

Operator	Definition	WC
$\pm O_{\mathbf{u}\varphi}^{(ij)}$	$\bar{\mathbf{q}}_i \mathbf{u}_j \tilde{\varphi} (\varphi^\dagger \varphi)$	$c_{t\varphi} + i c_{t\varphi}^I$
$O_{\varphi\mathbf{q}}^{1(ij)}$	$(\varphi^\dagger \overleftrightarrow{iD}_\mu \varphi) (\bar{\mathbf{q}}_i \gamma^\mu \mathbf{q}_j)$	$c_{\varphi Q}^- + c_{\varphi Q}^3$
$O_{\varphi\mathbf{q}}^{3(ij)}$	$(\varphi^\dagger \overleftrightarrow{iD}_\mu^I \varphi) (\bar{\mathbf{q}}_i \gamma^\mu \tau^I \mathbf{q}_j)$	$c_{\varphi Q}^3$
$O_{\varphi\mathbf{u}}^{(ij)}$	$(\varphi^\dagger \overleftrightarrow{iD}_\mu \varphi) (\bar{\mathbf{u}}_i \gamma^\mu \mathbf{u}_j)$	$c_{\varphi t}$
$\pm O_{\varphi\text{ud}}^{(ij)}$	$(\tilde{\varphi}^\dagger i D_\mu \varphi) (\bar{\mathbf{u}}_i \gamma^\mu \mathbf{d}_j)$	$c_{\varphi tb} + i c_{\varphi tb}^I$
$\pm O_{\mathbf{u}W}^{(ij)}$	$(\bar{\mathbf{q}}_i \sigma^{\mu\nu} \tau^I \mathbf{u}_j) \tilde{\varphi} W_{\mu\nu}^I$	$c_{tW} + i c_{tW}^I$
$\pm O_{\mathbf{d}W}^{(ij)}$	$(\bar{\mathbf{q}}_i \sigma^{\mu\nu} \tau^I \mathbf{d}_j) \varphi W_{\mu\nu}^I$	$c_{bW} + i c_{bW}^I$
$\pm O_{\mathbf{u}B}^{(ij)}$	$(\bar{\mathbf{q}}_i \sigma^{\mu\nu} \mathbf{u}_j) \tilde{\varphi} B_{\mu\nu}$	$(\mathcal{C}_W c_{tW} - c_{tZ}) / \mathcal{S}_W + i(\mathcal{C}_W c_{tW}^I - c_{tZ}^I) / \mathcal{S}_W$