# Vascular Settings *1064nm (with contact / dynamic cooling)*

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Size** | **100um** | **200um** | **300um** | **400um** | **500um** | **600um** | **700um** | **800um** | **900um** | **1.0mm** |
| **P/W** | **10ms** | **15ms** | **20ms** | **25ms** | **30ms** | **35ms** | **40ms** | **45ms** | **50ms** | **55ms** |

1. This algorithm will afford using the least amount of energy to effectively close vascular targets.
2. Use contact dynamic (PPP) cooling at 10 - 15oC for safety.
3. Starting at 80J/cm2 and titrating energies in increments of 10J/cm2 until desired response is achieved (stasis).
4. Using a 6mm spot, regardless of vessel diameter, will insure the vessel falls within the effective treatment zone.   
   For 200 um and less and when treating over bone or competing target’s in the area (male facial hair),   
   use a 3mm spot and double treatment energy range starting at 160 J/cm2.
5. Keep hand piece 90o to tissue plane.
6. Position patient in supine position to equalize pressures.
7. Use sapphire cooling in light contact. The use of optical coupling gel helps   
   step index the light into the skin and draw heat out post delivery.
8. You should find that a range of 80 – 120J/cm2 for 6mm spot and 160 – 240 J/cm2 for 3 mm   
   spot will be sufficient to effectively close most vessels regardless of color and or location.
9. Change only one perimeter at a time.
10. Once the fluence (J/cm2) has been established, pulse width is your key perimeter on remaining vessels.
11. Goals:
    1. Raise blood above 70oC
    2. Damage intima
    3. Contract Type I & Type III collagen surrounding vessel
    4. Achieve vessel stasis (no purge and refill)

* Treatment range for 6mm spot: 80 - 120J/cm2
* Treatment range for 3mm spot: 180 - 240J/cm2

When using 532nm wavelength:

* Treatment range is: 8 – 12 J/cm2
* 1 J/cm2 adjustments increments

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***Reference:*** *A USEFUL ALGORITHM FOR DETERMINING FLUENCE AND PULSE WIDTH FOR VASCULAR TARGETS USING 1064 NM ND: YAG LASER IN AN ANIMAL MODEL, American Society of Laser Medicine and Surgery*