Soft Cap:

10k (icy tempest boost applies to this for melee)

Crit Cap:

12k w/o Grim, 15k w/
Multiply by smoke cloud based on style & icy tempest here as well

Bleeds not affected by:

Prayers
Ults (minus meta)
ZGS
Berserker Fury relic
Precise, equilibrium
Crits

Bleeds affected by:

Equipment damage bonus
Visible boosts
Vuln
Zerk style auras (invisible boost negated under ult)
Mahjarrat and dark magic (does work with db ult)
Scrims
Wen arrows icy precision

Include ful arrows with prayer mod for range

Speed Multipliers

Fastest: 1, 1
Fast: 1.25, (12.25 / 9.6)
Average: 1.5, (14.9 / 9.6)

Weapon Handedness

2H: 1.5, 3.75
MH: 1, 2.5
OH: .5, 1.25

Weapon Damage

RoundDown(9.6 * SpeedMultipliersColumn2 * damage tier * WeaponHandednessColumn1)

Skill Bonus

Round((visible boosted cmb lvl * WeaponHandednessColumn2 - 1) * SpeedMultipliersColumn1)

Combat Style Bonus

Round(SpeedMultipliersColumn2 * Equipped Bonus * WeaponHandednessColumn1)

Bleed Inclusive
*set bleedexclusive to 1 to start

(1 + PocketDamageIncrease)
*
(1 + vuln increase)
*
Aura modifier

Auto Damage

WeaponDamage + Skill Bonus + Combat Style Bonus
If using hexhunter or equivalent, multiply by value (1.125 or 1.175 depending on if enchantment is unlocked)
RoundDown

Ability Damage

RoundDown(Damage Tier * 9.6 * WeaponHandednessColumn1)
+
RoundDown(BoostedLevel * WeaponHandednessColumn2)
+
RoundDown(Equipped Bonus * WeaponHandednessColumn1)

If using hexhunter or equivalent, multiply by value (1.125 or 1.175 depending on if enchantment is unlocked)
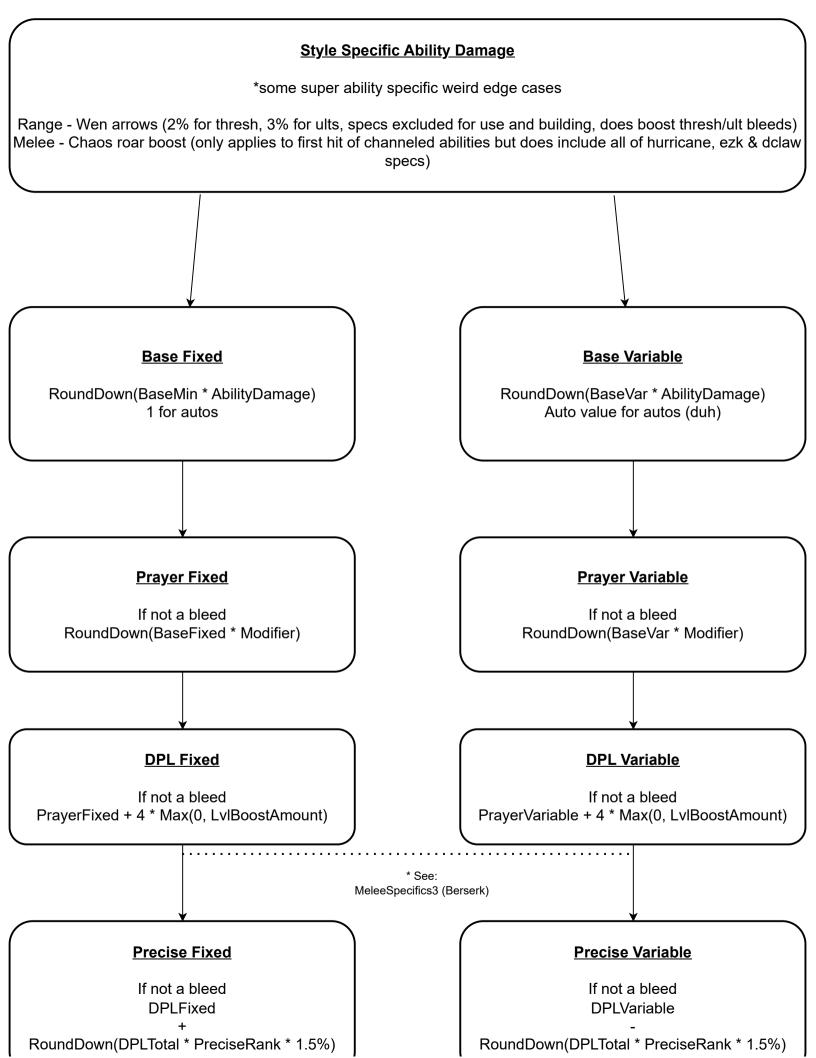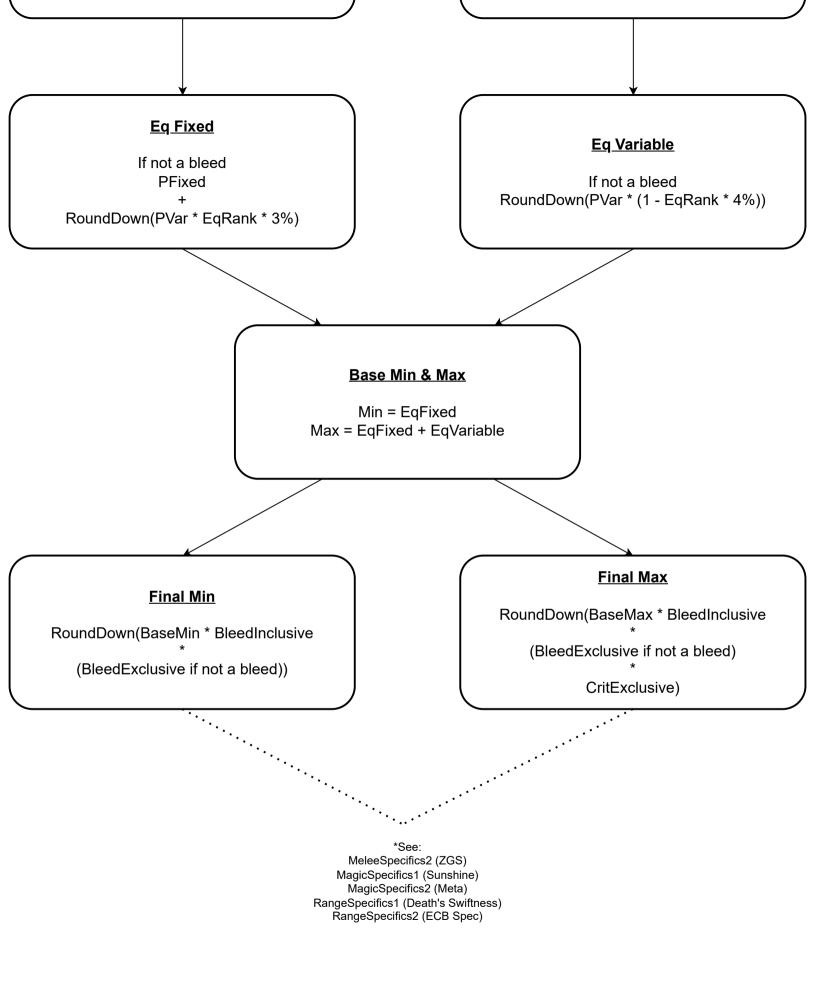RoundDown

Crit Exclusive

*Mage crit increase only applies to channel abilities

Mage crit increase only applies to channel abilities

smoke cloud crit damage increase * combat style ring crit increase

Style Specific Ability Damage

*some super ability specific weird edge cases

Range - Wen arrows (2% for thresh, 3% for ults, specs excluded for use and building, does boost thresh/ult bleeds)
Melee - Chaos roar boost (only applies to first hit of channeled abilities but does include all of hurricane, ezk & dclaw specs)

Base Fixed

RoundDown(BaseMin * AbilityDamage)
1 for autos

Base Variable

RoundDown(BaseVar * AbilityDamage)
Auto value for autos (duh)

Prayer Fixed

If not a bleed
RoundDown(BaseFixed * Modifier)

Prayer Variable

If not a bleed
RoundDown(BaseVar * Modifier)

DPL Fixed

If not a bleed
PrayerFixed + 4 * Max(0, LvlBoostAmount)

DPL Variable

If not a bleed
PrayerVariable + 4 * Max(0, LvlBoostAmount)

* See:
MeleeSpecifics3 (Berserk)

Precise Fixed

If not a bleed
DPLFixed
+
RoundDown(DPLTotal * PreciseRank * 1.5%)

Precise Variable

If not a bleed
DPLVariable
-
RoundDown(DPLTotal * PreciseRank * 1.5%)

Eq Fixed

If not a bleed
PFixed
+
RoundDown(PVar * EqRank * 3%)

Eq Variable

If not a bleed
RoundDown(PVar * (1 - EqRank * 4%))

Base Min & Max

Min = EqFixed
Max = EqFixed + EqVariable

Final Min

RoundDown(BaseMin * BleedInclusive
*
(BleedExclusive if not a bleed))

Final Max

RoundDown(BaseMax * BleedInclusive
*
(BleedExclusive if not a bleed)
*
CritExclusive)

*See:
MeleeSpecifics2 (ZGS)
MagicSpecifics1 (Sunshine)
MagicSpecifics2 (Meta)
RangeSpecifics1 (Death's Swiftness)
RangeSpecifics2 (ECB Spec)

2 - ZGS Min

If not a bleed
RoundDown(FinalMin * 1.25)

2 - ZGS Max

If not a bleed
RoundDown(FinalMax * 1.25)

3 - Berserker Flow

Berserk Mod Fixed

Aura = 1.1 for zerk, 1 otherwise

If bleed
RoundDown(DPLFixed / Aura)

If not a bleed
RoundDown(DPLFixed * 2 / Aura)

Berserk Mod Var

Aura = 1.1 for zerk, 1 otherwise

If bleed
RoundDown(DPLVar / Aura)

If not a bleed
RoundDown(DPLVar * 2 / Aura)

Rest of the process continues as normal starting with Precise

1 - Sunshine Flow

Sunshine Final Min

Aura = 1.1 if mani, 1 otherwise

If bleed
RoundDown(FinalMin / Aura)

If not a bleed
RoundDown(FinalMin / Aura * 1.5)

Sunshine Final Max

Aura = 1.1 if mani, 1 otherwise

If bleed
RoundDown(FinalMax / Aura)

If not a bleed
RoundDown(FinalMax / Aura * 1.5)

2 - Meta Flow

Meta Final Min

Aura = 1.1 if mani, 1 otherwise

RoundDown(FinalMin / Aura * 1.625)

Meta Final Max

Aura = 1.1 if mani, 1 otherwise

RoundDown(FinalMax / Aura * 1.625)

1 - Death's Swiftness

DS Final Min

Aura = 1.1 if reckless, 1 otherwise

If bleed
RoundDown(FinalMin / Aura)
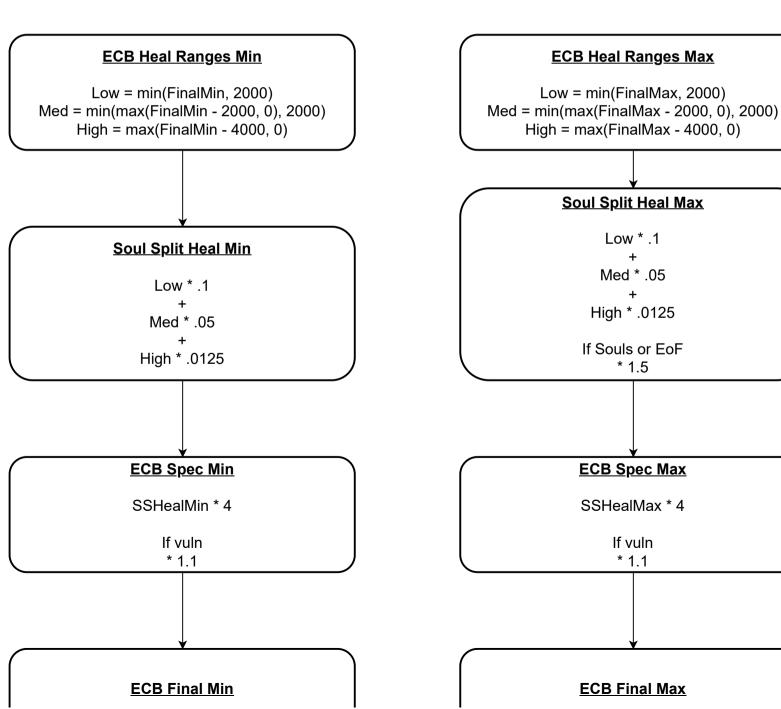
If not a bleed
RoundDown(FinalMin / Aura * 1.5)

DS Final Max

Aura = 1.1 if reckless, 1 otherwise

If bleed
RoundDown(FinalMax / Aura)

If not a bleed
RoundDown(FinalMax / Aura * 1.5)

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2 - ECB Spec

ECB Heal Ranges Min

Low = min(FinalMin, 2000)
Med = min(max(FinalMin - 2000, 0), 2000)
High = max(FinalMin - 4000, 0)

ECB Heal Ranges Max

Low = min(FinalMax, 2000)
Med = min(max(FinalMax - 2000, 0), 2000)
High = max(FinalMax - 4000, 0)

Soul Split Heal Min

Low * .1
+
Med * .05
+
High * .0125

Soul Split Heal Max

Low * .1
+
Med * .05
+
High * .0125

If Souls or EoF
* 1.5

ECB Spec Min

SSHealMin * 4

If vuln
* 1.1

ECB Spec Max

SSHealMax * 4

If vuln
* 1.1

ECB Final Min

ECB Final Max

ECBSpecMin + FinalMin

ECBSpecMax + FinalMax

3 - ECB Spec inside DS

Run through normal DS calculations

Run through normal ECB calculations using DS Final Min/Max as starting points

Melee Abilities

Hurricane 2nd Hit

Steps modified are DPL & Precise

H1 = hit one
H2 = hit two

DPL Fixed

H2PrayerFixed
+
10 * H2PrayerVar / H1PrayerVar * Max(0, LevelBoostAmount)

DPL Variable

H2PrayerVar
+
2 * Max(0, LevelBoostAmount)

Precise Fixed

H2DPLFixed
+
RoundDown((1 + H1DPLVar / H1DPLFixed) * H2DPLFixed * PreciseRank * 1.5%)

Precise Variable

H2DPLVar / H1DPLVar * H1PreciseVar

Magic Abilities

Smoke Tendrils All Hits

Step modified is FinalMin because this ability always crits

Final Min

RoundDown(BaseMin * BleedInclusive * BleedExclusive if not a bleed * CritExclusive)

Range Abilities

Greater Ricochet

Rico has 3 parts
Initial single hit of 20-100%
Second 2 hits of 10-50% each
Third (with caroming up to 4) of 5-15% each

Hits are appended with 1, 2, or 3 respectively here

Only unique aspect is on the third group of hits

DPL Fixed

Min(PrayerFixed3 + 4 * Max(0,
LevelBoostAmount),
RoundDown(DPLFixed1 / 4))

DPL Variable

Min(PrayerVar3 + 4 * Max(0, LevelBoostAmount),
RoundDown(DPLVariable1 / 4))

Snapshot

Precise step modified for 2nd hit

Precise Fixed

PreciseFixed1

Precise Variable

RoundDown(PreciseFixed2 * 1.1)

Shadow Tendrils

2-5 hits
First 2 guaranteed
Next 3 are 90%, 80%, and 70% resp.
So roughly 50% to do all 5

DPL, Prec, Eq steps modified

DPL Fixed

PrayerFixed + 8 * Max(0, LevelBoostAmount)

DPL Variable

PrayerVar

Precise Fixed

DPLFixed

Precise Variable

DPLVar

Equilibrium Fixed

PreciseFixed

Equilibrium Variable

PreciseVar