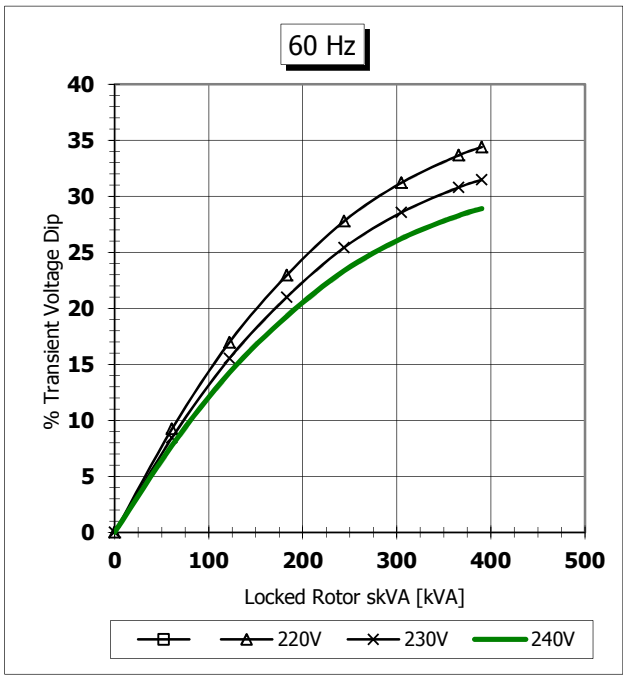
ECO 38 1S/4 1phase, reconnected 12 lead machine



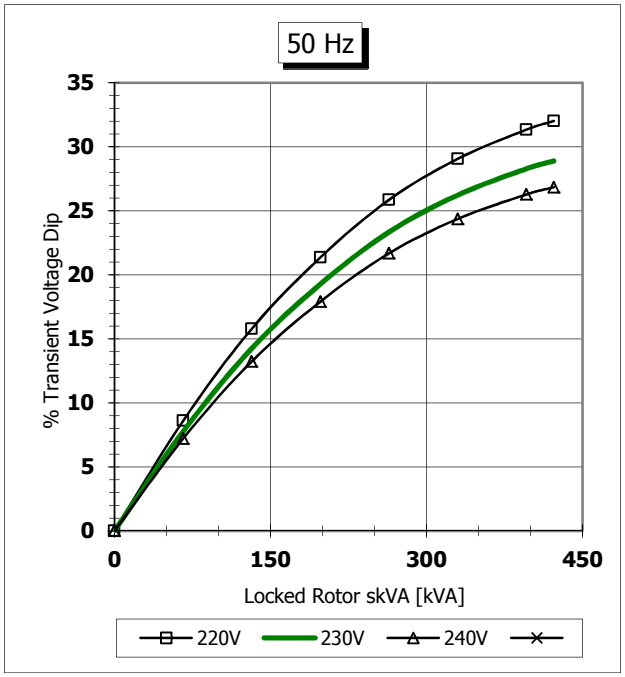


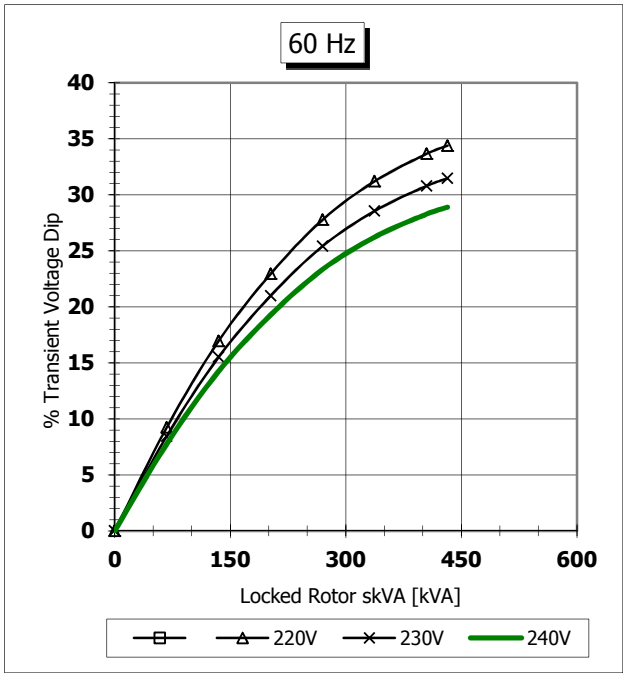
ECO 38 2S/4 1phase, reconnected 12 lead machine



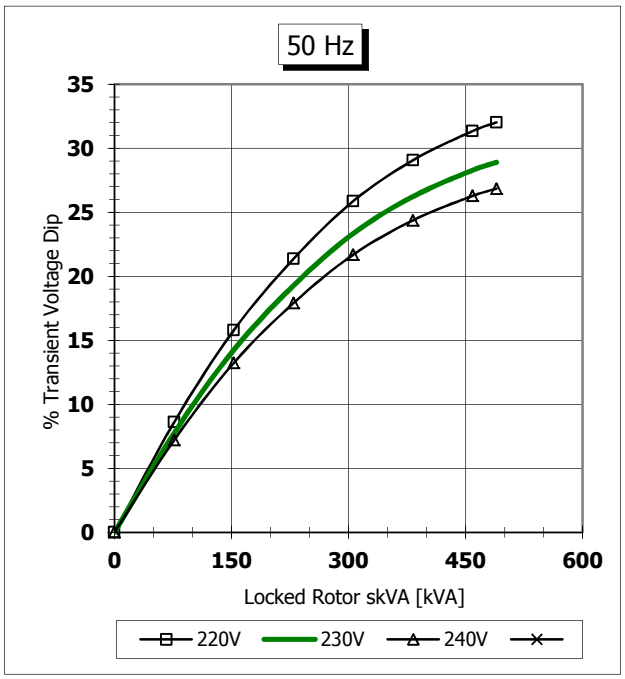


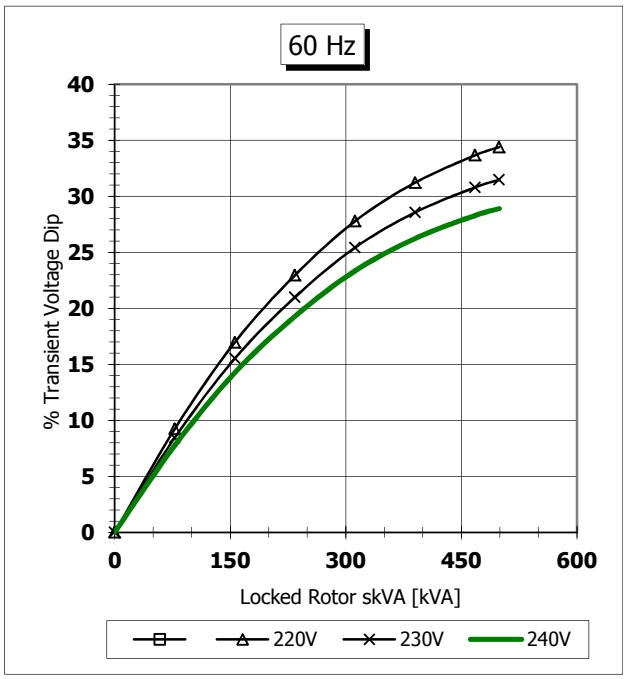
ECO 38 3S/4 1phase, reconnected 12 lead machine



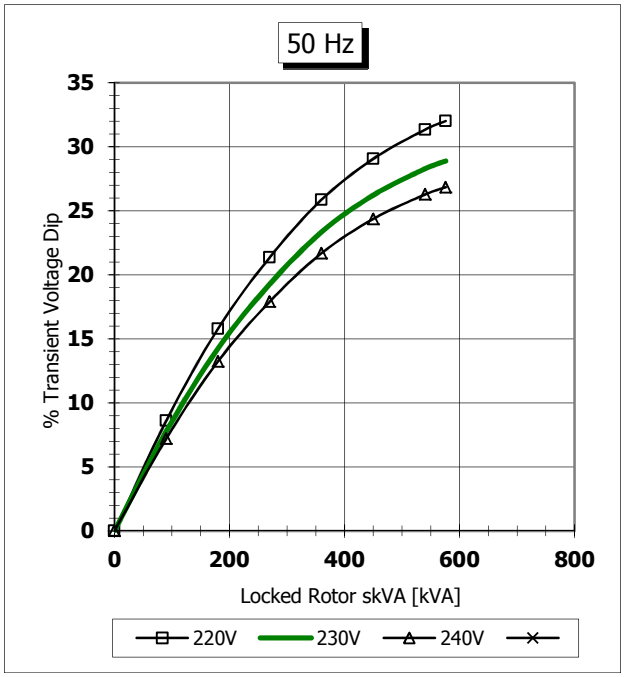


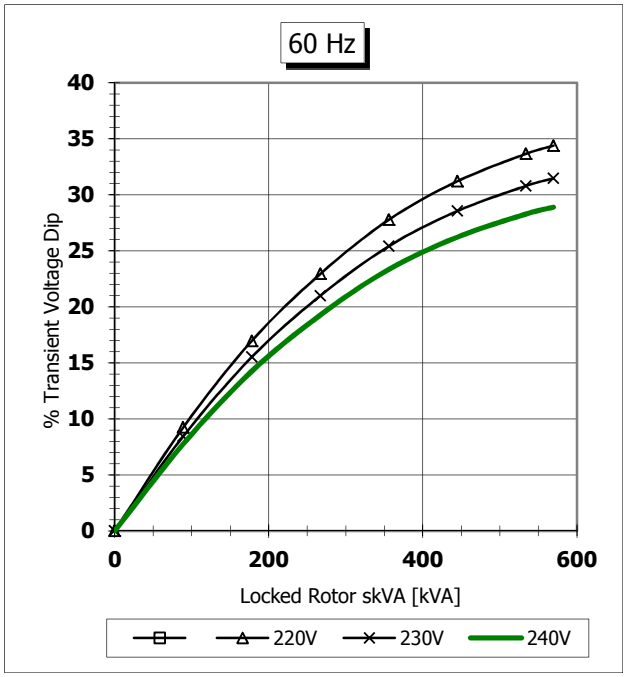
ECO 38 1L/4 1phase, reconnected 12 lead machine



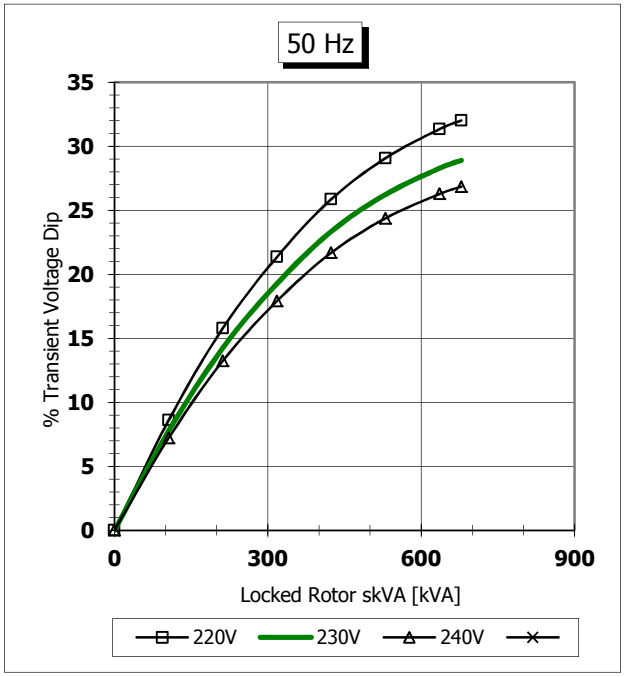


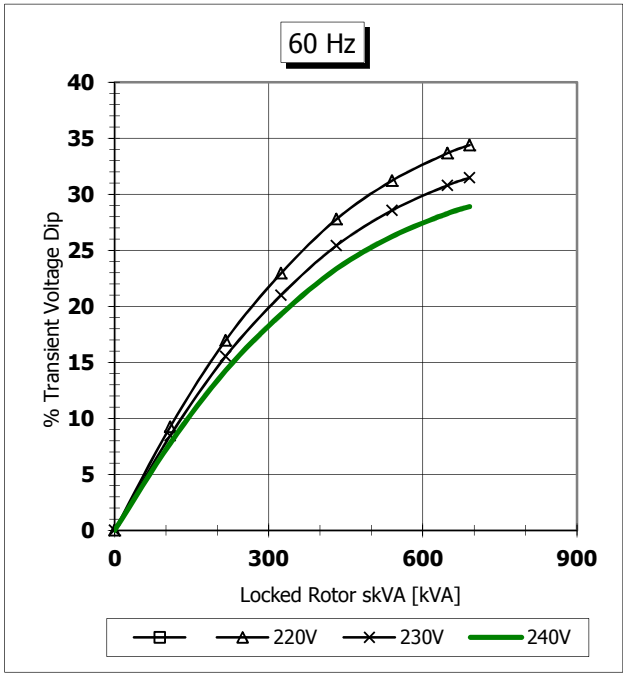
ECO 38 2L/4 1phase, reconnected 12 lead machine



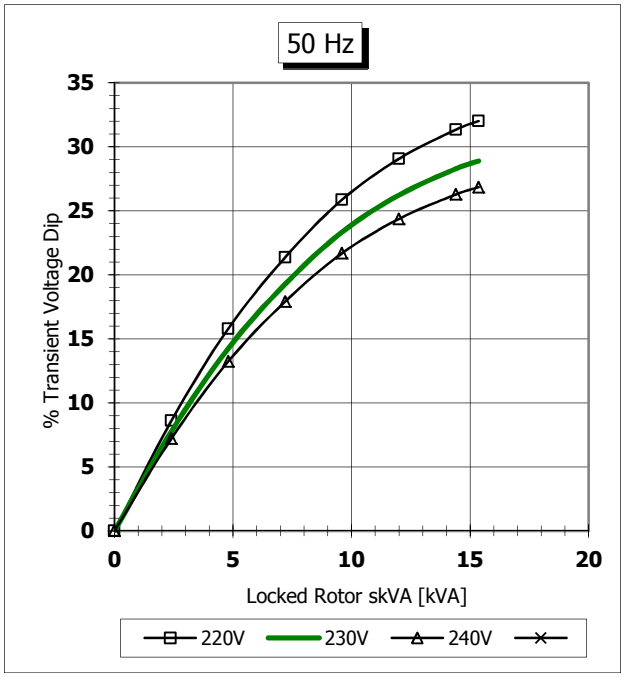


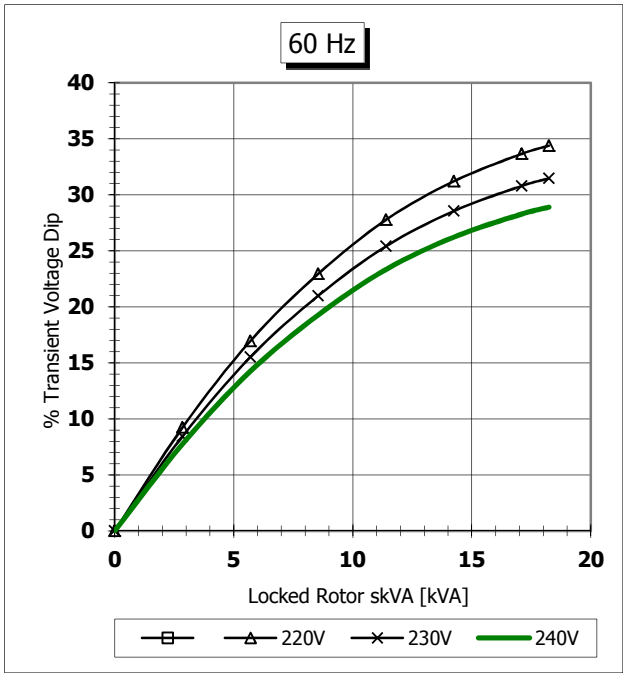
ECO 38 3L/4 1phase, reconnected 12 lead machine



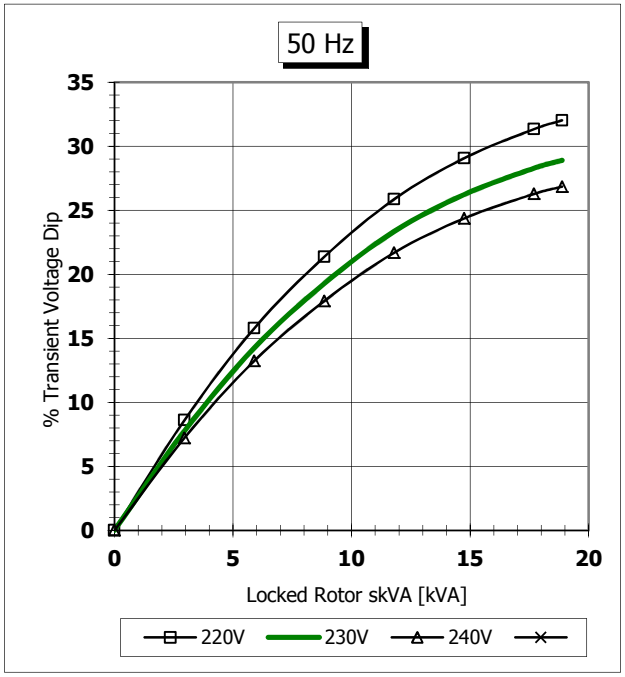


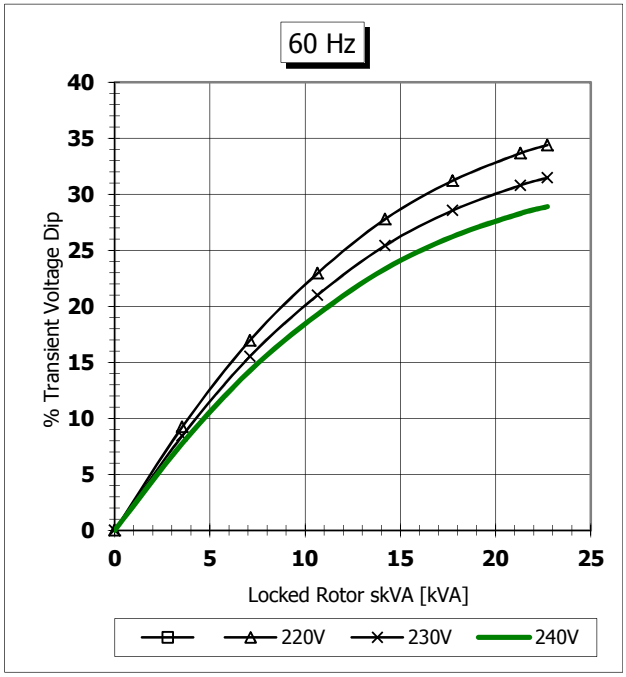
ECP 3 1S/4 1phase, dedicated 4 wire winding



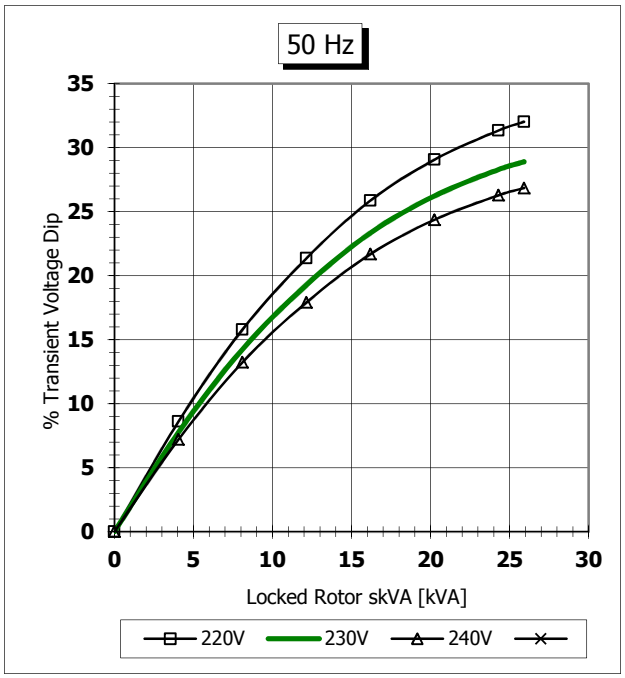


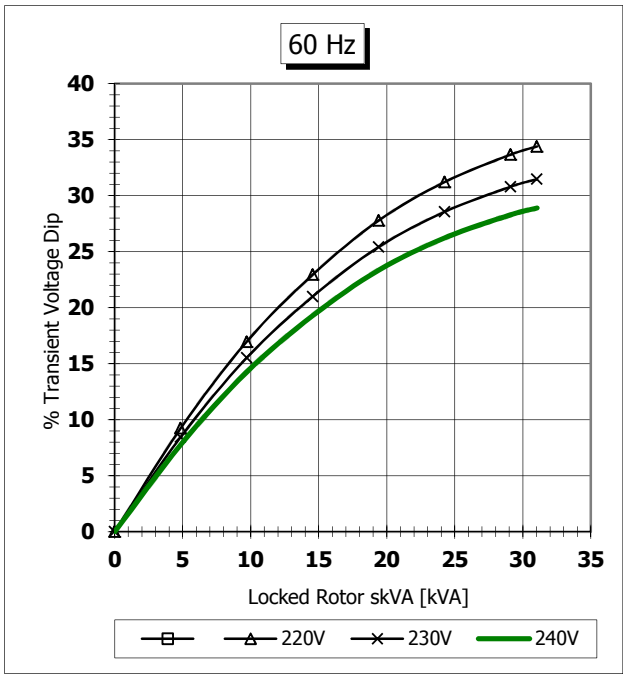
ECP 3 2S/4 1phase, dedicated 4 wire winding



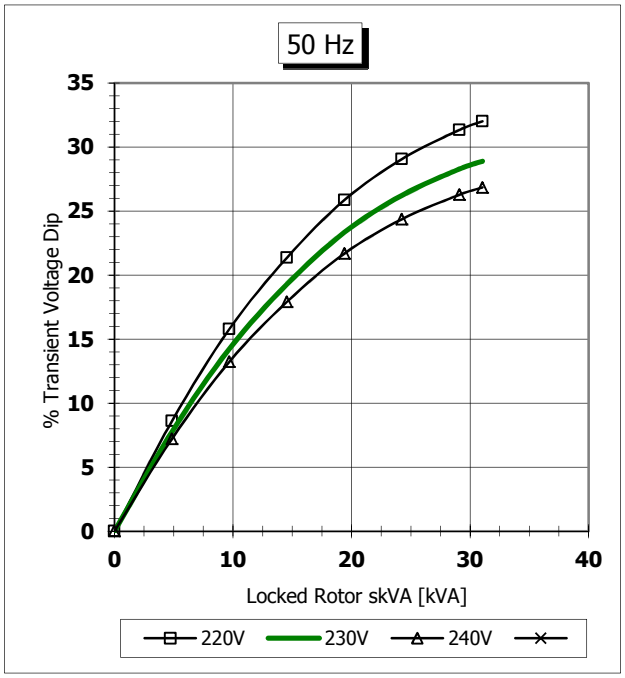


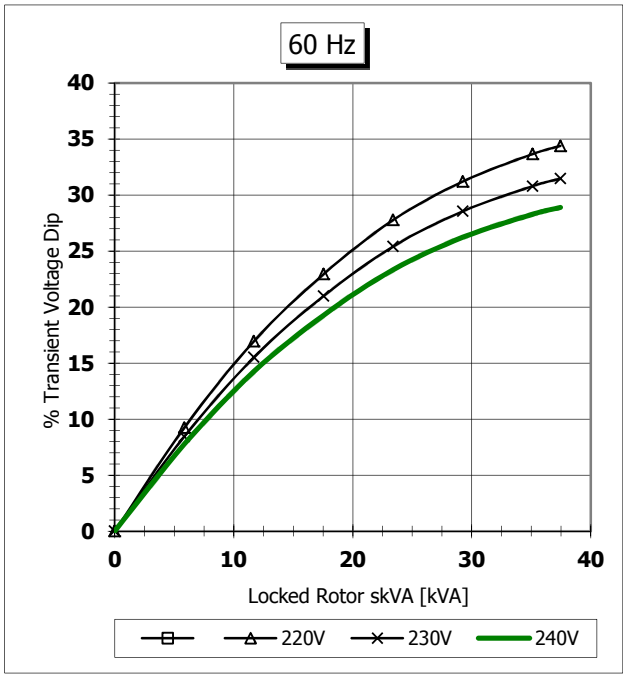
ECP 3 1L/4 1phase, dedicated 4 wire winding



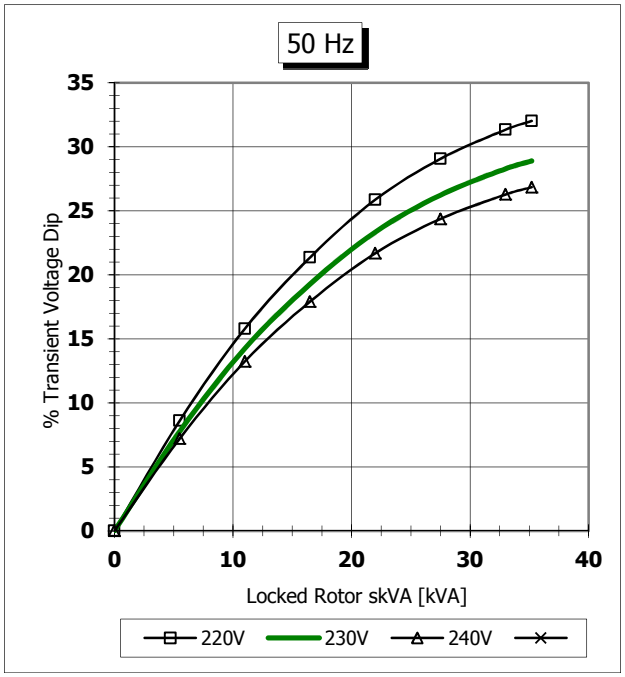


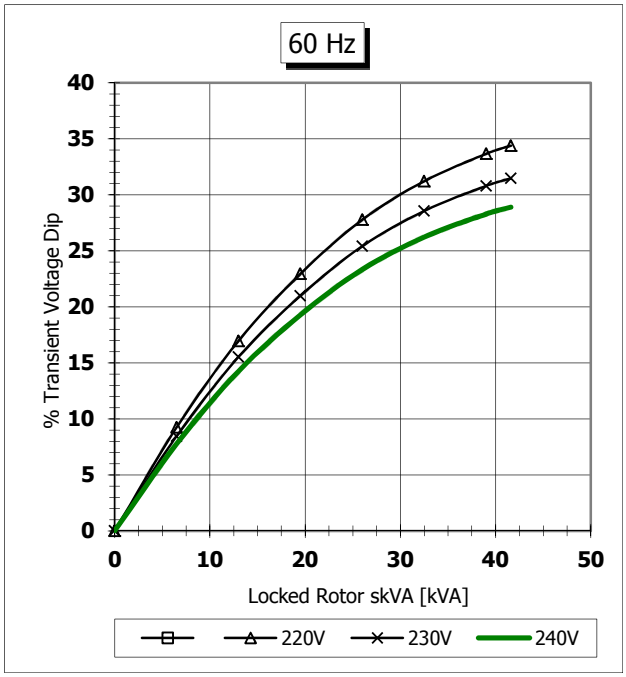
ECP 3 2L/4 1phase, dedicated 4 wire winding



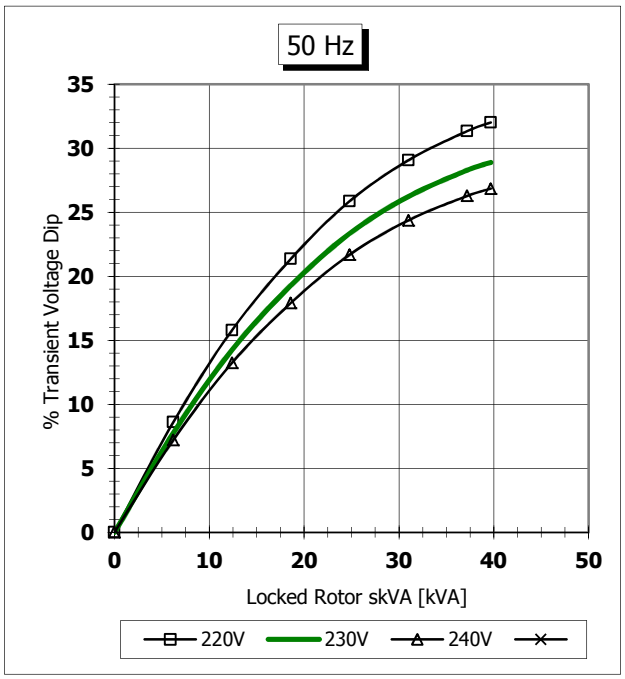


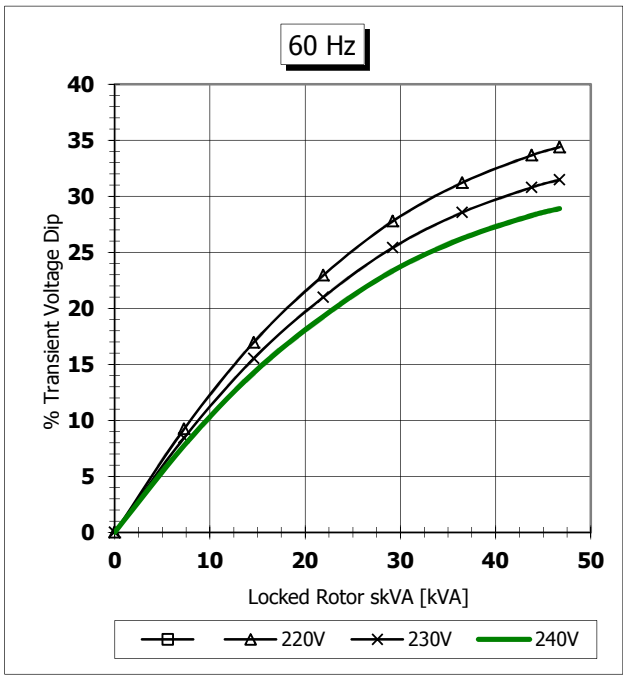
ECP 3 3L/4 1phase, dedicated 4 wire winding



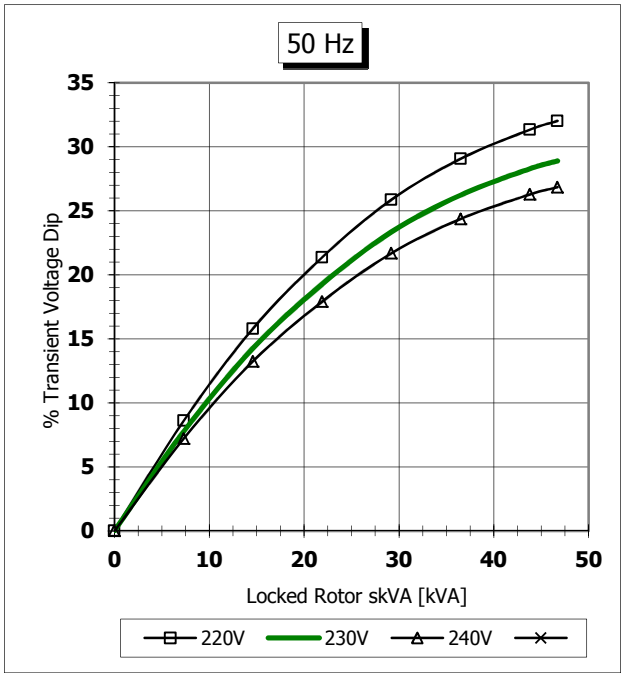


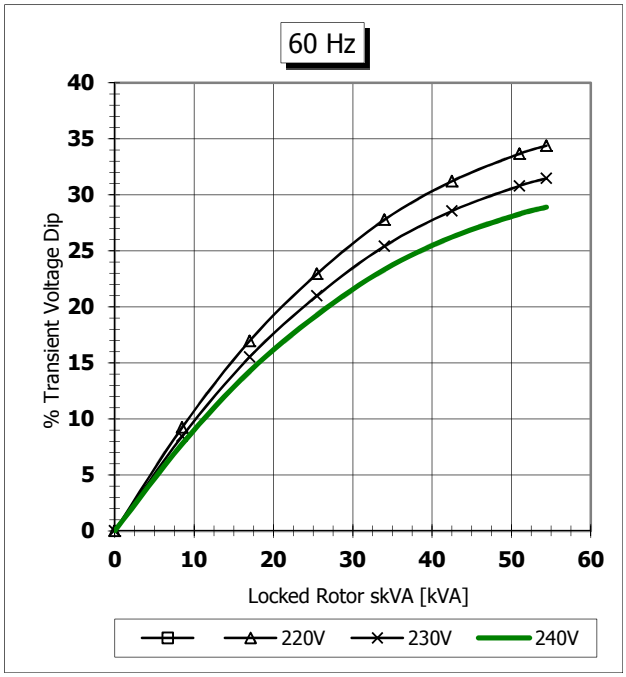
ECO 28 S/4 1phase, dedicated 4 wire winding



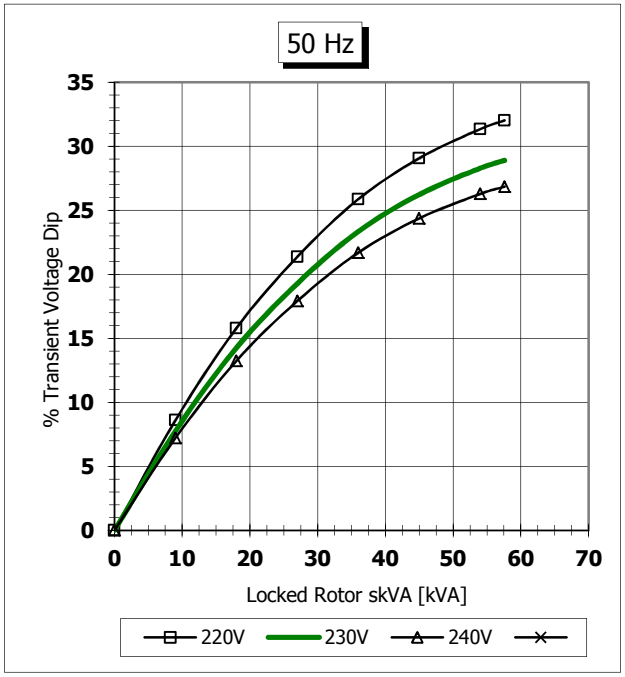


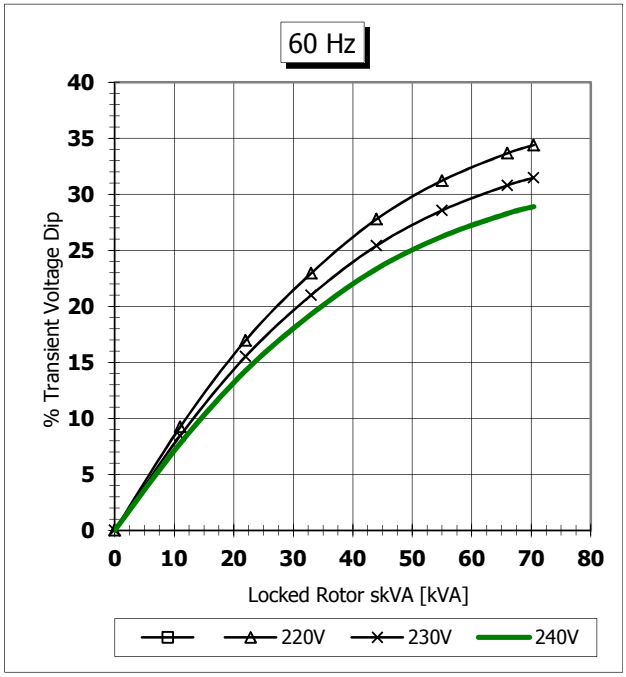
ECO 28 1L/4 1phase, dedicated 4 wire winding



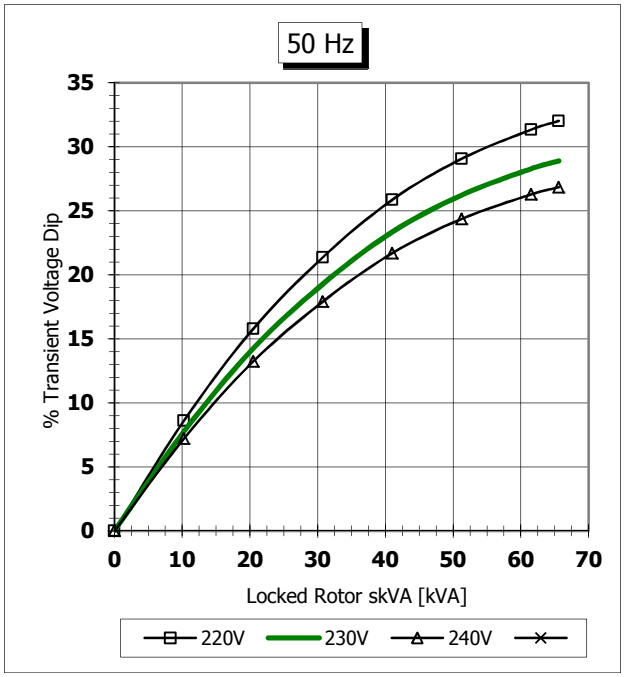


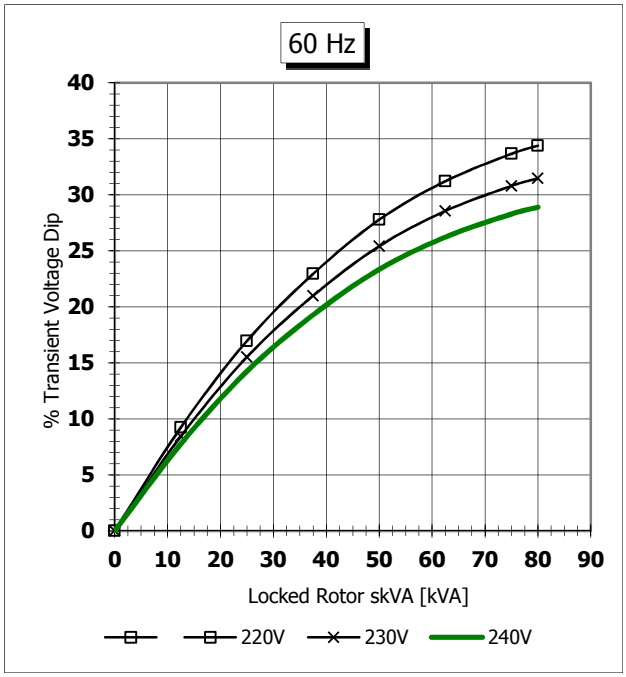
ECO 28 2L/4 1phase, dedicated 4 wire winding



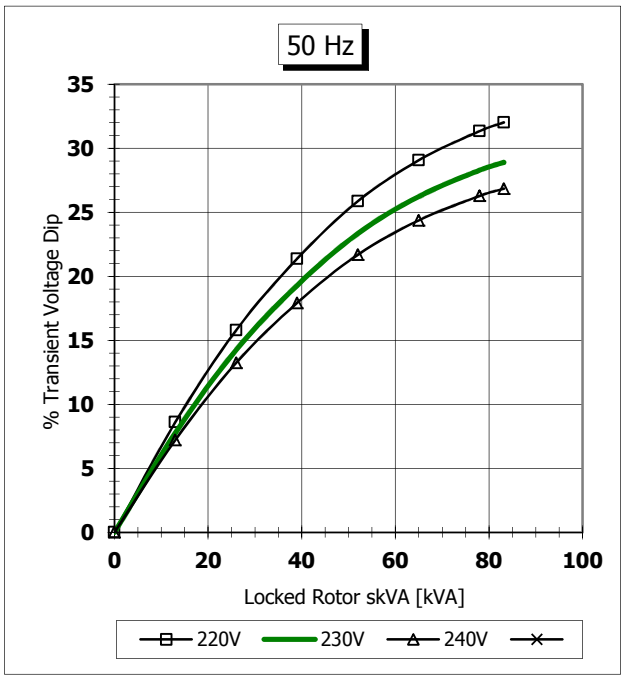


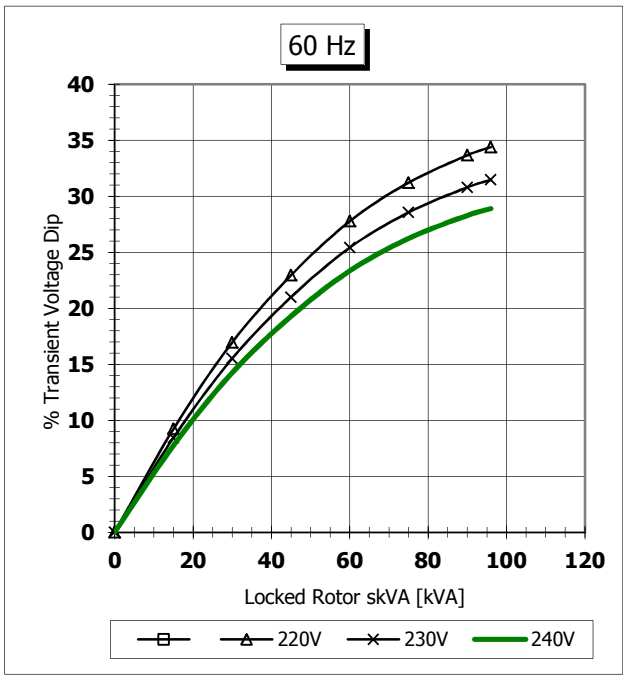
ECO 28 VL/4 1phase, dedicated 4 wire winding



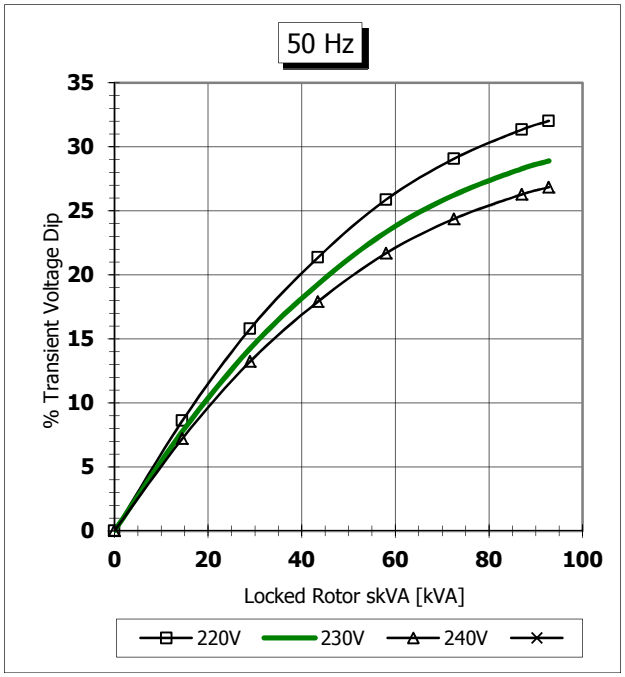


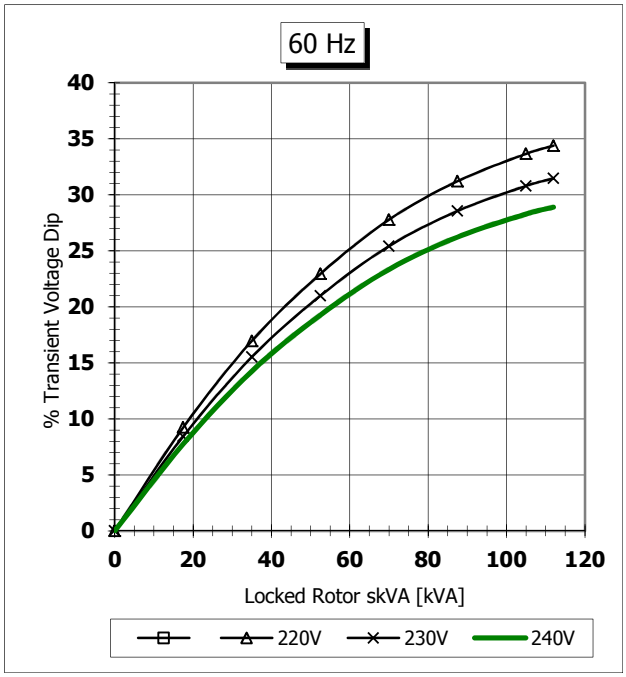
ECO 32 2S/4 1phase, dedicated 4 wire winding



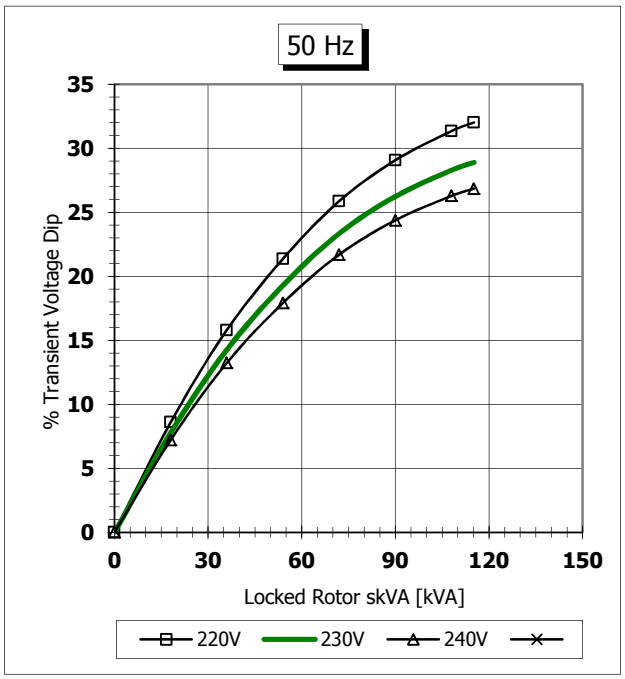


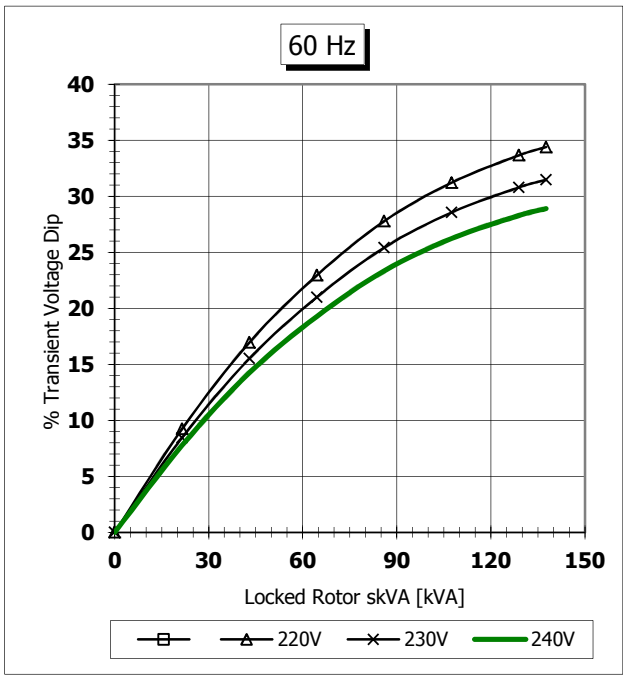
ECO 32 3S/4 1phase, dedicated 4 wire winding



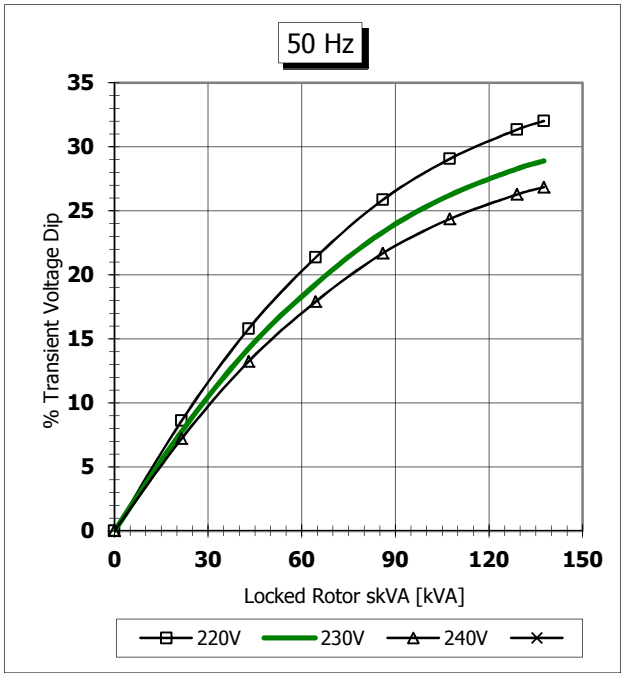


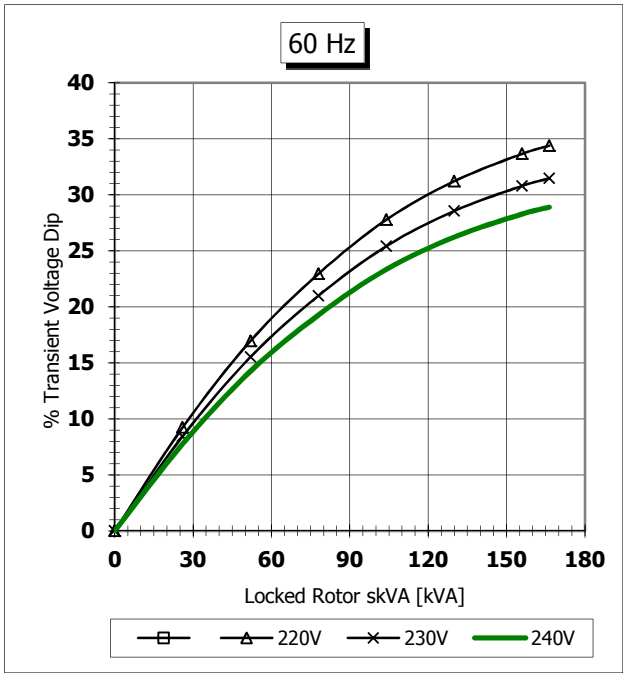
ECO 32 1L/4 1phase, dedicated 4 wire winding



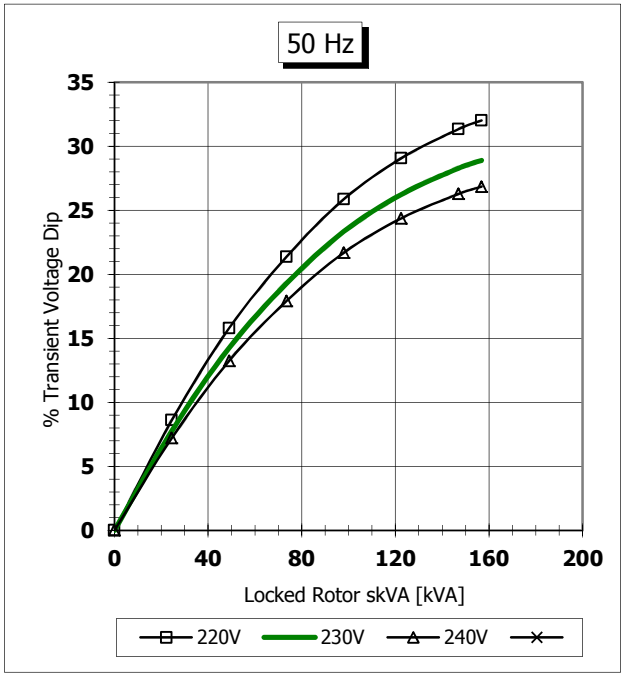


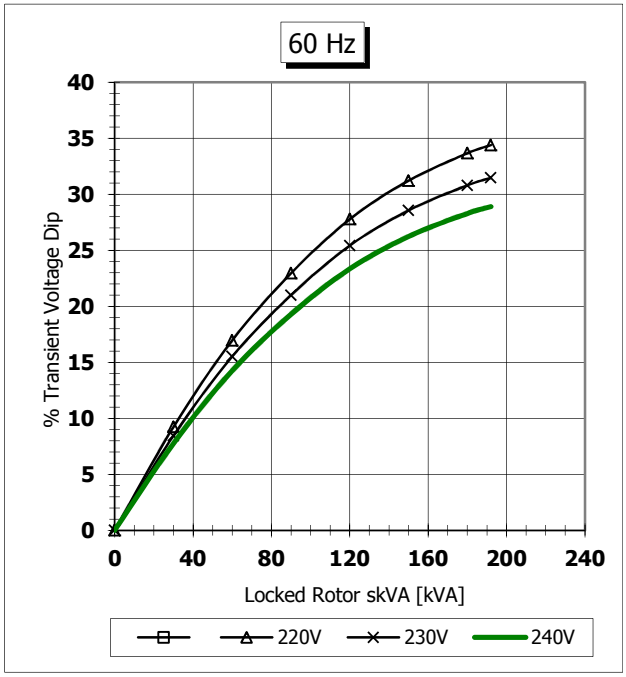
ECO 32 2L/4 1phase, dedicated 4 wire winding



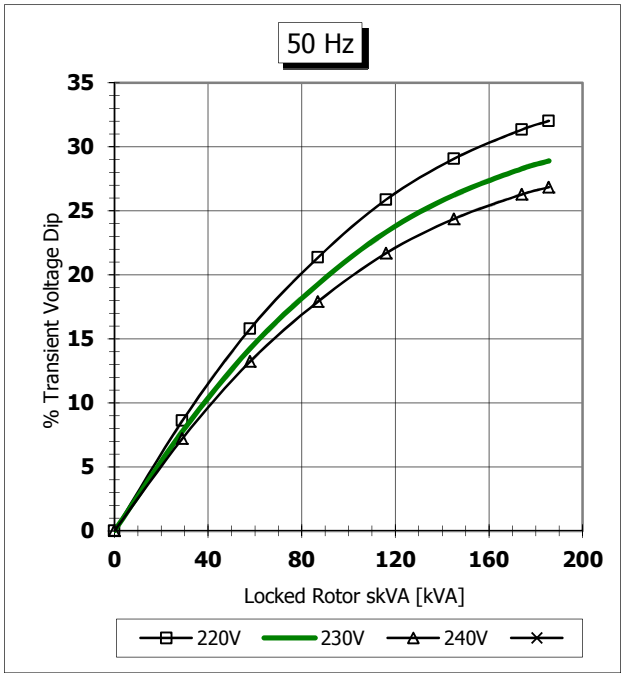


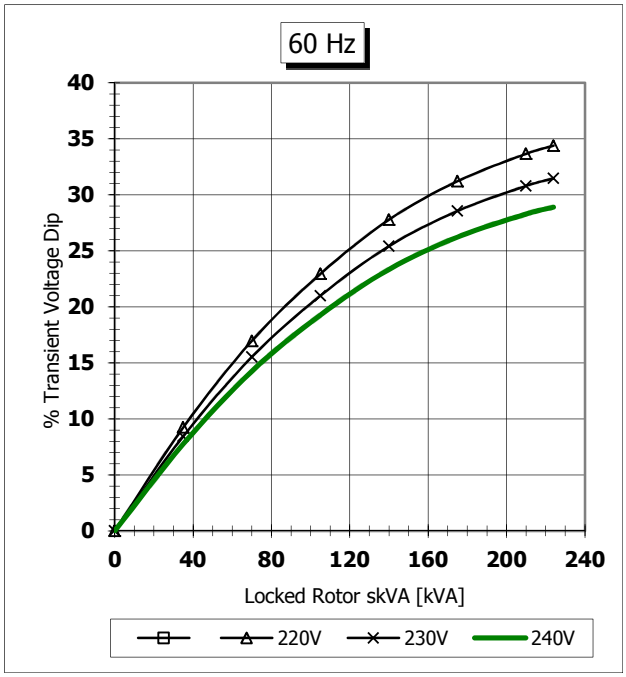
ECO 32 3L/4 1phase, dedicated 4 wire winding



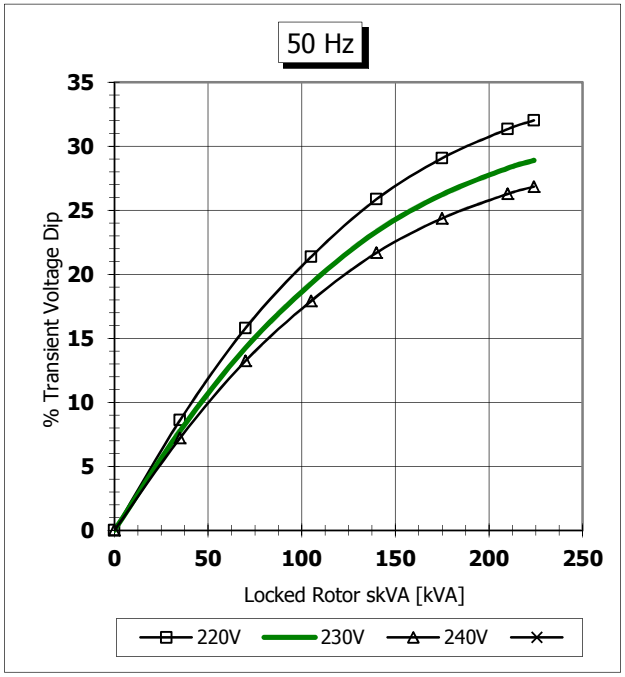


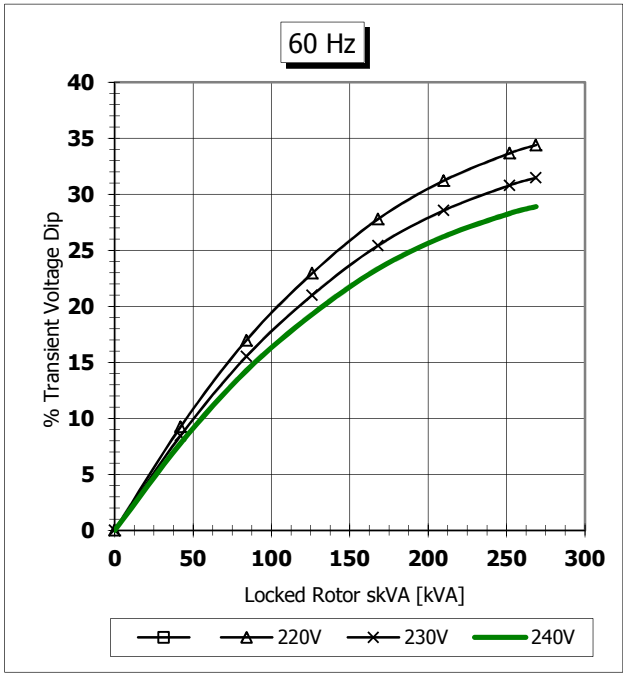
ECP 34 1S/4 1phase, dedicated 4 wire winding



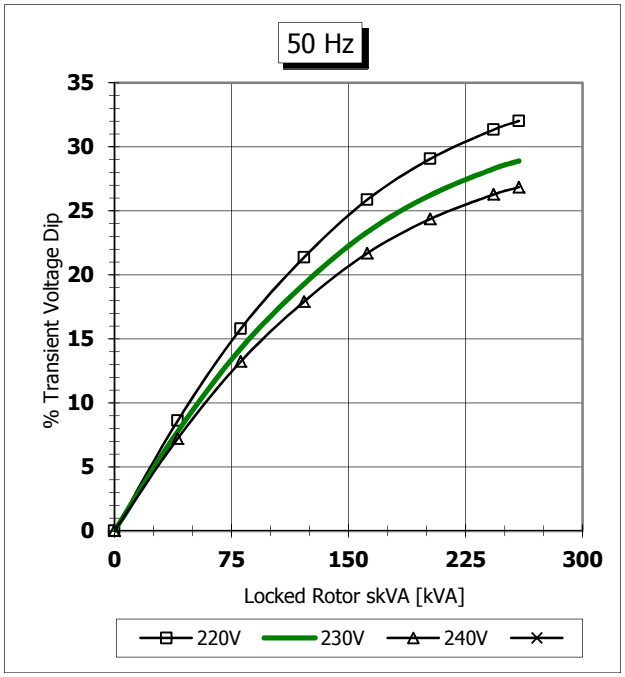


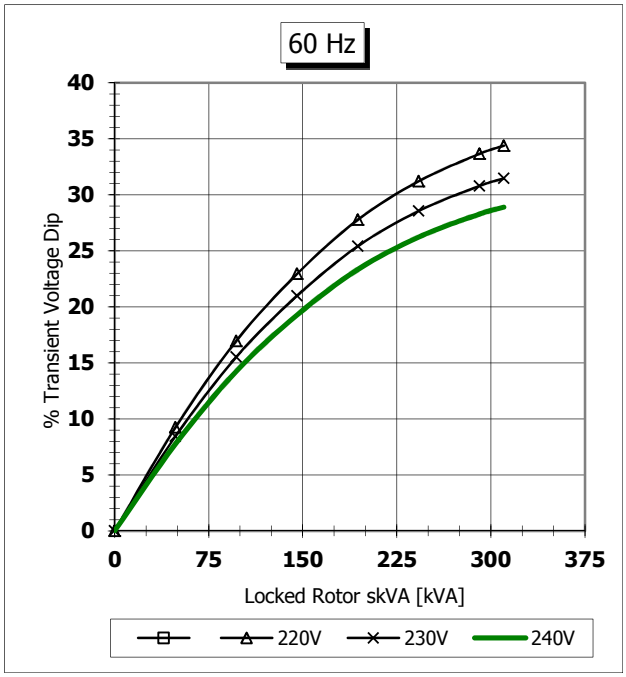
ECP 34 2S/4 1phase, dedicated 4 wire winding



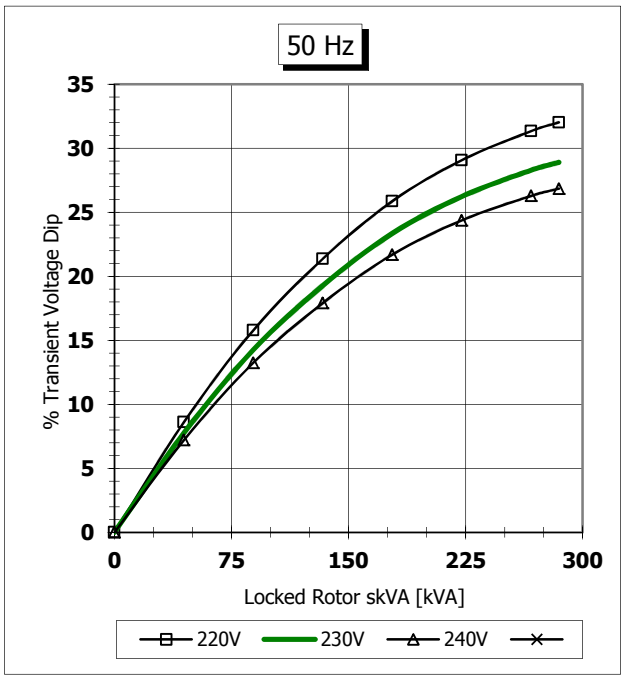


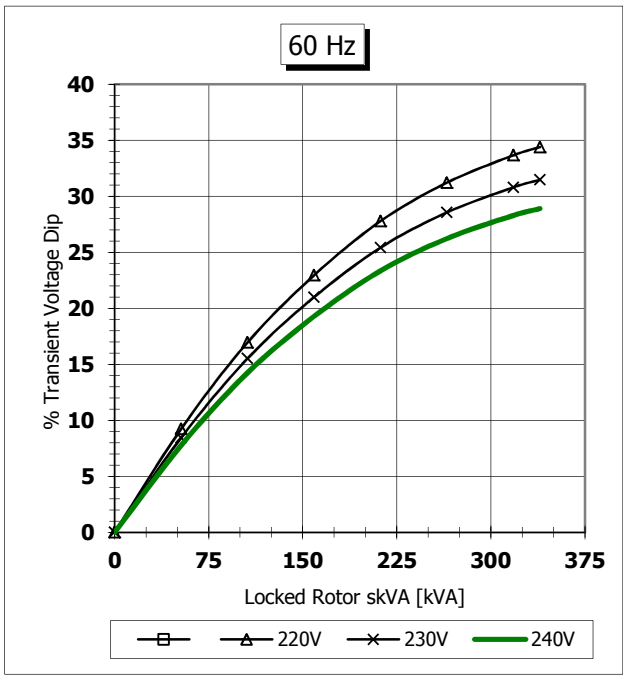
ECP 34 1L/4 1phase, dedicated 4 wire winding



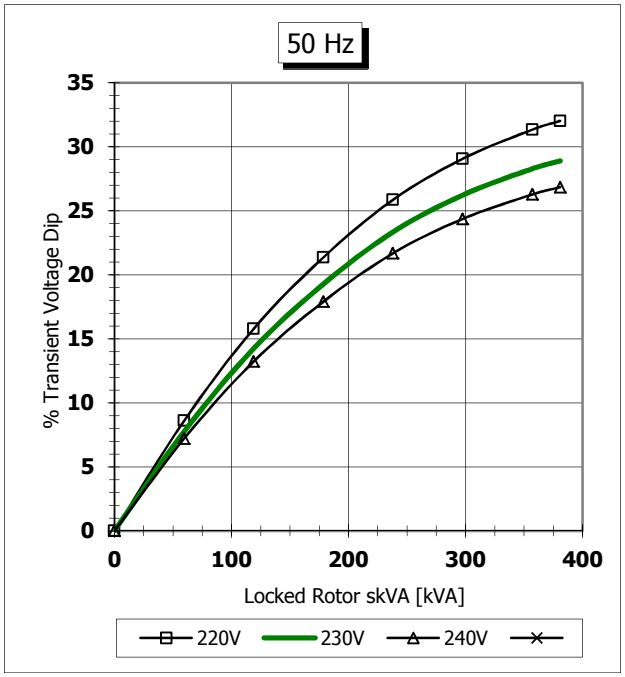


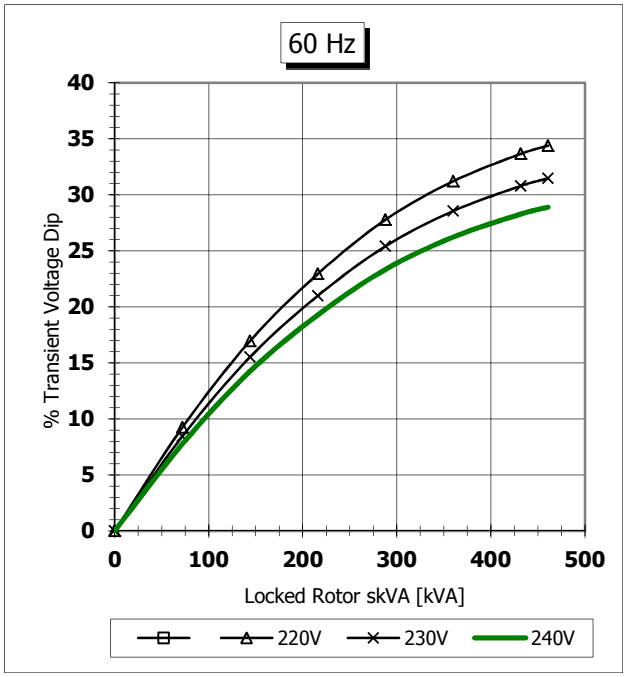
ECP 34 2L/4 1phase, dedicated 4 wire winding



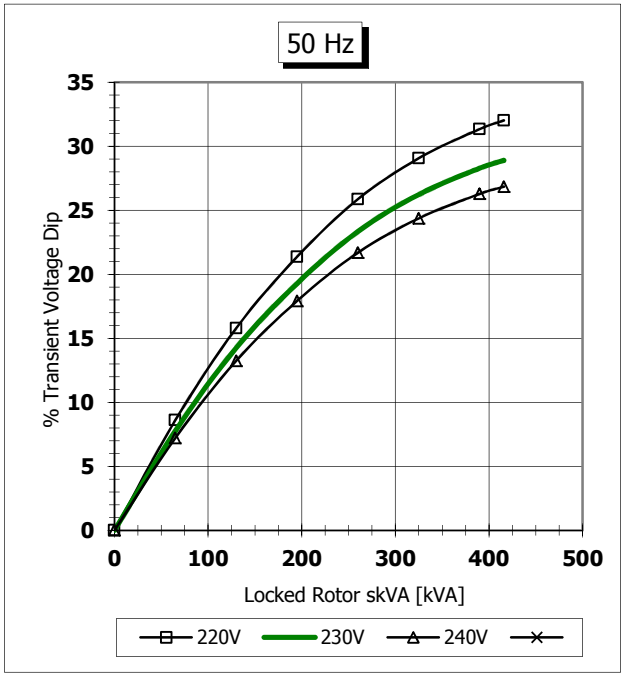


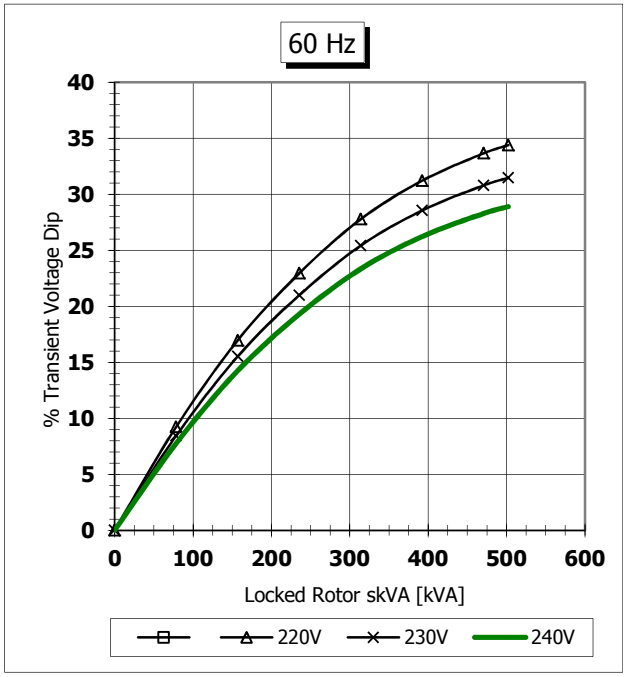
ECO 38 1S/4 1phase, dedicated 4 wire winding



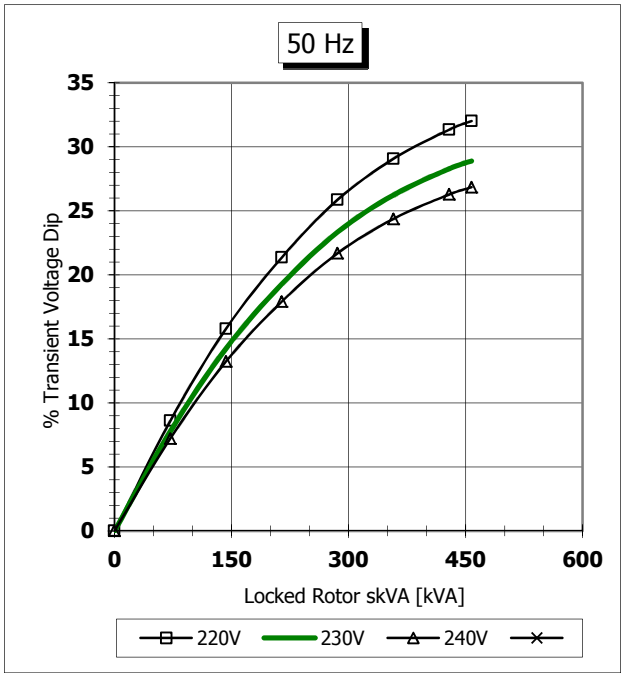


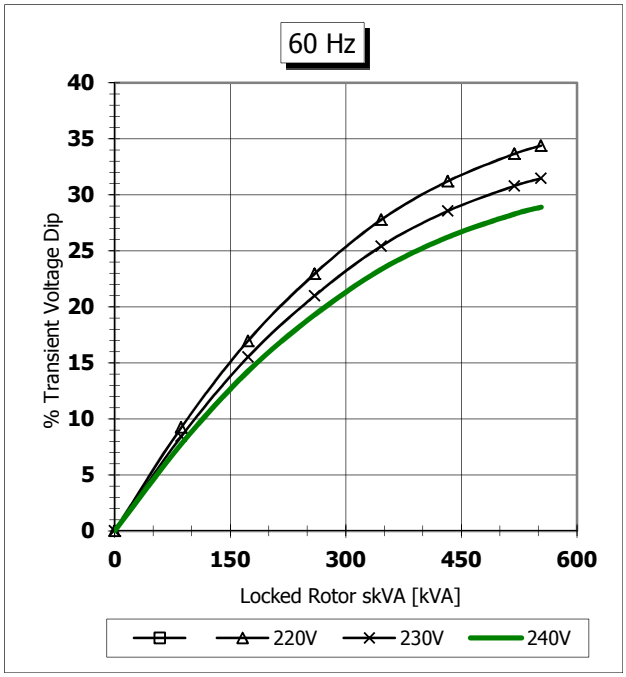
ECO 38 2S/4 1phase, dedicated 4 wire winding



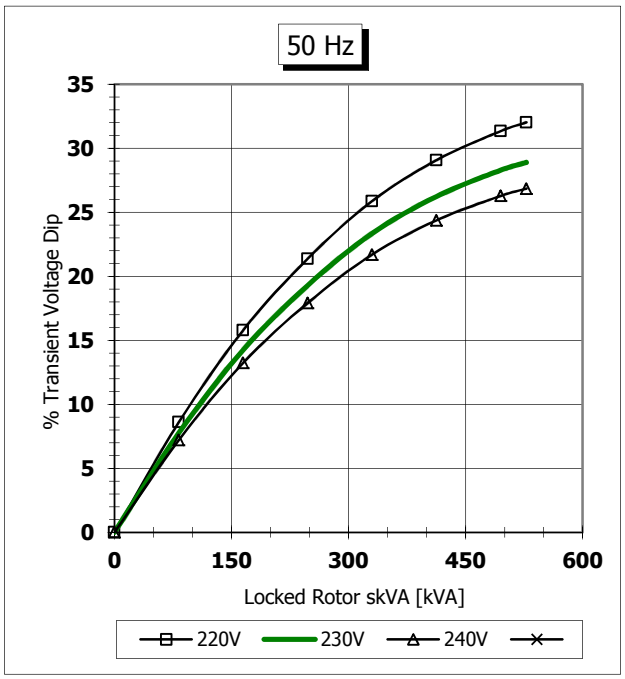


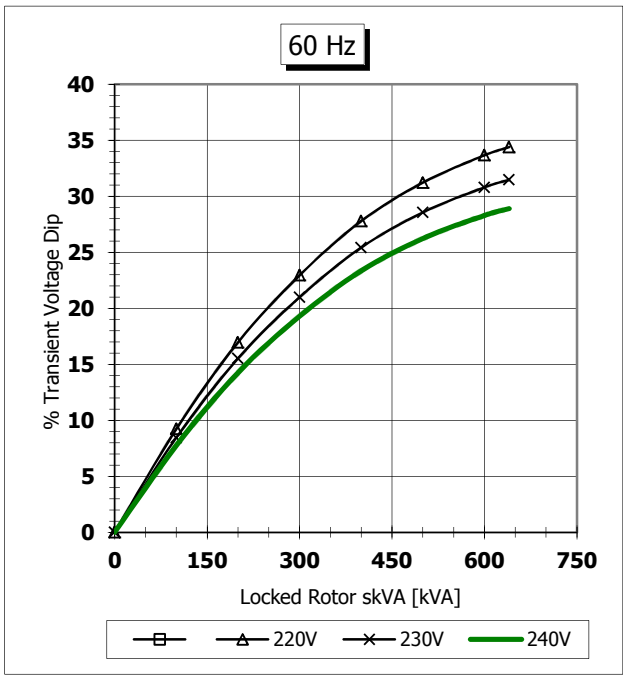
ECO 38 3S/4 1phase, dedicated 4 wire winding



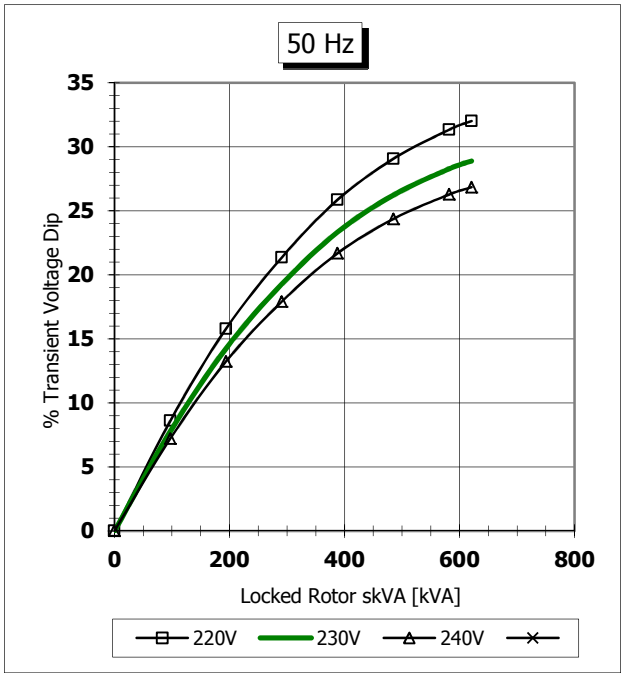


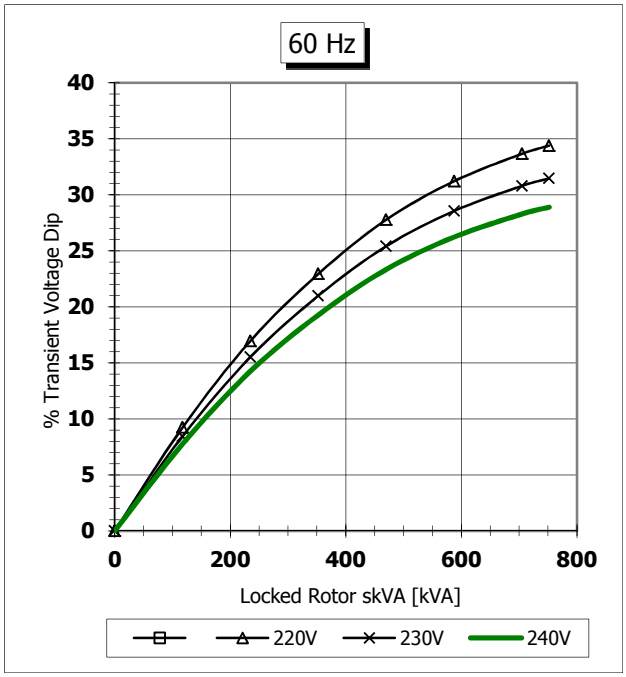
ECO 38 1L/4 1phase, dedicated 4 wire winding



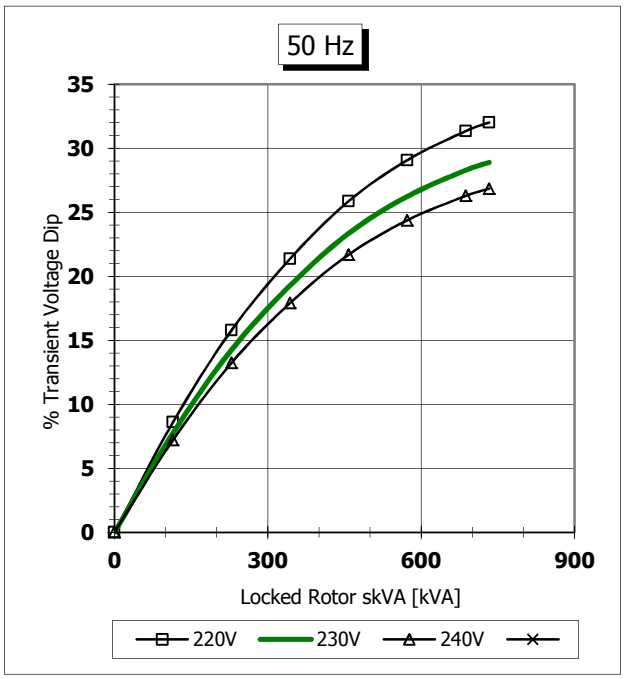


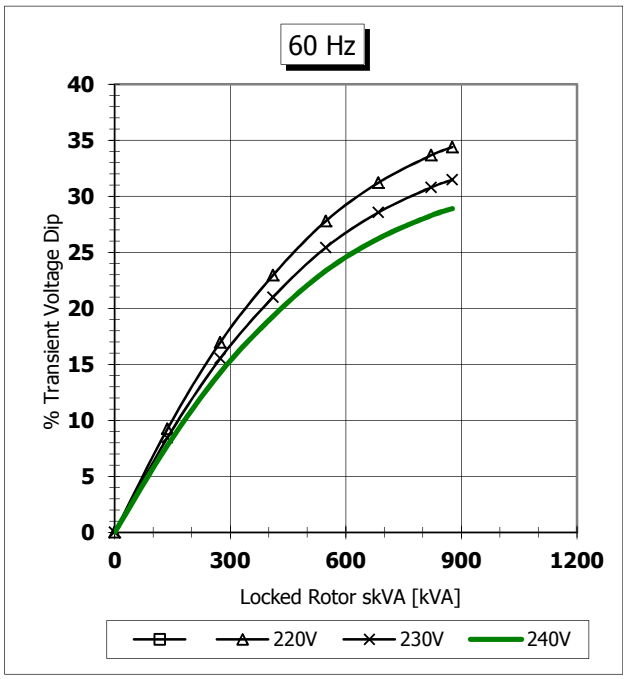
ECO 38 2L/4 1phase, dedicated 4 wire winding



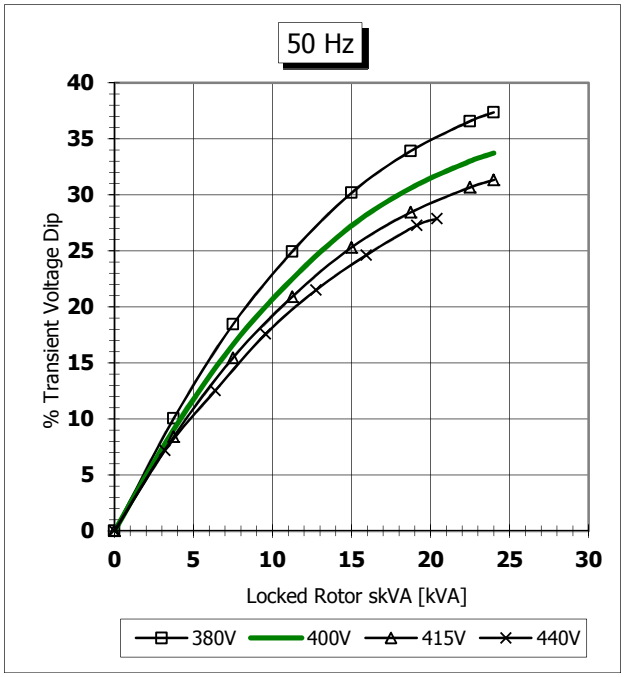


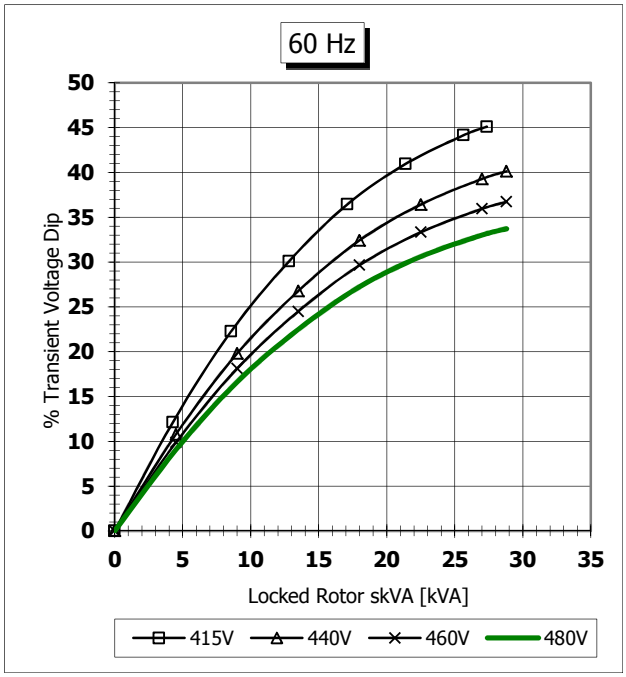
ECO 38 3L/4 1phase, dedicated 4 wire winding



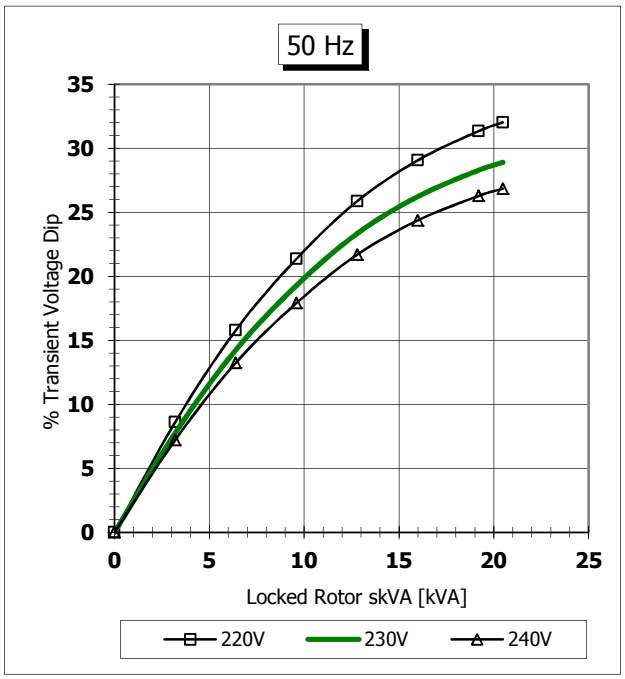


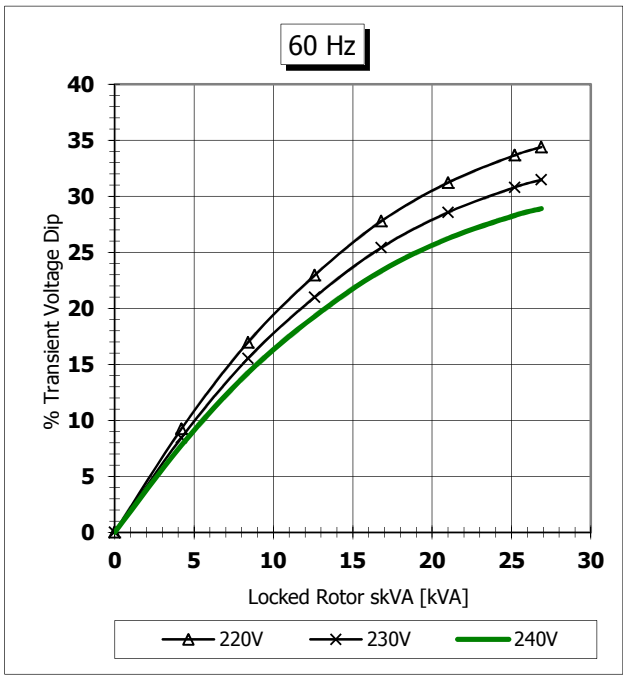
NPE 32 A/4 3Phase 12 lead machine



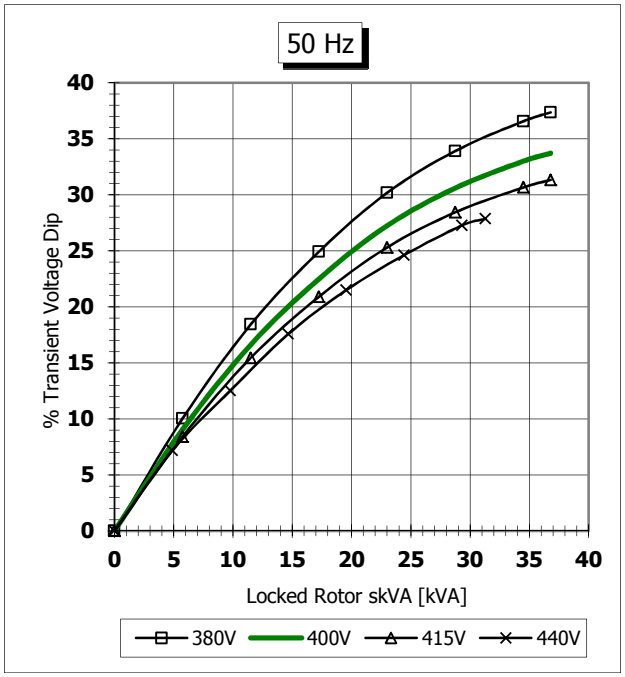


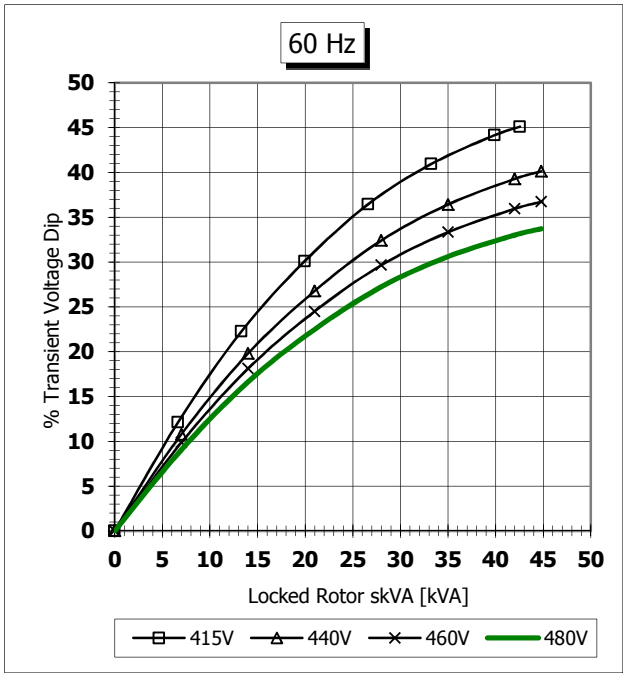
NPE 32 A/4 1phase, dedicated 4 wire winding



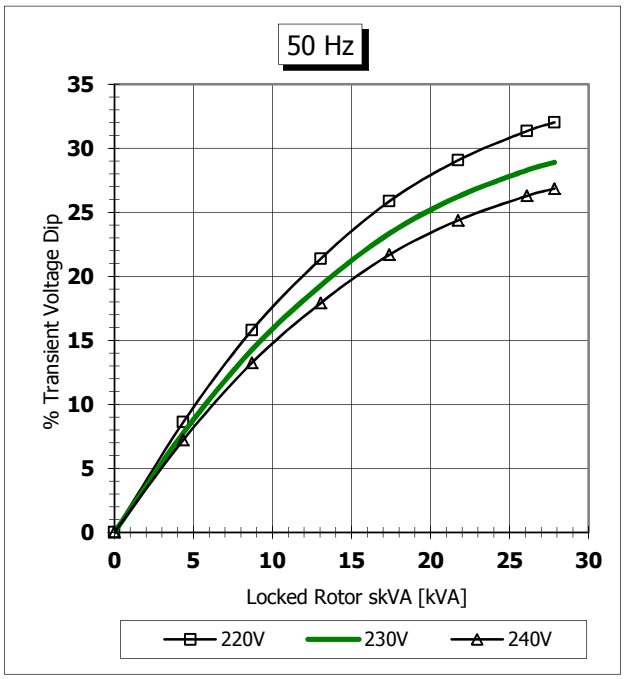


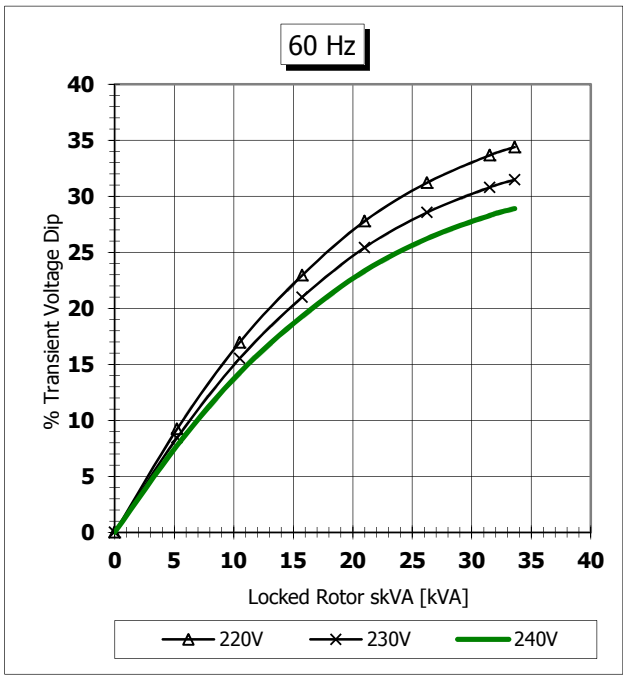
NPE 32 B/4 3Phase 12 lead machine



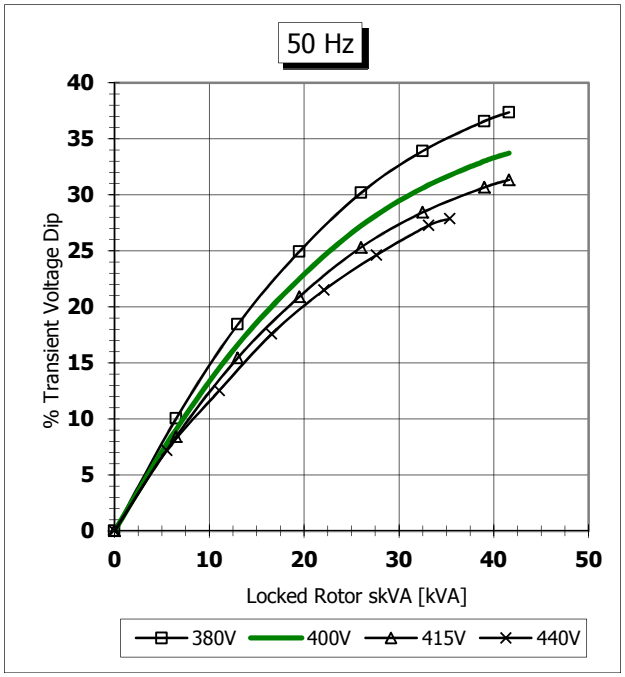


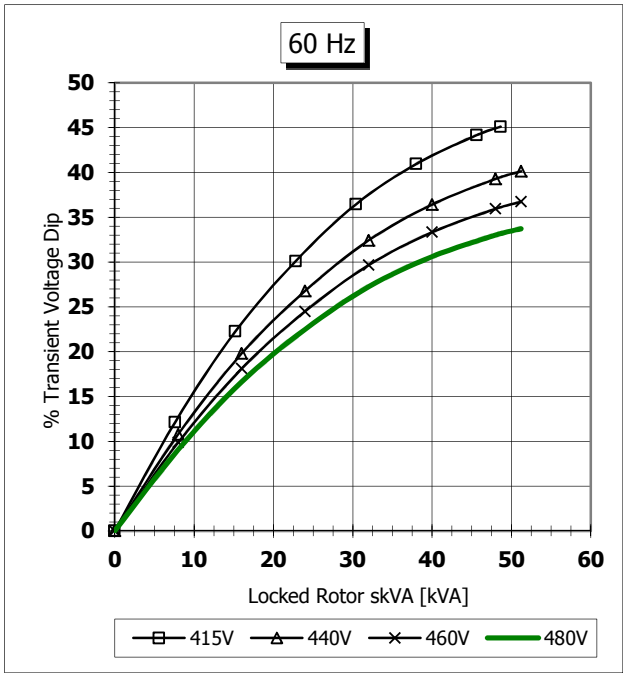
NPE 32 B/4 1phase, dedicated 4 wire winding



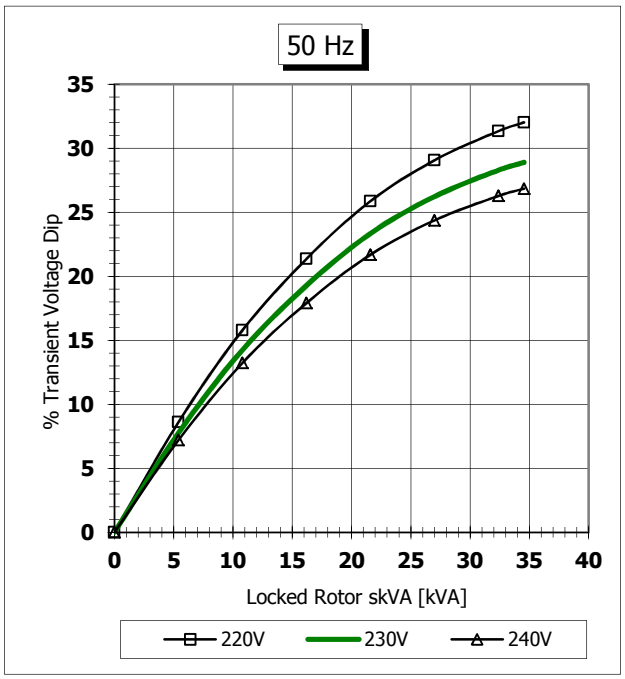


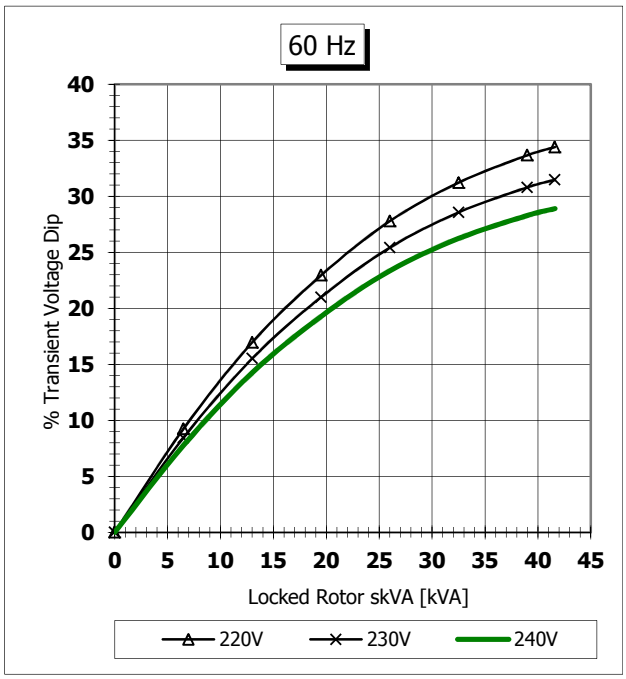
NPE 32 C/4 3Phase 12 lead machine



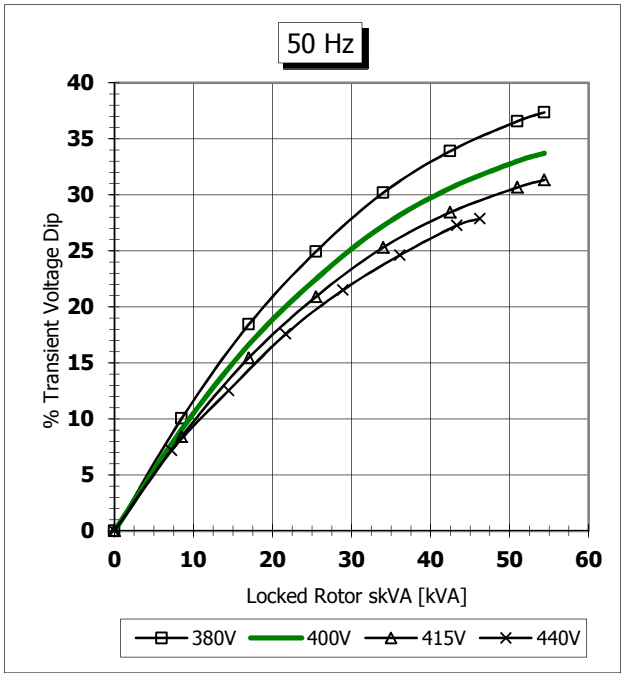


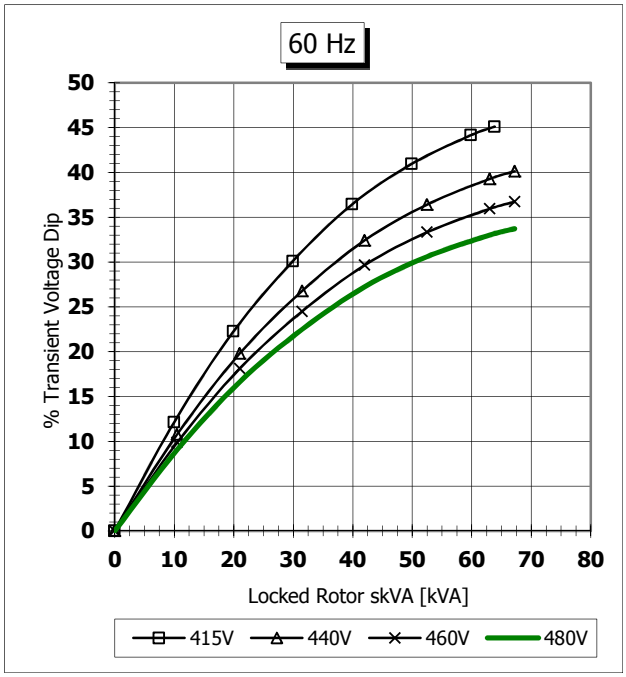
NPE 32 C/4 1phase, dedicated 4 wire winding



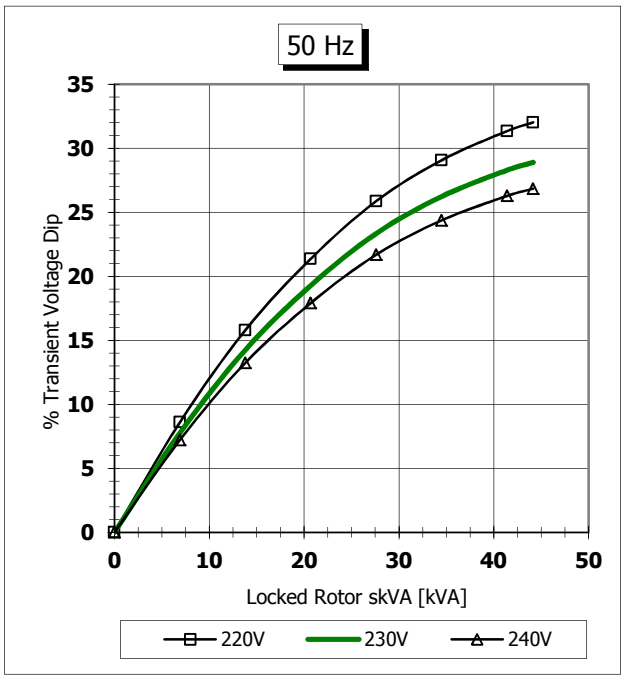


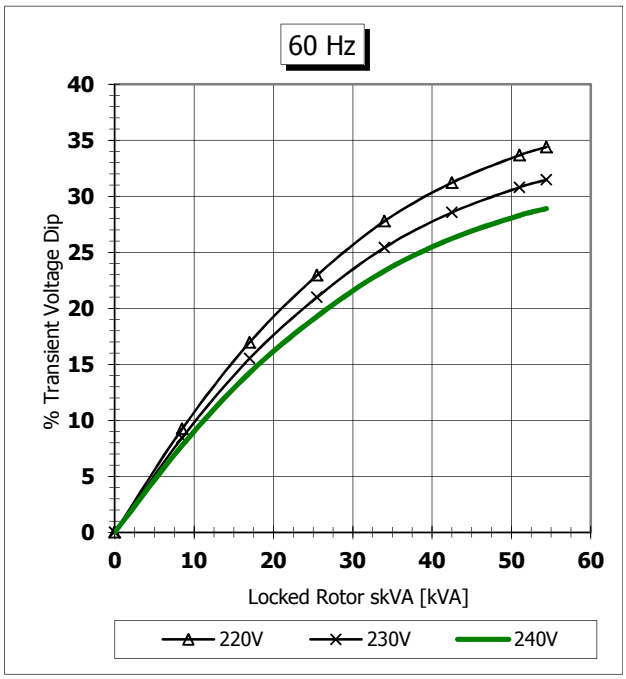
NPE 32 D/4 3Phase 12 lead machine



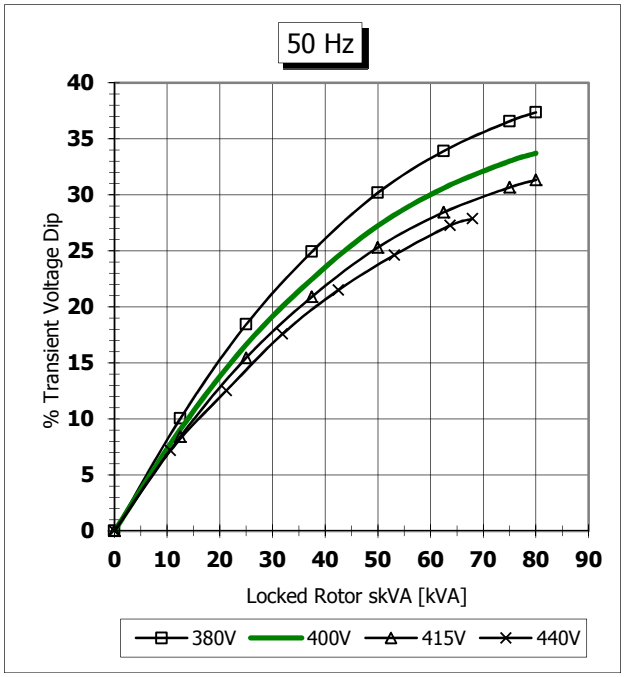


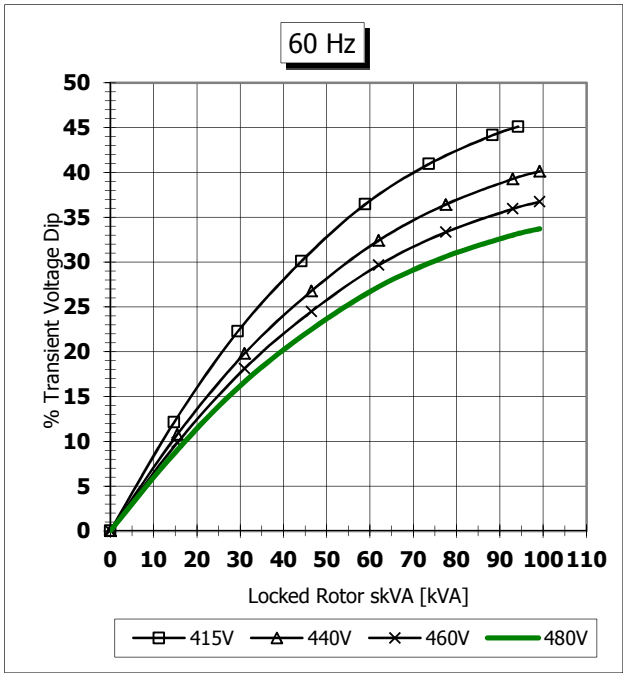
NPE 32 D/4 1phase, dedicated 4 wire winding



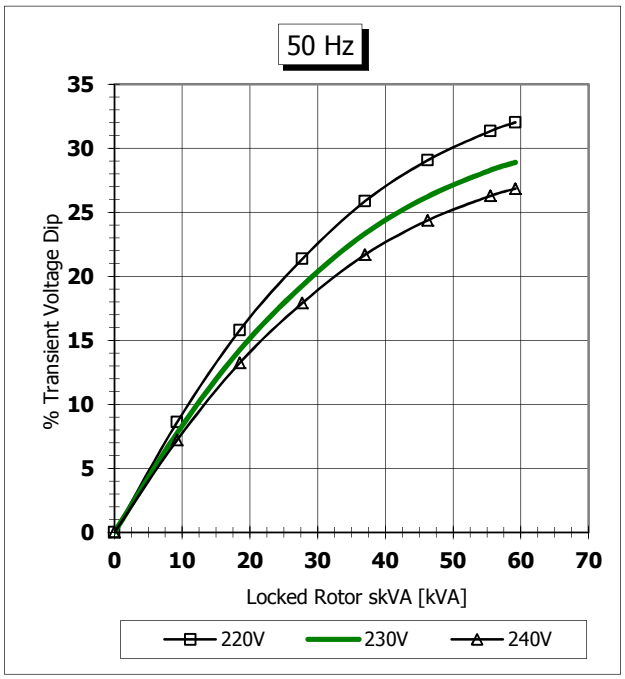


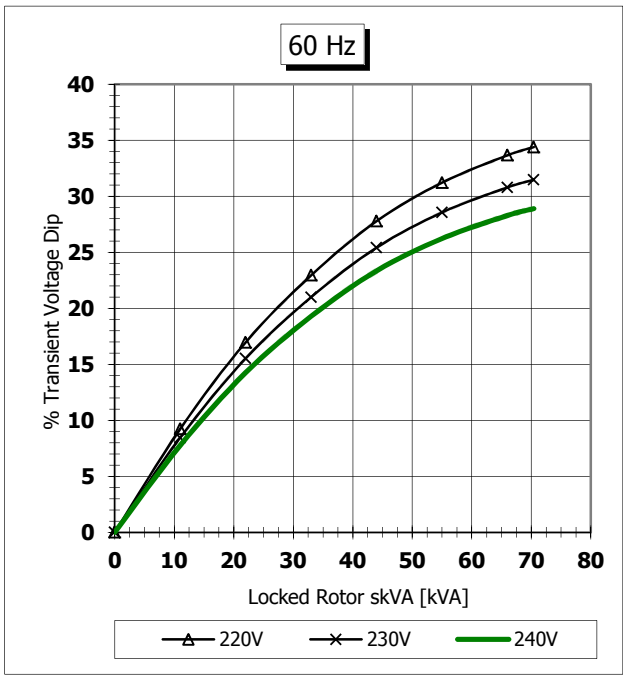
NPE 32 E/4 3Phase 12 lead machine



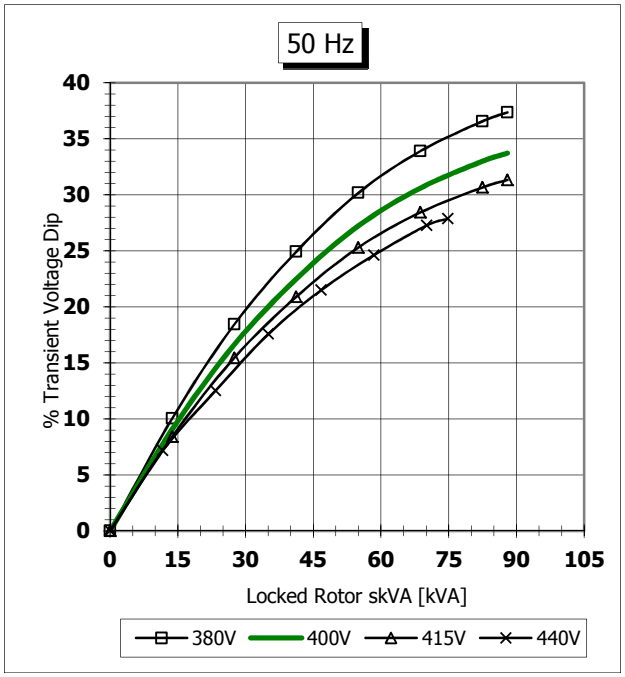


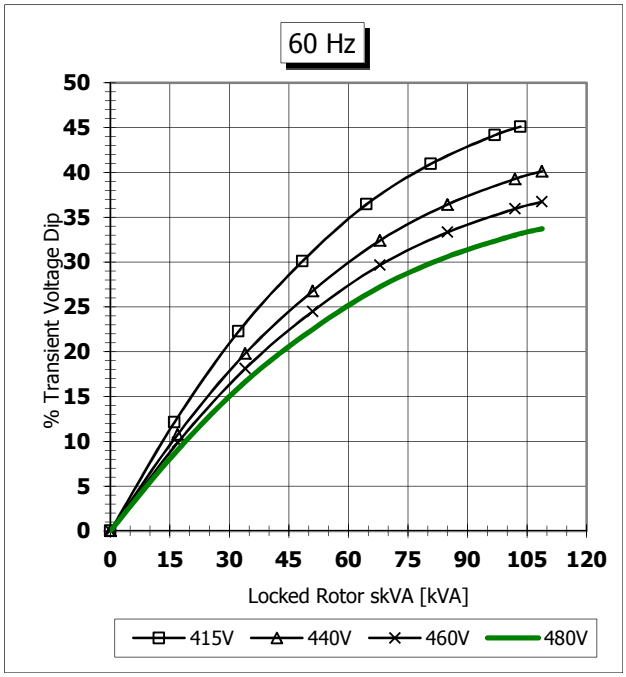
NPE 32 E/4 1phase, dedicated 4 wire winding



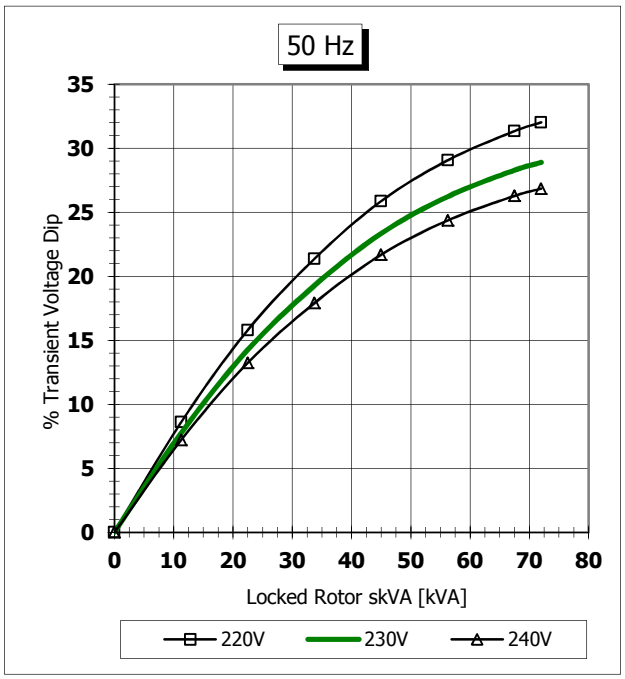


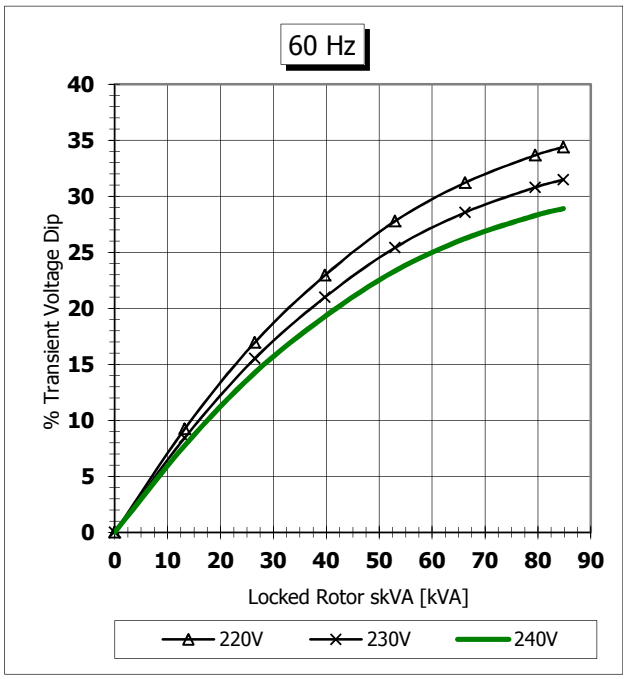
NPE 32 F/4 3Phase 12 lead machine





NPE 32 F/4 1phase, dedicated 4 wire winding





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