# Rectifier Tables: Triphasic Uncontrolled

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## Table of contents

# 1 Rectifier Tables

1. Monophasic Uncontrolled Rectifiers with R load
2. Monophasic Uncontrolled Full Wave Rectifier loads
3. Monophasic Controlled Full Wave Rectifier, R vs RL load
4. **Triphasic Uncontrolled Rectifiers with R load**
5. Triphasic Controlled Half Wave Rectifier, R vs RL load
6. Triphasic Controlled Full Wave Rectifier, R vs RL load

## 1.1 Triphasic Uncontrolled Rectifiers with R load

| What | 3Φ Half Wave Rectifier | 3Φ Full Wave Rectifier |
|---|---|---|
| Circuit Diagram |  |  |
| $v_o$ |  |  |
| Peaks/period | 3 peaks/period | 3 peaks/period |
| Period | $\dfrac{2\pi}{3}$ | $\dfrac{2\pi}{6} = \dfrac{\pi}{3}$ |
| Integration limits | $\dfrac{\pi}{6}, \dfrac{5\pi}{6}$ | $\dfrac{\pi}{3}, \dfrac{2\pi}{3}$ |
| Load Voltage | Phase Voltage | Line Voltage |
| $\bar{v}_o$ | $\bar{v}_o = \dfrac{1}{\frac{2\pi}{3}} \displaystyle\int_{\frac{\pi}{6}}^{\frac{5\pi}{6}} V_{PN}\sin(\theta)\, d\theta$ <br><br> $\bar{v}_o = \dfrac{3V_{PN}}{2\pi}[-\cos(\theta)]_{\frac{\pi}{6}}^{\frac{5\pi}{6}}$ <br><br> $\bar{v}_o = \dfrac{3\sqrt{3}}{2\pi}V_{PN}$ | $\bar{v}_o = \dfrac{1}{\frac{\pi}{3}} \displaystyle\int_{\frac{\pi}{3}}^{\frac{2\pi}{3}} V_{LL}\sin(\theta)\, d\theta$ <br><br> $\bar{v}_o = \dfrac{3V_{LL}}{\pi}[-\cos(\theta)]_{\frac{\pi}{3}}^{\frac{2\pi}{3}}$ <br><br> $\bar{v}_o = \dfrac{3}{\pi}V_{LL}$ |
| Diode table | | |
| $i_o$ |  |  |

| $i_i$ |  |  |