For operators in model 1 with fermionic DM the Lagrangian is

$$\mathcal{L} = \frac{1}{\Lambda^3}\chi\overline{\chi}D_\mu H\left(D^\mu H\right)^\dagger \tag{1}$$

For operators in model 1 with scalar DM the Lagrangian is

$$\mathcal{L} = \frac{1}{\Lambda^2}\phi\overline{\phi}D_\mu H\left(D^\mu H\right)^\dagger \tag{2}$$

Where H is the SM Higgs field. When Higgs vevs are inserted this leads to couplings of DM to pairs of W and Z bosons. These couplings are fixed with respect to each other, and proportional to the W and Z masses themselves. For model 1 we have operators of effective dimension 5

$$L \;=\; \frac{m_W^2}{\Lambda^3}\chi\overline{\chi}W^+W^- + \frac{m_Z^2}{2\Lambda^3}\chi\overline{\chi}ZZ$$

and for model 2 we have operators of effective dimension 4.

$$L \;=\; \frac{m_W^2}{\Lambda^2}\phi\overline{\phi}W^+W^- + \frac{m_Z^2}{2\Lambda^2}\phi\overline{\phi}ZZ$$

Here the Mono-Z and mono-W search channels will be correlated for the process $qq \to \chi\chi V$. These model files may, in future, be extended to included also terms resulting in mono-Higgs signals.